International Paper Presentations

(Break out room 5)

High-Performance Political Regime

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Abstract

Thailand has adhered to a democratic parliamentary system since the 1932 regime change, but the ethical problems of politicians from politicians seeking personal gain rather than public. There are corruption and using of powers by the parties is irrespective of the public interest and consequences. Thai society has demands against politicians in terms of vision, knowledge, ability, morality and responsibility to the country. In particular, politicians must not corruption. People have right to select politicient to be their representators. However, they are not good know to all of the applicants. Therefore, a high-performance political regime has been proposed. Starting from the selection, assessment, development and retention of high-performing politicians in political regimes to create the potential of the country to develop able to compete in the midst of globalization with sustainability for the well-being of the people truly.

Keywords: Thai Politics, Competence Selection, Evaluation, Development, Treatment of Politicians

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The Sustainable Professional Development Contribution:

Registered Nurses' Informal Learning Experiences in Thailand, Australia and USA

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Abstract

The objective of this article was to understand the lived experience of registered nurses embracing informal learning for sustainable professional development during the COVID-19 pandemic. Using a phenomenological approach to extract the key contributions from registered nurses who have worked in 3 different countries; Australia, Thailand, and The USA. Four macro themes were identified: 1) effectively and actively adapting to sudden change, 2) survival instinct, 3) lifelong learning concept, and 4) being self-directed learners with a high level of self-efficacy. The findings highlighted the importance of informal learning for sustainable professional development for registered nurses, especially during the COVID-19 pandemic. Nurses had to care for patients while ensuring their own personal safety and well-being which were factors motivating them to continually educate themselves to survive the pandemic while working effectively. The findings of this study can provide insight and a better understanding of the value and importance of informal learning in the clinical setting to educators and all stakeholders participating in nursing contexts.

Keywords: Informal Learning, Nursing Education, Sustainable Professional Development, COVID-19, Registered Nurses

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Introduction

Due to the complex nature of the role of healthcare professionals and their responsibilities, the education of this workforce is necessarily multifaceted and challenging especially during dramatic circumstances such as the COVID-19 pandemic (Kumar et al., 2021). It should be pointed out that the COVID-19 pandemic impacted learning styles and learning opportunities and the way of accessing up-to-date knowledge, especially for those nursing professionals who are involved in personal interaction with peers and who provide healthcare services to patients. Nursing education requires both theoretical learning, usually provided in lectures by professionals and nursing trainers, and practical skills-based learning. Nurses are professionally required to possess not only paramedical skills such as managing medications, administering injections, and wound care, but also soft skills, or bedside skills, such as therapeutic communication with patients, counselling to both patients and their relatives, and behavioral management of patients (Graham et al, 2020).

Given the worldwide, pandemic nature of COVID-19 since early 2020, challenges to all sectors of the international society have been encountered in all aspects of nursing and health care, from leadership at the top to service at the front lines (Watkins & Marsick, 2021). Looking closely at nursing professionals, it was obvious that nurses work in an ever-changing healthcare environment where learning plays a key role in their professional development, their job satisfaction and work engagement, and the need for continuous improvement in patient healthcare procedures (Skår, 2010). This is consistent with the statements provided by Gerrish (2000) and Jensen (2007), indicating that nursing professionals have shown to be active lifelong learners throughout all stages of their careers. Further, nurses are active learners who seek socially-oriented learning activities including the exchange of ideas, sharing of information from the clinical setting, and confirming the general knowledge and practical procedures for patient care with colleagues in uncertain situations (Estabrooks, 2005). All of these learning processes among nurses can be recognized through their actions when they seek knowledge to improve their technical nursing skills (Berings et al. 2007) and when they handle the mistakes or errors occurring in the workplace (Bauer & Mulder, 2007).

Mochizuki and Fadeeva (2010) asserted that education and training are fundamental elements to creating better personal change management skills and achieving sustainable development. However, Kopnina and Meijers (2014) pointed out that, regardless of the extent

and excellence of the education that people receive, a gap still exists between what people learn and an understanding of how it motivates people to modify their behavior to better solve problems and address confronting issues, particularly sustainability-related issues, as well as creating a "change agent" mindfulness to deal with complex issues in society. This seems to be related to the ongoing discussions on competencies for sustainable development, particularly education for sustainable development (ESD) (Mochizuki & Fadeeva, 2010). According to Delors (1996), the four pillars of education for the 21st century were conceptualized in the UNESCO report as learning to know, learning to do, learning to be, and learning to live together which are all expressed as competencies. More clearly, UNESCO (2005) defined various kinds of the essential characteristics of education for sustainable development (ESD). According to UNESCO (2005), it can be seen that some partial aspects of those elements appear to be relevant to this present study which deals with "the well-being of all three realms of sustainability – the environment, society at large, and the economy, which promote life-long learning and engagement in formal, non-formal and informal education, and which use a variety of pedagogical techniques that promote participatory learning and higher-order thinking skills" (pp. 30-31). As reported by UNESCO-UIS (2012), the core of ESD is the application of formal, non-formal, and informal education at all levels as an integral part of lifelong learning. Thus, the informal learning experiences of registered nurses whose responsibilities deal with healthcare and the well-being of human beings during the uncertain situation of the pandemic are worth examining.

Focusing on the COVID-19 pandemic and nursing context, pandemic-related restrictions in face-to-face interactions and hospital-based patient-care opportunities have presented some barriers to nursing education (Alsoufi et al., 2020). Further, nursing professionals' job responsibilities and duties appear to be multi-task skills. Therefore, relying solely on formal and in-house training programs at all times during the pandemic outbreak seems to be one of the factors causing ineffectiveness in providing healthcare services to patients. Thus, informal learning plays a vital role in nursing education which can enhance recent knowledge about clinical practices and procedures in the workplace. This echoes the study of Marsick (2006) where it is suggested that approximately 80% of skills at work are learned in informal day-to-day interaction.

Theoretically, informal learning can be defined as "experiential, non-routine and tacit" (Marsick & Watson, 1990, p. 15). Further, informal learning can be considered as incidental learning in which learners are not always consciously aware of when learning takes place

(Marsick & Watson, 2001). Further, from Eraut (2004), workplace learning research has recognized that informal learning plays a significant role in continuing professional development (CPD). It can also be acknowledged that informal learning has been widely defined in multifaceted and complex dimensions (Wilkinson & Walsh, 2014) such as incorporating both intentional and incidental learning through peer discussions and networking (Eraut, 2004), learning from trial-and-error (Marsick & Watson, 2001), learning through work processes (Malcolm et al., 2003), and practice-based groups (Rial & Scallan, 2013).

With regard to informal learning in the clinical setting, Bjørk et al. (2013) indicated that there are few observational studies on staff learning. Consistently, Berg and Chyung (2008) postulated that the tacit nature of informal learning can be an important factor that makes the investigation of informal learning in the clinical workplace difficult to be conducted. A review of the literature identified some studies focusing on this topic of investigation. More specifically, Hunter et al. (2008) aimed to identify how nurse clinicians learn cooperatively with and from each other in a neonatal intensive care unit (NICU) and they were able to highlight the importance of workplace learning and learning processes among nurses that took place informally, incidentally, interpersonally, and interactively. This accords with Ryan et al. (2010) whose study of mentoring as relational learning in perinatal nursing practice suggested that doing clinical work among nurses has been acknowledged as informal learning. Further, Bjørk et al. (2013) stressed that "informal learning for the nurses varied greatly according to leadership styles and social relations in the ward" (p. 428) and that informal learning processes occur through participation in group activities, working alongside others, tackling challenging tasks together, and working with clients.

Previous studies attempted to explore the informal learning experiences of nurses in various contexts such as exploring informal learning among hospital nurses in Norway (Bjørk et al., 2013); work-based mobile learning experiences of registered nurses in Canada (Fahlman, 2014); investigating informal mobile learning in nurse education and practice in rural South Africa (Pimmer et al., 2014); exploring informal workplace learning in primary healthcare for continuous professional development (CPD) (Joynes et al., 2017); and examining the influence of informal learning and learning transfer on nurses' clinical performance in South Korea (Yun et al., 2019). From these studies, it can be seen that the topic of informal learning enhancing the professional development of nurses has attracted scholars' attention internationally, and those scholars have attempted to study the lived experiences of informal learning of nursing professionals in non-COVID-19 pandemic contexts.

However, few studies have investigated the informal learning experiences of nursing students in COVID-19-type pandemics. For instance, Kim (2021) studied the informal learning experiences of nursing students regarding patient safety management activities at three universities in South Korea. Further, numerous studies have focused on nursing students' attitudes, perceptions, perspectives, experiences, and readiness to transition to e-learning during COVID-19 across countries such as Indonesia, United Arab Emirates, and Saudi Arabia (Achmad et al., 2021: Mukasa et al., 2021; Castro et al., 2022), to name a few.

To the best of the authors' knowledge, there has been no detailed investigation of the informal learning experiences of registered nurses during the COVID-19 pandemic. This is consistent with the suggestion of (Bjørk et al., 2013) that little attention has been paid to specifically exploring informal learning among nursing professionals. To fill the gap, the purpose of this phenomenological study was to explore the informal learning experiences of registered nurses from diverse backgrounds and clinical settings such as Thailand, the Philippines, the United States, and Australia to gain insight and wider perspectives about how informal learning takes place and can be supportive to their sustainable professional development during the COVID-19 pandemic outbreak. The findings of this study will be beneficial to educators and all stakeholders such as the chief nursing officer, director of nursing, nurse supervisors, nurse practitioners, bedside nurses, and all involved people, to better understand the importance of informal learning in the clinical setting. They can then promote informal learning by building a conducive environment and a culture that facilitates and supports various types of informal learning for all nurses in the ward. Specifically, this study aims to answer the following research question:

How does informal learning enhance the sustainable professional development of registered nurses during the COVID-19 pandemic?

Literature Review

Adult learning and informal learning in the nursing context

The core concept of andragogy is defined as the method and practice of teaching adults. However, Loeng (2018) highlighted that the term 'andragogy' originally came from the Greek in which aner (genitive andros), means 'man', while again means 'to lead'. So, the term 'andragogy' means 'leading men', which can be paraphrased as 'leading adults' (Loeng, 2018). This is consistent with Knowles's idea (1977), which explained that adult educators in

Europe attempted to differentiate adult learning from the conventional theory called 'pedagogy'. According to Knowles (1977), a German adult educator had coined the term 'andragogy' which derived from the Greek root word of 'aner', meaning 'man not boy' in 1833. Since then, the term 'andragogy' has been employed to be the name of the faculties/schools in many universities such as the University of Belgrade, the University of Zagreb, and the University of Amsterdam.

More recently, Knowles (1977) indicated that Concordia University, which is a merger of Loyola of Montreal and Sir George Williams in Montreal, established an undergraduate degree program in andragogy and is currently about to offer such a program at the master's degree level. In recent years, andragogy has increasingly been accepted as an emerging body of theory for adult learning, and many universities in Western countries, including, for example, Concordia University in Montreal, an early provider of such courses, offers bachelor's degrees, master's degrees, and doctoral programs in adult education. Interestingly, Werner and Desimone (2012) provided the four hypotheses on which andragogy is based: (1) self-directed; (2) knowledge and experience; (3) readiness to learn relevant tasks; and (4) motivated to learn and expect to immediately apply to the real-world context of career.

In informal learning, Fahlman (2013) noted that many researchers have attempted to define the concept of informal learning from different perspectives such as self-directed and intentional or incidental or unplanned learning, where we see such learning occurring both intentionally and incidentally through co-worker discussions, network, errors, work processes and practice as previously mentioned. However, due to the multifaceted and complex nature of informal learning, there is still no agreed definition of the concept among scholars. Kelly and Hager (2015) then restated the concept of informal learning as learning that takes into account all learning situations that exclude formal learning. Corrigan and Curtis (2017) further explicated that all learning processes excluding learning in the formal context can be considered informal learning, resulting in "a large and diverse repertoire of circumstances and conditions for informal learning" (p. 23).

Based on the model of informal and incidental learning suggested by Marsick et al. (2010), informal learning occurs outside "formally structured, institutionally sponsored, classroom-based activities" (p. 63), and informal learning is based on experiences that are associated with meaningful job activities. To use an iceberg as a metaphor to explain the concept of informal learning, Coffield (2002) suggested that the part above the surface of the

water would be sufficient to cover formal learning if all learning were to be represented by an iceberg, but the submerged two thirds would be the focal part of informal learning.

To facilitate informal learning in nursing education, Corrigan and Curtis (2017) reported that various types of leadership approaches (e.g. collaborative leadership, distributed leadership, shared leadership, collective leadership, cooperative leadership, democratic leadership) are required to foster and promote informal learning in the clinical context. This echoes the ideas of Allan et al. (2008) and Ratnapalan and Uleryk (2014), highlighting that leadership for learning should be a priority for all healthcare systems to facilitate all nurses from all units/departments to learn, to carry out their work effectively, and to improve patient care and safety. Day (2000) indicated that meaningful leadership in developing a more collaborative manner can help to build a foundation of mutual trust and respect and develop the reciprocal obligations and commitments among employees in the organization.

Closely looking at previous studies relating to the importance of informal learning in the clinical setting for nursing professionals, Fahlman (2014) conducted a qualitative descriptive inquiry, using semi-structured interviews, to explore ten Canadian registered nurses' experiences of using mobile devices for individual and collaborative informal work-based mobile learning (WBML) Participants from this study reported that they used their mobile devices for accessing evidence-based resources and did self-study when dealing with challenging and new situations, procedures, and/or treatments.

A study conducted by Bjørk et al. (2013) focused on exploring the opportunities for informal learning among Norwegian nurses working in a hospital ward, through a triangulation approach for data collection (i.e. participant observation, ad hoc conversations, and formal interviews). The findings revealed that the size and physical structures of the ward, role modeling by the nurse leader, and systems and artifacts that scaffolded learning, interaction, and collaborations among all nursing professionals, were the primary factors mediating the opportunities for informal learning in the workplace. It is worth mentioning that the role model presented by the nurse leader was one of the factors supporting the informal learning in the ward, a finding that is in line with Corrigan and Curtis's (2017) suggestions about the types of leadership that are likely to foster informal learning in the workplace.

In more recent work, Joynes (2017) explored informal workplace learning in primary healthcare for continuous professional development (CPD) of general practices, practice nurses, specialist nurses, and managerial and administrative staff through a qualitative multi-method approach. Joyne's study shed light on the essential role of informal learning in the

primary care workplace toward the continuous professional development (CPD) for healthcare professionals, and also highlighted that informal learning can support healthcare professionals at the individual level by sharing best knowledge and practice with each other, while at the same time, it can be a great contribution to the organizational level to improve patient care and treatment service provision.

As previously mentioned, past research attempted to investigate the informal learning experiences of nurses and other healthcare professionals in healthcare settings in the context of the non-COVID-19 pandemic. To add the findings of this present study to the existing literature, the research purpose was specifically to highlight the informal learning experiences of registered nurses from diverse nursing contexts during the COVID-19 pandemic circumstance, a situation that has been acknowledged as being poorly researched previously. By exploring how nurses use their learning strategies to obtain updated knowledge and clinical practices through informal learning, we can correctly acknowledge that informal learning experiences and efforts made a great contribution to providing effective and efficient patient care as each successive day of the COVID pandemic unfolded.

Methodology

Phenomenology is the methodology used for this study. Phenomenology is based on the belief that truth and understanding of life and phenomena can emerge from an individual's lived experiences (Byrne, 2001). This approach is considered by many social researchers, including the authors, to be best suited to extract the lived experience of the registered nurses who have experienced utilizing informal learning to their professional development during the rise of the pandemic as we believe they have some in-depth knowledge to contribute to this phenomenon.

Participant Selection

For the sampling selection method, we used convenient sampling techniques to approach the participants who were accessible to us. The snowball sampling technique was employed to recruit sufficient participants for the study, which resulted in 7 participants being recruited. These were all registered nurses who are working in healthcare settings in different

countries such as Australia, Thailand, and the USA. All of them had firsthand experience in managing work during the COVID-19 pandemic which supported the assumption that they would be able to contribute appropriately to this study.

The choice of the seven participating registered nurses was based on the following reasons. First, these seven nursing professionals are from four different countries. This provides a more insightful and deeper understanding of the lived experiences of nurses in the different social environments when engaging in informal learning and dealing with patient care during the pandemic. Second, the participants' working experiences vary from 2 to 14 years in different wards and places such as a school, a prison, COVID-19 wards, and the in-patient department (IPD) of a hospital. Interviewing those participants as senior nurses or early career nurses, from diverse contexts while discussing the same topic of investigation, facilitated the researchers in gaining rich data and wider perspectives. Lastly, the matter of their accessibility was resolved by two of the researchers contacting them through family networks and ensuring that all participants were willing to participate in this research project voluntarily.

Trustworthiness

Interview protocol refinement (IPR) was used to develop interview questions of this study. IPR has 4 phrases. Phase 1 is ensuring interview questions align with research questions. Phase 2 is constructing an inquiry-based conversation. Phase 3 is receiving feedback on interview protocols. Phase 4 is piloting the interview protocol (Castillo-Montoya, 2016). We proceeded through each phase appropriately, and 5 comprehensive interview questions resulted (see appendix A).

To ensure trustworthiness in the coding process, Cohen et al. (2007) suggested that the peer debriefing procedure is one of the important steps for data coding in qualitative research. Selecting one or more peers, independent people that specialize in qualitative research and data coding of qualitative inquiry, is vital in order to establish credibility in the data analysis process. In this present study, researchers contacted a researcher who is a full-time lecturer in the field of English language education at a Thai public university and specializes in qualitative research, in order to review the coding process. Specifically, one interview transcript was selected to serve this purpose. This selected transcript was sent to a peer to code based on Braun and Clarke's (2006) six phases of thematic analysis. Two researchers were involved in coding this selected transcript in order to compare the similarities and differences of the emerging coding patterns throughout the transcript. In the final stage of this process, both

researchers and the selected peer discussed the coding patterns to find a consensus when disagreement regarding the coding patterns occurred.

