



# Developing a Conceptual Framework of Instructional Model for Creating an Innovative Business Project: Applying the Sufficiency Economy Philosophy for Private Vocational Colleges in Bangkok, Thailand

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**Abstract:** Vocational students in business programs become the future of the global workforce; this field requires innovation, given its added value. Importantly, the balance among profit, people, and the planet is greatly needed. Adaptability to sudden changes, such as pandemics or economic crises, is essential. This research developed a conceptual framework of instructional model for creating innovative projects applying the sufficiency economy philosophy (SEP), which aims to balance prosperity, society, environment, and culture with risk management for private vocational colleges in Bangkok, Thailand. The conceptual framework of instructional model was created from a literature review and empirical studies. Empirical data was gathered by studying current business project instructions from stratified random samples given by 250 teachers. The findings showed that instruction of basic business management, entrepreneurship, risk management, business innovation, and social responsibility are separate instead of integrated and applied to real situations. Furthermore, student business innovation in projects is low, while the suggestions to apply the SEP to business project instruction are high. The conceptual framework of instructional model consisted of instructions and assessments, based on design thinking, SEP, constructivist learning theory, and project-based learning. These instructions and assessments led to student learning outcomes that include the knowledge, skills, and attributes necessary to develop socially responsible, risk-manageable, and innovative business projects. Evaluation of the conceptual framework of instructional model's feasibility by five experts resulted in high or very high ratings of all items.

**Keywords:** Instructional model, project, project-based learning, business, innovation, vocational

## 1. Introduction

"Security, Prosperity, Sustainability" is the motto of Thailand's 20-year national strategy. This strategy emphasizes innovation-driven development and the principle of sufficiency economy philosophy (SEP), which aligns with the Sustainable Development Goals or SDGs (National Strategy Secretariat Office, 2017). Thailand 4.0 denotes a new era of opportunity for the nation. The latest Thailand's economic proposition aims to adjust the economic structure toward a value-based economy that makes Thailand a country experiencing high economic growth. It will turn existing small and medium enterprises, or SMEs, with high ability and low-valued traditional services into high-value enterprises through creativity and innovation (Thailand Board of Investment, 2017). According to Kruasom (2017)'s research findings, the competitive advantage of Thai SMEs in the Thailand 4.0 era was driven by being a learning organization and having

organizational creativity. This aligns with the findings of Munizu and Hamid (2018), who discovered that innovation has a positive direct effect on business performance in the Indonesian furniture industry. At present, new and existing companies are searching for ways to succeed in a competitive market by developing creative business models that respect society and avoid harming the environment. Circular economy, fair trade, low consumerism, and the sharing economy are some current trends (Todeschini et al. 2017). These concerns of society, the economy, and the environment are included in sustainable development goals (SDGs), which is the global goal of ending poverty, protecting the planet, and ensuring peace and prosperity for all people by 2030 (United Nations, 2020). Companies are becoming more interested in the SDGs (Cordeva & Celone, 2019). Also, becoming a responsible organization that operates with respect for the community, people, and society has many advantages, including employee engagement, customer attraction, and appreciation (Pedersen, 2018). Sudirman et al. (2021) studied the involvement of business sectors to SDGs through their Corporate Social Responsibility (CSR) programmes. The findings showed the CSR programme can be aligned with the goals in achieving the SDGs.

Besides integrating innovation and capturing social and environmental considerations into business operations and considering unexpected events that will affect the business are also necessary. On March 11, 2020, the World Health Organization (WHO) issued a statement saying that the new coronavirus 2019 (COVID-19) has entered a global pandemic. After significantly rising cases in different regions of the world (World Health Organization, 2020). Because of this situation, business organisations have reshaped their sustainability-based business practices and reduced business risk (Gregurec, Furjan & Tomacic-Pupek, 2020). Unfortunately, in a time when COVID-19 pandemics local infections have been widespread in Thailand, SMEs have been affected negatively by more than larger enterprises, therefore SMEs should consider a new strategy for survival rehabilitation amid this pandemic. (Siriphattasophon, 2020).

In such a crisis, the Sufficiency Economy Philosophy (SEP) given by King Bhumibol the Great of Thailand can be used as a basis for safe living, survival and resilience from the outbreak (Boontongkham & Phrakrupaladsuwattanabuddhikun, 2020). The Sufficiency Economy Philosophy (SEP) is an innovative approach to the development designed for practical application over a wide range of problems and situations (United Nations, 2020). The five principles of SEP are moderation, reasonableness, self-immunity, knowledge and virtues that positively affect the achievement of the sustainable development goals (SDGs) of the country (Thailand Sustainable Development Foundation or TSDF, 2017). SEP is harmoniously aligned with SDGs because they have consistently and in common endpoint goals. SEP and SDGs aim to develop and balance society, economy and environment. The overlapping but uncontracted part is that SEP also emphasizes cultural dimension, while in SDGs, cultural dimensions are intrinsic in many goals and there is also a section of peace and cooperation for development (Maesincee, 2017).

