Sustainability Development and Kaizen Implementation for Vocational Education from Japan's ODA in Thailand: How It Works and Impacts?

Reni Juwitasari* and Yuki Miyake

Asian Research Center for International Development (ARCID), School of Social Innovation, Mae Fah Luang University
No. 333 Moo 1, Tasud Sub-district, Muang District, Chiang Rai 57100, Thailand
*Corresponding author. E-mail address: reni.juw@mfu.ac.th
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Abstract

The prominent agenda of Japan's Official Development Assistance (ODA) is to develop human capital in line with the Sustainable Development Goals (SDGs) vision of "people-centered development". This study aimed to examine Japan's ODA program in the Thai Vocational Education System by establishing the Japanese College Technology, *KOSEN*. Japan implements the *5S-Kaizen* value system in *KOSEN* in order to promote sustainable growth. Kaizen is derived from words "Kai" (change) and "Zen" (good), while the 5S is derived from the five practices in the Japanese letters: *Seiri* (organization), *Seiton* (tidiness), *Seiso* (purity), *Seiketsu* (cleanliness), and *Shitsuke* (discipline). This research incorporated a qualitative approach with exploratory study combined with Bernstein's Classification, and Framing employed a conceptual structure comprised of two variables: 1) the 5S-Kaizen value and its learning mechanism inside Thai-*KOSEN* as modeled by Vygotsky's activity theory in the late of 1920 and early 1930s (1978), and 2) Elkington's Sustainable Development (SD) model (2001). Four key informants from JICA and Thai-*KOSEN* participated in in-depth interviews. The study concluded that studying 5S- Kaizen in *KOSEN* leads to strong farming classification to SDG 8 decent work and economic growth and proved to be a significant force in embedding eco-friendly practices. Besides, ODA's presence reflects that vocational education has been under control by a major power, including positioning education as a tool of cultural imperialism.

Keywords: Sustainability, 5s-Kaizen, TVET, Japan's ODA, Cultural Imperialism

Introduction

As the world's largest single and high-profile aid donor under its salient foreign policy, Japan's presence in the global south has significantly underpinned the socio-economic growth, acceleration, and development since the Second World War (Araki, 2007). Japan's Official Development Assistance (ODA) is remarkably described as the forerunner of Asia's Newly Industrializing Economies (NIEs) in the form of technical cooperation and loan programmer end of the 1950s, aligning with its aid philosophy of *"hito zukuri, kuni zukuri, kokoro no fureai"* (human development, national development, bringing people together) (Kohama, 2004). Since then, Japan's ODA has been utmostly supporting human resource development with a concomitant key concept of "self-help effort" (Sunaga, 2004). Furthermore, in terms of achieving simultaneous sustainable development for human resources thus, Japan's ODA is projected to improve the legal system, including education in developing countries. Consequently, Japan has provided the assistance for vocational education to boost engendering the outstanding laborers in that nation achieving Sustainable Development Goals number 8 of decent work and economic growth (JICA, n.d.; McGrath & Powell, 2016), especially in Thailand, where Japan acclaimed its vital role as the host multiple economic corridors connecting the other Mekong, Eastern Economic Corridors in particular (Carminati, 2020; Tarat & Sindecharak, 2020).

Human Resource Development (HRD) is capital or asset to increase the value of productivity in accordance with labor market demand and becomes priority agenda of both international bilateral and multilateral cooperation as an integral part of international development work (ICDF, 2003; Moe, 2008). The toolkit of HRD in the

nation is fostered through its vocational education system (Bagale, 2015). In the case of Thailand, vocational education remains to encounter critical constraints reflected from the quality of its graduated students (Mekarkakorn & Narkwiboonwong, 2017). Structurally, the challenges in Thai vocational education derive from the teacher's capacities and insufficient education facilities that impact the unsatisfied quality of students (JICA, 2018). Due to that, Japan has focal initiative assistance to refresh Thai vocational education by establishing Japan Technical College style, known as KOSEN. The KOSEN is recognized as Japan's booster engineering, which attracts low-middle class students endeavoring the agenda of "no one left behind" (Shimoda & Maki, 2018). Besides, KOSEN has embedded the value of Kaizen, derived from words "Kai" (change) and "Zen" (good), meaning 'change for better, continuous improvement' (JICA, 2016; Duren & Mertol, 2020). Kaizen value stimulates a significant contribution to reinforcing the waste burdened behavior and action (Kolodziejczak, Szarska, & Edelmuller, 2019). Through its value, Kaizen promotes a 5S technique of maintaining a quality of the environment, comprising of *Seiri* (organization), *Seiton* (tidiness), *Seiso* (purity), *Seiketsu* (cleanliness), and *Shitsuke* (discipline) where is relevant to increasing competitive industry with the stricter environmental regulation and legislation in which designates sustainability concept in holistic view pervading economic, environmental, and social aspects (Duren & Mertol, 2020; Titu, Oprean, & Grecu, 2010; Sanchez-Ruiz, Blanco, Marin-Garcia, & Diez-Busto, 2020).