Data collection and analysis

Data collection was undertaken by holding in-depth interviews. As we were still in the COVID-19 pandemic situation when conducting the interviews, and some participants were residing in different countries, it was not convenient to schedule face-to-face interviews with the participants.

We took advantage of technological advances in Internet communications to use the Zoom application for interviews. This online interviewing facility gave us two advantages. First, it removed the inconvenience of both interviewer and interviewee having to undergo required COVID-19 precautionary measures to meet in person. Second, the Zoom application offers auto transcript generation. This is helpful for data collection and analysis, particularly as each interview lasted for between 60 minutes and 90 minutes which exceded the criteria establishing it as an in-depth interview (Showkat & Parveen, 2017).

Braun and Clarke's (2006) six phases of thematic analysis of qualitative inquiry include (1) data familiarization, (2) initial coding generation, (3) search for themes based on initial coding, (4) review of themes, (5) theme definition and labeling, and (6) report writing. Conducting each step thoroughly, we ensured that all emerging themes represented the registered nurses' lived experiences of informal learning. More specifically, we read all interview transcripts several times to clean the data and to familiarize ourselves with the data set. Further, we paid attention to the keywords and conceptualized those keywords in connection with the context of the study where codes were identified and themes emerged. In the last phase, we reviewed these emerging themes and named the themes for further steps of analysis and interpretation. The transcripts were identified by the abbreviations as pseudonyms for the participants (i. e. AS, CD, CF, etc.) to guarantee anonymity.

Results

Table 1: Demographic information of participants

Name/Position	Age	Gender	Nationality	Current workplace	Years of Experience
AS/School nurse	35	Female	Filipino	Thailand	12
CD/Prison nurse	35	Female	Filipino	USA	13
CF/Ward nurse	35	Female	Filipino	Australia	12
MG/COVID ward nurse	35	Male	Filipino	USA	14
NT/COVID ward nurse	24	Female	Thai	Thailand	2
FM/COVID ward nurse	24	Female	Thai	Thailand	2
PN/Ward nurse	24	Female	Thai	Thailand	2

The research question was posed to enable us to understand the personal experience of participants of informal learning and how this benefited their professional development as a nurse during the COVID-19 pandemic. Four emerging themes were identified: (1) effectively/actively adapting to sudden change; (2) survival instinct; (3) learning never ends; and 4) being self-directed learners with a high level of self-efficacy.

Effectively/Actively Adapting to Sudden Changes

Nursing during the COVID-19 pandemic faced significant challenges, especially during the surge of the pandemic when everything changed quickly and constantly and the nurses were faced with the challenge of keeping themselves up-to-date on contemporary advice relevant to their circumstances. If they had not kept up with the new information about the disease, they would have been ill-prepared and unable to manage the work effectively. This theme was identified in all the discussions with all the participants. When we asked how had they viewed informal learning as enhancing their professional development as a nurse during the surge of COVID-19, Participant AS responded:

> *"Informal learning allows me to adjust to any sudden change during*
> *this Covid-19. This new disease changes to different variants in a short*

period. We as school nurses learned and adapted through the announcements regarding the public health situation, information from WHO, and suggestions from our group of International Nurses in Thailand. Informal learning along with the trend of doctor's recommendations from the medical certificate given to us allows us to give health education to our anxious patients." **(**AS, age 35, school nurse, Thailand**)**

CD also saw that informal learning helped her keep up with the fluid situation in her workplace.

"Executing 100% compliance for the effectiveness of containing Covid is hard when following protocols. Trial and error during those times were needed to successfully contain the spread of Covid 19. After the formal training, there are still scenarios that will most likely test you on how you will proceed by following formal training in different scenarios. Some scenarios are not mentioned during formal training. Applying informal learning through experience and from other co-workers' points of view with which the majority agrees, like restarting the whole 14 days quarantine for those 14 inmates, is an acceptable process compared to following the guidelines and protocols to release the uninfected after the 14 days. This trial and error approach has successfully contained the spread of infection." **(**CD, age 35, prison nurse, USA**)**

MG amplified on his sharing that informal learning especially from his experience of trial and error helping him to adapt his knowledge to his day-to-day work in his COVID-19 ward.

"Learning the basics about this pandemic from different means of informal learning is a no brainer. Informal learning was accessible, easy and convenient. Every day, our team would share what we learned from the news, FB posts or any sharing experiences of nursing networks. They were very helpful and as we slowly go back to our normal lives, as a nurse, there is so much more to be learned from this informal learning." **(**MG, age 35, COVID ward nurse, USA**)**

CF, a nurse practitioner working in an inpatient ward, agreed that informal learning had helped her tremendously in her routine work.

> "*Before the pandemic, the in-service training was limited to the staff working on the day; however, when it was changed to a regular virtual session, staff not rostered to work could also benefit from this training by attending the session from the comfort of their home. The team not rostered to work is not obliged to attend the virtual session but, because it was convenient, almost all staff that were not rostered to work attended online sessions most of the time. This virtual in-service training is an effective tool for us to learn new things about COVID-19 and be able to manage our ward and at the same time we can protect ourselves effectively.*" (CF, age 35, ward nurse, Australia)

Consistent with the ideas of senior nurses, one young nurse also stated that she had to adapt herself a lot by keeping updated with important information about preventive measures and vaccinations during the pandemic. It is assumed that the information about this disease, such as how to get the right vaccine for each particular age group and the direction of the government on how to handle such a difficult situation, was still "up to the air" at the beginning of the spread of this disease. Thus, actively keeping updated with viral information pertaining to this disease is an important skill that all nurses prioritized at that time. The view about being an active learner to consume important information during the surge of the virus is evident in the following interview extract:

> "*I think informal learning is very important during the time of disease because everyone is at risk of getting infected. So, as the nurse is one of the healthcare professionals, we need to keep ourselves updated with the information regarding infections, the preventive measures for the virus outbreak, and vaccinations. For example, there are many kinds of vaccinations to fight COVID, we need to deeply understand the side effects of each one of them.*" (NT, age 24, COVID ward nurse, Thailand).

This is the first finding that is very rich in the sharing across all participants. The urge to maximize informal learning to tackle the sudden change of hospital work due to the COVID-19 situation meant that then nurses needed to be agile in the understanding of their role, but

needed to maintain their professional image and appearance at the same time. They were dealing with life and death situations daily, and continuing to educate themselves helped them to work effectively in the unforeseen circumstances of a pandemic.

Survival Instinct

Survival instinct is another theme identified in this phenomenological study. Surviving the pandemic drove the participants to educate themselves regarding the information about COVID-19 disease. AS shared when asked what motivates her to utilize informal learning during the time of COVID-19;

> "We have to keep ourselves updated so we can protect our school community and keep ourselves safe while trying to live a normal life at school as we face this new disease."

Then I asked her elaborate more on this sharing;

> "I have a daughter who was just 6 months old when the pandemic started. Every day I woke up, I would tell myself I have to make sure I took care of myself and would not infect my daughter. Every day, I had to research how to protect myself, how to handle COVID-19 patients, and how to remove and wear the protective gear correctly. I am glad our family survived until now. None of my family members has contracted COVID-19." (AS, age 35, school nurse, Thailand)

CD also expressed the same motivation that she wanted to survive this pandemic which was why she motivated herself to do informal learning activities during the pandemic.

> "As a nurse getting sick is very risky to me and my family as well. Continuously learning and developing nursing skills is very important for me to continue this job. Many medical staff had died during COVID times and nurses included. Many nurses quit their jobs due to exhaustion and lack of staff. Some of us remained. Nursing is a continuous learning experience. The better I develop the knowledge and skills of my profession the safer I am to practice nursing. The safety of the patients and everyone is always the priority." (CD, age 35, prison nurse, USA).

During the peak time of COVID-19 in the USA, MG was moved to the COVID ward where he was to work overtime almost every day to cover the high demands of COVID patients. He was honestly so scared that he would get COVID-19 and eventually die as he had directly experienced seeing one couple who had to be apart from this disease.

> "I couldn't agree more than to say it's taking a toll on my mental health. Seeing patients and family members being apart breaks my heart. And as nurses, we take care of them holistically, meaning we do not only alleviate their physical symptoms but as a person in general. There was this incident where I admitted 2 COVID patients, husband and wife, and eventually, the husband was sent to the ICU and did not make it. And the dilemma was how am I going to tell the wife that her husband died? These are one of the things that I learned the hard way. Learning how to break bad news on top of the ugly and bitter truth. It's a hard pill to swallow but as a nurse, I must do it. I am also scared that it will be my turn soon as I have to deal with this deadly disease day in and day out. I kept educating myself to make sure I am on top of the situation for me to survive." (MG, age 35, COVID ward nurse, USA)

We wanted to conclude this theme with the sharing of CF;

> "I am working here in Australia by leaving my family behind in my home country (Philippines). I was afraid to die but there was no turning back to me. I wanted to survive and the only way to survive was to learn and understand this disease thoroughly. Informal learning helped in this crisis moment and I am glad that I can still survive. Thanks to my resilience." (CF, age 35, ward nurse, Australia)

This theme was very powerful in the sharing of this phenomenon. We sometimes learn to survive and the experiences of these nurses are the living proof of this saying.

Learning Never Ends

Most of the participants agreed that learning is a never-ending process especially when you are practicing nursing. You have to have a lifelong learner mindset.

"The current situation requires us to be very resourceful to survive. Covid-19 is new to most of us. It is constantly changing. Last year, it affected a lot of people around the globe. Any learning regarding this disease is very useful and should be utilized. Every day I would learn new things and those learning has been helpful to my work so far" **(AS, age 35, school nurse, Thailand)**

CR pointed out that informal learning helped her grow in her work every day.
Growth! The same scenario is not presented every day. Patients, treatment plans or reasons for hospitalization differ. Formal learning is a good set of guidelines and protocols to follow but adding informal learning helps each and anyone in the medical field to grow. To grow confidence in what I do will help me stay in this profession." **(CR, age 35, prison nurse, USA)**

CF added that continuing to learn is her focus to provide quality care to patients. Nurses cannot rely on formal training only, they need to initiate the learning through informal learning.
"There is always new evidence-based practice and academic studies available. Nurses must keep up with this new practice to provide quality care to patients. We could not just wait for formal training. We need to take the initiative to actively learn to protect the patients and ourselves" CF, age 35, ward nurse, Australia)

MG amplified his sharing on learning as a never-ending process because the information for nursing is being updated every day.
"Learning is a never-ending process. We learn every day; for our professional or our mental growth. But what I can say is that most people have no clue how science works. And that's a problem. And it is important to keep educating ourselves so that we can protect other people's lives." **(MG, age 35, COVID ward nurse, USA)**

Looking closely at early career nurses' interview responses, it can be stated that primary informal learning opportunities are mainly self-explanatory. Based on selected excerpts from

those responses, it can be seen that two young nurses used various kinds of informal strategies to gain knowledge theoretically and practically. Searching for information on the Google search engine is likely to be the easiest way. It seems that respondents had media literacy skills which they applied to consider which types of sources seem to be reliable sources. Sources appearing on websites provided by governmental agencies and public authorities seem to be reliable sources that young nurses relied on. Further, social networking sites such as YouTube played an important role in the informal learning of this group of registered nurses when they attempted to expose themselves to real clinical procedures and practical skills for some special cases. Further, learning opportunities arising during routine work seemed to be common in the real clinical setting when early-career nurses were curious and aimed to expand their knowledge about such particular cases. This interview statement from FM, age 24 COVID ward nurse, Thailand would prove these points:

> "*For theoretical knowledge, I always search on Google and I chose the websites of hospitals and universities as reliable sources. I sometimes kept myself updated by reading research articles. For example, I frequently searched for recently updated information about COVID-19 from the Department of Disease Control. On this website, there are two channels of sources of information, one for the general public and one for healthcare professionals. However, there is not that much information about nursing procedures and skills. I always obtain information about such clinical procedures by searching on YouTube. I sometimes ask for information from senior nurses when some interesting and special cases emerge incidentally. I even ask senior nurses' permission to observe the case and specific procedures to handle those cases in a special ward. Some cases that I was really curious about, I then self-studied those special cases and related information on the Google search engine and other social media networks after observing from a real context, to expand my knowledge.*" (FM, age 24 COVID ward nurse, Thailand)

In a nursing career, learning is an ongoing process. All of the participants agreed that they are doing what they believe to be valuable. They keep learning and informal learning plays an important role in their lifelong learning process.

Being Self-Directed Learners with a High Level of Self-Efficacy

Self-directed learning is a preferred qualification for a successful adult learner. This theme has been shared and agreed upon among the participants where, to enhance their sustainable professional development, they need to be self-directed learners which also increases their self-efficacy in the workplace. PN shared that:

"*My hospital provides content and knowledge of various topics in digital format. They are in-house materials for hospital staff only. I do self-study about various topics of nursing procedures through this informal learning. I really enjoy and feel more engaged in this way of learning because I can learn anytime and anywhere that I want. Most importantly, I can share what I learned and what I knew from these self-paced learning materials with my colleagues. I feel proud of myself when I can be a resourceful person and contribute something good to my colleagues. This is one way of learning that my hospital provides for everyone during the time that formal workshops are not organized.*" (*PN, age 24, ward nurse, Thailand*)

CF and MG shared the sentiment that being a self-directed learner was a quality that helped them and the community and it made them better nursing professionals.

"*There is always new evidence-based practice and academic studies available. Nurses must keep up with this new practice to provide quality care to patients and more importantly it makes me a better person.*" (*CF, age 34, ward nurse, Australia*)

"*It keeps me motivated because learning is never-ending, it will be with us until the end of time. We can be resilient and keep educating ourselves. This will be beneficial to both my career growth and my performance at work.* "(*MG, age 35, COVID ward, USA*)

This theme reflects simple but meaningful sharing when it was shared in the COVID-19 context where every day was a real battlefield in the hospitals. Keeping themselves educated about the disease was the only way to protect themselves and their communities and the reward of doing that is self-efficacy in the workplace.

Discussion and Conclusion

Given the paucity of research regarding how informal learning enhances registered nurses' professional development during the surge of COVID-19, the objective of this study was to explore the informal learning experiences of nursing professionals and understand how such experiences and knowledge gained from informal learning provide a contribution to the nursing context. Given the registered nurses' experiences with informal learning in the clinical context, as ascertained in the interviews, they recognized the value of informal learning for advancing career development, promoting the ongoing collaboration, performing professional practices, and providing accurate healthcare procedures for patients, which concurs with the findings in previous studies (Fahlman, 2013; Corrigan & Curtis, 2017; Joynes et al., 2017). This might be because nursing education and training are a combination of both theory and hands-on learning experiences in the actual clinical setting (Ross, 2017). Additionally, informal learning has been used increasingly in adult education because of its greater flexibility to foster the freedom of learners to be more self-directed and independent, which has been highlighted in Eraut's (2004) study.

The present study is an important contribution to ongoing conversations about informal learning enhancing the professional sustainability and development in the clinical contexts. The qualitative analysis based on interview data revealed that nurses shared similar views on how informal workplace learning could help them to keep up-to-date and continuously improve clinical practice in a complex and changing environment during the pandemic. This finding seems to be consistent with McClenaghan's (2020) case study of nurses in Ontario, which suggested that informal learning occurring on and off the job is a possible tool that could be used to create a conducive work environment to enhance communication and teamwork skills. As Skule (2004) pointed out, the increased demands, managerial responsibilities, extensive professional contacts, good feedback, and management support for learning, appear to be the working patterns and environment which nurses are facing. Obviously, nurses are required to deal with high demands on the standards of work and are involved with all stakeholders in demanding environments, such as patients, suppliers, owners, authorities, or professional communities. It can be pointed out that these job-related factors and the working environment could stimulate and promote learning among nurses, because their job characteristics are likely associated with learning-intensive work (Skule, 2004). Providing learning conditions relative to work and also outside of work thus seems to be best

suited for widespread informal workplace learning in the nursing context. This case exemplifies that informal learning activities that take place outside of work hours play a crucial role in enhancing the sustainability and development of the nursing profession as much as formal education.

The present study likewise revealed that the registered nurses concurred that the COVID-19 outbreak, the workload of senior nurses, and the unexpected situations such as new cases, up-to-date procedures, and treatments foster the occurrences of informal learning in both clinical settings and other places which they were available for self-study. Findings in the former study suggested that nursing professionals used their mobile phones to access evidence-based resources for self-directed learning when they faced challenging situations and dealt with specific procedures that they had less experience with (Fahlman, 2013). More specifically, the findings of this present study accord with previous investigations which have shown that important information was exchanged among healthcare professionals, and knowledge development was likely to occur based on informal workplace learning (Joynes et al., 2017). Interestingly, the findings of this study also echo (Joynes et al., 2017) point of view that when time pressures occurred, it was likely that informal learning opportunities would take place. This might be because early-career nurses tend to find the best way to obtain knowledge and information to perform clinical procedures accurately and independently, while their senior nurses were occupied with other tasks at critical times in the ward. This is in line with (Marsick et al., 2010) whose model of informal and incidental learning in which informal learning is based on experiences that are associated with meaningful job activities.