Tomorrow's business workforce needs to be characterized by business education today. Therefore, Thai National Education Standards B.E. 2561 (A.C. 2018) set being a creative co-creator; acquiring social well-being with stability, prosperity, and sustainability; generating innovation and being an entrepreneur as key characteristics of Thai vocational students to adhere to the 20-year national strategy in terms of an innovation-driven economy (Office of the Educational Council, 2018). However, according to the report of Thai National Education Standards B.E. 2561 (A.C. 2018) mobilization, there is still an improvement gap needed to achieve desired students' characteristics (Office of the Educational Council, 2019). Moreover, vocational colleges still deliver content that is not updated to current global situations and still lacks the necessary competencies for real work (Thailand Development Research Institute or TDRI, 2018).

Bangkok plays an important role as the country's business and economic activity hub. As seen from Bangkok's economy, it is 29 percent of the country's overall economy. Bangkok is not only the economic hub of Thailand, it is also one of the major economic hubs for ASEAN. Bangkok has 5,676,765 people (as of February 2013), while Thailand's total population is 8,839,022, therefore Bangkok is about 14 percent of the country's population. Bangkok is divided administrative area into 50 districts, grouping the area into six groups for urban development efficiency. They are Central Bangkok, Eastern Bangkok, North Bangkok, South Bangkok, North Thonburi and South Thonburi (Bangkok Office of Strategy and Evaluation, 2016). At present, there are 67 private vocational colleges in the Bangkok area. They are all are under the supervision of the Office of Private Vocational Education Management, Office of the Vocational Education Commission. (Office of the Vocational Education Commission, 2020).

Under the importance of innovation, the balance of profit, people, planet and adaptability to sudden changes in business, this research aims to develop a conceptual framework of an instructional model for creating an innovative business project applying the sufficiency economy philosophy for private vocational colleges in Bangkok, Thailand. There are three research stages aligned with three research questions, which are:

- i. What are the current situations of business project instruction in private vocational colleges in Bangkok like?
- ii. What are the attributes of an instructional model's conceptual framework, created from a literature review and a survey from business project vocational teachers in private vocational colleges in Bangkok, Thailand?
- iii. What is the feasibility level of an instructional model's conceptual framework?

## 2. Related Literature

Design thinking is critical to the success of many innovative global enterprises. Originally, the concept of design thinking was intended for designers or creative professionals. It has grown in popularity over the last few decades, ever since David Kelly, founder, and chairman of IDEO - a renowned global design firm - began using it in the business context and later at Stanford University's Hasso Plattner Institute of Design, or Stanford d.school (Camacho, 2016). Tim Brown, another key figure in design thinking in business and education, defines design thinking as a human-centred approach to innovation that draws on the designer toolkit to integrate people's needs, technological opportunities, and business success requirements. Understanding, defining problems, finding ideas, developing prototypes, and testing are the five process steps in the design thinking process (IDEO, 2020). Design thinking is an effective support process representing greater integration for start-up success at both the back end and the front end of innovation (Pattnaik, Shukla & Pandey 2020). Design thinking for innovation should be viewed as both an individual mindset and an organizational culture (Prud Homme Van Reine, 2017).

Design thinking has been incorporated into business education worldwide. Stanford d.school, founded in 2005, was the first and continues to offer many design thinking courses (Stanford d.school, Hasso Plattner Institute of Design at Stanford 2021). In "Design Thinking: A New Road Map in Business Education," Ceviker-Cinar, Mura, and Dermirbag-Kaplan (2017) investigated case studies of current trends in applying design thinking into the higher education of leading universities and recommended that rather than providing it as a fast-track via credit courses, design thinking should embrace a philosophy that pervades all aspects of business education. Regarding vocational education, Nordin et al. (2020) discovered that design thinking positively impacted Malaysian students' learning and collaboration. In business and entrepreneur courses, Kurniawan et al. (2018) and Huber et al. (2016) investigated the integration of design thinking principles into an entrepreneur course and were able to add value to the courses. However, there is still a need to work toward a common understanding of design thinking when developing an effective entrepreneurial curriculum (Sarooghi et al. 2019). In Thailand, design thinking is used by organizations outside formal schools and colleges—for example, innovative entrepreneur boot camp for teenagers (National Innovation Agency, 2021) and food innovator boot camp for teenagers (National Science and Technology Development Agency, 2021)