Hence, this study offers an understanding of how 5S-Kaizen value is implemented in Thai KOSEN vocational education and to what extent the implementation has impacted the progress of sustainable development toward economic and labor quality growth in Thailand. It explained the role of *KOSEN* as Kaizen manifestation toolkits toward sustainability as it is elaborated by the 1920 Vygotsky's activity theory (1978). The process of Kaizen *N* cultivation is elaborated by Bernstein's Classification and Framing, unveiling the empirical investigation of educational practice toward enhancing the sustainability of 2001 Elkington's theory of 3Ps; people, profit, and the planet (2001). Due to that, the result may extend the legitimation of *KOSEN* as one of Japan's salient aid assistance in attaining the sustainability and Sustainable Development Goals, particularly priority number 8 decent work and economic growth in Thailand to underpin the sustainability development (planet, people, and profit).

Methods

This research adopted a qualitative method using descriptive analysis of a case study on the constructivist epistemology bridging theory and practice of Kaizen value at Thai-*KOSEN* in Suranaree Technological College. With the emphasis of the Pedagogic code of Bernstein's Classification and Framing, this study investigated professors who are under an engineering major and experience working with Japanese experts from Japanese-*KOSEN*. The data collection of this study used the ethnographic interview, led by questions of 3Ps: planet, people, and profit, through purposive sampling from four critical informants of the relevant institution, Japan International Cooperation Agency (JICA), and Thai-*KOSEN*, Suranaree Technical College, which the interview's duration was one hour on average. The three JICA officials were interviewed to verify the *KOSEN* as Japan's aid program, emphasizing *Kaizen*'s value. The policy-maker Thai-*KOSEN*, Suranaree Technical College's representatives, were interviewed to understand the Thai vocational education system and the role of the Japanese KOSEN model in the Thai education system context. The interview contents were transcripted to conduct a content analysis, including documenting Japanese-Thai referential literatures, interpreting characteristics and patterns from Japanese cultural-educational value in Thai contexts, and elaborating the information in accordance with the theoretical framework provided.

Bernstein's Classification and Framing in Activity Theory

In Bernstein's work, classification refers to the strength of boundaries between subject matter categories, actors, and discourses of pedagogic practice, while Framing is a concept that directs the analytical focus towards principles regulating communication and learning in education (Nylund, Ledman, Rosvall, & Rönnlund, 2020). Therefore, to comprehend the discourse of the KOSEN system toward sustainability manifestation, under this study, Bernstein's classification and farming as pedagogic codes are used and implemented by using the 1920 Vygotsky's activity theory (1978).

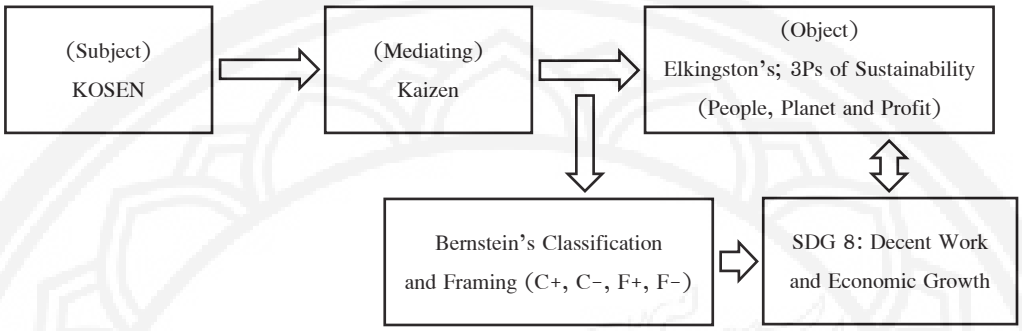

Figure 1 Conceptual Framework Adopted from Vygotsky's Activity Theory.