This study also highlights that the strict lockdowns and the preventive measures of the COVID-19 pandemic, such as physical or social distancing to minimize the risk of transmissions, were likely to be a driving force for informal learning among nursing professionals. Based on the participants' responses, some of them pointed out that in-house training programs and workshops were not physically organized to prevent the spread of COVID-19; therefore, they have created different means of informal learning through online platforms and social networking sites (e.g. Facebook, YouTube, Tik Tok inter alia), or even self-paced learning materials provided by the hospital. to obtain updated information and new knowledge which could be useful for nursing professional practices. Sharing their knowledge with those co-workers who were willing to learn from others frequently occurred during the crisis of COVID-19. It can be noted that the flexibility and individualized nature of informal learning enable nurses to generate learning relevant to their role, which can be embedded into their career

advancement and professional practices in the healthcare setting (Galletly, 2021). It has been suggested previously that informal learning is a naturally occurring, an ongoing process both inside and outside of the workplace, and informal learning is recognized as being a part of the nursing professional's job (Attenborough, et al., 2019; Jolly et al., 2017).

Another finding from our qualitative study also supports the value of education for sustainable development (ESD), as suggested by UNESCO-UIS (2012), that the core of ESD is the application in all levels of formal, non-formal, and informal education as an integral part of lifelong learning. Being nurses by profession, applying informal learning to their daily routines leads them to the ESD's goals of seeking to sustain the environment and natural resources on which all people depend (Hopkins & McKeown, 2002). The participants strived hard to educate themselves in response to the COVID-19 situation they were facing. They felt the need to save the lives of the patients because human capital is the most important resource that the world is relying on to continue sustainable development. Recognizing the critical importance of sustainable livelihoods is another emphasis of ESD and informal learning enables the participants to continue their lifelong learning journey so that they can be an agent of change to sustain the livelihoods in the societies.

Further, a partial finding of this present study corroborates the findings of (Bjørk et al, 2013), which revealed that the socialization process of nurse professionals seems to drive increased participation in more advanced tasks and promote informal learning in the workplace. Further, our findings are also consistent with (Andersson et al., 2022) who indicated that early-career nurses are required to develop the ability to identify gaps in their knowledge and work capabilities and to use individual learning strategies in preparation for an actual care situation. This also echoes the importance of continuing professional development of the nursing profession which has been highlighted in (Mlambo et al., 2021) whose meta-synthesis of the previous studies showed that nurses value the continuing professional development which occurs in the workplace, both formally and informally, and they also believe that such mode of learning is fundamental to professionalism and lifelong learning in this career. This is in line with the study of Vázquez-Calatayud et al. (2021) that indicated that continuing professional development (CPD), occurring in both formal and informal modes of learning, is a feature throughout the nursing profession, and keeping nurses' knowledge and skills up to date is important in clinical-related performance. Thus, nursing professionals should continue to actively engage in continuing professional development formally and informally to maintain high standards of nursing care and professional practice (Mlambo et al., 2021).

Another interesting point worth mentioning is that individual modes of informal learning can encourage young nurses to be more autonomous. Once early-career nurses have the freedom to motivate their informal learning affairs, they become self-directed learners. This assumption, mentioned previously, can be seen in some young nurses- participants' curiosity and enthusiasm for learning from a case study in clinical practice, and in-house-and-self-paced materials to keep their knowledge up-to-date. The advantages of self-directed learning in an informal mode of learning have been indicated in the research of Fahlman (2014) where it was stated that "mobiles provided flexibility in time and classifies place of learning, convenience, and learner-centered control resulting in perceptions of increased self-confidence and self-efficacy for professional practice" (p. 302). This is also consistent with (Wlodkowski, 2008) whose summary of motivational strategies for motivating adult learners suggested that promoting learners' control of learning can be one of many ways to develop self-efficacy for learning and create relevant learning experiences.

To conclude, since informal learning plays an essential role in promoting self-directed learning, supporting collaborative learning, and enhancing the professional development of nurses by providing such physical space and supportive working environment as needed. This will allow and encourage all nurses from the various units or departments to share their knowledge and up-to-date techniques for clinical procedures, valuably promoting informal learning opportunities in the healthcare context. It is also recommended that nursing staff should be facilitated in terms of place, time, and space to engage in informal learning and to share their knowledge and practice, not only enhances nursing professional development but also contributes to the effectiveness of patient care and the credibility of the healthcare service organization.

Limitation

Due to time constraints, the researchers were only able to conduct in-depth interviews. We are aware that the number of participants in this study is insufficient to provide solid evidence of this phenomenon that we are studying, although we do feel that the information gained has substance. Interviewing a few more nurses would have confirmed that we have reached data sufficiency (Young & Casey, 2019). Lastly, doing the online interview, which was necessary for the circumstances, lacked the opportunity to observe participants' non-verbal language closely, a factor that is very important when conducting in-depth interviews.

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Appendices

Appendix A: Interview questions

- What are your experiences with informal learning for your sustainable professional development?

- What is it like to work during COVID-19?

- How have you found informal learning enhancing your professional development as a nurse during the surge of COVID-19?

- What kinds of informal learning did you use for your professional development? Elaborate each?

- What motivates you to utilize informal learning for your professional development?

- How important is it to continually develop your knowledge in your profession? Please give me an example if it will help amplify your sharing.

- Can you share an incident(s) when you found that informal learning was very helpful to you in your workplace? May it be impacting your work during COVID-19 or how you managed yourself to survive during the pandemic.

Learning and Development's Role in The VUCA World

for Sustainable Organization

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Abstract

VUCA world has brought several changes and challenges to management for decades. However, in the recent VUCA world are more obvious, tangible and paced faster than before. Three key factors currently are the COVID-19 pandemic, technology, and diversity of workforce. Consequently, organizations have to confront a variety of changes and issues such as hybrid work, upskilling and reskilling, as well as multigenerational workforce. To be sustainable, organizations are required to find ways to cope with these realities. In organizations, Learning and Development (L&D) has been viewed as a key to current and future success and sustainability. Given that, roles played and responsibilities performed by L&D in an increasingly VUCA world is a significant and consequential consideration for organizations today. However, few present studies focus on this field which consequently creates a knowledge gap for current and future researches. This paper provides a conceptual framework for L&D's role in VUCA world through a comprehensive literature review. Six roles have been established which can be divided into three groups, traditional roles, evolving roles, and emerging roles. In this study, responsibilities and implications such as digital learning have been clarified. The findings might have the potential to fill a knowledge gap in the literature. Additionally, a clear map to

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organizations on L&D function is also provided. It is our hope that this paper can contribute to establishing guidelines for organizations to better assess their current works and equip L&D to meet and exceed sustainability objectives in the future.

Keywords: Learning and Development, VUCA World, Sustainable Organization, Human Resource Development

Introduction

"The only thing we know about the future is that it will be different." (Drucker, 1986, p. 36). This quote is still true today. Today we are experiencing many collective changes in our lives, VUCA world is what we call our living world today. The VUCA world is characterized by four different types of challenges; volatility (unstable and unexpected external environment), uncertainty (more difficulty predicting trends), complexity (overwhelming with many interconnected parts), and ambiguity (unclear causes and effects with many unknowns) (Chartered Institute of Personnel and Development [CIPD], 2014). These challenges make our vision for the future quite complicated. A number of recent events including the COVID-19 pandemic increases the impact of VUCA world in every aspect of modern life and commerce (Maini et al., 2020). Consequently, this pandemic has required industry leaders and managers to develop and apply new approaches and methods to operations, management and a variety of other roles within organizations (McKinsey, 2020).

Due to the effect of VUCA on the business world throughout the first two decades of the 21st century (Nowacka & Rzemieniak, 2022), organizations are learning new ways to gain knowledge and adapt to the dynamics of the VUCA world (Swain-Oropeza & Renteria-Salcedo, 2019). To meet the VUCA challenges in the working environment, organizations need to develop the vital ability to adapt to and manage change simultaneously by balancing their operations and learning to identify and leverage new opportunities (CIPD, 2014). Therefore, organizational learning is important and reasonable for every member within an organization. Declaring an organization as a learning organization is the right direction to take to assure that every employee is part of developing a dynamic ecosystem of learning, updating knowledge management, applying new training and development, and implementing mentoring processes (Antonacopoulou et al., 2019). For this direction of development to galvanize, organizations must involve people throughout the decision-making process, which requires a qualified managerial staff with specific skills and competencies (Nowacka & Rzemieniak, 2022).

Given the fact that employee development is a key objective for organizations, Learning and Development (L&D) plays an important role in supporting an organization by developing programs with suitable knowledge and skills to empower employees (CIPD, 2014). As rapid changes occur in a VUCA world, a dynamic approach to learning, effective communication, and quick decision-making are essential concerns for L&D within an organization. Nevertheless,

VUCA places pressure on L&D by decreasing resources while simultaneously demanding increased productivity. A curiosity mindset can be developed within an organization through reinforcing employee inquisitiveness, creativity, openness, and disruption tolerance which can contribute to more focused learning and development (Horstmeyer, 2019). Therefore, organizations that desire to survive and sustain themselves in a VUCA world are required to implement and pay close attention to different types of L&D such as intercultural training (to understand different perspectives and behaviors which may improve adaptability, creativity, and innovation), individual training (to identify potential and develop new levels of personal success for employees through more targeted and personalized training), and communication and soft skills training (to help employees to share their goals, expectations, progress with strong communication and soft skills) (Pialat, 2022).

VUCA world poses unprecedented challenges which demand coordination and collaboration from employees across a variety of roles at each level of an organization. Volatility, uncertainty, complexity, and ambiguity can be managed through the development of new organizational structures that take into account diversity within a workforce with respect to mindsets, values, norms, and standards. Furthermore, to be consistent with sustainable development goals (SDGs) in promoting sustained, full, and productive employment, and lifelong learning opportunities for all employees (United Nations [UN], 2015), organizations need to enhance their employees' efficiency in performing to their full potential. L&D can help to transmit the values and skills necessary to make informed choices and shape a more sustainable future for organizations.

To lead change in the VUCA world, organizations need to communicate their desired vision (keep employees informed along the way without overloading them with information), demonstrate a sense of urgency (work fast and show how easy and positive change can really be), create a dedicated team for change (create a strength of belief from employee level), and allow the action to be taken (eliminate all obstacles and make change easier to implement) (Pialat, 2022). Moreover, technological advancements also play an important role in increasing the quality and effectiveness of L&D in organizations. Ultimately, there is convincing evidence to suggest that encouraging and supporting employees to develop their potential by implementing suitable and personalized L&D programs with technology can lead to improved performance across a variety of metrics which can produce increased sustainability within an organization.

Finally, as L&D is a key to the success and sustainability of the organization, especially in the VUCA world, this article aims to provide explicit knowledge and conceptual frameworks for L&D's role in the VUCA world which would be beneficial for organizations to enhance their understanding of the dynamic environment that organizations are facing and how to implement L&D successfully for organizations' sustainability. This knowledge and frameworks are valued in leading organizations to a clearer direction when planning for L&D and bridging a knowledge gap in the literature. The significance of this article is to emphasize the importance of organizational change in the VUCA world leading to the new roles of L&D within the organizations and highlight the new ways of L&D expectantly that organizations can gain knowledge and adapt to the dynamics of the VUCA world for sustainable organizations.

The Important of Organizational Change in the VUCA World

Facing a VUCA environment, organizations have to confront the key drivers of change from the external environment which directly and indirectly impact their operations and objectives. The expected and unexpected changes in the past, present and future affect organizations and how organizations adapt and respond to these forces. CIPD (2014) identifies three key external changes that impact organizations in VUCA which are social and cultural change, science and technology, and economic development. Generational changes and diversity of the workplace have a dramatic impact on organizations (Cetron & Davies 2010). Millennials, born in the 1980s to 2000s, are promptly become main employees in many organizations (Bartz et al., 2017). This generation brings new dynamics to their organizations. Therefore, organizations need to be ready to implement appropriate design of the workplace environment and opportunities for intercultural experiences to assure that all employees across generations perform their work effectively and successfully together (Otieno & Nyambegera, 2019).

As technology offers new and better approaches to managing and operating organizations, it equips employees with more efficient and convenient ways of working across various contexts. Technology also basically changes the operations of organizations and brings many opportunities and advanced tools for employees to develop their skills, which can lead the way for organizations to successfully achieve their goals (CIPD, 2014). Therefore, organizations need to be ready for challenges associated with implementing new technologies. For example, now that the world economy has been severely impacted by COVID- 19, organizations face many challenges.

Organizations have to quickly respond with crisis management plans (Mikusova & Horvathova, 2019) and create new work conditions to protect their employees and business under these unforeseen circumstances (Gunn et al., 2020). By exploring the new modes, demands and roles of work, organizations can continue running and maintaining their businesses as we continue to navigate and move beyond this economic crisis (Baker, 2021).

The changes in the external environment during VUCA seriously impact a variety of internal realities and processes within organizations. Organizations need to quickly respond to these forces by changing their strategy and organization, careers and work, and as well as individual employee capabilities and competencies (CIPD, 2014). By facilitating these changes, organizations have to adopt new organizational strategies and structures. Ultimately, organizations are required to establish a network and connection strategy by having and increasing relationships with other organizations at all levels (Economist Intelligence Unit [EIU], 2014). Organizations are now not only the workplace for employees to perform their daily work, but also places where everyone can socialize and engage with each other, create new ideas, motivate and encourage effective performance, provide training, and develop careers (Gill, 2019). These considerations provide directions for future organizational strategy.

Austin (2010) anticipated that work in the VUCA environment would be more on-demand, collective, flexible, specialized, yet less routine. These predictions are quite salient given the contemporary realities associated with the impact of COVID-19. Besides, a happy workplace is what employees and organizations aim for when designing and implementing models for future work environments (Hart, 2019). Moreover, organizations are moving towards transforming themselves into learning organizations where every employee is encouraged to take responsibility for their own learning with the organizations serving as facilitators by providing support and technology for their employees. Besides, employees need to adjust to the new ways of work and increase their ability in social and cultural intelligence to meet the needs of global organizations (Davies et al., 2011). However, challenges posed by the VUCA environment create conditions where newly acquired skills may become out-of-date quickly. Therefore, learning how to learn and developing an orientation towards lifelong learning is important for organizations, as well as individual employees to more effectively monitor their internal resources, capabilities and competencies (CIPD, 2014).

To confront external and internal challenges in the VUCA world, the ability of organizations to adapt to and manage change is essential. Workplace change occurs in organizations quickly and this has been observable on a grand scale over the past two years due to the impact of the COVID-19 pandemic (Ancillo et al., 2021). For these reasons, organizations must attempt to be agile (flexible

and fast in integrating new ways of working）, ambidextrous （develop new capabilities and competencies at the same time）, and adaptive （conform to the new environment by using the ability to comply with the change） （CIPD, 2014）. For the managerial competences, the direct correspondence to answer each word of the VUCA is vision （make it possible to determine a certain trend and target description）, understanding （open for informative communication to determine quick decisions）, clarity （create procedures and process descriptions that are understandable to employees）, agility （clear and accurate identification of situations） （Breen, 2017）. Therefore, in the VUCA world, organizations have to operate together as a whole with the visions and actions using their full efficiency to achieve organizational change （Antonacopoulou et al., 2019）.

The Roles of Learning and Development in the VUCA world

VUCA world, as mentioned above, stands for volatility, uncertainty, complexity, and ambiguity. This term was coined after the Cold War and used in military to describe a new emerged warfare in the 1990s （Codreanu, 2016; Heritage & Center, 2018）. Regarding the adoption of the concept in management, it has been discussed and employed since 2002 in order to navigate the complex internal and external environment encountered by organizations and ultimately find impactful solutions （Brown & Stiehm, 2003）. Given that, obviously there is nothing new about the evolution of this term （Bruce, 2019）. However, why has it been discussed and researched frequently in the recent a couple of years? It might be because the constant evolution of it tends to move faster and more tangible and obvious due to the changes including COVID-19 pandemic （Hamouche, 2020）, technology （Vey et al., 2017）, and diversity of workforce （Bruce, 2019; Hamouche, 2021） （shown by figure 3.1） happened currently. To respond to this reality, organizations have to confront the issues and challenges resulted from those changes discuss above and prepare solutions so as to seek opportunities to be sustainable （Hamouche, 2020; Hamouche, 2021）.

As Figure 3.1 shows, due to the pandemic hybrid working and remote work have been used by a few organizations to try to protect their employees and get performance （AM et al., 2020; Kaufman et al., 2020）. In addition, the issue of employee skillset including up-skill and re-skill in the workplace has been aggravated by the pandemic and the development of technology （Przytuła et al., 2020）. Artificial Intelligence and robotics are increasingly adopted by organizations （Lind et al., 2021; Vey et al., 2017）. On the one hand, a number of people are losing their job due to the implications of high technology （Vey et al., 2017）. On the other hand, jobs are being created quickly

(Vey et al., 2017). Those challenges happened in workplace in coupled with other issues such as the health-related issue of employees (Hamouche, 2020) and the diversity of workforce have and will have a significant impact on the organizations' sustainability (Korhani, 2021; Sahrash, 2020). In a word, to cope with this situation organization need to create and nurture a culture and provide related programs inside to enable employee to develop a growing mindset and suitable skillset to cope with this complex environment in order to be sustainable with organizations together (Bruce, 2019; Korhani, 2021; Sahrash, 2020). This is where L&D has a critical role to play literally as L&D as one of functions of HRD is the process of enabling and empowering employees through L&D strategies and tactics to drive better performance with the focus on business performance, employee satisfaction, employer branding, and individual self-actualization (BasuMallick, 2020; Bruce, 2019; O'Toole, 2010).