"...If one is moderate in one's desires, one will have less craving. If one has less craving, one will take less advantage of others. If all nations hold this concept - I do not mean sufficiency economy - this concept of moderation, without being extreme or insatiable in one's desires, the world will be a happier place..." by King Bhumibol of Thailand, given to Thai in the year 1998 (Chaipattana Foundation, 2019). King Bhumibol of Thailand presented the sufficiency economy philosophy, or SEP, following the 1997 financial crisis, known as the Tomyumkung financial crisis. The philosophy can be used as a decision-making tool to help people live more sustainably by combining knowledge and virtues. Moderation, reasonableness, and self-immunity are the guiding principles of SEP. The philosophy emphasizes the importance of preparedness in coping with changes in these four dimensions and balance in the use of economic, social, environmental, and cultural resources (Ministry of Foreign Affairs of the Kingdom of Thailand, 2016). The concept of SEP has been recognized and internationalized by the United Nations (UN). Former Secretary-General Kofi Annan introduced the SEP's implementation in Thailand in the UN Human Development Award Ceremony in 2006 as a development model aimed at protecting society's most valuable sectors and as a model of best practice with respect to human rights (Contipelli & Picciau, 2020).

SEP can be applied in business without being contrary to profitability. However, profits must not be obtained by exploiting others or taking unfair advantage of society (Office of the Royal Development Projects Board, 2017). There are many empirical studies that state that SEP has an impact on achieving SDGs and SEP in practice can reduce firm-specific risk from an unexpected situation. Winit and Kantabutra (2017) discovered that organisations responsible for the community, society and environment positively affect their employee's engagement and can create a positive image for the organisation. Research findings from Vichitranuja and Nitiphon (2019) conclude that the Suanson Pradipat golf course adopts SEP by promoting the responsible business practice and views local people as a stakeholder. In terms of risk management, according to Jeenaboonrueang (2018), Thai business firms that survived the economic downturn noted that implementing the SEP practice in their operations put them in a better market position and helped them gain market recognition. The findings from U-tantada et al. (2016) support the idea that SEP alignment can reduce risk and predict corporate sustainability.

In the education sector, generally, there are four main approaches to drive the sufficiency economy philosophy (SEP) to educational institutes; 1) Applying SEP in educational institutes' management 2) Applying SEP in the curriculum--as extra subjects in a curriculum or integrating with existing subjects 3) Creating extra-curricular activities to promote the use of SEP and 4) Applying SEP in everyday thinking and actions such as having lunch, water and electricity usage (Khammanee, 2016). According to Pomdam (2018)'s research, five factors affecting the success of Sufficiency Economy Philosophy learning centres in schools under the Lopburi Primary Education Service Office are readiness, learning system, activity, changing context and building a network. In business education, "Porlaewdee - The Creator Project" with the goals of combining SEP with creativity in business, develop young entrepreneurs to do business sustainability and to benefit their homeland in all regions, change the attitude and image of the word "sufficiency economy philosophy" that this philosophy can apply to business, not only in agriculture as many Thai understand and to return to inspiring community power (Porlaewdee, 2020).

In Thai vocational business education, subjects related to innovation and social responsibility have been already included in the Thai National Vocational Curriculum B.E. 2562 (A.C. 2019). Being creative, being socially responsible, and applying sufficiency economy philosophy in daily life, are set as competencies of the whole curriculum, and applying the philosophy in business and entrepreneurship is one of the desired learning outcomes in business and entrepreneurship courses (Office of the Vocational Education Commission, 2021). Some vocational colleges incorporate social responsibility and SDGs into their courses as extracurricular activities through their rover scout club (Supervisory Unit of the Office of the Vocational Education Commission, 2019). Moreover, "Scouts for SDGs" guidelines are provided as ideas as well as a variety of instructional services for youth activities to comply with SDGs (World Organization of Scout Movement, 2018). There are also SMEs and start-up incubators and a mandatory "Vocational Project Subject" in Thai vocational curricula that assist students in becoming entrepreneurs (Office of the Vocational Education Commission, 2020). Project-based learning or PBL is used in vocational colleges throughout many countries, including Thailand (Chookaew, Wongwatkit & Howimanporn, 2017). PBL was originated from Dewey's belief that students' interest drives teacher instruction and that learning occurs through doing in a real-world situation (Dewey, 1938 cited in Williams, 2017).

According to two reasons 1) Project-Based Learning (PBL) can motivate students to integrate and formulate the multi-disciplinary knowledge previously learned into a practical situation (Dechakup and Yindeesuk, 2017) 2) One of the tools or strategies used in achieving specific student learning outcomes is "an instructional model" which is the state of instruction that encompasses essential elements organised in an orderly manner based on philosophies, theories, principles or beliefs. It comprises important processes or steps in teaching and learning. It includes teaching methods and techniques that help make the educational environment align with the model's theoretical basis. An instructional model must be proven to be effective (Khammanee, 2017). Therefore, many researchers have developed instructional models based on PBL. Lubis et al. (2019) developed a project-based vocational school instructional model for entrepreneurship classes concerning hospitality and accounting departments. The results showed that there was increased student motivation and enhanced learning outcomes after the model's usage. In addition, Ariwibowo, Slamet and Syamwil (2018) developed and implemented an instructional model based on PBL that integrated entrepreneurship and productive learning of motorcycle tune-up competence. The researchers found that students' technical and entrepreneurship skills in the class that implemented the model increased significantly.