According to Xu & Zammit (2020), in the case of stronger classification (C+), knowledge categories are well insulated from one another, whereas in the case of weaker classification (C-), the boundaries between categories of knowledge are more permeable and elastic. If the pedagogy is focused on teacher-directed, it might be described as stronger Framing (F+); if it tends to be student-centered, it might be described as weaker Framing (F-) (F-; Bernstein, 2000). Based on this conceptual framework, C+, C-, F+, and F- may create a codebook and deductively code classroom pedagogical activity.

Literature Review

Vocational Education, Kaizen, and Sustainability

The 21st-century societies are invoked to rapidly evolve towards sustainability while equilibrating the industry's complexity of social, economic, and ecological requirements (Lambini, Goeschl, Wäsch, & Wittau, 2021). The industry dilemma has always been profoundly incorporated with ecology, e.g., the massive use of material or chemicals on nature for economic activity or production in which considers of "appropriateness" combining the usage of equipment or technology by people for planet and profit, which discerns relations of people, the earth (planet), and profit (Krönner, 2005; Khoso, Buarod, & Kaewpijit, 2021; UNESCO-UNEVOC, 2000; Lambini et al., 2021). Vocational education has taken a vital role in the manifestation of sustainability (Minghat & Yasin, 2010). As a result, sustainability creates education and economic relations successful and of better quality which is carried out to help society moving toward a green economy and environment which related to the 2001 Elkingston's theory of 3Ps of people, planet, and profit (Gu, Gomes, & Brizuela, 2011; Briede & Drelinga, 2020). Eventually, vocational education concerning human development is inseparable from sustainable development.

KOSEN establishment in Thailand in 2018 is an outcome of donor and recipient country's agreement under Official Development Assistance (ODA), which bolsters human resource development for the industrial engineers' workforce in teaching the valuable Kaizen concept. In the case of Kaizen comprising of 5s of *Seiri* (sorting),

Seiton (set in order), *Seiso* (sweep or clean), *Seiketsu* (standardize), *Shitsuke* (sustain or self-discipline) that originated from Japan as continuous development or sustainable development, it has contributed to the improvement of green economic, environmental and social performance (Cherrafi, Elfezazi, Hurley, Garza-Reyes, Kumar, Anosike, & Batista, 2019; Arrasyid & Amaliyah, 2019). This 5S technique is a salient approach of the Kaizen concept to assess undesirable activity and replace it with measurable activity producing the optimal achievement in the industry, along with the identification and elimination of valueless activity in order to reduce costs with companies and to improve the quality of service and accelerate the process of production, especially improvements in the industry's environmental character and collective social responsibility (Arrasyid & Amaliyah, 2019; Morell-Santandreu, Santandreu-Mascarell, & García-Sabater, 2020).

Activity Theory of Learning Process on Kaizen

As Japan's ODA is highlighted in education, the process of human resource development is significantly determined by learning activity (Callaghan, 2016). The learning activity is given to construct the authentic experience of theory and practice (Bockarie, 2002). In vocational education, this education system remains premised on behavioral accounts of the goals and learning process, which outcomes focus on indulging industry instruction (Billett, 2003). Hence, by learning activity, the value or object is governed for cultural embodiment (Taylor, 2014), in which Kaizen is the cultural identity of KOSEN.

In acclaiming Kaizen knowledge production in KOSEN, the activity theory has invested in learning development among societies (Bedny & Karwowski, 2004). On the other hand, activity theory focuses on the learning and development that emerge in the institutionalized contexts of practical activities culturally and historically mediated within a society, which have been influential in education in Japan over the past two decades (Yamazumi, 2006). The activity theory initiated by the 1920 Vygotsky (1978) delineates the transformation of traditional pedagogy from object-given-oriented to human action in an environment and structured socially and culturally, which features three components; subject, object, and mediating artifacts or tools (Bakhurst, 2009). By elaborating the activity theory, the learning process sought to transmit the predefined content to productive societal activity (Yamazumi, 2006), in which Kaizen becomes KOSEN graduate student's skills and competency.