With respect to the role of L&D in organizations, it has evolved over time due to the internal and external environments faced by organizations. According to Davies et al. (2004), key roles played by HRD included learning strategist, business partner, project manager, and professional specialist. Meanwhile, key roles of L&D are trainer and order taker who are responsible for responding to the needs of organizations reactively (Modern Workplace, 2022). However, according to Werner and DeSimone (2012) these roles have been in flux as organizations have to adjust to environmental challenges. During this age, L&D tends to response proactively with roles including facilitator, designer, and assessor (CIPD, n.d.). Today, due to the characteristics of VUCA world L&D's roles have to change and evolve naturally otherwise organizations will die, let alone achieve sustainability (CIPD, n.d.; Tratar, 2022).
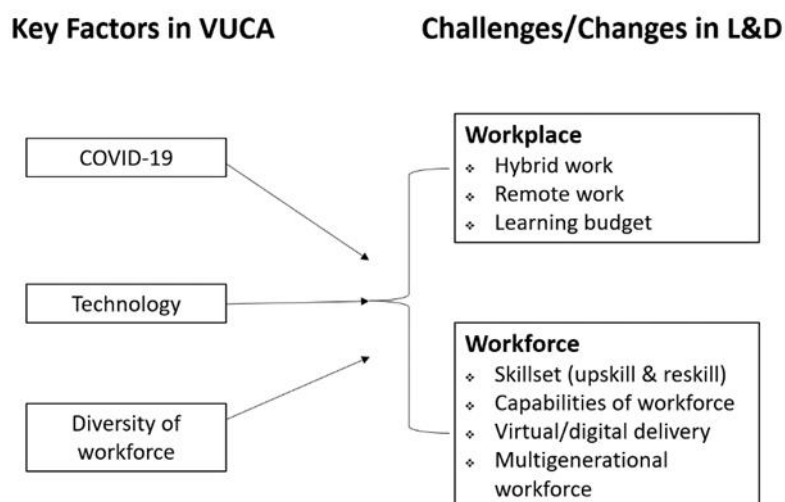
Key Factors in VUCA **Challenges/Changes in L&D**

Workplace
- Hybrid work
- Remote work
- Learning budget

Workforce
- Skillset (upskill & reskill)
- Capabilities of workforce
- Virtual/digital delivery
- Multigenerational workforce

COVID-19

Technology

Diversity of workforce

Figure 3.1: Factors encountered by L&D in VUCA world

Roles L&D play in VUCA world must be proactive rather than reactive, more strategic and agile, both versatile and ubiquitous to foster agility and innovation in organizations to achieve increased sustainability eventually. The role of L&D can be divided into three groups (see figure 3.2 and figure 3.3). First, roles, which VUCA world enhances their significance rather than change them, include the strategic role of L&D and organizational change agent (Betterworks, 2022; CIPD, n.d.; Finch, 2019). Second, a couple of roles which consist of culture transmitter and HR business partner (HRBP) have evolved to be culture shaper and L&D business partner (L&D BP) in order to cope with the environment and be sustainable (Finch, 2019; Learning and Performance Institute, n.d.). Finally, along with the development of technology, new roles have also been emerging (Lind et al., 2021; Vey et al., 2017). They are digital content developer and learning analyst (CIPD, n.d.; Finch, 2019; Learning and Performance Institute, n.d.). Each of them will be clarified as below.

L&D as a Strategic Role

L&D as a strategic role in organizations has been talked about for decades based on Werner and DeSimone (2012). The main responsibility is to advise and consult management on business strategy and performance goals. However, a report by McKinsey showed that only 40% of organizations claimed that their L&D played this role internally which means there is a huge role gap within organizations for L&D practitioners (Brassey et al., 2019). Today, as mentioned previously factors in VUCA world have given rise to a notable challenge to organizational management (Hamouche, 2020). The COVID-19 pandemic has essentially changed the way people work, learn, and collaborate (Betterworks, 2022; CIPD, n.d.; Hamouche, 2020; Learning and Performance Institute, n.d.). Hybrid work and remote work (AM et al., 2020; CIPD, n.d.; Finch, 2019; Kaufman et al., 2020), upskill and reskill (Przytuła et al., 2020), the application of high technology, and four different generations working together (Lind et al., 2021; Vey et al., 2017) call for L&D to play a strategic role in driving organizations to be sustainable today and in the future (Brassey et al., 2019; Learning and Performance Institute, n.d.). In addition to attending to crafting business strategy and performance goals with management as an advisor, L&D's role on strategic should also ensure the alignment between learning strategy and business strategy (Deloitte, 2021; Finch, 2019), as well as focus

on the employability, culture, employer brand, and employee engagement of organizations (BasuMallick, 2020; Deloitte, 2021).

L&D as an Organization Change Agent

Generally, the role of change agent is to help organizations prepare workplaces and workforces for the future (Loon, 2016; Werner & DeSimone, 2012). To respond to unprecedented changes happening in VUCA world, L&D should be savvy, agile, and versatile to confront changes within organizations, as well as externally (Learning and Performance Institute, n.d.; Loon, 2014). Basically, the job of an organization change agent is twofold. In addition to monitoring and evaluating existing changes, organization structure, forms of work and methods which supporting organizational development and offer suggestions and interventions through change strategies and operations (Learning and Performance Institute, n.d.), L&D should also prepare organizations for the future, such as building capacity, developing capabilities, cultivating a learning climate, and driving agility (Loon, 2016). In other words, a change agent intends to align with management on the process of designing and implementing change strategies while also empowering employees to participate in change programs and activities proactively through injecting stimuli for changes in order to foster organizations and employees having capacities and capabilities to survive and sustain in the future.

L&D as a Business Partner

The role of business partner played by L&D has evolved from HR business partner (HRBP) which is responsible for serving organizations at all levels on learning and development (Learning and Performance Institute, n.d.). Traditionally, L&D is responsible for crafting learning strategies and tactics in accordance with business strategy, conducting programs and activities in line with the learning strategy, and providing support to organizations and employees in order to response to their needs (Davies et al., 2004). However, the traditional role of L&D has been not sufficient to cope with the unprecedented external and internal changes in VUCA (BasuMallick, 2020; Deloitte, 2021; Werner & DeSimone, 2012). Reasons will be introduced below.

First, a number of organizations have employed hybrid work or remote work due to the pandemic (AM et al., 2020; Kaufman et al., 2020). A variety of challenges and issues have arisen from this situation. For example, some employees may lack skills to work online

(Hamouche, 2020; Hamouche, 2021). In addition, mental-health problems may occur due to isolation (Deloitte, 2021). Additionally, upskill and reskill could be another significant issue for organizations and employees currently (Bruce, 2019; CIPD, n.d.; Lund et al., 2021; McKinsey Global Institute, 2017; Przytuła et al., 2020). A report by McKinsey estimated that around 800 million jobs could be displaced as a result of the automation by 2030 (McKinsey Global Institute, 2017). Another report by the World Economic Forum contended that half of employees need to be reskilled by 2025 (Forum, 2020). It should be also noted that advanced technologies such as AI and VR have been adopted on the manufacturing line in several organization for years whereas they have not really been used in management recently (Lind et al., 2021; Vey et al., 2017). At present, the COVID-19 pandemic has been accelerating the usage of technology in management (Deloitte, 2021). Given that a digital mindset is needed for L&D practitioners. a variety of technologies such as AI, robotics, VR and AR can be adopted to develop and build programs and activities to fulfill the needs of organizations and the personalized needs of employees. Finally, L&D have to cope with multigenerational workforce challenges along with more and more Generation Z entering the workforce (Korhani, 2021; Sahrash, 2020). All above shows that the traditional role of L&D is no longer appropriate for workplace and workforce in today's VUCA world. As a business partner, L&D should collaborate with executives and employees to fill skill gaps, develop capabilities, and increase productivity (Bruce, 2019; CIPD, n.d.; Werner & DeSimone, 2012). Furthermore, L&D should be a boundary spanner and a community manager to embrace advanced technologies and employ them, thus fostering increased innovation and agility in organizations (Loon, 2016).

L&D as a Culture Shaper

A learning culture has become increasingly vital for organizations, not only in VUCA world (Darwin, 2017; Rider et al., 2018; Smircich, 1983). According to Carwin (2017), learning is the key to success and survive for organizations. Additionally, a podcast by Styr (2020) which discussed four emerging trends on learning and development with five thinkers in this field put forth perspectives that learning will be central to shape businesses at all levels and impact across the organizations. Furthermore, they also suggested that organizations will be more likely be successful if their cultures align with their business strategies (Styr, 2020). With this in mind, it may not be enough for L&D to solely operate it traditional part on the culture element as embedding and driving the culture ordered by management if organizations want

to survive and sustain (Finch, 2019; Learning and Performance Institute, n.d.). As an evolving role in VUCA world, the culture shaper should collaborate with managers to shape the learning culture through a series of steps including dampening the negative elements and strengthening positive elements including organizational structures, systems, and policies (Center for Creative Leadership, 2020; Rider et al., 2018). Meanwhile, learning programs and activities should be conducted among employees to encourage them to model the culture and the habits over time (Center for Creative Leadership, 2020; Rider et al., 2018).

L&D as a Digital Content Developer

The trend of digitalization in learning and development started to show it effect when the COVID-19 pandemic spread widely (Learning, 2022). A sheer variety of technologies such AI and VR have been used in workplaces across industries (Lind et al., 2021; Vey et al., 2017). L&D has been working as the content developer over years (Learning and Performance Institute, n.d.). However, digital content developer as a new role emerged due to the implications of technology in organizations mainly (Learning and Performance Institute, n.d.). To play this role, L&D need to create, curate, and deliver digital learner-centric content to employees by using tools including webinars, online platforms, and apps (Deloitte, 2021; James, 2020). L&D can create a range of content including videos, images, games, and infographics for delivery to employees (James, 2020). Compared to traditional paper-based and instructor-led training style, digital learning is more flexible and effective (Sousa & Rocha, 2019). Learners can access the digital content at any time and everywhere (Sousa & Rocha, 2019; Tratar, 2022). In addition, through using these technologies L&D is able to build content ecosystems to track learners' learning behavior, gain data, and build the database as well (Deloitte, 2021). This data can be a good resource for L&D to evaluate the effectiveness and efficiency of content and tools, while also analyzing employee preferences (Deloitte, 2021; Tratar, 2022). Furthermore, according to a report by Deloitte in 2021, around 75% of organizations stated that they do not want to buy content anymore (Deloitte, 2021). It is better to create their own digital content due to the lower cost and better strategic alignment (Deloitte, 2021). Creating and curating original content can dramatically reduce the cost of learning and development part (Deloitte, 2021). This is significant for organizations while they have to reduce the budget of learning and development during the pandemic (Deloitte, 2021). In addition, to compare the content bought outside creating and curating own content is more likely to produce the content which can align with business strategies better (Deloitte, 2021).

To conclude, this is worthy as it can help organizations increase the effectiveness and efficiency of learning and productivity (Sousa & Rocha, 2019).

L&D as a Learning Analyst

The role of HR analyst has been around for years (Learning and Performance Institute, n.d.; Werner & DeSimone, 2012). The function of L&D on analyzing typically include conducting appraisals, measuring learning revenue on investment (ROI), and data management (CIPD, n.d.; Learning and Performance Institute, n.d.). However, the rise of digital learning and adoptions of tools and platforms in organizations has caused an amount of data related to learners' behavior (Learning and Performance Institute, n.d.). A report by Deloitte (2021) mentioned that one of seven disruptors in the new normal is the data tsunami. The data in the past two years has been growing nine times more than before. This situation is driven by technology and accelerated by the COVID-19 (Deloitte, 2021). Given this reality, only operating the analyzing single function is not sufficient for L&D currently. A full-time learning analyst role need to be advised to organizations to fulfill those needs concerning collecting, measuring, analyzing, and reporting data (Learning and Performance Institute, n.d.). At the micro level, the learning analyst should collect data related to learning behavior, preference, and performance of learners to optimize learning content, program, and tools in addition to measure the learning ROI (CIPD, n.d.; Deloitte, 2021; Learning and Performance Institute, n.d.). At the macro level, the learning analyst is responsible for building the database to provide support for both the content ecosystem, as well as the learning strategy (CIPD, n.d.; Deloitte, 2021; Learning and Performance Institute, n.d.).
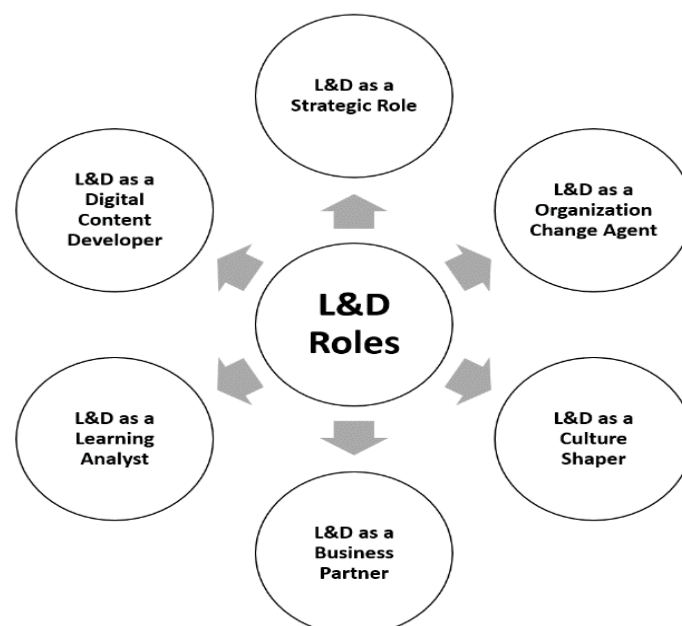
Figure 3.2: The role of L&D in VUCA world for sustainable organization

In summary, the role of L&D has been evolving for decades (Learning and Performance Institute, n.d.; Werner & DeSimone, 2012). During the VUCA world as a result of three factors including the COVID-19 pandemic, technology, and workforce diversity, a lot of challenges emerged, for example hybrid work, skill gap, and shifting talent pools (e.g., Hamouche, 2020; Hamouche, 2021). The evolution of the role of L&D is driven by those challenges (e.g., Deloitte, 2021).

Traditional Roles	Evolving Roles	Emerging Roles

• **L&D as a Strategic Role**
  ❖ Aligning learning to business strategy
  ❖ Create the learning strategy
• **L&D as a Organizational Change Agent**
  ❖ Advise organizations in designing and implementing change strategy
  ❖ Foster agility, innovation, and the learning process of individuals and organizations
	• **L&D as a Culture Shaper**
	  ❖ Nurture a vibrant organizational culture that prizes learning and development
	  ❖ Shape a culture of innovation through creating learning and innovation opportunities
	• **L&D as a Business Partner**
	  ❖ Deliver the learning strategy
	  ❖ Consult and support talent management
	  ❖ Engage stakeholders effectively
		• **L&D as a Learning Analyst**
		  ❖ Collect and assess L&D practices and programs
		  ❖ Advise L&D strategy and tactics through analyzing L&D data
		• **L&D as a Digital Content Developer**
		  ❖ Create and curtate digital content
		  ❖ Deliver the digital content

Figure 3.3: Summary of the role of L&D in VUCA world

Implications of Learning and Development in the VUCA World for a Sustainable Organization

L&D plays a significant role in many organizations. For instance, the role of L&D has helped many businesses realize notable improvements at the individual, team, and organization level by providing training courses to enhance employees and manager critical thinking and problem solving skills, as well as to help employees across organizations to become more flexible and adaptive in order to meet current management various challenges, while also increasing productivity within organizations. Especially, in the contemporary VUCA

World context, where a number of impending situations maybe quite difficult to be forecast due to the unpredictable nature of current economic developments. Therefore, L&D has the potential to offers actionable solutions to businesses and their employees to survive, adapt, innovate and thrive in the VUCA world. Executives, managers and employees will need to have a durable and growth-oriented mindset, and be prepared to train individuals to face and deals with rapid changes. The purpose of this section is to cover some primary implications of L&D such as individual learning, digital learning, intercultural learning, soft skills communication learning, coaching and mentoring, and challenge-based learning.

Individual Learning

As individuals, we all respond different to various ways of being trained. It is an individual's ability to learn as they wish while utilizing their own means and resources. For instance, the 70:20:10 workplace learning model reflects on how employee learn through various methods, the most common one; 70 percent from on-the-job experiences, 20 percent from colleagues, mentors, and the other 10 percent from formal training (Anderson, 2014). According to Olivia (2011), individual training is aimed at developing specialized skills within each individual and this type of training is mainly used during the employee performance evaluation process. Furthermore, this type of learning will help empower individuals to think critically and develop new perspectives within the context of a variety of potential circumstances related to performing workplace responsibilities. The individual learning plan (ILP) involves both a career exploration process, as well as career plan development. It is personalized to the needs and interests of each individual and aims to assist with determining employee career goals, examining future labor market needs in selected occupations of interest, global market needs and identifying an individual's current knowledge and skills may meet market needs within a specific area (Hackmann et al, 2019).

Learning has become a routine and a lifelong learning reality as people can always develop themselves by developing a growth mindset to challenge themselves. In the workplace environment, individual employees will often have different preferences with respect to preferred training methods. Some individuals may be visual learners where they learn best through demonstration and observation; aural learners may respond most effectively to listening; read/write learners may prefer taking notes; and kinesthetic learners may respond best to simply doing (Drago & Wagner, 2004). In addition, Kolb's experiential

learning cycle emphasizes the four-stage learning cycle which are active experimentation; trying out what you have learned, concrete experience; having the actual experience, reflective observation; reflecting on the experience, and abstract conceptualization, learning from experience. Regardless of the learning styles, learners eventually touch all four bases (Mcleod, 2017)

Digital Learning

Digital learning also plays a key role in the VUCA world as the advancement of technologies has resulted in leaders and employees being required to possess the ability to develop and adapt themselves to a constantly changing digital world. If they do not continually make adjustments to adapt to ongoing change, then those organization have a higher chance of being disrupted. In order to be more accustomed to multiple digital technologies, organizations should have the ability to demonstrate flexibility with respect to modifying thinking as required to best respond to various problems that may occur (Nowacka & Rzemieniak, 2021). Individuals should be eager and ready to use different type of social media networks, and other online resources. Organizations are also encouraged to promote an environment that encourages workplace trainers to design courses that meet specific outcome-oriented criteria so that objectives will be clear and achievable for individuals. Some examples suggested by current research include the view that online learning must be well structured, and include clearly defined learning expectations, as well as constant feedback across different levels (Adamson, 2012). In addition, digital learning has provided a variety of options for learners. For example, individuals have access to more variety by various modes such as learning through text, images, learning videos, for instance audio and visual simulations that may increase individual's interest and enthusiasm for learning digitally (Cerya et al., 2021).