To achieve the expected student learning outcomes, teachers in the 21st century use the alignment of students' learning outcomes, instruction and assessment based on the constructivist learning theory (Surakarn et al. 2020). The constructivist learning theory has four main principles; learning is an active process enhanced by social instruction, and meaningful learning develops through authentic tasks. To begin, Piaget's cognitive constructivist theory is concerned with knowledge, specifically individual and psychological sources of learning. Afterwards, Vygotsky's social constructivist theory considers language learning to be socialisation rather than cognition (Dechakup & Yindeesuk, 2020). In vocational business classroom instruction, to promote effective teaching and learning delivery, instructors should strive to implement the constructivist approach in business education (Ekpenyong and Edokpolor, 2016). Hongsakul (2018) studied the necessity of reforming traditional instruction, teacher-centred, to active and collaborative learning in the current era of the 21st century. Active and collaborative stresses students constructing their knowledge by hands-on activities e.g., group discussion, investigation, etcetera. Sirum et al. (2020) also found the assessment suits for the 21st century that teachers should have a variety of tools and techniques to do assessment and students should self-assess to improve themselves in learning.

### **3. Methodology**

The research is divided into three orderly stages according to three research questions as follows:

#### **Stage 1:**

##### *Studying the Current Business Project Instruction of Private Vocational Colleges in Bangkok Through A Survey*

The population used to study the instruction conditions of business projects in private vocational colleges in Bangkok is 67 private vocational colleges in Bangkok. According to the Bangkok Office of Strategy and Evaluation (2016), the Bangkok area is divided into 50 districts and is grouped into six groups: Central Bangkok, Eastern Bangkok, North Bangkok, South Bangkok, North Thonburi and South Thonburi. From the population of 67 private vocational colleges, a sample of 54 colleges was used using stratified random sampling (nine colleges from each group, six groups in total). Then, five questionnaires were sent out to five teachers; who teach business projects in the business vocational certificate level. Returning number of questionnaires is 262. The complete questionnaires that can be used are 250 questionnaires. The sample size was based on Desired Accuracy (Gill et al. 2010) with a confidence level of 95%.

The questionnaires comprised 12 items related to the measures and achievement of the course student learning outcomes of creating business projects, key concepts integrated into business project creation, business project instruction and assessment, the teacher's perspectives toward limitations and recommendations on business project instruction. The questionnaire format was multiple-choice, checklist and open-ended questions. All the questions were validated by using the Index of Item-Objective Congruence or IOC by three business project instruction in vocational education experts. The statistical analysis tool used at this stage was Percentage.

## Stage 2:

*Creating A Conceptual Framework of Instructional Model for An Innovative Business Project Applying the Sufficiency Economy Philosophy for Private Vocational Colleges in Bangkok From the Dataset From Stage 1 and A Literature Review*

The conceptual framework of the instructional model was presented in a diagram using arrows to link 1) "problems" found from stage one's dataset 2) "principles behind the solutions" selected from a literature review 3) "proposed solution" presented in the instructional process and 4) "desired student learning outcomes" after using each proposed solution.

## Stage 3:

*Gathering the Experts' Perspectives on the Feasibility Level of the Instructional Model's Conceptual Framework via Questionnaires. Five Experts from the Areas Of Innovative Business, Business Project Instruction and Application of the Sufficiency Economy Philosophy In Business.*

The questionnaires comprised ten items related to the feasibility of relationships between problems and solutions' underlying principles, the feasibility of each conceptual framework's components for achieving the desired student learning outcomes and the expert's further recommendations. The questions in the questionnaire were applied by using The Program Evaluation Standards by Yarbrough et al. (2011) using a 4 rating Likert Scale and open-end questions. The statistical analysis tool used in this stage was Average and Standard Deviation.

## 4. Findings

The findings were divided into three orderly stages according to the three research questions as follows:

### 4.1 Stage 1: What Are The Current Situations Of Business Project Instruction in Vocational Colleges In Bangkok Like?

**Table 1 - The current status of business project instruction in business programs offered by private vocational colleges in Bangkok as expressed in a sample of 250 teachers**

Items for Assessment	Percentage (%)	Meaning
<b>Measures of course student learning outcomes</b>		
-Levels of Knowledge (K), skills (S), attributes (A) for creating a business project	92	Very high
-Levels of K, S, A for creating an innovative business project	63	Medium
-Levels of K, S, A for creating a socially responsible business project	49	Low
-Levels of K, S, A for creating an innovative and socially responsible business project	7	Very low
<b>Achievement of course student learning outcomes</b>		
-Levels of K, S, A for creating a business project	98	98
-Levels of K, S, A for creating an innovative business project	50	50
-Levels of K, S, A for creating a socially responsible business project	44	44
-Levels of K, S, A for creating an innovative and socially responsible business project	9	9

