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The Missing Pedagogical Link for Malaysian Environmental Citizenship: An Emerging Model of Interconnectedness of Knowledge Domains and Values Mediation

Esther Gnanamalar Sarojini Daniel[a]
University of Malaya

Subarna Sivapalan
University of Nottingham Malaysia

Khai Ern Lee
Universiti Kebangsaan Malaysia

Thiagarajan Nadeson
WWF Malaysia

Abstract: *In Malaysian education, an approach to inculcate Environmental Citizenship (EC) comprising positive attitudes and pro-environmental behaviour is to try and improve Sustainable Development (SD) awareness based upon knowledge of the environment, social, cultural, and economic domains. However, will the increase of knowledge of these domains suffice for enhancing EC? The paper discusses a 2019-2020 nationwide survey conducted to determine the EC status and SD awareness. The study had 1976 respondents, and statistical analysis revealed that the overall self-perceived EC and SD awareness levels were high among Malaysians. However, correlational analysis between the EC and the SD knowledge component domains revealed low associations indicating a lack of interconnectedness between the domains. Environmental values, investigated as an exploratory variable in the study, appeared to have a mediating role between the EC and SD awareness component domains. Further analysis using PLS-SEM software revealed that values did play a mediating role. Based on these findings, the paper argues for an emerging model for a missing pedagogical link in transforming Malaysian EC through SD awareness education for pro-environmental behaviour. Implications for an education policy are discussed.*

Keywords: *Environmental Citizenship; Sustainable Development Awareness; Attitudes; Pro-Environmental Behaviour; Values*

Introduction

We live in precarious times. Although humans have long been identified as significant contributors to environmental degradation, global reports such as the Intergovernmental Panel on Climate Change (a UN body) and Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services have reiterated the role of humans in environmental destruction and paved the way for firm global commitments. The United Nation's Sustainable Development Goals, the Paris Climate Agreement (by UN Framework Convention on Climate Change) and the Post-2020 Biological Diversity Framework

a Correspondence can be directed to: esther@um.edu.my

(by UN Biodiversity Convention) reflect the dire need for critical global interventions to manage world human activities in a collective and holistic approach.

Agenda 2030, also known as the United Nations Sustainable Development Goals (SDGs), was adopted by member states in 2015 and formalised in Jan 2016. The SDGs are a - "blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice" (United Nations, 2020). With a total of 17 goals and 169 targets, the SDGs are indeed ambitious in wanting to create a more secure world for mankind and all living beings. However, the actualisation of these goals and targets will involve addressing the interactions between biophysical, social, economic, and governance issues or components that underlie these goals and targets and should not be compartmentalised (Lim, Jørgensen & Wyborn, 2018). There must be an element of balance and interactions between these components (Zenelaj, 2013; Šulc et al., 2020) to ensure the SDGs' transformations are projected for sustainable development (Ban, 2014).

Education is vital in translating the vision of the SDGs in a balanced manner (Zenelaj, 2013). SDG4 (Quality Education) has played a major role in infusing EC into Malaysian education. Besides formal and non-formal environmental education (EE), Mohamad Saifudin et al. (2018) revealed that in Malaysia, EE is also to a great extent facilitated by the media and environmental non-governmental organisations (ENGOs) to enhance SD awareness. Quality Education, imbued within the philosophies and practices of education for sustainable development, has set forth significant targets to ensure the generations of the future continue to flourish within more sustainable environmental, economic, social, and cultural ecosystems (Frank, Fischer & Wamsler, 2019). To this end, many international and local initiatives have been envisioned and conducted to promote greater awareness and accountability to sustainable development. Among these initiatives is developing EC through enhancing SD awareness within the education ecosystem.

Environmental Citizenship (EC) and Sustainability Development (SD)Awareness

In the late 1980s, the vision for sustainable development was three dimensions: economic growth, social inclusion, and environmental balance. The Brundtland Report (1987) enshrined these three dimensions as the pattern used in local, national, and global strategies for development. Today, the concept of sustainable development has become prominent in dialogues of social and economic development and for environmental protection since the Rio Declaration on Environment and Development (UNCED, 1992) and the Millennium Development Goals (United Nations, 2020). In April 2010, the Executive Bureau of United Cities and Local Governments (UCLG) agreed to mandate Culture as the Fourth Pillar of Sustainable Development at its meeting in Chicago.

EC is defined as when pro-environmental behaviour is practised both in public and private spheres, based upon a belief that active participation of citizens is necessary for trying to achieve sustainability (Dobson, 2010; Hadjichambis et al., 2020). Thus, it can be said that a society steeped in EC is when values, attitudes and pro-environmental behaviour are transformed, as individuals view themselves as being part of the global environment (Barry, 2006). Such could be developed through SD awareness where the knowledge domains of the environment, economy, social and culture are expounded effectively.

As noted by Common and Stagl (2005), the study of EC has a lot to do with sustainability since EC must be understood to maintain the capacity of the joint economy-environment system to continue to satisfy the needs and desires of humans for a long time into the future (Dobson, 2010). In EC and SD, awareness, interconnection, partnerships, and interdependence at a global scale, unbounded by boundaries, is essential and needs to be prioritized (Beck, 2010). The key document – Transforming our World – the 2030 Agenda for Sustainable Development, focuses on five main issues, namely people, planet, prosperity, peace, and partnership which pushes for sustainability and EC for citizens to act as agents of change (ENEC, 2018; Kaputa, Lapin, Leregger & Gekic, 2020).

In building EC through SD awareness, EE has been considered an essential pathway that can bring behavioural changes (Gunningham, Kagan & Thornton, 2004; Dietz & Stern, 2002). In times of a changing climate, EE can hope to strengthen EC to bring solutions to environmental problems (Huckle, 2014). EE's goal should be to translate the knowledge of the various pillars of environment, economy, social, and culture into the cultivation of positive pro-environmental attitudes and behaviour. It should be about scaffolding a critical change in the intellectual mindset for an environmentally responsible individual in society (Goldman et al., 2020). Environmental education is a learning process that increases people's knowledge, and awareness about the environment and associated challenges develops the necessary skills and expertise to address the challenges and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (Linke 1980, pp. 26-27; Gillett 1977). The EE story continued to the next significant development with the establishment of the UN Decade of Education for Sustainable Development (DESD) from 2005 to 2015, and the Agenda 2030 from 2015-2030 with 17 Sustainable Development Goals. Each member country was encouraged to incorporate Education for Sustainable Development (ESD) into all relevant subjects in their formal education systems and to develop policies and practices to achieve this. ESD enhances the cognitive, social, emotional, and behavioural dimensions of learning. ESD is recognized as a key enabler of all Sustainable Development Goals and achieves its purpose by transforming society. ESD empowers people of all genders, ages, present and future generations while respecting cultural diversity (UNESCO, 2021). Furthermore, Šulc et al. (2020) think that education for sustainability (EfS) promotes three interconnected pillars, i.e., environmental, social, and economic sustainability, that should be considered in many educational systems. Nonetheless. The debate between EE, EfS and ESD is that EE has a narrow focus on "… the natural environment without considering the needs and rights of human populations as an integral part of the ecosystem" (Sauvé 1996, p.8) in comparison to ESD.