Intercultural Learning

As nations have evolved and expanded, it has become crucial for diverse groups of individual to have a better understanding of one another. To avoid misunderstanding and conflict it is crucial for organizations to provide training to their employees in order to improve their adaptability, innovation and analytical skills across a variety of situations (Pialat, 2022). Ultimately, many organizations are more interested in individuals who are skilled, and ready

to adapt to the current economic environment, as this will be beneficial to the business internationally. Some notable factors that help improve intercultural communication training are building self-awareness of cultural norms, and communication skills (Sinden, 2021). Moreover, there are three main components in intercultural competence which are cognitive, affective, and behavioral. Cognitive is when individual gain knowledge about other cultures than the individual's own. Affective is being aware of the intercultural sensitivity and Behavioral is having the acquire skills to effectively and appropriately manage intercultural situations. Later on, these three is merge into one main component (Graf, 2003).

Soft Skills Communication Learning

The majority of organizations cannot depend exclusively on employees possessing hard skills, which pertains to measurable specific abilities. Previously, there has been a shift in focus towards the development of soft skills for personnel within organizations. Soft skills include people skills, social skills, interpersonal skills, problem solving skills, and conflict resolution skills. Excellent communication is the foundation of a pleasant working relationship between employees and the management (Mehdi & Mehdi, 2017). In the VUCA world, if organizations begin to reinforce more of the soft skills training for their employees, then they will be able to gain new business partners, improve customer service metrics and develop relationships with international organizations (Colman, 2020) Furthermore, organization that have employees with soft skills capabilities tends to have higher organizational performance. For instance; employees who learn from their previous experiences, and constantly apply their learnings into practice in new situations, often acquire additional skills, face new challenges with increased confidence and success, and perform skillfully in changing environments (Horstmeyer, 2020).

Coaching and Mentoring

Another factor in the VUCA world that organizations should take into consideration, is the value of coaching and mentoring for their employees. Amidst a climate of sustained and accelerating global uncertainty, it is important that employees are well taken care of, as well as receiving clear guidance and training to develop confidence in practicing decisive decision making. 'Coaching' is a development-focused relationship with a trained coach, in order to assist a trainee to realize and fulfill their potential, whereas 'mentoring' focuses more on passing an expert's skills to their mentees. Mentors are typically recruited from external

professional networks (Croswell, 2020). Both of these approaches to knowledge and skills development can help organizations build resilience to obstacles and challenges, support decision making processes, and develop employees to become cross functional leaders in the future (Merrick, 2017). Especially in this era, generation differences may be a challenge for coaches and mentors, as they have to deal with different preferences and levels of digital expertise. For instance, Generation X are happier to work independently without close supervision, but may be less familiar with advanced technologies when compared to their Generation Y and Gen Z. Generation X are also more likely to feel offended when having a younger generation peer take charge in a leadership role and act as a mentor. As a result, both coach and mentor have to find a way for different generations to work together collaboratively and get on with shared leadership in order to survive in the current VUCA world (Kornelsen, 2019).

Challenge-based Learning

One example of a concern addresses by challenge-based learning is that there are some individuals who do not have access to highspeed internet while assigned to work remotely from offices. This leads to frustration related to incomplete training and information from the trainer to the learners (Matsuda, 2021). The main challenge is to cope with how to harness the broad range of access to technology and information, while also attracting a highly diverse group of participants (Willis, Byrd & Johnson, 2017). Overall, the challenge-based learning (CBL) covers three phases: Engage. This is a commitment an individual takes on in facing a challenge. Investigate. This is when the individual needs more information to analyze it. Act. This is the stage where the individual designs and implements a procedure to put into action in order to get to the final solution (Scroccaro, 2021).

Finally, this study provides HROD practitioners a comprehensive framework and detailed knowledge concerning L&D's role in the VUCA world. The framework could be a guideline for organizations to review, adjust, and build their L&D system. Organizations and managers can adopt the framework to their strategies according to their environment. Moreover, conducting activities and programs which are related to L&D in organizations could be another practical implication of this study. For instance, L&D practitioners may play a change agent role during the COVID-19 pandemic by conducting a hybrid training program to meet the needs of employees and organizations. Additionally, the framework may be employing by organization

development practitioners as a diagnosis tool to scan what and where the issues and challenges are as well as to provide solutions.

Conclusion

When organizations and individuals understand each other more and continuously strive to adapt their orientations, skills and productivity the VUCA world, it is not difficult for them to survive. If organizations communicate and collaborate with each other more frequent and use advanced technology to aid their daily work. L&D will always remain one of the key components to most organizations to make sure that their employees have the ability to grow and develop themselves professionally, which will positively enhance their performance and accelerate their career advancement in the future (Gill, 2019). Organizations need to change their judgement from implementing traditional L&D procedures, and instead move towards shifting their focus to look at evolving and emerging roles such as digital content developer, culture shaper, strategic learning and development, business partners, organization change management and learning analyst. Especially when more organizations are providing their employees with the hybrid and remote working model, employees have to use various technology devices to effectively communicate with other employees across departments both internally and externally. If everyone makes the effort to help each other within their organization, then trainings for individuals to learn new things will be more efficient, as employees will have more knowledge and understanding of what they are being trained for such as intercultural training, soft skills and how to cope and deal with challenges. These trainings reflect on lifelong learning for both the individual and organizations to continue to improve, develop, and strengthen themselves. In the near future, organizations should shift their perspectives from denying the new reality of the world and focus their plans in order to move towards the same goals. Any obstacles that occurred often leads to an opportunity for organizations to find a solution and even possible that they will come up with alternative solutions.

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**The 2022 National and International Conference of
The National Institute of Development Administration**

Intra-ASEAN Student Mobility Sustainability During and Post COVID-19 Pandemic: An Essay

Agustina Kustulasari[1]

Abstract

Student mobility programs such as the intra-ASEAN mobility was impacted by the COVID-19 pandemic like most other educational programs. This essay discusses the disruption and how it tests the organization's agility to maintain the continuity of the program. It is argued that the punctuated equilibrium moment created by the pandemic creates a shift in the idea of student mobility and opens a new venue for supporting the education goal in the Sustainable Development Goals (Goal No. 4). The paper then proposes two ways of enhancing the student mobility program to expand the access to this educational service to under-represented and unrepresented groups. The first idea is to maintain the practice of virtual student mobility that inadvertently became a practice due to the pandemic, and the second idea is to design it as a micro-credential program. This virtual/micro-credential student mobility is expected not only to support the achievement of SDG4 but also to enhance the regionalization/harmonization of higher education in Southeast Asia.

Keywords: Student exchange, Higher Education Regionalization, SDG4

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Intra-ASEAN Student Mobility Prior to and During the Pandemic

International student mobility is one of the multitudes of activities in higher education that are disrupted by the COVID-19 pandemic. Albeit diverse in levels of intensity, the global pandemic poses unprecedented challenges to practicing institutions all over the world. In the Southeast Asian region, an initiative called the ASEAN University Network (AUN)-ASEAN Credit Transfer System (ACTS) student mobility was just beginning to thrive when the pandemic hit. The program was piloted in 2011 and received development support from the European Union, among others, in 2015. At the initial stage of implementation, the EU-supported project (SHARE) commissioned a study to map student mobility in ASEAN. One of the findings reported in the study shows that, despite the increasing number of ASEAN students participating in international student mobility, less than 10% is between the countries in the region, or in other words, intra-ASEAN mobility (European Union Support to Higher Education in the ASEAN Region (SHARE), 2016). This finding provides an incentive for stronger intra-ASEAN mobilization efforts to strengthen the ongoing higher education regionalization agenda.

The program generates institutional support and financial assistance. By 2015, over 500 scholarships had been awarded under the AUN-ACTS initiative. This number might be small, compared, for example, to the number of outgoing students from ASEAN recorded by UNESCO in 2013, which was 227,408 (European Union Support to Higher Education in the ASEAN Region (SHARE), 2016). There is nonetheless an increasing trend in the numbers of applicants to this program. In the 2016 report, the program records an increase from 180 nominated applicants in 2011 to 1,694 in mid-2015. And again, in 2019, the program reports that 489 scholarships have been provided for intra-ASEAN mobility, along with an additional 102 in ASEAN-EU scholarships (European Union Support to Higher Education in the ASEAN Region (SHARE), 2019). Looking at the numbers of scholarships provided and participating students, it is reasonable to conclude that the initiative has gradually drawn considerable attention and interest from the stakeholders.

Similar to other student exchange programs, the intra-ASEAN student mobility is a one to 2-semester opportunity for studying at a partner university. By the end of the program, students receive some credits transferrable to their home university academic record. Prior to the COVID-19 pandemic, the activity involved students traveling to the host country. However, as travel restrictions were imposed including within the ASEAN region, the mobility program has been either canceled, deferred, or modified to a virtual activity.

At the beginning of the pandemic, understandably, most if not all higher education institutions (HEIs) were struggling to respond and to put forward the best measures, but similar emergency policies could be identified. In the experiences of Singapore and Indonesia, classes and other educational activities such as international student mobility were immediately moved online, while Malaysia initially decided to prohibit online lecturing (Crawford et al., 2020). As the pandemic continues and people begin to familiarize themselves with the use of technology-assisted distance learning, more courses are delivered virtually. The 'online' modality of the courses expands to programs that include international students. In Universitas Gadjah Mada's experience, after initially canceled, student exchange and international student enrollment were resumed; outbound and inbound exchange students attend online classes from their home countries. A similar practice is likely to be found in other universities in the region.

The websites of Universitas Indonesia (the coordinating center of AUN-ACTS) and other participating universities like Universiti Kebangsaan Malaysia (UKM) and Institut Teknologi Bandung (ITB) posted information in their student exchange announcements that in-person participation is contingent on the COVID-19 state in the relevant countries. Nevertheless, an invitation to apply for the AUN-ACTS student mobility program remains in place and updated. This is an indication of the program's resilience, although official data on the program's participation rate during the pandemic is not provided in the organization's recent publications. The AUN's 2020-2021 Annual Report (ASEAN University Network, 2021) acknowledges the challenges of navigating the programs during the pandemic but does not specifically address how much it has affected the participation or the organization's plan regarding the future of AUN-ACTS post-pandemic. However, another study commissioned by the SHARE project attempts to capture the experience of the mobility participants (both students and institutions) and finds that the virtual exchange is well-appreciated (European Union Support to Higher Education in the ASEAN Region (SHARE), nd.). The study reports that the virtual exchange provides a similar learning experience in terms of the exchange of knowledge amongst the international and multicultural participants. The report suggests maintaining and developing further the virtual exchange even when the in-person exchange resumes.

The Impact of the Pandemic Disruption

The above study may have some self-reporting bias, but we should not dismiss its potential merit i.e., that virtual exchange is a welcome alternative to student mobility in this pandemic. Moving

on further, a critical question is expected: what does this mean for the 'traditional' notion of student exchange and the multicultural exposures that it entails? While the virtual exchange experience may arguably call for a redefinition of 'student exchange program', I think the more momentous question is whether the physical- geography aspect of the ' exchange' program has now become substitutable? These questions are salient but will not be addressed directly in this essay. Instead, this paper will attempt to discuss two approaches to understanding the organization's response to the disruption and its impact on the policy design.

The first useful approach to understanding this disruption and how it affects the organization is the concept of organizational agility. When faced with a discontinuous change such as this pandemic crisis, organizations become fragile because the disruptive event potentially nullifies the organization's knowledge of what works (Alves et al., 2021). The disruption also could present problems in which solutions are not readily available, reducing the organization's capability to carry out its mission. Organizational agility is not a novel idea. Authors such as True et al. (2007) and May et al. (2008) have discussed policy disruption and the importance of adaptability in the course of widespread disruption such as natural disasters or terrorism. Recently, Crawford et al (2020) and Moon (2020) have argued the need for an organization's agility to maintain performance during the pandemic disruption.

Moon (2020) argues that by putting science over policy, the South Korean government is able to perform in an adaptive and agile manner. The science, the author recognizes, comes from a painful lesson from the MERS outbreak. In other words, an organization's agility is learned. Past experiences of handling crises improve the organization's readiness to adapt to a new crisis. However, for many other governments, the COVID-19 pandemic is nothing like other crises that they have prior knowledge about. In the case of Southeast Asia, for example, the countries in this region are familiar with earthquakes and floods, but the kinds of damage and the way of recovery between these two disruptions are different. Earthquakes and similar natural disasters impose an abrupt but relatively short interruption. The damage could be different in intensity and the recovery may vary in time. However, there is knowledge of what to do to return to the previous state before the disruption, and thus prevention and mitigation measures can be developed.

With the COVID-19 pandemic, the similarity is that it is also an external and a relatively abrupt shock, because of the dramatic increase in the numbers of infections. Initially, many of us thought it was a temporary interruption of our regular activities, perhaps like a terrible heatwave that requires us to stay put for a few days. Indeed, initial forecasts predicted that the pandemic would last for a few months. However, as we learned, this pandemic is a prolonged crisis and it shows us that much

of what we know does not apply. Alves et al. (2021) suggest that in such a situation – where the world that we know does not exist, organization leaders could benefit from intuitive processing. I argue that this leaders' intuitive skill is also part of the organization's agility. By this, I mean that, although Moon (2020) proposes that the Korean government's agility is built partially by learning from past failure, intuitive processing requires less prior know-how.

The continuity of the AUN-ACTS student mobility program shows the organization's resilience. There is no available empirical evidence or a reflective recount of how the organizer processed the pandemic disruption and made a decision regarding the continuity and the modality of the program. However, under the resilience assumption, I argue that there is an indication of the organization's agility that fosters the survival of the program and, at large, the organization. It means that in a way, the pandemic does not directly cause the change in the modality of the program. The direct impact to the program is that it immediately ceases the travel aspect of the student exchange activity. To the organization, the pandemic has forced the organization to be agile and adaptive in order for it to survive. The output of the organization's agility is the change in the program modality.

With that in mind, the next question is what this change – from physical exchange to virtual exchange – means to the organization's future policy design. Case studies about the virtual exchange experiences (SHARE, nd.; Yildirim, 2021; Stewart & Lowenthal, 2021) suggest that this emergency remote teaching could be retained and improved for future use even after the in-person activities can be fully resumed. Let us assume that it is maintained as a new practice to complement or, I imagine, to compete with the more traditional practice of mobilizing students across geographical locations. One way to understand this phenomenon is by looking at this event as a punctuated equilibrium moment in the development of student exchange policy. The punctuated equilibrium theory proposed by Baumgartner and Jones in 1993 (True et al., 2007) seeks to explain why sometimes a policy development takes a sudden turn in direction, instead of an expected incremental change. True and colleagues use the term "policy image", or in another term, a policy idea.

Before the pandemic, the policy image of a student exchange program is a student's physical mobility and in-person interaction with the host culture and community. Before the pandemic, the idea of virtual learning is unfavorable, more so in the context of multicultural education. The public's perception of online learning was less positive than now. Although international collaborative learning such as COIL has existed, the institutional adoption of the program before the pandemic was relatively low. The SHARE study regarding the virtual exchange experience of the AUN-ACTS mobility participants is an example that virtual exchange or COIL has now gained stronger acceptance. The recommendation from other studies to continue the online learning practice post-

pandemic provides another support to the argument that this form of learning has become more widely accepted. I interpret this as a shift in the policy image of student exchange.

In the study of evolution, the punctuated equilibrium produces new offspring that is different than the ancestor (cladogenesis), while a gradual change produces similar offspring (anagenesis). In Baumgartner and Jones' framework, borrowing the term also from the study of evolution, the change is introduced by the brief period of a shift in policy image that leads to a major change in the policy (True et al., 2007). I consider the change in the preconception of student exchange introduced by the pandemic disruption is quite major and leads to a new form that is different from its predecessor. Student exchange policy in the future may include both types of activity: in-person, virtual, and perhaps a hybrid one. Evidently, this proposition needs to be tested with empirical inquiries such as whether the in-person exchange is more effective than the virtual exchange in training the students' multicultural competency, and whether in the end, in-person exchange remains the better option. However, for the purpose of this paper, the analysis is concluded in two key takeaways: 1) the pandemic necessitates the adaptability and agility of the participating institutions in order to continue the intra-ASEAN student mobility program, and 2) the pandemic disruption brings about a punctuated equilibrium moment in the student exchange policy design.

Future Consideration for intra-ASEAN Student Mobility Post Pandemic

A quick reminder, the rationale of the AUN-ACTS for intra-ASEAN student mobility is to enhance the cooperation of the participating universities (European Union Support to Higher Education in the ASEAN Region (SHARE), 2016). This initiative is tightly coupled with the ASEAN's mission to create the ASEAN community, which was launched in 2015. At the 2015 ASEAN Summit, the ASEAN Chairman asserts "the importance of higher education as one of the catalysts in accelerating ASEAN force for the socio-economic fulfillment" (Chairman's Statement of the 27th ASEAN Summit; p. 21). In short, the intra-ASEAN student mobility program through the AUN-ACTS framework is considered a key initiative in the regionalization process. The HEIs thereby are regarded as a means for regionalization. Knight (2012) discusses this issue – higher education as a tool for regional integration – as one of the main inquiries in academic conversation regarding higher education regionalization. She further affirms that regionalization and internationalization in higher education studies co-exist, despite sometimes emerging as competing ideas (Knight, 2012).