**Table 1 - Continue**

<b>Integration of these key concepts into business project creation</b>		
<b>Items for Assessment</b>	<b>Percentage (%)</b>	<b>Meaning</b>
-Basic business management	100	Very high
-Entrepreneurship	100	Very high
-Business innovation	12	Very low
-Social responsibility in business	8	Very low
-Risk management in business	6	Very low
<b>Instruction (instructional process and methods)</b>		
-Start project based on student interest/ problem	100	Very high
-Students search/gather information before action	100	Very high
-Hands-on project (real task situation)	100	Very high
-Students work in teams/collaboration	100	Very high
-Students distribute their projects to the public	100	Very high
-Inductive reasoning	21	Very low
-Deductive reasoning	84	High
-Small group discussion	97	Very high
-Demonstration	54	Medium
-Field trip	5	Very low
-Case study	19	Very low
-Role play	11	Very low
-Simulation	8	Very low
-Gamification	44	Low
<b>Assessment</b>		
-Performance assessment rubric	58	Medium
-Product assessment rubric	55	Medium
-Self-reflective journal	17	Very low
-Peer assessment	39	Low
-Written examination	100	Very high
-Work progressive report	37	Low
-Observation	100	Very high
-Worksheet	100	Very high
-Attitude survey	10	Very low
<b>Teacher Perspectives on Limitations and Recommendations</b>		
-Application of SEP in business for social responsibility	85	High
-Application of SEP in business for risk management	81	High
-Follow product trends with no differentiation in products	79	High
-High cost of conducting the project	87	High

Table 1 indicates that the findings in two areas--the measures of course's student learning outcomes and the achievement of course's student learning outcomes have the same direction. The highest ones are using K, S, A for creating a business project (that is not innovative and socially responsible), while the lowest ones are K, S, A for creating an innovative and socially responsible business project. Key concepts that are mostly integrated with project creation are basic business management and entrepreneurship. While innovation, social responsibility, and risk management in business are placed at a very low level.

In the instruction section, most items are rated at a very high level, except inductive reasoning, field trip, case study, role play, simulation and gamification are at a low and very low level. In the assessment section, only self-reflective journals, peer assessment, work progressive reports, and attitude test are rated low and very low. Moreover, the teacher perspectives on limitations and recommendations section, all items are rated at high levels. They include applying SEP in business for social responsibility and risk management, following product trends with no differentiation in products and high project cost.

## 4.2 Stage 2: What Are The Attributes of An Instructional Model's Conceptual Framework?

As this instructional model's conceptual framework was developed from a literature review and a survey of current business project instructions, four main problems were found. In order to solve these problems, the systematic relations between four main problems discovered in a survey and the four principles to be used in creating a proposed solution is explained in Table 2.