To counter this perception, Sauvé (1996) discussed the concept of environmental education for sustainable development (EEFSD). The conceptions within this concept include, 'Environment as nature - to be appreciated, respected, preserved'; 'Environment as a resource - to be managed'; 'Environment as a problem - to be solved'; 'Environment as a "place to live" - to know and learn about, to plan for to take care of'; 'Environment as the biosphere - in which we all live together, into the future' and 'Environment as a community project - in which to get involved (Sauve 1996, pp.10-12). Nonetheless, Kopnina (2014) points out that,

> "…while multiple perspectives on (education for) sustainable development are possible and perhaps desirable, they should not obscure the original aim of environmental education in fostering a citizenry that, in the words of the Belgrade Charter (1976), is 'aware of, and concerned about, the environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones' (p. 74).

Therefore, there is a broad characterisation of EE, and in delivering EE, the 'environment' must be addressed in its totality, i.e., natural, social, economic, political, cultural, and historical (Sabo, 2011), all of which the present study is cognizant.

Pro-Environmental Behaviour and Environmental Value Orientations

Behaviour towards the environment has been investigated from many angles. The mediating effect of intention is significant in pro-environmental behaviour among Malaysian public employees (Mohamad Fazli, Norjumaaton & Wijekoon, 2019). In contrast, in investigating the environmental values–behaviour gap, it was found that good intentions do not necessarily translate into environmentally supportive behaviour (Kennedy, Beckly, McFarlane, & Nadeau, 2009). Chin, De Pretto, Thuppil and Ashfold (2019) found that public perceptions and support for environmental protection

were high, but many did not want to take on actions that involved individual effort. Factors such as environmental knowledge, motivation (Vicente-Molina, Fernandez-Sainz & Izagirre-Olaizola, 2013), cognitive knowledge and values (Schneiderhan-Opel & Bogner, 2020) have been found to influence pro-environmental attitudes and promote suitable environmental behaviour. Other studies include Leiserowitz, Kates and Parris (2006), who reviewed multinational and global trends in sustainability values, attitudes, and behaviours, while Kollmuss and Agyeman (2002) investigated barriers to pro-environmental behaviour. Hence, many studies have investigated numerous constructs about pro-environmental behaviour in many ways and approaches, with contrasting results. Overall, Liobikiene and Poškus (2019) found that the interplay between external factors such as environmental knowledge and internal factors such as environmental concern affect public and private behaviours and, ultimately, EC.

The sophistication and complexity of human behaviour are context-specific. Research shows a gap between having environmental knowledge and demonstrating environmentally friendly attitudes and pro-environmental behaviour (UNCED, 1992). The right kind of knowledge of the environment is essential for pro-environmental behaviour and, therefore, for EC, was argued by Smederevac-Lalic M. et al. (2020). However, knowledge such as environmental systems knowledge and action related knowledge must be linked to values and real life. To be an environmental citizen, fundamental and holistic knowledge of the relationships and interactions of living and non-living things are required (Hay, 2002). However, this knowledge must be linked to actions for sustainability (Ergen & Ergen, 2011). Mensah and Casadevall (2019) caution that the pillars of environment, economy, social and culture are interconnected and have complex relationships which can influence and lead to responsible human behaviour. Bascopé, Perasso and Reiss (2019) state that ESD activities must start at an early childhood stage and be value-oriented.

Rokeach (1973) defined the concept of value as "…an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable…" (p. 5). Rokeach stated that three important characteristics are found in the value concept, namely, (Rokeach 1973, p. 5-7),

(1) it is cognition about what is desirable;
(2) it is affective, with associated emotions; and
(3) it has a behavioural component that leads to action when activated.

A general classification of 56 values representing ten universal value types found across cultures was put forward by Schwartz (1994). Research since the 90s' has shown an association between these values and environmental behaviour (Gutiérrez, 1996; Thogersen & Grunert-Beckmann, 1997; van Riper & Kyle, 2014). Studies have also sought to see a link between values and attitudes (Grunert & Juhl, 1995; Nordlund & Garvill, 2002; Schultz & Zelezny, 2003). Generally, the findings from previous studies suggest that values underlie environmental attitudes and behaviour (Schultz et al., 2005; Corraliza & Berenguer, 2000).

Values are also considered multidimensional constructs acting as guiding principles that reach across different situations and influence decision-making (van Riper et al., 2020). Furthermore, values are a basis for many psychological processes and thus are considered critical in behavioural change (van Riper & Kyle, 2014; Wynveen, Wynveen, & Sutton, 2015; Jones, Shaw, Ross, Witt, & Pinner, 2016). Dietz, Fitzgerald and Shwom (2005) concluded that values are stable in a person's life. Hitlin (2011) added that values create an internal compass that individuals navigate actions through life's experiences.

Related to pro-environmental behaviour, four underlying environmental value dimensions thought to influence behaviours are the biospheric (concern for the environment), altruistic (concern for others), egoistic (concern for personal resources) and the hedonic (concern for pleasure and comfort) dimensions (Bouman, Steg & Kiers 2018). The intersection between values and behaviour appears complex (Steg & Vlek, 2009). It has been found that these multi-faceted dimensions of values have different effects on behaviour (Manfredo et al., 2017). Biospheric and altruistic values are closely related to pro-environmental actions (Balunde, Perlaviciute & Steg, 2019; Steg & De Groot

2012; van Riper & Kyle, 2014; Unal, Steg & Gorsira, 2017). Egoistic values have been associated with negative environmental behaviour (De Groot & Steg, 2010; Hurst, Dittmar, Bond, & Kasser, 2013).

In the present study, two types of values were the focus, biospheric and altruistic values. Biospheric values are defined as "…a value orientation in which "people judge phenomena on the basis of costs or benefits to ecosystems or the biosphere" (Stern & Dietz 1994, p. 70). Biospheric values do not have a clear link to human welfare but show concern with the quality of nature and the environment for its own sake (Steg & De Groot, 2012). Martin & Czellar (2017) stated that biospheric values mediate the relationship between self-nature connection and environmentally friendly behaviour. Altruistic values reflect a concern for the welfare of other human beings (Steg & De Groot, 2012). Welfare includes equal opportunities for all, social justice, caring for the weak and free of war (Dietz, Fitzgerald & Shwom, 2005)

The biospheric and altruistic dimensions are also categorized as self-transcendence and the egoistic dimension as self-enhancement (Schwartz, 2012). Biospheric and altruistic values are good predictors of pro-environmental behaviour and therefore should be promoted and strengthened in pedagogical aspects of interventions or activities to enhance pro-environmental behaviour (De Groot & Steg, 2010; Steg & De Groot 2012). Thus, much research has been conducted into the complex association between values and behaviour involving factors such as attitudes, intent, beliefs, motivations, and emotions which can guide EE (Gifford & Nilsson, 2014; van Riper et al., 2018). Closer to home, Choy and Onuma (2021) identified a spectrum of values in the Heart of Borneo (an area demarcated in East Malaysia, Indonesia, and Brunei, in the island of Borneo), which play an essential role in complex decision making related to environmental policy and natural resource management for environmental conservation.