Research Findings

Classification and Framing on Kaizen under KOSEN Pedagogy's Activity

According to Bernstein, students' success in academics must be balanced with success in social life. Thus, Bernstein develops the classification and framing model to understand "recognition" and realization" aspects in education. The students' recognition dimension includes: understanding the education process, procedures, and criteria, and later they can demonstrate the knowledge realization in a continuity process (Bernstein, 2000). Bernstein emphasizes the classification of the relation status between the students and the teachers in "visible elements" of pedagogy through students' engagement and teachers' management in the classroom. According to Bernstein (2000), classification and Framing will determine the structure of knowledge found in the curriculum and evaluation outcomes in the education system. The classification from the curriculum can impact the pedagogy activity because categories hold relative power positions, either strong (+) or weak (-). Classification (C) is the relative strength of boundaries between categories or contexts, and framing (F) is the relative strength of control within categories. There are four modalities: C+, F+, C-, and F- applied in Bernstein's Classification and Framing, as shown in Figure 2.

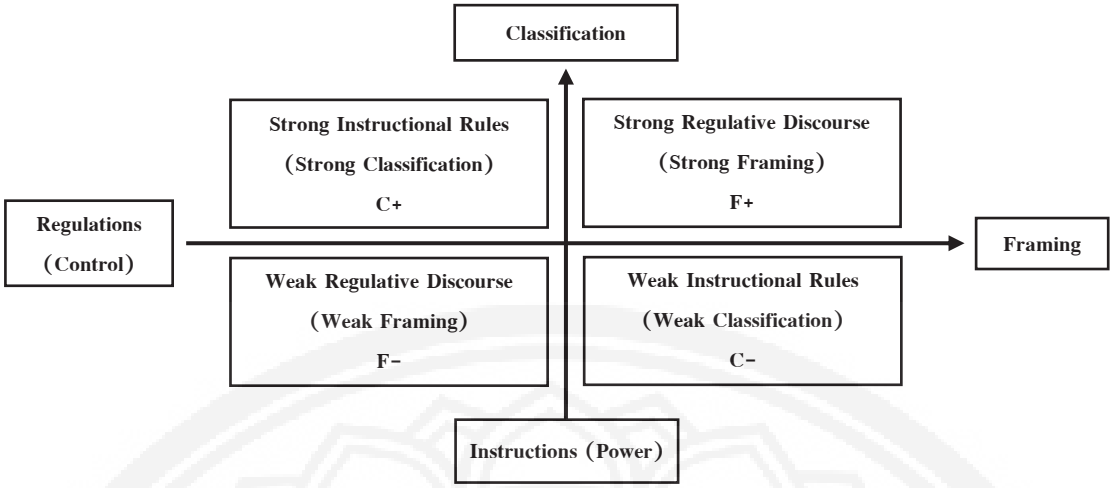

Figure 2 Bernstein's Classification and Framework.
Adapted from Bernstein (2000); Pountney & Schimmel (2015)

Implementing Kaizen Classification in Thai Pedagogy

The direction of skills developments activities in the workplace is a part of national development, which becomes the responsibility of the Thailand Ministry of Education under vocational education (Chalapati & Chalapati, 2020). Thailand is in desperate need of a skilled workforce, especially vocationally skilled workers. The evolution of industrialization has supposedly unfolded with a concomitant vocational education system to meet the standard of competitive industrial demand. Thailand, in the attempt of competitiveness, has established an influential social and educational policy. Over the next nine years, the Ministry of Education aims to boost the ratio of vocational education to general education from the current share of 23:77 to 60:4 (Senkrua, 2015) in which bolsters the National Economic and Social Development Plan underpinnings of His Majesty King's Philosophy on Sufficiency Economy directed by Ministry of Labor.

For Japan, the promotion of education is integrated into the cultural dimension. Under the Cultural Grant Aid scheme introduced in 1975 as part of the official ODA to foreign countries, Japan has contributed to the educational assistance to improve the HRD through education in Thailand. The total number of Japan's aid assistance for Industrial Human Resourced Development through JICA's Cooperation is provided in Table 1.