Literature on international higher education suggests diverse motivations for internationalization; one of them is the economic pursuit through market gain and revenue diversification. I argue that the main driver for internationalization in Southeast Asian higher education is cultural appreciation (unpublished; Kustulasari, 2020). However, in this era of the knowledge economy, indisputably there is an increase in interest in human development and for participating in the international education market. The data cited in SHARE's 2016 report indicates there is a desire to benefit from the untapped market of intra-ASEAN international education. However, financial limitation remains considered as the main challenge for increasing the number of student participation. The virtual form of student mobility, therefore, offers a potential solution to the challenge and perhaps more.

A study by Yildirim et al. (2021) confers that the emerging diverse online learning may create more access opportunities. This argument is valid, although accessing online learning is not without its own costs, and the opportunity may give rise to a different kind of inequality. Regardless of these concerns, the virtual exchange program might be a rewarding alternative to widen access to international education and strengthen the intra-ASEAN connectivity. Therefore, the objective of the AUN-ACTS student mobility is likely to remain as one of the ASEAN's regionalization endeavors, but the program's priority might change. The future focus of the program can be about better facilitating the students and providing more opportunities for students who might otherwise not be able to participate in intra-ASEAN student mobility.

Sustainability Development Goals and International Student Mobility

The preceding argument about how the emerging virtual student mobility may have created a new venue for efforts toward widening access to education serve a point of departure for our next discussion regarding the potential role of student mobility for achieving the Sustainable Development Goals particularly no. 4 – the education goal. The SDG4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UNESCO, 2018a, p. 16). It has seven outcome targets, and three other targets that serve as means of implementation (UNESCO, n.d.). While the Millennium Development Goals and the Education for All focus on basic education, SDG4's focus shifts to include higher levels of education and emphasizes on inclusivity and life-long learning (UNESCO, 2018b). Table 1 summarizes this shift and the SDG4 targets.

There is vast literature on SDG4 but much less touches on how international student mobility may/have contributed to achieving this goal (Lai et al., 2019; Nogueiro et al., 2022). This essay argues that its potential might have been underrated and proposes two ideas on how virtual student mobility could be enhanced to support SDG4's inclusivity and life-long learning objective, particularly in Southeast Asian region. There are other SDGs relevant to SDG4, such as Gender Equality (SDG5, Target 5.6) and Decent Work and Sustainable Growth (SDG8, Target 8.6) (Global Education Cooperation Mechanism, n.d.). In other words, the achievement of targets in SDG4 enhances the achievement of other goals. The new model of student mobility proposed here, I argue, fits for that purpose.

Table 1: Summary of SDG4 Targets and Comparison to MDG & EFA

SDG4 aims			
"to ensure inclusive and equitable quality education and promote lifelong opportunities for all"			
Target 4.1	Quality Primary/Secondary Education for All		
Target 4.2	Early Childhood & Pre-Primary Education		
Target 4.3	Equal Access to TVET & Higher Education		
Target 4.4	Skills for Decent Work		
Target 4.5	Gender Equality & Equal Access for All		
Target 4.6	Youth & Adult Literacy		
Target 4.7	Sustainable Development & Global Citizenship		
Target 4.a	Safe & Inclusive Learning Environment		
Target 4.b	Scholarships for Higher Education		
Target 4.c	Professional Development for Teachers		
	Millennium Development Goal (MDG) 2	Education for All Goal	Sustainable Development Goal
Implementation period	2000 to 2015	2001 to 2015	2015 to 2030
Scope	Primary education (children)	Basic education (children and adults)	All levels and forms of education and lifelong learning
Geographical coverage	Low-income countries	Global, but focus on low-income countries	Global, including advanced economies
Lead agency	UN	UN	Member States
Policy focus	Access and completion of primary education for all	Access and completion of quality basic education for all	Equitable access and acquisition of relevant skills through all forms of quality education and training
Number of targets	2	6	10

Source: UNESCO (2018a) Paving the Road to Education for Asia and the Pacific, and UNESCO (2018b) Asia Pacific Regional Roadmap for the SDG4

The first idea is to develop virtual intra‑region student mobility program. A virtual student mobility is not an entirely novel or pandemic-induced idea. A study by Abrahamse et al. (2015), for example, reported a virtual student exchange between two universities, in the US and in Bolivia. The study found that despite the challenges, the virtual experience facilitates an international exposure for the undergraduate students. To leverage the virtual student mobility and open up access for other groups of learners, the second idea proposed here is to create a qualification framework to certify this activity as a micro‑credential, which may be equivalent to 1 credit‑hour. Ideally, the micro‑credential student mobility is a semester‑length course with assignments and assessments like a regular course, open to public, and maybe assigned a certificate that is transferrable as a course micro‑credit. Micro-credential programs combined with a digital badge are an emerging trend in higher education services.

As discussed earlier, there is an untapped market of international students within the region. The UNESCO Institute for Statistics' Global Flow of Tertiary‑Level Students (GFTLS) show that most countries in Southeast Asia (Table 2) continue to be the 'sending' countries, despite studies that suggest the growing efforts to shift into 'receiving' countries (Kondakci et al., 2018). It is important to note that the GFTLS statistics are incomplete for some countries and provides an aggregate of all tertiary-level students, which means both undergraduate and graduate students. Member countries also may interpret SDG4 to focus on the immediate next level of education after secondary i.e., the diploma/bachelor/undergraduate education, which is aligned with Track 2 in the 2030 Agenda for Asia‑Pacific Region (UNESCO, 2018b). Nevertheless, the GFTLS stats give us the sense that there is a growing demand for international education and there might not be enough supply to cater to this need within the region.

Table 2. Global Flow of Tertiary-Level Students in ASEAN Member Countries

Country	Total Number of Mobile Students Abroad (Outbound Mobility Ratio)	Total Number of Mobile Students Hosted (Inbound Mobility Rate)	Top 5 Countries of Origin – where students come from	Top 5 Destination Countries – where students go to
Brunei Darussalam	1,988 (18.0)	420 (3.7)	Malaysia, Indonesia, Thailand, India, Singapore	UK, Australia, Malaysia, US, New Zealand
Cambodia	6,983 (3.1)	NA	NA	Australia, Thailand, US, Vietnam, Japan
Indonesia	53,604 (0.6)	7,677 (0.1)	Malaysia, Timor Leste, Thailand, India, China	Australia, Malaysia, US, Japan, UK
Lao PDR	8,234 (8.1)	543 (0.6)	Vietnam, China, Cambodia, Korea Rep., Mongolia	Vietnam, Thailand, Australia, Japan, US
Malaysia	59,144 (4.8)	81,953 (6.7)	China, Indonesia, Bangladesh, Yemen, Nigeria	Australia, UK, US, Japan, Indonesia
Myanmar	12,818 (1.1)	459 (0.1)	China, Korea DPR, Japan, Korea Rep. Thailand	Japan, Thailand, US, Australia, Korea Rep.
The Philippines	22,709 (0.5)	NA	NA	Australia, US, Canada, Japan, New Zealand
Singapore	23,456 (NA)	53,030 (NA)	NA	Australia, UK, US, Malaysia, Germany
Thailand	32,607 (NA)	25,086 (NA)	China, Myanmar, Cambodia, Lao PDR, Vietnam	Australia, UK, US, Japan, Indonesia
Vietnam	126,059 (6.4)	8,646 (0.4)	Lao PDR, Cambodia, Korea Rep., China, Timor Leste	Japan, US, Australia, Korea Rep., Canada

Source: UNESCO Institute for Statistics – GFTLS (accessed June, 2022)

Research in international education has suggested the various benefits of student mobility (e.g., Heinzmann et al., 2015; Gaia, 2015; Lomer, 2017). Arguably however, these benefits are limited to those who can afford such service, because for one, to be able to participate in student mobility, one must first be enrolled in a higher education institution. And two, while tuition and fee are generally waived, student mobility participants are still responsible for other costs such as travel and living costs. The financial challenge in this traditional form of student mobility can be considered as one of the barriers to making this educational service inclusive. That is likely the reason first initiatives from governments and international organizations such as SHARE project include providing scholarships for student mobility (e.g. AIMS, SHARE Scholarship, Canada-ASEAN Scholarships and Educational Exchanges). SDG4 also sets an implementation means target to provide more scholarships for higher education (Target 4.b), especially for those who might otherwise not be able to afford it.

UNESCO reports (e.g., UNESCO, 2018a) acknowledge the increase in higher education enrollment in the Asia-Pacific, between 2000 – 2016. However, despite this progress, the current state of our tertiary education may have benefitted some group more than others. The report on tertiary education completion by gender and socioeconomic in Asia Pacific, for example, indicates a significant gap between urban richest male at one end and rural poorest female on the other end. By implementing an alternative modality to student mobility, governments and other supporting organizations may be able to make this service more accessible to non-traditional students and underrepresented or unrepresented groups. In this paper, these disadvantaged groups are identified as follows: 1) those who cannot afford the traditional student mobility program, 2) those who are not enrolled in a higher education institution, and 3) those who do not have the required technological literacy and resources.
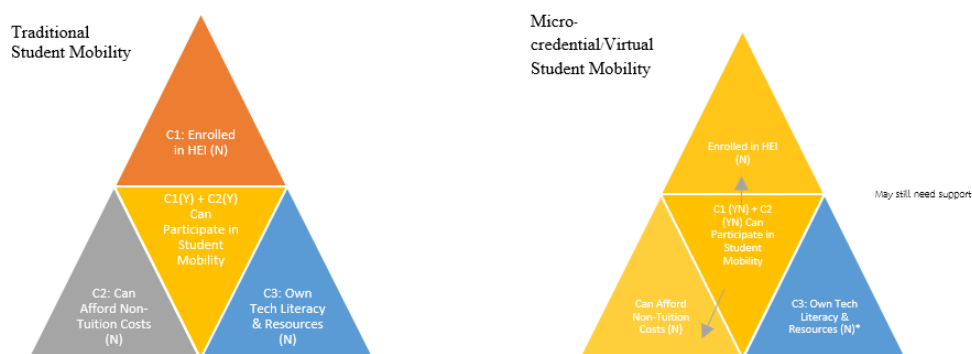

Figure 1. Groups of Students Served in International Student Mobility

Source: Author's Modeling

The Asia-Pacific Regional Roadmap for the SDG4 (UNESCO, 2018b) asserts that the inclusiveness in the education goal means that "education must be available, accessible, acceptable and adaptable to all learners" (p. 10), and this is done by eliminating the barriers and ensuring quality. It is also recommended in the document that each country develops some qualification frameworks that not only to recognize different kinds of education and training for youth and young adults, but also to allow people to move from one framework to another. For this reason, this paper proposes a micro-credentialing approach to student mobility for both enrolled and non-enrolled students. de Wit & Altbach (2021) propose some recommendations for internationalization of higher education post-COVID-19 pandemic, and one of their recommendations is to facilitate mobility of disadvantaged students such as the indigenous and refugees. Providing a higher education service to non-enrolled students as such has been attempted in a university in Brazil (de Wit et al., 2020), for example. A similar administrative mechanism like the ones implemented in night classes in community colleges, adult-learner training, or open-for-public certificate program can be used for this micro-credential program.

To simulate the idea, the model presented in Figure 1 demonstrates who will benefit from the micro-credential/virtual student mobility program. In the traditional student mobility program where students travel overseas to a partner university and spend a period of time taking courses before going back and transferring the credits, a limited group of students benefit from the invaluable experience. This includes those who fulfill conditions 1 and 2 i.e., those who can afford the non-tuition costs, those who are enrolled in a HEI. In the micro-credential virtual mobility program that this paper proposes, students who otherwise cannot afford it and non-traditional (unenrolled, out-of-age group, and non-formal) students have more opportunity to access that educational service. Another identified marginalized group – those without sufficient technological resources – still need to be supported by, for example, being provided with a scholarship or facility to accommodate the need.

Conclusion

This paper has argued that virtual student mobility, which initially was an unintended consequence of the COVID-19 pandemic, could actually be maintained and improved to gain leverage particularly in Southeast Asian countries, and to enable higher education institutions

to respond to international education demand, to be more inclusive and to support the life-long learning. It has been raised before that the virtual modality of student mobility is opening more opportunity but maybe pushing further some marginalized groups such as those without the required internet and technology resources. However, that should not discourage policymakers and implementing actors to welcome the proposal. If it all, it should encourage them more to actualize the scholarship (Target 4.b in SDG4) for this program. This paper proposes two ways of enhancing the student mobility for a more inclusive and sustainable education, turning challenges into opportunity by creating a new model of student mobility i.e., virtual, and micro-credential. It has also been explained that the previously underrepresented/ unrepresented groups will benefit from this initiative. In sum, the virtual/micro-credential student mobility has strong potentials to support the achievement of SDG4 – the education goal for inclusivity and lifelong learning.

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Deliberations and Pandemics: Unraveling "Resilience" towards Productive Deliberative Policy Analysis Amid Turbulent Times?

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Abstract

The progressive consideration in critical policy issues by the DPA's people-centered, participatory and inclusive objective has been utilized by the contemporary society in crisis mitigation efforts. Yet, literature points to the necessity to establish resilience as part of the DPA discourse. With this, the case study primarily looks into how the 'resilience' concept is relevant to DPA in cases of addressing public problems in turbulent times. In doing so, it will look into two cases of policy innovation projects in Chiang Mai, Thailand that have employed the DPA approach in coping with immediate concerns of the pandemic. As this follows the case study method in research, the work utilized both primary and secondary data gathered from documentary research, data mining, and case specific data to articulate the arguments and unravel key points as to why there is relevance to highlight resilience as an integral element of the critical-pragmatic approach in DPA. In exploring policy analyses and innovation, the following lessons can be derived: (1) resilience being a critical factor towards productively deliberating on pressing issues in the context of high inequalities, (2) DPA can sometimes be messy and lengthy in its process, thus, considering resilience strategies poses practical considerations. It also means such a process will demand for a comprehensive deliberative resilience in order to withstand follow-up and attributing consequences, (3)

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resilience will guide practitioners to sympathize with situations that demand immediate, if not, both critical and practical solutions.

Keywords: Deliberative, Crisis, Critical-Pragmatic, Policy Analysis, Resilience

Introduction

The vast impacts of COVID-19 pandemic[3] have shaken socio-political and economic institutions not just in the developed countries who have the capacity to combat a public health concern, but more so to the developing world and the Global South which grappled even more to containing and mitigating the impacts of the global-scale health crisis (Chowdhury & Jomo, 2020, 2020; Kobayashi et al., 2021; Tisdell, 2020). While governments and societies have practically been gauged in scientific and expert-oriented demand of addressing public problems during turbulent times posed by pandemic (Bennett, 2020; Boschele, 2020; Cairney & Wellstead, 2021), however, it is likewise to leverage that not all public problems can be addressed highly technical and expert-oriented approach to policy alternatives. The deliberative approach to policy analysis or DPA (Boossabong & Fischer, 2018; Fischer, 2010; Fischer et al., 2015) have been both progressive and productive consideration to critically address policy issues considering its people-centered, participatory, and inclusive potential. Notwithstanding social-political-economic realities in a crisis context, can the role of people-centered policy alternatives be still of relevance despite emerging and re-emerging threats and concerns under turbulent times? Of course, it is non-dismissive that society's public problems also demand a deliberative approach despite overarching alternatives posed by technocratic traditions. However, it is timely to question too: how can DPA still become relevant amid turbulent times, much more during pandemic?

While numerous studies in various social science disciplines, disaster management, and post-disaster recovery research have underscored the role of resilience in a paradigmatic approach to understanding a socio-cultural-political dynamics and phenomenon (Koliou et al., 2020; Linnenluecke & McKnight, 2017; Miles, 2018; Paton & Johnston, 2017), however, the public policy discipline lacks a holistic integration of the resilience concept into policy processes and specifically in policy analysis (Comfort, 2012; Duit et al., 2010; Reid & Botterill, 2013). The study then argues that to integrate the "resilience" concept in the DPA paradigm instrumentalizes an argumentative process that is both critical and pragmatic towards addressing public problems of immediate concern. Moreover, in productively constituting a deliberative process requires practical consideration of

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[3] According to the World Health Organization (2022), the "Coronavirus disease (COVID-19) is an infectious disease caused by the SARS-CoV-2 virus. Most people infected with the virus will experience mild to moderate respiratory illness and recover without requiring special treatment. However, some will become seriously ill and require medical attention. Older people and those with underlying medical conditions like cardiovascular disease, diabetes, chronic respiratory disease, or cancer are more likely to develop serious illness. Anyone can get sick with COVID-19 and become seriously ill or die at any age."

deliberative mechanisms, and at the same time, to essentially employ technocratic tools dependent toward what the context demands. To carefully note, the study does note that in policy analysis, the mainstream scientific, technical, and empirical technocratic policy analysis approach dominates the paradigm in addressing public problems (Andrews, 2007; Boossabong & Fischer, 2018; Dunn, 2015; Griggs, 2007). However, this work stands along the thought that to productively address public problems demands an assimilation of the critical argumentative and interpretive traditions (Boossabong & Fischer, 2018; Fischer, 2015; Wagenaar, 2014) to the highly empirical and technocratic approach (Sacramento & Boossabong, 2021), which some positivist scholars in the discipline have perhaps pinpointed and argued that such assimilation is likely possible (i.e., Jones & Radaelli, 2015).