Malaysian Environmental Citizenship (EC) and Pro-Environmental Behaviour

In 1995, the Malaysian Economic Planning Unit (EPU) investigated environmental awareness among Malaysians. The national survey involved 3,564 persons in both urban and rural areas in Malaysia and covered 15 years and above. Among the findings that emerged were that only 37% have an adequate understanding of the word "environment", 34% have some idea, while 29% declare ignorance of the word's meaning. Soon after this, in 1998, the Ministry of Education rolled out instructions for EE infusion in all subjects (cited in WWF-M, 2009).

The World Wildlife Fund for Nature (WWF) conducted the next extensive nationwide survey in Malaysia among 6090 respondents in 2007. In addition to determining the level of EC in Malaysia at 57.1%, knowledge of the environment, the perceived levels of positive attitude towards the environment and pro-environmental behaviour were 57.7%, 71% and 47.1%, respectively (WWF-M, 2009). Although perceived attitude levels were high, and knowledge of the environment was moderate, this did not appear to translate into a high level of pro-environmental behaviour. These findings spurred WWF-M and many other agencies to increase and expand their efforts in improving the level of SD awareness to bring about the transformation of EC. Some of these efforts include the Eco-School and Eco-Campus programmes. Eco-conferences and seminars are also organised yearly nationwide. These efforts have been influenced by the United Nations Sustainable Development Goals (2015-2030), which replaced the Millennium Development Goals (2000- 2014).

During the above-mentioned ongoing efforts to enhance EC through SD awareness, numerous studies have investigated the various domains involved. A six-year longitudinal study (2008 -2013) by WWF-M, where modules prepared for the subjects of Science, Mathematics, Geography and Language with various pedagogical interventions were utilised for EE in selected schools, indicated that an increase in SD knowledge does not necessarily translate into transformational pro-environmental behaviour (WWF-M, 2013). The issue of food waste in Malaysia was studied in relation to SD knowledge and pro-environmental attitude by Muhammad 'Arif et al. (2018), and it was found that a strong SD awareness level does not necessarily indicate a higher pro-environmental behaviour level.

In contrast, research focusing on young consumers in a local university revealed that the higher the level of knowledge in environmental issues, the higher the association with perceived pro-environmental behaviour (Siti et al., 2010). SD awareness and behaviour was found to be positively correlated by Neo, Choong and Rahmalan (2017). Saripah et al. (2013), in their study of five major urban locations in Malaysia, reported that environmental knowledge affects the inculcation of environmental values among the residents of urban areas, which in turn affects their pro-environmental behaviour. The constructs of environmental commitment, environmental consciousness, green lifestyle, and green self-efficacy were investigated by Yusliza et al. (2020) and found to positively influence pro-environmental behaviour among a selected group of students from a training centre in Malaysia. The above studies have revealed contrasting results in the investigation of pro-environmental behaviour.

Although much work has been done and is still being done to bring about changes in pro-environmental behaviour (11th Malaysia Plan, 2016-2020), newspaper reports before and during the Covid-19 pandemic lockdown exposed unchecked disposal of waste in several Malaysian rivers (e.g., Selangor River, Langat River) (Chen, 2019; The STAR, 2020; Bernama, 2021). Despite numerous activities and campaigns related to SD awareness and EC by various NGOs and government organisations, actual pro-environmental behaviour appears to lag, although perceived levels of self-action are high.

Existing Models for Pro-Environmental Behaviour

What influences pro-environmental behaviour? According to Kollmuss and Agyeman (2002), this complex question has been investigated for almost half a century. It is accepted that positive changes in pro-environmental behaviour are essential for the continued progress of EC. For this to happen, changes in attitudes must also occur (Dobson, 2007).

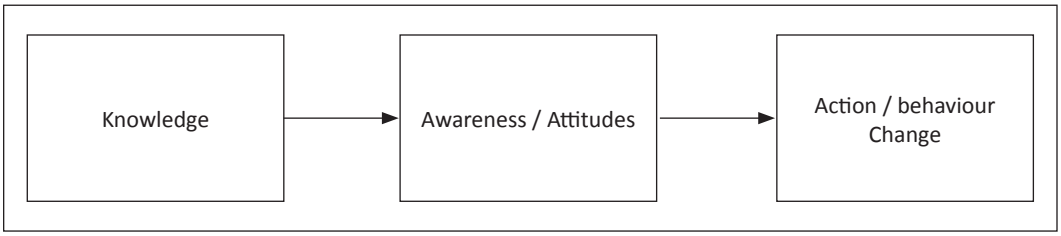

Figure 1: Early Behavioural Change Model
Source: modified from Akintunde (2012)

Figure 1 shows the early behavioural change model of the 1970s, which implies that a pedagogy steeped in knowledge of the environment would build environmentally favourable attitudes, which eventually develops responsible environmental actions. However, this linear model is now too simplistic to explain the development of pro-environmental behaviour.

Since the 1970s, various models have been put forward, namely, the model of reasoned action (Ajzen & Fishbein, 1980), model of ecological behaviour, models of predictors of environmental behaviour (Hines, Hungerford & Tomera, 1986–87). and barriers between environmental concern and action (Blake, 1999). Blake (1999), in his model, highlighted the attitude–behaviour gap as the value–action gap. Blake based the model upon Redclift and Benton's belief that values are "negotiated, transitory, and sometimes contradictory' (as quoted in Blake 1999, pp. 7-8). Kollmuss and Agyeman (2002) went on to categorise factors influencing pro-environmental behaviour into internal factors (e.g., motivation, environmental knowledge, awareness, values, attitudes, emotion, locus of control, responsibilities, and priorities) and external factors (e.g., institutional, economic, social, and cultural factors). Chen and Martin (2015) also highlight how Kollmuss and Agyeman group environmental

knowledge, values, attitudes and emotional involvement as 'pro-environmental consciousness', a complex factor that is shaped by personality and external factors (Figure 2).