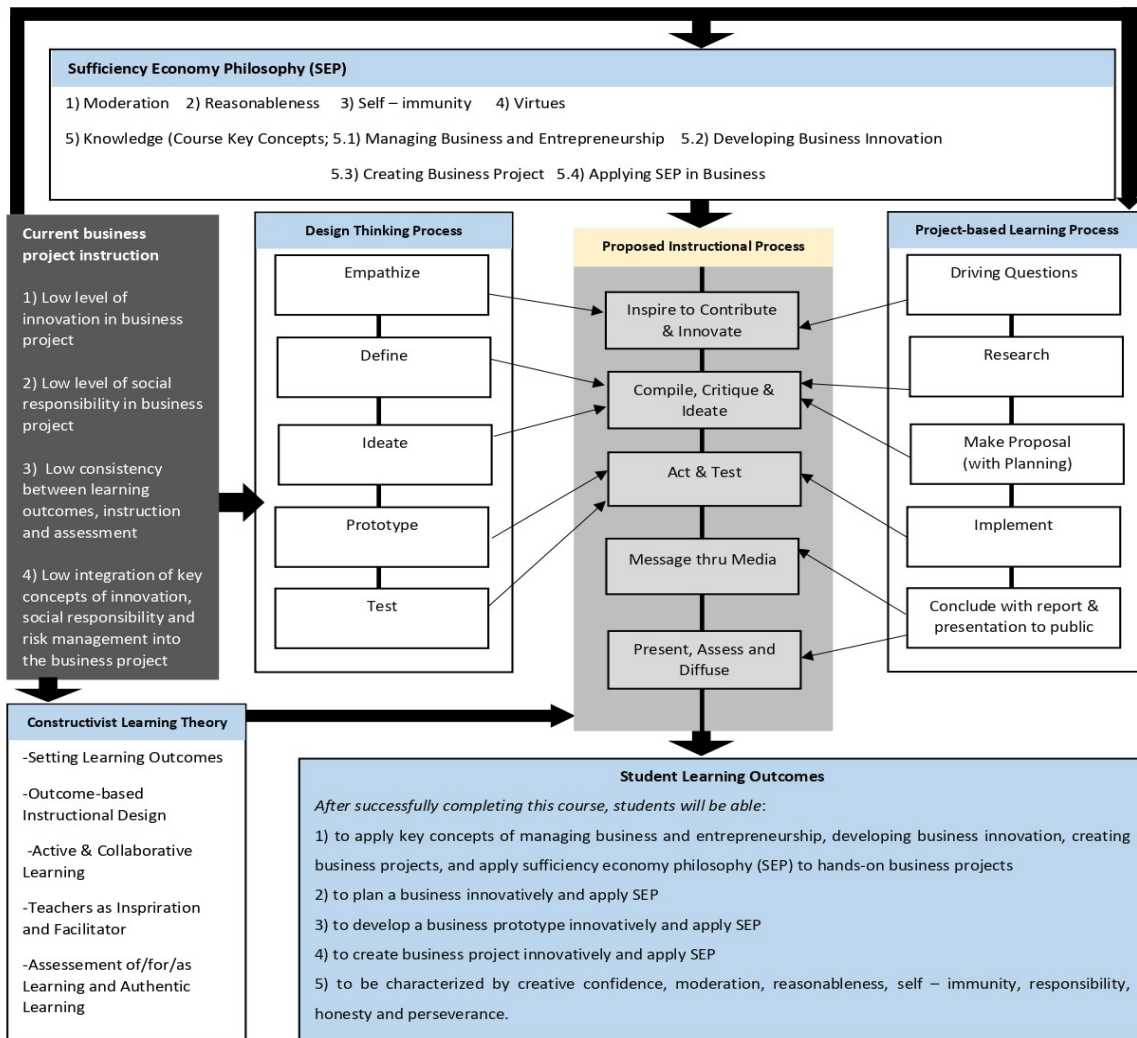
**Table 2 - Principles Behind the Relation Between Problems and Solutions**

Problems	Principle behind solutions
1. Low level of innovation in business project	Principle 1: Design thinking
2. Low level of social responsibility in business project	Principle 2: Sufficiency economy philosophy or SEP (Moderation and virtues, which are the two component of SEP)
3. Low integration of key concepts of innovation, social responsibility and risk management into the business project	Principle 2: Sufficiency economy philosophy or SEP (Reasonableness, self-immunity and knowledge, which are the three components of SEP)
	Principle 3: Project-based learning process
4. Low consistency between learning outcomes, instruction and assessment	Principle 4: Constructivist learning theory

The above systematic relations between problems and solutions led to a diagram using arrows to link 1) the four main problems from current business instruction 2) the four principles which were: Design thinking, Sufficiency economy philosophy, Project-based learning and Constructivist learning theory 3) A proposed solution or instructional process and 4) the desired students learning outcomes after using a proposed solution.

This diagram (Figure 1) indicates the route starting at the current business project instruction to the desired student learning outcomes, which are achieved via the proposed instructional process (comprising five instruction steps): 1) Inspire to contribute and innovate, 2) Compile, critique and ideate, 3) Act and test 4) Message through media and 5) Present, Assess and Diffuse. At the beginning point of an instructional model's conceptual framework are four main problems, therefore each "problem-solution route" can be explained:

- a) **Problem 1:** To solve a low level of innovation in a business project. The design thinking process is integrated into each proposed instructional process. They are as follow: empathize into step 1 (inspire to contribute and innovate), define and ideate into step 2 (compile, critique and ideate) and prototype and test into step 3 (Act and test).
- b) **Problem 2:** To solve the low level of social responsibility in a business project, the two components of sufficiency economy philosophy are integrated into the instructional process and assessment approach. The two components are moderation and virtues.
- c) **Problem 3:** To solve the low integration of key concepts of innovation, social responsibility and risk management into the business project, three components of sufficiency economy philosophy are integrated into the instructional process and assessment approach: reasonableness, self-immunity and knowledge. Also, the project-based learning process is integrated into each proposed instructional process, which is as follow: driving questions into step 1 (Inspire to contribute and innovate), research and proposing with planning into step 2 (Compile, critique and ideate), implement into step 3 (Act and test), and conclude with report and presentation to the public into step 4 (Message thru media) and step 5 (Present, assess and diffuse).
- d) **Problem 4:** To solve low consistency between learning outcomes, instruction and assessment, the constructivist learning theory is integrated into instruction (instructional process) and assessment (assessment approach). The instruction includes outcome-based instructional design, active and collaborative learning and teacher as inspiration and facilitator. The assessment includes assessment of learning, assessment for learning, assessment as learning and authentic assessment. These instructions and assessments lead to the setting of learning outcomes.