Table 1 Contribution to Industrial Human Resource Development (IHRD) through JICA's Cooperation in 2016

Type of Aid Assistance from Japan	Total Number	Specific Number for IHRD
Technical Cooperation		
Amount	224.24 Billion Yen / 71.31 Billion Baht	18 Billion Baht
Human Resources Development (Dispatch)	30,831 trainees	7,071 trainees
ODA Loan		
Amount	2,164.4 Billion Yen / 681 Billion Baht	53 Billion Baht

Source: JICA, 2016

In 2016, as the initiator of the KOSEN Initiative in Thailand, Japan's aid support for industrial HRD was divided into two kinds of help modalities: Technical Cooperation (TC) and Loans. Until 2016, the budget allocation for industrial human resource development was 18 billion baht from TC and 53 billion baht from loans. Until 2016, 7,071 trainees have received the training program to improve and create innovative technical and

vocational skills to boost the Thai education system. The substantial influence of industry in vocational education policy is evidenced by the Ministry of Education and Ministry of Labor intervened with FDI investors. These parties represent a strengthening of classification of vocational education, pervading teachers on arrangement of their pedagogic activity in accordance with industry (C+, market demand).

The structures described reveal much about the classification of the HRD policy. The formation of the Ministry of Education represents a unification of policy interest between education and national development policy. Thus, a firm boundary or classification of education policy has been reflected to fit the sufficiency economy of Thai's philosophy (C+, Thai philosophy). The agreement of Japan's ODA concerning HRD policy of enhancing human resource potential including in line with the product strategy and human resources development, research, and innovation under the National Education Plan 2017-2036, that is, a strengthening of classification revealing a characteristic tension in the existing vocational education structure arrangement (C+, Japan's ODA).

Since the strong classification of HRD on vocational education policy is addressed, the Kaizen embodiment under KOSEN. On the other hand, KOSEN is one prominent educational system of "one-on left behind" that has strongly classified to increase the employment rate where the Japan International Cooperation Agency (JICA) has addressed a clear picture of KOSEN in linking with the labor demand (C+, market demand).

> *"JICA as a coordinator of the aid program has always been empowered the Japanese model, e.g., education or KOSEN to bolster the recipient country's development, especially in development policy. KOSEN has a clear future for young engineers to proper and decent work who comprehend the social, economic, and environmental issues."*

Kaizen/continuous improvement is a skill to identify an effect on the use of materials and release of pollutants. Mainly, Kaizen is not a subject lecture, yet it is a skill that is significantly valuable for sharpening the attitude toward environmental change. Even though Kaizen is not a specific subject in the curriculum, it is viewed as the ideal vehicle for students to use the materials wisely and efficiently (C+, Waste Management).

> *"Kaizen is permanently integrated with every subject, especially in the lab classes. Kaizen adheres with Toyota basically, which emphasizes on reducing waste."*

Moreover, through the idea of Kaizen, from the industry's perspective, reducing waste means decreasing costs. Kaizen is a skill of getting rid of unnecessary items that are increasing unpredicted costs. In other words, Kaizen enhances manufacturers' profitability (C+, Cost). However, the profitability benefits for the industry resulting from Kaizen embodiment under the KOSEN system. Under KOSEN, students are encouraged to be aware of environmental issues, expected to be adhered to daily. Furthermore, Kaizen, in principle, recognizes the relationship between humans and the planet or earth. Therefore, the crux of Kaizen becomes an inherent life competency that opposed the anthropocentric idea (Pluim, Nazir, & Wallace, 2020), which Kaizen is a strong classification for 'Planet' of sustainability.

Kaizen Framing in Thai-KOSEN Classroom

Kaizen is reflected in lab-practical and experimental classes to provide an authentic industrial world experience. To maintain a strong classification, the lecturer focuses on clarification of issues relating to Kaizen. Likewise, some professor's instructions are described. In the classroom practice in Thai vocational schools, the implementation of 5S-Kaizen remains to derive from the instruction of the professor in accordance with the given Standard of Operation (SOP), mainly through the practice of visual management of displaying perceptible objects.

The role of visual management is to build the habit of visual controls providing operators and management visibility into performance. The lecture's preparation dictates the content to be learned and constitutes strong framing in relation to pedagogy activity (F+, lecture content).

In the context of KOSEN in Thailand, the lecture involves a strong framing (F+, cultural value) of Kaizen cultivation during the preparation process. Most instructions are addressed to give students comprehend of Kaizen as the identity of KOSEN strictly. Educational institutions have complete control of knowledge production that is structurally perpetrated under their curriculum or syllabus. From the interview, Kaizen remains cultivated through each occasion in every subject.