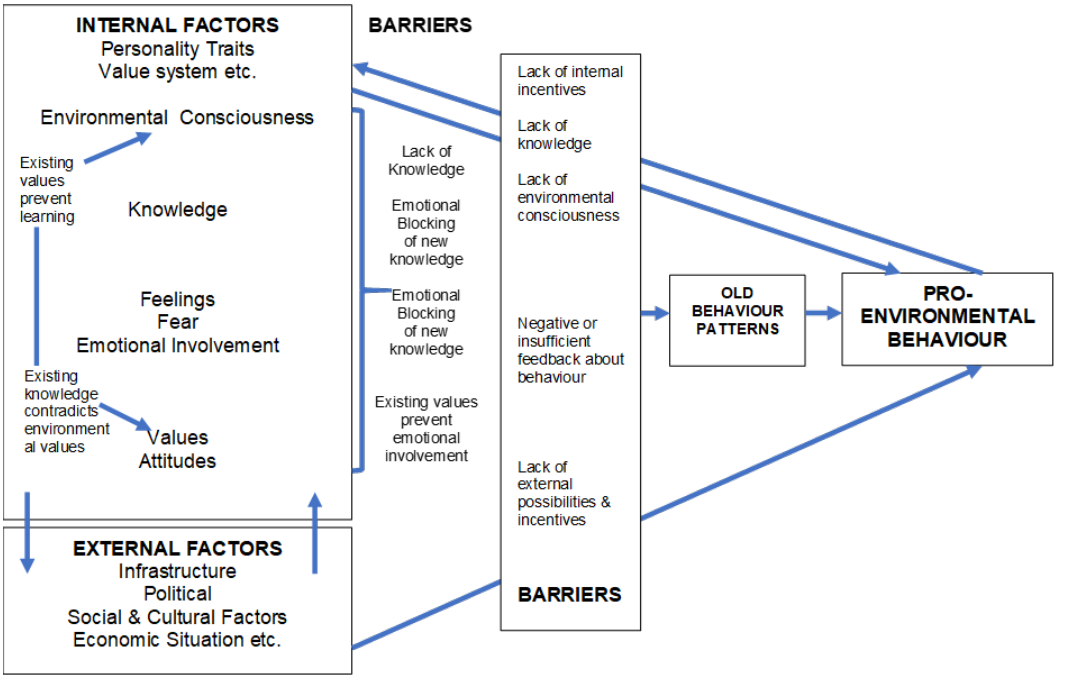

Figure 2: Model for Pro-Environmental Behaviour
Source: modified from Kollmuss & Agyeman (2002)

With numerous factors to consider, this study investigated EC (environment, attitudes, and behaviour domains perspectives), SD awareness (environment, economy, social and culture domains perspectives).

Objectives of the Study

The objectives of the present study were fourfold, (i) to determine the current level of EC and SD awareness; (ii) to examine the associations between the SD knowledge domains and the EC affective domains; (iii) to explore the role of the values domain in EC and SD awareness, and (iv) to put forward pedagogical implications for EC education.

Methodology

A Quantitative Survey approach was adopted for the study. This section will discuss the Research Instrument, the Pilot Study and the Respondents involved in the actual study.

The Survey Research Instrument

A literature review of previous studies was carried out in which the domains for SD and EC were investigated. Several surveys and their items were scrutinised, such as the Effective practice for SD in Ireland Schools (2010) survey, Effectiveness of education for SD, University of South Carolina (2014) survey, Education for Sustainable Development (ESD) in the Western Balkans survey and Effects of ESD implementation in Swedish Schools survey to name a few. The researchers drafted out items (in English) for all the knowledge domains of environment, social, economy, culture, and the affective

domains of attitudes, values, and behaviour in the first version of the survey, which consisted of 100 items. The items were then back-translated into Bahasa Malaysia (BM- the national language of Malaysia) by two language experts. The researchers (subject matter experts) and the language experts then vetted the items again in both languages. The survey was tested for face validity and content validity for both languages by a group of seven local experts in environmental sustainability education. The bilingual survey was pilot tested with 683 volunteer student respondents from a local university, a secondary and a primary school.

Pilot Study

The feedback given by many of the respondents was that there were too many items in the survey and that it took a long time to complete the survey. Such could cause the number of respondents participating in the actual study to be low. Therefore, the researchers re-examined the items again, vetted them, and reduced them to 50. In addition, several group discussions were held together with the language and the environmental sustainability experts in the field in vetting the items.

The final survey was then placed online on the WWF-M website and announced on the various social media platforms between September 2019 to January 2020 for nationwide research. The link was sent to all partners associated with WWF-M nationwide, eco-schools and eco-campuses throughout the nation under the purview of WWF-M. The Alpha reliability coefficient of the instrument was found to be r=0.925.

Respondents of the Study

A total of 1976 respondents took part in the actual survey. The essential demographics of the sample are shown in Table 1.

Table 1: Respondent Demographics

	Categories	**No.**	**%**
Gender	Male	1492	75.51
	Female	484	24.49
	Total	1976	100
Students	Public schools	533	26.97
	Private Schools	234	11.84
	Other types of schools	26	1.32
Non-Students	From Various Industries*	1183	59.87
	Total	1976	100

*NGOs, Forestry, Banking, Health Care, Arts & Entertainment, Legal, Finance, Advertising, Fashion, Architect, Retiree, Insurance, etc.

Explanation of Main Constructs and Components

The two important constructs in the study are SD and EC and their components, which were investigated through the Likert Scale survey. These constructs and their component domains from the literature have been discussed above. The specific aspects of these constructs investigated in the present study are explained below.

(a) Sustainable Development (SD): This study looks at the comprehension of four component domains or pillars within SD Awareness: environment, economy, economy, and culture.

Environment: The study focused on the interdependence of living things, renewable natural resources, and biological biodiversity. Six items in the survey measured this aspect.

Item example: The interdependence of living things in an environment must be preserved for sustainable development
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

Economy: The study focused on preserving biodiversity, land conservation and reducing poverty versus development for economic welfare. Seven items in the survey measured this aspect.

Item example: Poverty levels directly affect the potential for a sustainable society.
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

Social: The study focused on the link between local and global issues related to health, degradation of the environment and peace. Six items in the survey measured this aspect.

Item example: Improving people's health and opportunities for a good life contributes to sustainable development.
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

Culture: The study focused on respect for different cultures, gender equality and interaction between different cultures. Six items in the survey measured this aspect.

Item example: All people must be treated with the same respect whatever their cultural backgrounds
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

(b) Environmental Citizenship: This study investigated the levels of three-component domains within the EC - environment, attitudes, and behaviour. There is an overlap for the environmental domain with SD awareness.

Environment: Already explained above
Attitudes: The study focused on sustainable lifestyles, state of the environment, laws to protect the environment, decision-making for development activities. Eight items in the survey measured this aspect.

Item example: All people must be treated with the same respect whatever their cultural backgrounds
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

Behaviour: The study focused on personal actions (recycling, etc.), being involved in group activities to protect the environment. Nine items in the survey measured this aspect.

Item Example: I join in my community clean-up efforts.
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

Values: The study focused on personal sacrifices, taking responsibility, the value of all life on earth. Eight items in the survey measured this aspect.