**Fig. 1 - Instructional model’s conceptual framework**

Table 3 indicates that the feasibility levels of the instructional model’s conceptual framework are all rated at high and very high levels. In the section of the feasibility of relation between problems and solutions’ underlying principles, the highest feasibility level went to “Low integration of key concepts of innovation, social responsibilities and risk management into the business project and SEP. In the section of the feasibility of achieving desired learning outcomes, the authentic assessment is rated at the highest level. The experts’ recommendation is to add guided instructional methods, techniques and teacher’s role to the instructional model’s conceptual framework.

**5. Discussion**

This section was divided into two issues in order to reflect the results to the following research questions. Issue 1 was related to the research question - What are the current situations of business project instruction in private vocational colleges in Bangkok? Issue 2 was related to the research questions - What are the attributes of an instructional model’s conceptual framework created from the literature review and the survey from the business project vocational teachers in private vocational colleges in Bangkok, Thailand? and What is the feasibility level of the instructional model’s conceptual framework?

Issue 1: The levels of innovation and social responsibility in the business project were low even though the nation needed them, which was in accordance with Thailand’s 20-Year National Strategy (2018-2037). This emphasised innovation-driven development and the principle of the sufficiency economy philosophy (aligned with the Sustainable Development Goals or SDGs) (National Strategy Secretariat Office, 2017). This reflected the immediate actions to improve present business education to be innovative and socially responsible to serve what the nation would require. In addition, the importance of innovation to small and medium-sized enterprises (SMEs) was aligned with Kruasom (2017)’s research findings. The competitive advantage of Thai SMEs in the Thailand 4.0 era was driven by being a learning organisation and having organisational creativity. Likewise, Munizu and Hamid (2018)’s research findings demonstrated



that innovation had a positive direct effect on the business performance in the Indonesian furniture industry. In contrast, the importance of being socially concerned was aligned with the research from Todeschini et al. (2017) regarding the circular economy, fair trade, low consumerism, and the sharing economy that were some current trends. Furthermore, becoming a responsible organisation that operated with respect for the community, people, and society had many advantages, including employee engagement, customer attraction, and appreciation (Pedersen, 2018).

### 4.3 Stage 3: What is the feasibility level of an instructional model's conceptual framework?

**Table 3 - Expert Perspectives on the Feasibility of the Instructional Model's Conceptual Framework**

Items of Evaluation	$\bar{X}$	SD	Levels of Feasibility
<i>Feasibility of relation between problems and solutions' underlying principles</i>			
2.1 Low level of innovation in business "and" design thinking	3.60	0.48	Very high
2.2 Low level of social responsibilities in business "and" SEP	3.60	0.48	Very high
2.3 Low consistency between instruction and assessment "and" constructivist learning theory	3.60	0.48	Very high
2.4 Low integration of key concepts of innovation, social responsibilities, risk management into the business project "and" project-based learning	3.60	0.48	Very high
2.5 Low integration of key concepts of innovation, social responsibilities, risk management into the business project "and" SEP	4.00	0.00	Very high
<i>Feasibility of achieving desired learning outcomes via:</i>			
2.6 The five steps of the proposed model's instructional process	3.40	0.48	High
2.7 Active and collaborative learning	3.40	0.32	High
2.8 Authentic assessment	3.60	0.32	Very high
2.9 Combination of assessment of/for/as learning	3.40	0.48	High
<i>Recommendation</i>			
2.10 Add guided instructional methods, techniques and teacher's role	3.40	0.48	High

The findings also showed that the integration of risk management in the students' business projects was very low. Thus, it could be seen that risk management would be very necessary according to the current global pandemic of the coronavirus 2019 (COVID-19). This unexpected crisis has caused a huge effect on SMEs (Gregurec et al. 2020), as business organisations have reshaped their sustainability-based business practices and reduced the business risk. Additionally, according to Siriphattrasophon (2020), SMEs have been affected negatively more than larger enterprises; therefore, SMEs should consider new strategies for rehabilitation to survive in the midst of this pandemic. The other interesting finding was the setting of the learning outcomes that consisted of knowledge (K), skills (S), and attributes (A) for creating an innovative and socially responsible business project to be at a very low level. This reflected that the policy of innovation and social responsibility did not enter the classroom even though it was already in the Thai National Education Standards B.E. 2561 (2018) as a creative co-creator acquiring social well-being with stability, prosperity, and sustainability; generating innovation and being an entrepreneur as key characteristics of Thai vocational students (Office of the Educational Council, 2018), and also in the Thai National Vocational Curriculum B.E. 2562 (2019), as being creative and socially responsible, as well as applying the sufficiency economy philosophy in daily life, which were set as the competencies of the whole curriculum (Office of the Vocational Education Commission, 2021).