> *"Kaizen is not taught under a certain subject, and it is reinforced in almost all subjects which are enculturated as KOSEN identity."*

Seen through the method of questions and answers prepared for the lecture, Kaizen cultivation, sorting, setting in order, cleaning, and the lecturer controls standardization competency. As the 5S program prioritizes visual sorting, categorizing, specificizing, inspecting/standardizing, and self-sustaining skills, the value should increase profitability, efficiency, service, and safety, which are core elements of an effective and efficient manufacturing industry. Kaizen's individuals or teams advocate the importance of visual management as a concept, practice, or tool to identify problems or promote empowerment. Preparing some questions to stimulate the students' remembrance, the lecturer considers it a space of student's freedom to avoid the oppression from cultivation activity. On the other hand, students discern the nature of the vocational education system, which tends to link with the industrial demand of quality. The frequent instruct production pervades the remembrance of 5s steps and actions, elucidated in Table 2 below.

Table 2 5s Kaizen Lecturer's Instruction

Type of 5s Kaizen	Professor's Instruction
Seiri (sorting)	What is Red label (specific label)?
Seiton (set in order)	Put the stuff according to destination and degree of usage.
Seiso (sweep)	What is equipment to clean this equipment (specific equipment)? Furthermore, please do not forget to check the machine.
Seiketsu (standardize)	Please remember the steps before and after working in this lab. How many grams of oil that can we use for this equipment?
Shitsuke (sustain or self-discipline)	**It reflects from students' behavior and performance that is an appraisal by practical examination.

According to Imai (1986), in the Japanese sense of management team, quality is visualized throughout the process from procuring, developing, designing, manufacturing, marketing, distributing, and servicing the products or services using the quality assurance system of Quality Function Deployment (QFD). Preparing some questions to stimulate the students' remembrance, the lecturer considers it a space of student's freedom to avoid the oppression from cultivation activity. On the other hand, students discern the nature of the vocational education system, which tends to link with industrial demand.

> *"We, as lecturers, use the methods of giving the questions as a particular form of pedagogy. We understand that vocational education is a place of human resource development in accordance with the labor demand where the pedagogy activity is all about remembrance skills."*

Thai-KOSEN follows the notion of quality as cost-effectiveness, which refers to the entire cost of developing, manufacturing, marketing, and servicing the product or service. Workplace cost reduction does not imply cost reduction, and it is all about budgeting. The cost management teams supervise the process of designing, producing, and selling high-quality products or services at a cheap cost. The way a product is developed, manufactured, and marketed can significantly waste resources. The present corporate rivalry for quality and pricing is becoming more intense. As a result, the only way to survive is to improve quality while decreasing costs. Better cost management should result in cost reduction. The objective is to create a management system that saves money while maintaining quality.

Japan's KOSEN-KAIZEN for Economic and Sustainability in Thailand

Using the 1920 Vygotsky's Activity Theory (1978), this research can observe the activity mechanism of the relations among KOSEN, Kaizen, and Sustainability development of which KOSEN as a subject to contribute the object of 3Ps Sustainability through its mediating of KAIZEN value. In the first opening of Thai-KOSEN in 2018, there were 300 students applicants, of which only 24 students were accepted (Investment Services Center, The Board of Investment, Office of the Prime Minister, 2020). EEC becomes a goal of KOSEN graduates where KOSEN embeds KAIZEN, which supports 3Ps; people, profit, and planet required by most Japanese companies in aligning with EEC establishment in 2017. Therefore, the KOSEN establishment in 2018 has been the most outstanding accommodation bolstering the EEC and Thailand 4.0. (Sakai, 2018)

The impact of this KOSEN-Kaizen to Thailand is obviously to support the Eastern Economic Corridor (EEC) vision for Thai economic growth, where it aims to provide new jobs for more than 400,000 skilled labors by 2023 (JICA, 2016). Therefore, it has been seen that KOSEN can create a promising future career path. Below is the detailed demand for skilled technicians and engineers where KOSEN (Secondary to Bachelor education system) takes the most significant number of job availability for two levels of education High Vocational Certificate for 140,039 and Bachelor and higher 199,901 in Table 3.

Table 3 Industry Demand of Engineers and Engineering Technicians in 2023

Below High School	High School	Vocational Certificate	High Vocational Certificate	Bachelor and Higher	Total
7,761	4,548	54,478	140,039	199,901	406,727

Source: JICA, 2018

From Bernstein's Classification and Framing, work benefits to discover the detailed fundamental social field, for instance, political and epistemological issues (Pluim et al., 2020). Due to that, this paper sought to examine to what extend has Japan's ODA presence in Thai Vocational Education affected economic growth and labor quality improvement under the 3Ps sustainability and SDG 8 decent work and economic growth framework.