Item example: In my opinion, all life on Earth has the right to exist no matter what is their value to humans.
[Strongly Agree (SA), Agree (A), Don't Know (DK), Disagree (DA), Strongly Disagree (SD)]

Data Analysis

The survey instrument utilised for the study was a Likert Scale Survey. Individual items of the scale had a response continuum in a linear scale, which indicates the extent to which respondents agree or disagree with the item. At this point, Jamieson's (2004) argument, "The response categories in Likert scales have a rank order, but the intervals between values cannot be presumed equal" (p.1217), needs to be addressed. Much has been written about parametric tests in analysing ordinal data. On the other side of the fence, Norman (2010), an expert in medical education research methodology, argued with actual examples that parametric tests could be used to analyse ordinal data. This is because they are sufficiently robust to yield largely unbiased answers that are acceptably close to ''the truth'' when analysing Likert scale responses. Warmbrod (2014) discussed two basic concepts which can point to the rationale behind reporting and interpreting average scores when using Likert scales to quantify educational constructs. The first is that the construct is not measured by a single item but a multiple-item scale. This leads to the second, which is scores from Likert scales are derived from a composite of responses to multiple items. This reasoning was originally used by Likert (1932), whose monograph explained, ". . . that the quantification of the construct is a summated score for each individual calculated by summing an individual's responses for each item comprising the scale" (Warmbrod 2014, p.31). Norman (2010) concluded that his findings are consistent with empirical literature dating back nearly 80 years. Nevertheless, the arguments for and against the use of parametric tests continues.

The survey used in the present study had seven domains. The items in each domain were combined into a single composite score/variable during the data analysis process to provide a quantitative measure of each domain (Boone & Boone, 2012). Rhemtulla, Brosseau-Liard and Savalei (2012) argued that reliance on continuous ordinal data methodology would produce acceptable results when the number of categories is five or higher. In educational research, the existence of underlying continuous variables is a common assumption when analysing categorical variables, and this is the paradigm adopted in the present article (Rhemtulla, Brosseau-Liard & Savalei, 2012).

Results and Findings

This section will discuss the levels of EC and SD awareness, the correlations between the various component domains of EC and SD awareness, the possible role of the values domain and the pedagogical implications.

Perceived Levels of EC and SD Awareness

The perceived levels for the environment, attitudes and behaviour component domains are as shown in Table 2 for EC. The overall level for EC is at mean (M) = 4.35 with standard deviation (*sd*)= 0.327. The attitudes domain is at M = 4.14 and *sd* = 0.369; the behaviour domain is at M = 4.23 and *sd* = 0.542; and the environment domain is at M = 4.68 with *sd* = 0.362.

Table 2: Levels of EC and its Component Domains

	Mean	Median	Standard Deviation
Environment	4.6789	4.8000	.36216
Attitudes	4.1422	4.2000	.36910
Behaviour	4.2278	4.2200	.54237
Overall EC	**4.3496**	**4.3667**	**.32665**

The perceived levels for the SD awareness component domains are shown in Table 3. The overall SD Awareness level is at M =4.23 with sd = 0.312. Results for the component domains of

SD awareness are environment at M = 4.68 with *sd* = 0.362; economy at M = 3.87 with *sd* = 0.593, social at M = 3.96 with *sd* = 0.423, and culture at M = 4.41 with sd = 0.398.

Table 3: Levels of SD Awareness and its Domains

	Mean	Median	Standard Deviation
Environment	4.6789	4.8000	.36216
Economy	3.8688	3.8600	.59258
Social	3.9585	3.8600	.42289
Culture	4.4059	4.4300	.39803
Overall SD Awareness	**4.2280**	**4.2500**	**.31233**

The perceived levels of the EC and SD awareness domains are high.

Associations between EC and SD Awareness Component Domains

Table 4 shows the associations between all the component domains. All the associations were found to be positive, although mostly weak. The correlation coefficient between the environment and economy domains is rs=0.332 (weak and significant), between the environment and social domains is rs=0.342 (weak and significant), and between the environment and culture domains is rs=0.386 (weak and significant). The correlation coefficient between the economy and social domain is rs=0.303 (weak) and between the economy and culture is r*s*=0.279 (negligible). The correlation coefficient (r*s* =0.334) between the social and the culture domains is weak, positive, and significant. These weak positive correlation coefficient values imply that increases in one domain are not correlated strongly with increases in the related domain.

Table 4: Correlations between SD and EC dimensions

		Env	Eco	Soc	Cul	Att	Beh
Env	Spearman 's Rho	1	**.332****	**.342****	**.386****	.421**	.336**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Eco	Spearman 's Rho	**.332****	1	**.303****	**.279***	**.380****	**.294****
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Soc	Spearman 's Rho	**.342****	**.303****	1	**.334****	**.372****	**.204****
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Cul	Spearman 's Rho	**.386****	**.279****	**.334****	1	**.465****	**.306****
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Att	Spearman 's Rho	**.421****	**.380*****	**.372****	**.465****	1	**.435****
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Beh	Spearman 's Rho	.336**	.294**	.204**	.306**	.435**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

The results also show that knowledge about the SD awareness component domains have weak to low correlations with attitudes (environment and attitude is r_s = .421; social and attitude is r_s =. 372; culture and attitude is r_s = .465) and have negligible to weak correlations with behaviour (economy and behaviour is r_s = .294; social and behaviour is r_s =. 204; culture and behaviour is r_s = .306). The association between economy and attitude is r_s = .380 (weak) and between environment

and behaviour is r_s = .336 (weak). The correlation coefficient between attitude and behaviour is r_s=0.435 (low). Thus, this suggests that even as the knowledge of the environment, economy, social and culture component domains increase, this will not be correlated strongly with an increase in pro-environmental behaviour.

Possible Role of the Values Domain in EC, SD Awareness and Pro-Environmental Behavior

Value is a domain that cannot be excluded in all decision making, whereby it is an integral part of EC and SD awareness in everyday living. Values underpin behavioural choices and the formation of attitudes towards emerging environmental, social, economic, and cultural issues (Jagers & Simon Matti, 2010). The values domain in the study was treated independently (explanatory variable) of the other domains (response variables) and was included in the study to explore the relationship of values with EC, SD awareness and their components.

Table 5: Correlations between Values, and the component domains of EC, SD Awareness.

		Env	**Eco**	**Soc**	**Cul**	**SD**
Spearman 's Rho	**Values**	.426**	.371**	.375**	.441**	.562**
Sig. (2-tailed)		.000	.000	.000	.000	.000
		Env	Att	Beh	EC	
Spearman 's Rho	**Values**	.426**	.542**	.428**	.587**	
Sig. (2-tailed)		.000	.000	.000	.000	.000

Table 5 shows the correlation coefficients. The association between values and the various component domains of EC and SD awareness is generally higher than the associations between the SD and EC component domains alone. In particular, the overall relationship between values and the SD awareness (r_s = .562) and EC (r_s = .587) constructs are moderately associated. This suggests that an increase in the values dimension will be correlated higher with SD awareness and EC.

As for the relationship between values and the environment domain (rs= .426), it is low. The correlations between values and the economy (r_s = .371), values and social (r_s = .375), values and EC (r_s = .587), values and attitudes (r_s = .542) and values and behaviour (r_s =. 428) can be considered as weak to moderate. These correlations indicate that an increase in the values domain could be accompanied by higher correlations with the associated domains. Thus, to further understand the mediating role of the values domain, the following hypotheses were put forward and tested using the PLS-SEM software.