Therefore, setting specific learning outcomes with the aligned instructions and assessments would lead to the expected learning outcomes, which the instructional model was one of the tools. According to the Thai National Vocational Curriculum B.E. 2562 (2019), subjects related to innovation and social responsibility were already included in the curriculum and applied the philosophy in business and entrepreneurship that had also been one of the desired learning outcomes in business and entrepreneurship courses (Office of the Vocational Education Commission, 2021). However, these subjects were taught separately. Therefore, teachers should integrate all the necessary subjects using project-based learning (PBL), which could motivate students to integrate and formulate the multidisciplinary knowledge previously learned into a practical situation. Moreover, vocational teachers would already be familiar with PBL because

in the curriculum, there had been a mandatory “Vocational Project Subject” for many years until now. As a consequence, this familiarity with PBL would facilitate teachers to be able to use an instructional model that applied this approach.

Issue 2: From the experts’ perspectives, the feasibility levels of using design thinking to solve the low level of innovation in a business project, using SEP to solve the low level of social responsibility in a business project, and SEP to support risk management were rated very high. This resulted in aligning with the research that presented design thinking to be an effective support process representing greater integration for a start-up’s success at both the back and the front end of innovation (Pattnaik et al. 2020). Many empirical studies stated SEP had an impact on social responsibility and risk management in business. Winit and Kantabutra (2017) discovered that organisations that were responsible to the community, society, and environment positively affected their employees’ engagement and could create a positive image. Alternatively, U-tantada et al. (2016) supported the idea that SEP alignment could reduce risk and predict corporate sustainability.

The other interesting findings from the experts’ perspectives were the feasibility level (high and very high) of achieving the expected learning outcomes via the five steps of the proposed model’s instructional process, active and collaborative learning, authentic assessment, a combination of assessment of/for/as learning, and the recommendations to add guided instructional methods and techniques, and the teacher’s role. This reflected the importance of applying the constructivist learning theory to instruction and assessment in order to achieve the expected student learning outcomes. These results were also aligned with Ekpenyong and Edokpolor (2016), who investigated the promotion of effective teaching and learning delivery, and found that instructors should strive to implement the constructivist approach in business education. In addition, according to Hongsakul (2018), the necessity of reforming traditional instruction to be teacher-centred would result in active and collaborative learning in the twenty-first century. Active and collaborative learning would emphasise students constructing their own knowledge through hands-on activities, e.g., group discussion, investigation, etc. Sirum et al. (2020) stated that for appropriate assessment for the twenty-first century, teachers should have a variety of tools and techniques, and students should conduct self-assessment to improve their own learning.

However, the principles of design thinking and the sufficiency economy philosophy have not yet really been applied much in vocational business education in Thailand. Recently, there were some courses outside the formal education/vocational colleges that used design thinking; for example, an innovative entrepreneur boot camp for teenagers organised by the National Innovation Agency (NIA), and a food innovator boot camp for teenagers organised by the National Science and Technology Development Agency (NSTDA). There were also a lot of SEP applications of academic institutes; such as, SEP learning centres, but these were not applied to business education. Even though there was the “Porlaewdee - The Creator Project” that had the goals of this training to combine SEP with creativity in business, the target group were young entrepreneurs who already had their own businesses. Therefore, vocational colleges would need an instructional model that would suit their students who mostly had no experience or their own business. In order for business vocational students who would have an impact on the future of the country’s economy, teachers would need to facilitate instructional tools to bring students achieving learning outcomes to be appropriate with the time and place. In this case, time would refer to lesson-learned unexpected crises; such as the COVID-19 pandemic, whereas risk management must be included in the business. The place would refer to Thailand that has recently implemented the 20-Year National Strategy (2018-2037), which is “Security, Prosperity, Sustainability”.

## 6. Conclusion and Implication

This research developed an instructional model for innovative projects by applying the sufficiency economy philosophy, which aims to balance prosperity, society, environment, and culture with risk management, for private vocational colleges in a Bangkok, Thailand business program. The model was created from a literature review and empirical studies. The empirical data was gathered from a study of current business project instruction from stratified random samples given by 250 teachers. Then, the instructional model’s conceptual framework was created. Lastly, five experts evaluated the feasibility levels of the conceptual framework. This resulted in the creation of a conceptual framework of an instructional model that can feasibly achieve expected learning outcomes and be further developed as an instructional model

This study provides the following implications. For academics, as this study developed an instructional model’s conceptual framework, this can be considered as a groundwork for a further model, and model handbook development. This will lead to the model implementation with students in private vocational colleges in Bangkok. However, as the limitation of this research is an empirical study from only private vocational colleges in Bangkok, further research should be done to survey within government colleges in Bangkok or private vocational colleges outside Bangkok. As this is the conceptual framework, the components are not complete for usage (as in an instructional model). However, the concept of this framework can be applied, such as with existing business subjects, or with colleges providing new extra subjects using this conceptual framework or organising the entrepreneur clubs or entrepreneurial incubators in the colleges applying the conceptual framework of the instructional model.

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