Bernstein's work is mainly recognized for its application in many different empirical situations discovered in the educational field associated with classifying power and control (Walford, 2007; Pluim et al., 2020).

In summary of Bernstein Classification and Framing in the result of research finding is described in Table 4 below:

Table 4 Summary of Bernstein Classification and Framing on Japan's ODA and KOSEN in Thailand

	Strong Classification (C+)	Activity Mechanism	Strong Framing (F+)	Activity Mechanism
People	C+, Thai Philosophy	Thai pedagogy must fit the sufficiency economy of Thai's philosophy	F+, Lecture Content F+ Cultural Value	5S-Kaizen in Curriculum, Material, Syllabus
	C+, Japan's ODA	Japan's ODA was established under the Thai National Education Plan 2017-2036		
	C+, Market Demand	Thai Ministry of Education and Ministry of Labor intervened with FDI investors		
Profit	C+, Labor Skills	KOSEN pedagogy in Thailand is established under Japan's ODA in Technical Cooperation (TC) and Loans modalities for HRD training program focusing on industrial technical and vocational skills improvement	F+, Lecture Content F+ Cultural Value	5S-Kaizen in Curriculum, Material, Syllabus
	C+, Cost	The 5S values include the emphasis on the effective use of industrial materials.		
Planet	C+, Waste Management	The 5S values include emphasizing the awareness of environmental waste issues by recognizing the relationship between humans and the earth	F+, Lecture Content F+ Cultural Value	5S-Kaizen in Curriculum, Material, Syllabus

The predominantly strong classification and Framing characterized the strong interference of actors on knowledge creation by strong boundaries applied to national policy influencing the pedagogy activity. The establishment of KOSEN is strongly leveraging the Thai vocational education where the country positioned the KOSEN under their consideration of National Legislative Assembly number 14/2553 to proceed with the draft law, constitution, or bill under the Ministry of Education and Sport. KOSEN is acknowledged as the best "model" to foster innovative and skillful students in providing the mathematical knowledge that Thailand Development Research Institute (TDRI) found out the lack of students' mathematical level standards. As a result, KOSEN is approved to bolster the Thailand 4.0 and Eastern Economic Corridor policy.

Furthermore, the policy established has strongly classified and framed the pedagogy activity in which teachers lead teaching and learning activities. Teachers or lecturers have taken complete control over students where the trajectory of curriculum, material, syllabus, and so forth have been under the "demand" of industry. As a result, It reflects the influence power of Japan, including under the education system, KOSEN, where KAIZEN value has been taught. Besides being taught under Kaizen values, the students are also trained to learn Japanese (Aburatani, Sittichivapak, Kano, & Uehara, 2020).

Based on 5S-Kaizen, students must acknowledge that every organization has problems; however, the problems are the opportunity to improve. The most basic element of Kaizen is that the persons who perform a specific work are the ones who possess the most knowledge, especially the knowledge of task measurement and performance.

The two elements from "Kai" and "Zen" are not meant to be separated to emphasize the critical element of its ongoing and never-ending improvement process. Management also includes tasks such as policy implementation, standardization, training, and education. When it comes to training, most businesses today place much too much emphasis on imparting information. Group learning in Kaizen emphasizes strengthening the core principles derived from common sense, self-discipline, order, and economy. Quality, cost, and delivery are all intertwined concepts. In linking to the attainment of SDG 8, KOSEN bolsters the two categories from SDG 8, mainly SDG 8.3 and SDG 8.6, in Table 5 below.

Table 5 KOSEN-KAIZEN for SDG 8 Attainment

SDG Priority	Indicators	Interview
SDG 8 Decent Work and Economic Growth	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services 8.6 By 2020, substantially reduce the proportion of youth not in employment, education, or training	"*KOSEN* bolsters the recipient country development policy under economy, social, and industrialization." "*KOSEN has a clear future for young engineers to proper and decent work who comprehend the social, economic, and environmental issues*."

Knowledge transmission of Kaizen in KOSEN values the manner of lecturer's communication to students. Eventually, it can be sustainably reflected on the students' behaviors, although the embodiment process reinforces the practical examination. The knowledge-to-practice experience also allows improvements in the industry's environment, improving students' skills and competency.