Hypothesis

1. The relationship between the SD knowledge domains (environment, social, cultural, and economy) and pro-environmental behaviour is positively mediated by the values domain.
2. The relationship between the attitude domain and pro-environmental behaviour is positively mediated by the values domain.

Results of PLS-SEM

Mediating analysis of Values (VAL) was performed on the linkage between the SD domains (Independent Variables) of Environment (ENV), Social (SOC), Economy (ECO) and Culture (CUL) and Behaviour (BEH) which was taken as the Dependent Variable. The results revealed that the Total Effect of ENV on BEH was significant (H1: β=0.097, t=3.643, p< 0.000). With the inclusion of the mediating variable (VAL), the impact of ENV on BEH remains significant (H1: β=0.054, t=2.059,

p=0.040). Furthermore, the indirect effect of ENV on BEH through VAL was also found to be significant (H1: β=0.043, t=5.701, p<0.000). This shows that VAL partially mediates the relationship between ENV and BEH.

The results revealed that the Total Effect of ATT on BEH was significant (H1: β=0.288, t=9.786, p< 0.000). With the inclusion of the mediating variable (VAL), the impact of ATT on BEH remains significant (H1: β=0.170, t=5.424, p<0.000). The indirect effect of ATT on BEH through VAL was also found to be significant (H1: β=0.117, t=7.264, p<0.000). This shows that VAL partially mediates the relationship between ATT and BEH.

The results revealed that the Total Effect of CUL on BEH was significant (H1: β=0.054, t=2.029, p=0.042). With the inclusion of the mediating variable (VAL), the impact of CUL on BEH became insignificant (H1: β=0.001, t=0.038, p=0.970). The indirect effect of CUL on BEH through VAL was also significant (H1: β=0.033, t=4.927, p<0.000). This shows that VAL fully mediates the relationship between CUL and BEH.

The results revealed that the Total Effect of SOC on BEH was insignificant (H1: β=0.036, t=1.303, p=0.193). With the inclusion of the mediating variable (VAL), the impact of SOC on BEH remains insignificant (H1: β=0.015, t=0.579, p=0.583). The indirect effect of SOC on BEH through VAL was significant (H1: β=0.053, t=6.054, p<0.000). This shows that VAL fully mediates the relationship between SOC and BEH.

The results revealed that the Total Effect of ECO on BEH was significant (H1: β=0.109, t=4.445, p<0.000). With the inclusion of the mediating variable (VAL), the impact of ECO on BEH became insignificant (H1: β=0.016, t=3.091, p=0.0.002). The indirect effect of ECO on BEH through VAL was also found to be significant (H1: β=0.117, t=9.264, p<0.000). This shows that VAL fully mediates the relationship between BEH. Based on the results above, Hypothesis 1 and 2 can be accepted.

The Emergent Model to Transform EC

The graphic representation in Figure 3 highlights the interplay of the four SD knowledge domains underpinned by values, which mediates the relationship between attitudes and pro-environmental behaviour. Such was also reported by Felixdóttir (2017), Saripah et al., (2013), Chen & Martin (2015) and Schneiderhan-Opel & Bogner (2020). If a transformed EC is an aim through SD, the education of the concepts within component domains of SD must be taught interconnectedly and underpinned by values. The model put forward is shown in Figure 3.

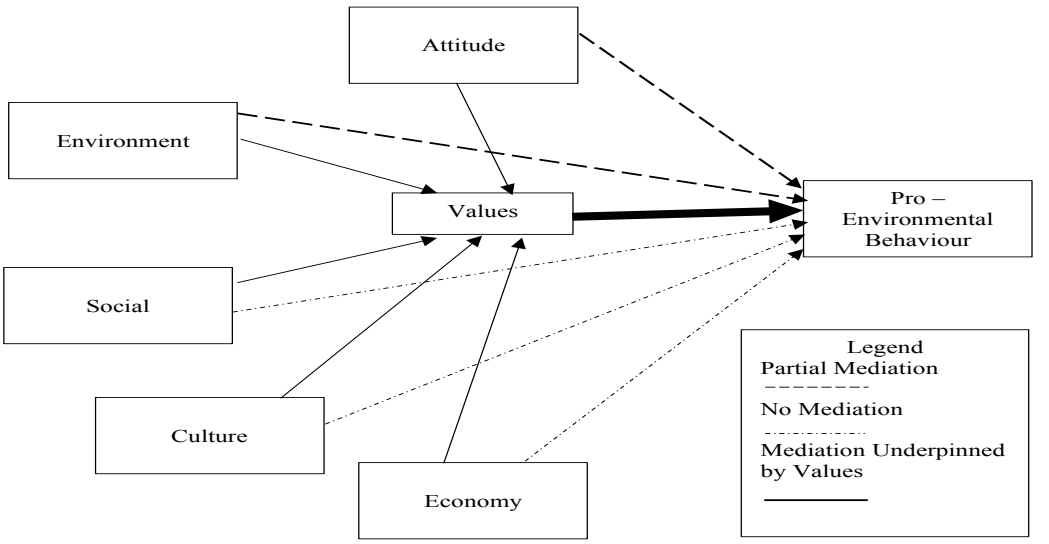

Figure 3: Emergent Model for EC Transformation

The Missing Pedagogical Link

The 2019-2020 national survey results revealed that self-perceived levels of SD and EC are high. However, the associations between component domains range from weak to low relationships, indicating that increases in one domain may not correlate strongly with increases in another. Ban (2014) and Lim et al. (2018) emphasised that the realisation of the SDGs and their targets for global transformation depends upon the interactions and integration between the various goals and targets, which cannot be addressed independently. Mensah and Casadevall (2019) state that the sustainable development pillars of environment, social, economy and culture are multifaceted.

The first pedagogical implication here is that the SD knowledge domains should not be compartmentalised and taught separately if EC is to be transformed. At present, these domains are mostly compartmentalised when taught. The concrete to abstract concepts embedded within the SD component knowledge domains of environment, economy, social and culture must be interlinked for deeper understanding. A scarcity of strong interconnected cognitive and metacognitive links between the knowledge domains will hinder the transformation of EC.

The values dimension, taken as an explanatory variable in the study, showed a higher association with all the response variables, hinting that values could be the mediating factor to enhance the associations between the SD awareness and EC components. Blake's (1999) model of the value-action gap explains the disparity between values placed upon an environmental sustainability or citizenship issue, and the translation into the required level of action taken to address the issue supports the findings of this study. Thus, the missing link in our Malaysian education points to the disconnectedness between the knowledge domains discussed in the study. Furthermore, the explicit and implicit underpinning of values in the teaching process must also be integrated.

Pedagogical Implications for Instruction

The guidelines provided by the Malaysian Ministry of Education in 1998 for EE infusion for every subject leave it to the subject teachers to implement as they see fit, and no evaluation has been done. Based on the present study findings, the authors will discuss this from two aspects, i.e., interdisciplinary approach and values infusion.