This case study primarily looks into how the 'resilience' concept can be of relevance to the DPA approach as it takes role towards addressing public problems in turbulent times. Comparatively, the work will be looking into two cases policy innovation projects in Chiang Mai, Thailand that have employed DPA approach in addressing public problems of immediate concern in the context of a pandemic. As this follows the case study method in research, the work employed both primary and secondary data gathered from documentary research, data mining, and case specific data to make sense and articulate the arguments as well as to unravel key points as to why it is relevant to highlight resilience as essential element to a critical-pragmatic approach in doing DPA. Hence, the succeeding section will present the theoretical-conceptual groundings of the arguments, the two cases of policy innovation in Chiang Mai, Thailand during COVID-19 pandemic, and substantial discussion of the case and implications towards integrating resilience to policy analysis.

Deliberative Policy Analysis, Resilience, and Critical Pragmatism

The deliberative policy analysis or DPA being people-centered and inclusive approach towards understanding and rethinking sound alternatives to public problems have been productively advanced and considered by the policy scholars for decades as response to technocratic approach (Boossabong & Fischer, 2018; Fischer et al., 2015; Li & Wagenaar, 2019). Aside from its people-centered and inclusive potentials, deliberative practitioners take essential role towards organizing and facilitating deliberative processes for the public to soundly address their pressing concerns. Forester (1999) have presented in his work the emancipatory potentials of the deliberations, framing the roles and functions of deliberative

practitioner in ensuring a participatory deliberation process (also see: Durnova et al., 2016; Fischer & Gottweis, 2012). However, the pandemic and its induced effect resulting in uncertain conditions has caused tremendous changes to the norms concerning deliberative potential of policy analysis. Among the most significant impacts of the COVID-19 pandemic is the conversion of all transactional processes to remote work, resulting in the lack of the normative interactions practiced a priori pandemic.

Although there is a necessity to acknowledge the technological development's utility in the onslaught of the pandemic where people shifted in flexible working hours and utilized remote communications, we also must put into consideration the risk of social isolation induced by the remote working environment. This has been the contention of Kłopotek (2017) when he figured out the phenomenon behind the pandemic's boosting of the age of social networking and extensive communication tools. If this has been the case in grassroots working set-up, much more would be the activities that concern critical decision making and those that require participation and inclusivity. Furthermore, it has been raised that the current situation was among the biggest tests in generations as the public sectors and the policy makers are pushed on the pedestal while lives are hanging in terrible and delicate balance. The world faces not only the health crisis but also the collapse and disruption of social, economic, and political spheres (Donovan, 2020). This only demands a policy approach that will replenish the DPA's capability to involve and other stakeholders in identifying problems, potential alternatives, and legitimizing decisions. With this, there must be alterations of the methods and remodeling of the long-practiced systems to cope with the demand of pandemic mitigation. It must also be noted that the special circumstance of this dire predicament posed a barrier to the already established deliberative methods posing a critical ground for probable reimagining of the democratic and participatory themes in social analysis. Not to mention, the DPA, as it already is, would need a thorough and sophisticated reformulation of the implementation system to foster engagement practices (Escobar, 2015).

In the face of the pandemic where aside from the social isolation, there are contrasting and varying opinions to mend through, the application of such analytical methods would pose a challenge. While participation has been the usual notion conceived in ideal practice of governance, as it is the point of deliberative designs, the actual result is constrained to how it is thoroughly implemented in the specificities of contexts and how effective it is in actual application. The processes involved in DPA is not only rigid but also poses possible constraints like time or duration of the brainstorming and the formulation of resolve, the engagement to

informal deliberations, and the uncertainty to whether it will be efficient or would pose far greater risk in the long run. This was also the subject of inquiry of Hoppe (2011) when he presented theoretical reflections on the widespread problems involving policies that involve deliberative-participatory approaches.

With this, there is a necessity to revitalize the concept of 'resilient deliberation'. It denotes the necessity to have a DPA that has both practical and pragmatic elements especially amidst unanticipated or unusual situations like disasters and pandemic (also see Forester, 2013). It involves the long process of deliberation that allows conversing of the foreseeable outcomes that transpired or will transpire amidst and in the aftermath of a certain crisis. In dire situations, 'resilience' has been among the core concepts of social science as it opts to provide a leeway on understanding uncertain features especially of ecological phenomena (Béné et al., 2018; Drennan & Morrissey, 2019; Manyena, 2006). It embodies the capacity to be adaptive and learn and allows strategies that will ascertain practical mobilization of resources as resilience implies a thorough process which would test commitment societal endurance. The proposition of Lebel et al., (2006) uncovered core concepts involving resiliency in government's deliberative tendency where they highlighted the propositions concerning:

a) Necessity of participation to be built on trust, which leads to effectively utilizing the DPA potential in allowing facile understanding which is needed for social mobility and self-organization;

b) Multi-layered and polycentric institutions that bridges the gaps between disparities of action, socio-ecological contexts, and knowledges which the allows societies to be responsive and adaptive;

c) and the focus to accountability on the authority that will assess the capability to effectively distribute resources and to enhance the adaptive capacity of the vulnerable sectors in accordance to the society as a whole.

As they delve on the process of resiliency, a similar contention was also raised by Elstub et al. (2021) when they try to understand the resiliency of pandemic digital deliberation. Their evidence pointed out a crucial notion that the entire process of deliberation could become resilient in times of crisis. Further, their data has suggested the relevance of resilient deliberation especially in the context of pandemic democracy, digital public sphere, and even data use which is the normative utility in the contemporary age. Moreover, the capability of public participation which remained the core notion of DPA in formulating inclusive policy systems remains crucial and relevant in allowing the merging of different interests and interactions of contending points as each side is being placed under meticulous scrutiny. The addition of the resilience aspect ensures the adaptability and the assurance that the trust and shared understanding between the core stakeholders are continually

built up in means of repeated interactions as this facilitates communal learning and explores the best possible response to certain issues (also see: Bartels et al., 2020; Chwalisz, 2021; Comfort, 2012; Esau et al., 2021; Gastil et al., 2022; Park et al., 2022).

While most studies have delved on resilience, deliberations, and policy analysis in the online context during the pandemic, this study critically delves on the processes which policy practitioners and analyst have undertook in conducting a deliberative process in the pandemic context both the use of online and on-site strategies. Drawing lessons from concrete cases primarily helps this work frame a substantial insight as to why consider critical pragmatism as compass in DPA and as to how resilience concept helps in achieving such approach. In the succeeding section, we will present the two policy innovation cases in Chiang, Mai, Thailand, which this cases study has drawn lessons. Then, the discussion will substantially present the links of the case to the arguments, which will substantively support the claim of this work. Towards the end, this paper will emphasize the need for DPA to revitalize and adapt on the (re)emerging changes that society's uncertainties and complexities bring.

DPA in crises situations, resilience in policy innovations:
Cases in Chiang Mai, Thailand

Conventional understanding of 'crises,' 'disasters,' or 'turbulent times' may be confined to only natural or technological related (Mohamed Shaluf, 2007). However, the pandemic has even posed great and quick impact over the disruption of social and economic dynamics of the society. Considerably, the uncertainties and complexities that pandemic poses are very much relevant to disasters (Alcántara-Ayala et al., 2021; Kelman, 2020). Scholars in disaster studies scholars have extensively considered pandemics as 'biological' in type in nature, which is a result of disruption of the environment, biodiversity, and natural ecology. Hence, it is critical to note that the COVID-19 pandemic has paralyzed basic functions of the society, which on one hand has posed pressing challenge to governments in responding to a global public health concern (Andia & Chorev, 2021). On the other hand, the pandemic has also unveiled overshadowed and unfelt prior social, political, and economic issues, which have greatly posed pressing concern to the lower socio-economic groups. Hence, policy analysis and innovations are much demanded even in uncertain and turbulent times where the grassroots and the public are much affected.

This section presents two cases in Chiang Mai, Thailand on policy analysis and innovation undertakings which happened amid rising waves of COVID-19 cases. The cases are based on the implemented projects of the School of Public Policy, Chiang Mai University (SPP-CMU) in 2020 to 2022, which the institution have agreed to provide details and necessary data, as well as authorized the use of the case to be cited in this paper as subject for drawing lessons to support the core arguments. The first case is the 'smart city planning' initiative which was done in the Fah Ham municipality in Chiang Mai City, which aims to aid the local government and the community in deliberatively organizing a plan and priority projects to materialize the said initiative. The second case is on the Chiang Mai City lab within the city of Chiang Mai, which aims on providing the policy alternatives and sound solutions on public problems deliberately identified by the community. While the cases provide rich data on the project and the deliberative process, however, the main interest of this work centers on how practitioners and analysts have considered implementing the process amid uncertain and complex times. Additionally, much interesting inquiry centers on the question: can policy analysis become both critical and pragmatic?

Case A: Smart city planning case in Fah Ham Municipality, Chiang Mai, Thailand

Smart city planning is dubbed as a technocratic agenda and thus constitute a highly technical and expert-oriented processes and dynamics from planning to implementation. It is well noted and critiqued by scholars that smart cities tend to be an order of business by either the government or private entities that is too imposing rather than being participatory and people centric. However, the work of Hajer and Dassen (2014) argues that there is potential towards integrating a more people-centered and participatory policy analysis process in smart city planning. While DPA camp may contend that technocratic tools and process will never be compatible to the deliberative approach, the work of Sacramento and Boossabong (2021) have alternatively argued that it is possible and even productive to assimilate technocratic approach to deliberation (and vice versa) in cases that it might demand to do so. Besides the technocratic and deliberative debate, what is critical to highlight here is that on how SPP-CMU undertook the smart city project in the midst of crisis situation.

The smart city planning project was implemented in late 2020 and towards the end of the first wave of COVID-19 pandemic in Thailand. Following the policy cycle process of problem identification or agenda setting, policy formulation or decision making, and policy legitimation or policy acceptance (Cairney, 2011), all of the phases in the smart city planning of Fah Ham municipality underwent during crisis situation. To reiterate few points of how

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resilience has undertook during the DPA process, the online deliberation is one of the few to significantly cited. Nevertheless, the online sphere and platform have taken a vantage position in the deliberative process as the society have halted and taken caution in the spread of virus. As the situation gets better, there a few dialogues and consultation which was conducted on-site with proper precautionary measures to mitigate the spread of the pandemic. While the conventional deliberation process embodies close interactions during dialogues and focus group discussions, the deliberative practitioners have innovatively considered measures to at least shorten the process without compromising the need capture relevant and essential narratives, details, and sentiments from stakeholders.

Since talking to power or authority is one of the major concerns in the deliberative process in soliciting agreement or approval to policy alternative (as well as towards its implementation), this need has created an extra obstacle to practitioners. Local leaders have been focusing on addressing a crisis situation brought by the pandemic through curbing the spread of the virus, responding to rising cases and confinements in the community, and not to mention, people's access to basic goods and services. Deliberative practitioners and facilitators of innovation agenda have conceptualized innovative ways in addressing concerns to local officials and decision-makers. For responses of the public to be heard by people in power or decision makers, policy practitioners and local government employees (heads or coordinators of committees and departments) have to lobby in semi-formal and informal setting what the people have professed as their immediate concern. Though conventional deliberative process may not take this path, however, crises situation demands lesser formally constituted forums and more on talking and lobbying to power, at least for the Southeast Asian context.

The case of Chiang Mai, Thailand City Lab

The Chiang Mai City Lab initiative implemented by the CMU SPP aims to deliberatively address public problems through integrating and linking the voices of the people on the ground, their genuine and immediate concerns, and how decision makers, policy planners, and power would act on it. While it is acknowledged that in policy process (specifically the technocratic ones), authority and power takes more hold over what policy alternatives to decide on (or consider and what not), and what to implement. However, CMU SPP have taken the role over underscoring the need to look into people's voices and concerns, and involve

them through proper representation, the mini public, and the active citizens in the decision making process. Similar to the first case, the Chiang Mai City Lab was implemented amid the pandemic during the mid of 2021 until early 2022, which was a critical time during the spike of COVID-19 case in Chiang Mai brought about the 2nd, 3rd, and 4th waves of the pandemic.

While similar resilient initiatives were undertaken by CMU SPP as a deliberative practitioner and facilitator to that of the first case, the City Lab has even leaped greater steps as to what resilient initiative undertook in policy analysis. While precautionary measures and minimum protocols are still in place during the time of agenda setting phase, the project heeded to the thought that there is also a need for practitioners to live with and by the pandemic an consider innovative measures to conduct policy deliberations and analysis. To point out, one strategy established by the project is to forward public deliberation, which is to adjust and reach out the people in the usual public spaces where they gather, set up deliberative platforms and tools such as mapping, post its, and stickers, in order for the public to manifest which part of and what problems of the city should the authority, policy innovators, funding agency, and policy entrepreneurs should look into. Critical to resilient deliberation is on how the project have facilitated policy innovators and entrepreneurs with projects on hand that corresponds on a certain public problem identified by the public. The pool and match initiative is the most practical way to initiate and select policy innovators to respond to public concern. Towards the end, the public are also engaged in deliberative polling as to which priority agendas and projects that they will consider to implement.

Resilience in DPA: Potential path for critical-pragmatist perspective? (A discussion)

The normative assumption that revolves with the notion of resilience is that it tends to be romanticized as a given, denying the idea that discourses concerning resilience ought to follow a rigid and thoroughly exposited procedure. For instance, in the article of Chaitovitz (2020), there is an immediate presumption that tagging the core values of resilience will tend to bring forth an elaborated public policy. And yet, the question of how such an ambiguous concept is executed amidst the tumultuous period of crises remains a predominant point of disagreement (Reid & Botterill, 2013). Undoubtedly, resilience is a relevant topic to meddle with as the global community is facing a tumultuous time where the pandemic has modified the economic life and the day-to-

day transactions of the people and that there is a necessity to build infrastructures that will sustain the people with innovative potential such as new generations of water treatment systems, bridges, roads, transits, and waterways. Resilience, being incorporated to policy executions is a huge blow to the ongoing crises, and is a powerful tool to aid the nations to great recovery. Now, in the context of DPA, resilience still withstands as the foundation of discourse durability. In the long-run, the demand for a thorough participatory democracy would need a robust mechanism that employs the resilience approach. While rich studies have shown the necessity of the resiliency and it's tendency to be malleable and become politically risky in the meticulous process of policy debate (Stark et al., 2021), this study would not take a complicit role in this onward trend to the study of resilience, but, it takes a critical-pragmatic stance on why there is a need to incorporate resilience to DPA. With the inclusion of a critical aspect that allows analysis of the conditions of society in response to existing models and structures, and the pragmatic element that would ensure applicability, it assures that the contemporary policy's comprehensive security on deliberations is incorporated into a genuine discursive approach that will ground the objective of resiliency to participatory democratic executory processes. With this, the paper took off from an understanding that the DPA procedures can easily be complex and protracted, hence, an inquiry has to be made on how it can become relevant during crisis situations and mitigation efforts.

To provide a thorough synthesis, such major lessons are assured to be derived from this case study. Foremost, the exemplification of the notion that resilience is a critical factor towards productively deliberating on pressing issues in the context of high inequalities. The process of mass-leveling and integration of different societal classes is assured in the procedures implied by DPA. It calls forth a critical analysis out of mass and bourgeoisie integration, and thus inhibits the quality in which all voices are heard and opinions are considered in a deliberative platform. Meanwhile, the inclusion of the resilience aspect guarantees the productive insertion of DPA in the policy formulation procedures since it lays down the practical direction of the DPA process. Secondly, while DPA can sometimes be messy and lengthy in its process, considering resilience strategies poses practical considerations. According to Holling (1973), resiliency is even being debated if it really poses change or mere instability. He emphasized the concept of instability in a resilient ecological setting as something that is more likely occurring in unstable populations. Hence, when applied in DPA processes, it must have a clear sight of the objectives in order for resiliency to be considered as a conceptual tool to deal with uncertainty and further changes. Furthermore, this also means that there are instances when the DPA can be too lengthy which may become unproductive in addressing public concerns during crisis situations. Hence, these types of positionality demands a

need for a resilience approach to withstand follow-up and inherent demands, like making the most out of existing resources, strategies, etc., in order to address specific concerns. Another thing to consider is the tendency that the DPA practitioners may have overlooked the complex and uncertain dimensions of public problems. Thus, pointing out resilience [specifically, the critical and practical part] will guide practitioners to sympathize with situations that demand immediate, if not, both critical and practical solutions. Hence, this study presents Resilience in DPA Framework that was drawn from the case of Chiang Mai, Thailand.
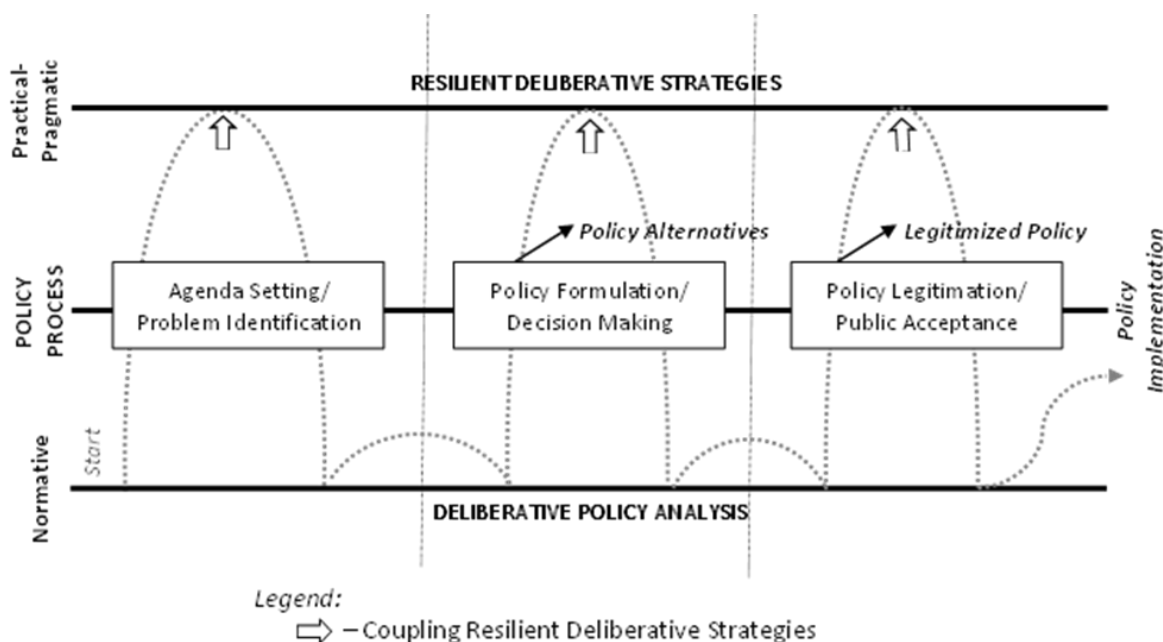

Figure 1 Resilience in deliberative policy analysis

Figure 1 framed that the process took off from the normative DPA approaches and strategies; however, the foundational basis supplied by DPA influence the principles and processes of resilient deliberation. It is productive to note that these dynamics (coupling DPA approaches and strategies towards resilience discourse) position that in crises situations, policy analysis transitions from the normative assumption towards a more pragmatic and practical orientation in addressing urgent concerns like the urgent and continuing impacts in the aftermath of a disaster. Crucial to this thought is the manifestation that the most convenient and practical ways should be considered and implied in addressing concerns; therefore, the deliberative practitioner has a very crucial role to play not just in the process of addressing disaster problems but also in preserving and pursuing deliberative and democratic processes in policy analysis in critical situations.