Discussion

Japan's ODA in Thailand: Power and Control in Pedagogy System?

Through his Classification and Framing theory, Bernstein (1990) argues that social power and control can manifest in the pedagogy system. He explains pedagogic discourse as a system of rules and production of knowledge within pedagogic interactions. The educational knowledge reflects the surface manifestations of ideological construction through the pedagogic practice. In identifying the pedagogic relationships with curricular knowledge, Bernstein argues that certain ideologies might circulate selecting curricula contents based on cultural reproduction. According to Bernstein, classification means power, and framing means to control that forms the structure of the symbolic linings within the classrooms' agents, discourses, and sites.

From Bernstein's Classification and Framing, the KOSEN system's case study in Thailand has been interpreted as "cultural imperialism", touching the people living in the Third World (Carnoy, 1974). It is conceptualized as the developed countries – the center – dominating the mon-industrialized country by the notion of "globalization" and "dependency" (Morris, 2008; Carnoy, 1974). Likewise, KOSEN brought from a developed country is firmly "cultural imperialism" as reflected through institutions and organization of education (Mather, 1995), which tends to operate by suppressing local languages in this instance Japanese, traditional customs of cultural expression and belief system exemplified Kaizen value. Therefore, under this study case, the power, social control, and knowledge created by Bernstein's Classification and Framing of vocational education are controlled by certain parties and major powers. Power relations between the hierarchal categories of the First, Second, and Third world legitimize the boundaries and categories of instructions in educational knowledge.

The Third world has accepted these ideas, which the education system plays an essential role in obtaining ODA offers, besides the implication of economic roots and political consequences, prevailing the power of culture in the global environment (Godsgift & Obukoadata, 2008). From the overview of the education system, knowledge transmission is influenced by the trajectory of the sociology of education, curriculum studies, and teaching and pedagogy (Pluim et al., 2020). Shortly, Bernstein's work contributed to the proposition of knowledge in the institutionalization of schooling that had conventionally been classified, transmitted, and organized in many means, reinforcing broader power and social control (Pluim et al., 2020). According to Robertson (2003), the brief overview of Bernstein's work is the ideas of classification and Framing and the pedagogic device with particular consideration of the recontextualizing principle as constructs that may potentially identify discourses that are privileged in VET policy. Bernstein constructed the twin code modalities of classification and Framing, describing forms of dynamic learning activity, especially in the classroom as pedagogic code (Badger, 2010; Nylund et al., 2020). Notwithstanding, Bernstein's Classification and Framing have also been described for other social fields, especially power distribution and the principles of social control under created knowledge (Pring, 1975).

Conclusion and Suggestions

Using Bernstein's Classification and Framing, the analytical description of the relationship among KOSEN, 5S-Kaizen, and Sustainability can be practically addressed. The findings and discussion demonstrate that Japan's ODA and HRD policy in Thailand is categorized by strong classification related to empowering vocational education under the National Education Policy. Furthermore, evidence of strong classification 5S-Kaizen in Thai-KOSEN can contribute to the sustainability of 3Ps (people, profit, and planet) through the strong implementation of Thai Philosophy (C+), Japan's ODA (C+), market demand (C+), labor skills (C+), cost (C+), waste management (C+). In a similar vein, Thai-KOSEN as an educational institution has been strongly represented by the HRD policy and FDI, which influences its curriculum and pedagogic activities reflected in the curriculum, material, and syllabus. The method of questions and answers in-class activity becomes controlled or a strong framing, directed and prepared by the lecturer (F+). Therefore, the 5S-Kaizen cultivation under KOSEN strongly contributes to the sustainability pillar of people, the planet, and profit. With its principal value of Kaizen, linking with that evidence, KOSEN has given a relevant skill for industrial demand, which leverages the attainment of Sustainable Development Goals priority number eight decent work and economic growth in Thailand. Nevertheless, the schooling practices also actualize power relations in symbolic control in a centralized instruction.

This study suggests pedagogic discourse in Thai-KOSEN education as reflected from the implementation of Japan's 5S-Kaizen in its curriculum, materials, and syllabus. The discourse brings an examination between skills (instructional discourse) and power relations in social order discourse. This study recommends the Thai educational system in KOSEN to balance the symbolic control of 5S-Kaizen and integrate with Thai philosophy dimensions.

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