Interdisciplinary Approach

A four-step module writing mode is proposed here, (i) Mapping concepts across subjects, (ii) Mapping with SD awareness domains, (iii) Match with SDGs, and (iv) Pedagogical Plan and Design. The present study indicates that a more interdisciplinary instructional approach is needed to bring out the flavour of interconnectedness between SD knowledge domains to address the complexity of transforming EC. Educators of all subjects must come together and map out how the different subject matter concepts can be related to the SD domains for students to realise the overall picture of how a small change in the environmental, social, cultural, or economic domains can bring about substantial changes in another. These concepts can then be matched to the SDGs. Finally, pedagogical approaches for transforming EC can be designed. Doğru et al. (2015) also stated that understanding many scientific concepts together would contribute to better sustainability education and can be applied in problem-solving real-world challenges. For example, the interconnection between varying sectors such as renewable energy sectors, local forestry and fishing sectors was investigated by Mammadova (2017). In addition, a study by Tan and Hyo-Jeong So (2018) demonstrated that outdoor environmental interactions promote interdisciplinary thinking among Singapore students.

The Ministry of Education Malaysia (MOE) has stated that although there is no formal 'global curriculum' covering global citizenship elements (GCE) for Malaysian schools, a guidebook has been developed for teachers to integrate GCE in their teaching and learning process across the curriculum. The Global Citizenship Elements aimed to enhance environmental citizenship towards sustainable development. Local studies have shown that Global Citizenship elements towards sustainable

development are embedded indirectly across the Malaysian Primary Core Subjects (Malay Language, English Language, Science, History, Islamic Education and Moral Education) Curricula (Sharifah et al., 2021). Another initiative is integrating STEM (Science, Technology, Engineering and Mathematics) Education. Ideally, STEM is interdiscplinary, with connections to all four disciplines. However, studies have shown that the primary focus is mainly on Science and Mathematics, with a sprinkling of computer and internet elements. The possibilities of a GREEN STEM approach are being explored, but although "… infusing natural and socio-cultural environments into STEM is a good move, surface inclusion of the relevant themes would not address the root cause of the current environmental crisis" (Aai & Suzieleez 2021, p. 22). Other programmes such as the IGCSE curriculum for the O level Cambridge certificates normally offered in the International schools also provide Global Perspectives in their curriculum, which is interdisciplinary and encompasses ESD related to the SDG goals. Many tertiary institutions have also begun to infuse sustainability elements within their curricula according to the SDGs. Nonetheless, educators could also creatively utilise the interdisciplinary approach within the existing curricula of the various subjects.

The delivery of these interdisciplinary instructional materials must also take on a pedagogically innovative, inquiry-based, experiential, hands-on and problem-solving approach, such that students can see the associations and connections between SD Awareness domains embedded within the various subject matter linked to real life and personal experiences. An interdisciplinary approach is a key to transformative, whether simulations, role-playing, self-reflections, case studies or fieldwork, which have already been proved valuable in driving sustainability philosophies and practices within classrooms of various levels (primary, secondary, and tertiary) EC. Karpan et al. (2020) viewed education for sustainable development as a harmonic connection between students and the great variety of content found in the world in general. Complex as it may sound, decompartmentalising fields of study could enhance deeper cognitive and metacognitive processing of subject matter and SD knowledge necessary for the realisation of pro-environmental behaviour and action to transform EC.

Besides the formal curriculum, the same principles of the interdisciplinary approach apply to informal EE activities in schools in societies or uniformed bodies. In addition, the various non-formal EE activities organised by non-governmental organisations also need to link all the concepts and domains explicitly to help learners connect the dots between the different domains.

Second, the infusion of biocentric and altruistic values in teaching the various SD domains must be pedagogically well-planned to transform EC. The findings hint at this. The various pedagogical approaches and instructional materials must also include the implicit and explicit infusing of environmental values (Steg & De Groot, 2012; De Groot & Steg, 2010) to mediate further the connections between the domains for actual transformative pro-environmental decision making.

Educational Policy Implication

The findings of the study point to the need of revamping the various curricula to be connected to other national agendas, such as the development of creative and innovative citizens and moving towards the direction of involving other ministries. Additionally, the various departments within the Ministry of Education, such as the Teacher Education Division, the Education Planning and Research Division, and the Curriculum Development Division, must come together to reimagine EE. Malaysia already has an overall National Education Policy (NEP). What remains to be done is to bring about change in the NEP, where an EE policy statement needs to be included. This can be achieved through an advocacy exercise, which includes the report findings presentations on various national platforms and through workshops and a national conference.

Conclusion

The focus of this paper was a possible missing pedagogical link for strengthening EC, leading to actual pro-environmental behaviour, which involves decision making every day towards sustainable

living. What is being argued in this paper is not new, as numerous studies have tied interdisciplinary knowledge approaches and values mediated EE. The study points out that compartmentalizing knowledge without the implicit or explicit underpinning of values could limit a holistic view of EC and SD awareness in EE activities. How can this be addressed?

To decide upon responsible pro-environmental behaviour and action, which involves complex thought, knowledge of the environment, economy, social and culture dimensions must be precisely and deeply interrelated and associated with the subject matter being taught in the formal curriculum. These SD knowledge domains have many concepts that must be understood about one another and not in isolation.

Thus, this paper concludes that the interconnectedness of the knowledge domains, underpinned by values, which is absent in pedagogical approaches at present, in Malaysian classrooms and other informal and non-formal EE programmes, could be the missing link that can influence the decision-making process for actual pro-environmental behaviour to bring about greater impact on EC. Thus, to enhance pedagogical approaches, policy also needs to be reviewed and revised.

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International Students in Japanese National Universities: Their Motivations, Experiences and Outcomes

Futao Huang
Lilan Chen[a]
Hiroshima University

Abstract: *Given the criticism of the institutional practices of Japan's higher education institutions on international students' learning experiences, the study attempts to investigate why international students still chose to study at Japanese universities and whether they benefited from this experience. It also explores whether they benefit from this experience by focusing on their motivations, learning experiences, and outcomes of studying in Japan. Through semi-structured interviews with 12 international students who studied in two different national universities, the research findings illustrate that: firstly, international students' decision-making of studying abroad was a complex process involving their host environments and various considerations, including academic, cultural, and financial factors; secondly, despite numerous barriers encountered by international students, they were supported well in various aspects, and finally, they believed that they benefited significantly in four key domains, including personal growth, cultural enrichment, professional development, and better career opportunities. Theoretical and practical implications are also provided for researchers, administrators, and policies makers.*

Keywords: *inbound international students; Japan; motivations, experiences and benefits*