Conclusion

Conventional approaches that lean towards expert-oriented and technical confrontation in policy analysis are insufficient in addressing modern social problems. In such, deliberative approaches are deemed crucial in assessing policy issues which embody inclusive and participatory elements in assessing socio-political realities. The study tries to lay down the efficacy of DPA in assessing crisis contexts while affirming its relevance amidst a global predicament, a pandemic. With this, the study offers an integrative aspect of the normative form of DPA paradigm with the concept of "resiliency" which employs critical and pragmatic approaches in addressing immediate social concerns. In the manner of providing exposition to the notion of resiliency, it has tried to assimilate what has been coined as a rigidly empirical approach to a much more critical, interpretive, and argumentative tradition of DPA. To further understand the relevance of resilience, it is imperative to put it in a tangible scenario which is the case of policy innovation projects in Chiang Mai, Thailand. The first case presents a deliberative attempt to induce materialization of an initiative or vision while the second case points on the cruciality of popular participation in crafting sound policy solutions which originated from direct observation of the grassroots community. Both cases ignite the deliberative potential in executive and strategizing areas that is attributed by DPA approaches. And yet, a notable inclusion of the resiliency aspect is also needed to be placed of great significance to which in the manner of infusing it to the traditional DPA, there is also an integration of pragmatic and practical orientation that leads to a much more effective means addressing urgent concerns like the immediate and continuing impacts in the aftermath of a disaster.

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A Conceptual Framework of Innovation and Green Logistics for Sustainable Organizational Development to Increase Business Performance of Road Transportation Enterprises

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Abstract

At present, environmental responsibility and sustainability are issues of great concern to the public and private sectors in many countries, especially Thailand. Thai government has established environmental policies that requires organizations and businesses to concern their operations with consideration to social, economic, and environmental sustainability. This study aims to propose a conceptual framework of innovation and green logistics sustainable organizational development in order to increase business performance of road transportation enterprises in Thailand. The framework comprises of one exogenous latent variable, three endogenous latent variables, and fourteen observed variables. The framework portrays eight hypotheses, as discussed in literature review part. The results can be used for further research in which Multiple Regression Analysis (MRA), Confirmatory Factor Analysis (CFA), and Structural Equation Model (SEM) are applied to discover the model on innovation and green logistics for sustainable organizational development that affects business performance of road transportation enterprises in Thailand or other countries.

Keywords: Innovation, Green Logistics, Sustainable Organizational Development, Business Performance, Road Transportation Enterprises

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Introduction

During the period of the thirteenth Economic Development Plan (2023- 2027) , Thai government has planned to develop the country's natural resources by shifting from focusing sustainability instead of economic and income, clearly set goals for a circular economy and an environmentally friendly low-carbon society along with changing consumption behavior to solve environmental and ecosystem problems. This was the beginning of having long-term balanced economic, social, and environmental development. (Office of the National Economic and Social Development Council, 2021) The logistics sector played an important role in driving the Thai economy, especially during the epidemic of coronavirus, the growing of the online market has made the transportation sector grow by leaps and bounds. Therefore, it was necessary to receive continuous support and development. (Department of Primary Industries and Mines, 2020) Companies, especially in transportation, must pay attention to innovation and green logistics management to support government environmental policies and improving business performance to meet the needs of service users and compete with international competitors. (Department of Business Development, 2020)

In addition, the adaptation of innovation and green logistics in business operation and efficient logistics management was one of the important factors that could help reduce costs and increased the ability to meet customer needs. (Namburi, 2019) However, the trend of sustainable development and environmental protection has led to the concept of green logistics development, which is the concept of environmentally friendly logistics management that creates a multidimensional management development model. Since the operations of various businesses had many aspects that are related or affect the environment. Therefore, the concept of green logistics management was created together with the use of creativity to create innovations to develop sustainable management.

From the above, the transport businesses need a way to adapt to meet international standards of competition. Innovation and green logistics play an important role in improving business performance in logistics. Therefore, this research aims to review the literature related to innovation and green logistics that contribute to sustainable organizational development and lead to increase business performance of road transportation enterprises. This study is significant as it contributes to sustainable environmental by encouraging Thai transport service provider towards the adaptation of innovation and green logistics to survive their business in eco-oriented situation today.

Literature Review and Hypothesis Development

Business Performance

Ilmudeen, Bao & Alharbi (2019) had divided the components of business efficiency into three components: there were financial compensation, operational excellence, and marketing performance which corresponds to Kurniawan, Hartati, Qodriah & Badawi (2020) and Exposito & Sanchis-Llopis (2018) that mentioned to the components of business efficiency which are financial success and operational excellence. Tommasetti, Singer, Troisi & Maione (2020) also mentioned to solid financial performance for cost-effective supply chain operations, market share, and profit growth that increased on company performance.

Based on the literature review, it was found that business performance consisted of financial performance, operational performance, and marketing performance.

Sustainable Organizational Development

Hysa, Kruja, Rehman & Laurenti (2020) studied three key circular economy indicators in the context of sustainable growth: economic, social and environment. Silvestre & Tirca (2019) studied innovation is the driver of sustainable development in three areas: economic, social, and environment, which related to the study of Ch'ng, Cheah & Amran (2021), Cioca, Ivascu, Turi, Artene, & Gaman (2019), Lee & Seo (2018), and Siddh, Soni, Jain& Sharma (2018) mentioned that sustainability and sustainable organizational development which has three dimensions: economic, social, and environment.

Based on the literature review, it was found that sustainable organizational development consisted of economic performance, social performance, and environment performance.

Innovation

Exposito & Sanchis-Llopis (2018) mentioned that product or service innovation, process innovation, and organizational innovation affected business performance. Sawangrat (2017) studied three variables in innovation, which are product or service innovation, process innovation, and technology innovation. It related to the study of Chege, Wang & Suntu (2020)

and Khan, Idrees, Rauf, Sami, Ansari & Jamil (2022) mentioned to technological innovation had a positive influence on firm performance.

Based on the literature review, it was found that innovation consisted of product or service innovation, process innovation, technology innovation, and organization innovation.

Green Logistics

Al-Minhas, Ndubisi & Barrane (2020) studied on environmentally sustainable logistics management which consists of four components: there were transport, warehousing, packaging, and reverse transport. It related to the study of Kumar, Brint, Shi, Upadhyay & Ruan (2019) that mentioned to green logistics management involves transportation and distribution and packaging material and Ceniga & Sukalova (2020) mentioned to element of green logistics which were transportation management and reverse logistics. Aroonsrimorakot, Laiphrakpam & Mungkun (2022) studied the development of environmentally friendly logistics in Thailand. in the aspect of transportation, storage, packing and warehousing. Moreover, Karaman, Kilic & Uyar (2020) stated that green logistics consist of green packaging activities using environmentally friendly materials to promote recycling and save energy.

Based on the literature review, it was found that green logistics consisted of green transportation, green warehousing, green reverse logistics, and green packaging.

Innovation and Green Logistics

Innovation impacts green logistics practices of 3PLs in Malaysia's manufacturing sector. (Adebare, Mustakim, & Richard, Moderating, 2021) It related to the study of Seman, Govindan, Mardani, Zakuan, Saman, Hooker & Ozkul (2019) that green innovation positively affects green supply chain management and environmental performance. In addition, D'Attoma & Ieva (2022) and Wang, Liu & Liang (2022) mentioned that the implementation of innovations brings benefits to the environment both internal and external of organizations. From these literature reviews lead to hypotheses:

H1: Innovation has a direct positive effect on Green Logistics.

Innovation and Sustainable Organizational Development

Szopik-Depczynska, Kedzierska-Szczepaniak, Szczepaniak, Cheba, Gajda & Ioppolo (2018) stated that innovation management had a positive effect on the sustainable development of businesses which related to Ch'ng, Cheah & Amran (2021) and Imaz & Eizagirre (2020) mentioned that environmentally friendly innovation practices had positively impacted sustainable business outcomes. Moreover, Stal, Bengtsson & Manzhynski (2022) and Silvestre & Tirca (2019) also stated that the integration of innovative practices and cross-sector collaboration in business model innovation facilitates sustainable development. From these literature reviews lead to hypotheses:

H2: Innovation has a direct positive effect on Sustainable Organizational Development.

Innovation and Business Performance

A study by Hizarci-Payne, Ipek & Kurt Gümüs (2021) found that environmental innovation had a positive impact on company operating efficiency which related to Arsawan, Koval, Duginets, Kalinin & Korostova (2021), and Udriyah, Tham & Azam (2019), that mentioned innovation has a direct and positive impact on company performance and efficiency. Moreover, Hady & Arafah (2018) stated that product innovation has a positive and significant impact on SME business efficiency of 90%. From these literature reviews lead to hypotheses:

H3: Innovation has a direct positive effect on Business Performance.

Green Logistics and Sustainable Organizational Development

Environmentally friendly logistics or green logistics was essential to environmental sustainability and a strategy for sustainable logistics development in Thailand. (Aroonsrimorakot, Laiphrakpam & Mungkun, 2022) It related to the study of Jermsittiparsert, Namdej & Somjai (2019) mentioned to green logistics management positively impacts sustainable performance in thailand's electronics industry. In addition, Dzwigol, Trushkina, Kvilinskyi & Kvilinskyi (2021) stated that green logistics affected the sustainable development of logistics in a circular economy and in Greek Agriculture and Food Sector. (Trivellas, Malindretos & Reklitis, 2020) Moreover, green logistics practices affect the sustainable development of transport and logistics companies in Lithuania (Vienazindiene, Tamuliene &

Zaleckiene, 2021) and in Slovakia Organizations as well. (Richnák & Gubová, 2021) From these literature reviews lead to hypotheses:

H4: Green Logistics has a direct positive effect on Sustainable Organizational Development.

Green Logistics and Business Performance

Environmentally friendly transport affected stable financial performance for supply chain operations, focusing on cost savings for increasing market share and profit growth. (Tommasetti, Singer, Troisi & Maione, 2020) Green logistics and supply chain management efficiency positively affected company performance because it increased profitability and market share which affects the environmental sustainability of the company. (Wai Peng Wong & Chor Foon Tang, 2018) In addition, Chidchob & Pianthong (2020) stated that green supply chain management consists of purchasing green, green design, green production, and green transportation, which directly influenced competitiveness and indirectly affect business performance. It related to Khan, Idrees, Rauf, Sami, Ansari & Jamil (2022) mentioned to green supply chain management also positively affects operational efficiency. From these literature reviews lead to hypotheses:

H5: Green Logistics has a direct positive effect on Business Performance.

Sustainable Organizational Development and Business Performance

Sustainable business organization performance can enhance a company's financial performance (Weber, 2018) which related to the study of Jawaad & Zafar (2020) stated that improving sustainable development also affects company performance. Moreover, Janphotanukul, Rojanasang & Angsuchoti (2018) mentioned to collaboration and sustainability influences the performance of marine exporters and sustainability also significantly affects performance with long-term adoption. (Vidal, Croom, Spetic, Marshall & McCarthy, 2018) From these literature reviews lead to hypotheses:

H6: Sustainable Organizational Development has a direct positive effect on Business Performance.

Mediating Role of Sustainable Organizational Development

The linkage of the hypotheses 2 and 6 allows the researchers to account for the mediation effect of sustainable organizational development on the effect of innovation on business performance. Moreover, the hypotheses 4 and 6 allows the researchers to represent the mediation effect of sustainable organizational development on the effect of green logistics on business performance (Hayes, 2013):

H7: Sustainable Organizational Development mediates the effect of Innovation on Business Performance.

H8: Sustainable Organizational Development mediates the effect of Green Logistics on Business Performance.
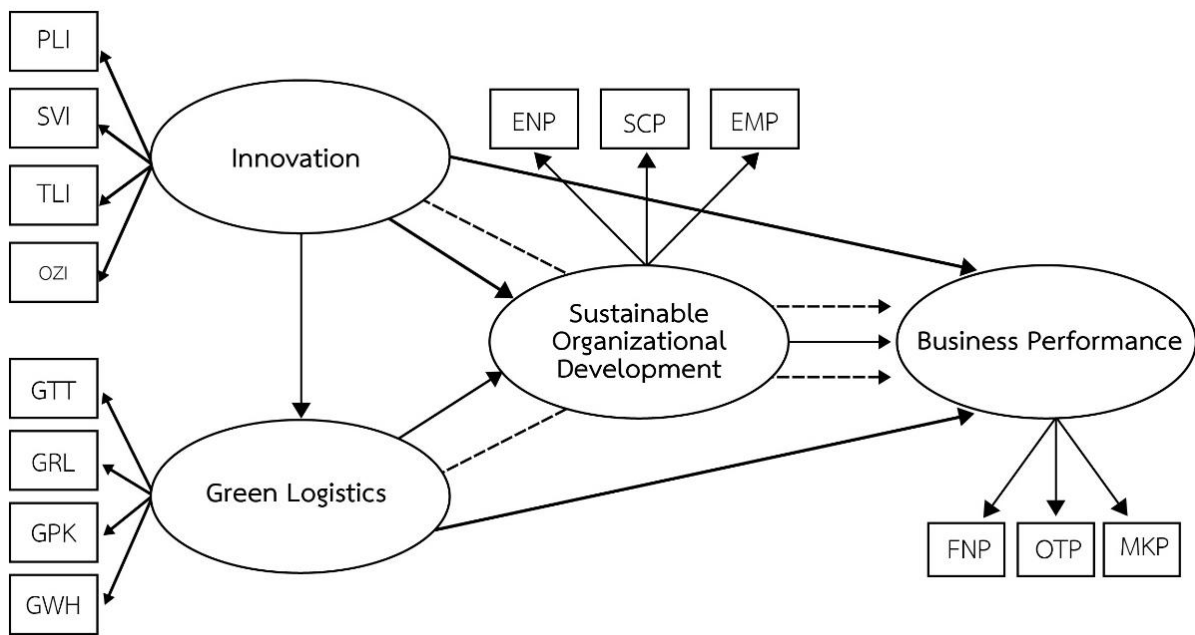
Conceptual Framework

Figure 1: Conceptual Framework

The conceptual framework, as shown in Figure 1, depicts the only exogenous latent variable, Innovation, consisting of Process Innovation (PLI), Service Innovation (SVI), Technology Innovation (TLI), and Organizational Innovation (OZI). In addition, three endogenous latent variables included Green Logistics, containing Green Transportation (GTT), Green Warehousing (GWH), Green Reverse Logistics (GRL), and Green Packaging (GPK), Sustainable Organizational

Development, comprising Economic Performance (ENP) , Social Performance (SCP) , and Environmental Performance (EMP) , and Business Performance, consisting of Financial Performance (FNP), Operational Performance (OTP), and Marketing Performance (MKP). The framework portrays eight hypotheses, as discussed in literature review part, displaying the effect of Innovation on Green Logistics, Sustainable Organizational Development, and Business Performance, the effect of Green Logistics on Sustainable Organizational Development and Business Performance, the effect of Sustainable Organizational Development on Business Performance, and the mediating roles of Sustainable Organizational Development on the effects of Innovation and Green Logistics on Business Performance.

Conclusion and Discussion

This paper provided a conceptual framework in the field of innovation. The field has seen growth over the past two decades as it has expanded in scope and definition. The researchers utilized a framework to help identify and advance research in this field. The researchers have shown how innovation relate to green logistics, sustainable organizational development, and business performance. The observed variables, besides, were identified.

Practically, managers, especially in Thailand, may be able to utilize this research to help them decipher the complexities faced when seeking to manage the greening of their businesses. In this paper, the researchers relied on more recent literature in this field. Significant reviews of green logistics and business practices have occurred previous to this article. Many of these were filtered out to provide some of the latest work in this area. It is an exciting time in business administration and supply chain management research.

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