Introduction

Influenced by the advancement of globalization, knowledge-based society, and a necessity to boost Japan's global competitiveness of higher education institutions (HEIs), attracting international students has become one of the cornerstones and the main activity of internationalization of Japan's HEIs since the early 2000s (Huang, 2007). A series of policies have been carried out to improve the number and the quality of international students and the internationalization and global competitiveness of Japan's HEIs since the 2000s, such as the "300,000 International Students Plan" in 2008 and the "Global 30 Program" in 2009. While the number of students enrolled in Japan's HEIs has increased gradually from 2,740,023 in 2000 to 2,917,998 in 2021 (MEXT, 2000; MEXT, 2021), there has been a rapid growth in the number of inbound international students since the early 1980s. For example, inbound international students increased from approximately 10,000 in 1983 to 279,597 in 2021, representing 9.58% of the total students. The numbers of international students at the postgraduate and undergraduate educational levels in 2021 arrived at 53,056 and 79,826, respectively (JASSO, 2021a). Moreover, after graduation, more than 60% of them stayed in Japan; specifically, 36.9% of them worked in Japan, and the other 26.2% chose to continue their studies in Japan as of 2020 (JASSO, 2021b).

a Correspondence can be directed to: lilanchen@hiroshima-u.ac.jp

Given the extensive policies and strategies, however, the internationalization of Japanese HEIs remains superficial (Ota, 2018). As argued constantly that the primary purposes of attracting international students at Japanese universities are to prevail in the domestic competition of Japanese universities since the government initiatives concerning internationalization generally bring research funding (Ota, 2018) and to externally visualize the internationalization of Japanese universities (e.g. Nonaka, 2020; Phan, 2013), little attention has been paid to international students' academic/learning experiences and outcomes. Under such a circumstance, why do international students still come to Japan, and what can they benefit from such an environment? Despite numerous previous studies investigating international students at Japanese universities concerning their motivations (e.g. Hennings & Tanabe, 2018; Sato, 2019; Futagami, 2021) and studying experiences (e.g. Rakhshandehroo, 2018), a specific exploration from this perspective is lacking.

Filling the research gap, the study attempts to provide possible explanations for this phenomenon by investigating inbound international students' motivations, experiences, and outcomes of studying at Japanese universities through semi-structured interviews with 12 international students from two case national universities. The following section reviews literature, followed by methodology. The fourth section analyzes the findings from the semi-structured interviews. Finally, the study concludes by discussing the main findings and presenting implications and limitations.

Literature Review

According to the scholarly interest of the study, existing literature from three broad areas was reviewed, namely, international students' motivation, experience, and outcome. Firstly, regarding their motivations for studying abroad, the situation from their home countries seems to "push" students abroad. For example, Mazzarol & Soutar (2002) argue the significant influences from economic and social forces of international students' home countries. In addition, some studies revealed that professional considerations, such as enhancing academic competency, professional knowledge, employment prospects, social network, and career attainment, could also affect students' decision to study abroad (e.g. Nilsson & Ripmeester, 2016; Wang & Crawford, 2020). Moreover, several researchers acknowledged other important considerations, such as their previous experience, cultural distance, and language learning (e.g. English, et al., 2016; Spinks, 2016).

In Japan, the existing research suggests that the main motivation for many international students from the East Asian cultural sphere is to receive academic degrees from Japan's HEIs. At the same time, most of those outside the Sino-sphere are interested in participating in professional development, such as improving their knowledge, capabilities, and skills to achieve career success (Sato, 2019). Furthermore, many of those who moved to Japan via short-term programs value their living experience in Japan more than their academic pursuits (Hennings & Tanabe, 2018). In the case of those from Japanese research universities, they were mainly attracted by three main factors: the education quality of Japanese universities, their fondness for Japan, and their scholarships (Futagami, 2021).

Secondly, regarding the experiences of international students, a great deal of research concentrated on the barriers and challenges in their host institutions. In English-speaking countries, previous studies mainly focused on factors critical to their adjustment to host countries, such as language, education, disconnection with local communities, perceived discrimination, and unjust treatment regarding employment opportunities (e.g. Tran & Vu, 2017; Velez-Gomez & Bell, 2018). For example, McClure (2007) argued that the experiences of being marginalized caused by the different expectations between Singapore and their original culture create significant tensions on the adjustment of international students. Campbell and Li (2008) identified the main challenges of Asian students in New Zealand, including language difficulties and cultural differences. Ammigan and Jones (2018) argued that all four dimensions of their satisfaction, namely, their arrival, living, learning, and support service experiences, were positively associated with students' overall university experience. Recent research describes Chinese students' challenges from the domestic American

students' perspectives concerning their integration at American Universities (Sato & Miller, 2021). Based on a case of a Korean university, Kim (2020) stressed that the engagement and interests in the local culture are strongly related to their evaluation and adjustment. In addition, prior knowledge, perceived relevance, belongingness, and cultural distance have been confirmed vital to the adjustment of international students (e.g. Karuppan & Barari, 2010).

In Japan, international students also face numerous challenges in their living and learning experiences. According to a quantitative study conducted by Ikeguchi (2012), focusing on Chinese students in Japanese universities, 81% of the respondents mentioned the difficulty of the Japanese language. Korean students in Japanese universities felt that they were a marginalized group and shared their challenges in communicating with local people because of the closeness and "group-consciousness" of Japanese people, as well the Japanese Honne (real feeling) and Tatemae (formal behavior) conflicts (Murphy-Shigematsu, 2002). In addition, prior research also suggested financial problems encountered by international students. On the one hand, because most inbound international students study in private HEIs whose incomes significantly rely on tuition fees charged from international students, it is difficult for them to receive scholarships or other financial support (Sawa, 2019). On the other hand, more than half of the international students (55%) in Japan perceived the negative attitude from Japanese people, which led to the hardness of getting a part-time job directly and indirectly (Ikeguchi, 2012). Regarding the educational issues of international students, prior studies indicated the longer time for international students to earn doctoral degrees. This reality is especially true for those studying humanities and social sciences (around 5-6 years) because of the language problem, economic burden, advising system, and some academic traditions and conventions in Japanese universities (Iwasaki, 2015).

Thirdly, as cultural adjustment has been viewed as a process of cultural learning (Gill, 2007), outcomes have also been taken as an essential theme regarding their adjustment experience. Despite the obstacles in the adaptation process, prior studies have constantly indicated that the compelling experiences of studying abroad contribute to personal and cultural aspects, including self-confidence, language proficiency, intercultural communication, cultural sensitivity (e.g. Brown et al., 2016; English et al., 2016).

Relevant existing literature in Japan seems very limited. To date, Ogden claimed that the experience of studying in Japan might be valuable for Americans due to the lack of American professionals who have Asia experience (Ogden, 2006). In addition, a recent study suggested that international students in Japanese HEIs have been considered highly contributing to both their home and host countries and promote the internationalization of Japan's HEIs based on their learning experiences in Japan (Huang & Horiuchi, 2020).

In summary, as reviewed previously, compared to previous studies in English-speaking countries such as the US, and the UK, there has been much less research on international students in Japan despite their rapid expansion. Among those conducted in Japan, most of them either focused on a group of inbound international students from a specific country like China or Korea or discussed their motivations, experiences, or outcomes separately without taking all the three components as a whole. Moreover, prior studies in Japan addressed some specific cases, such as research universities (Futagami, 2021), short-term programs (Hennings & Tanabe, 2018), and English native international students (Rakhshandehroo, 2018), the investigation of university type of national/local/private is lacking.

Methodology and Research Questions

Based on earlier research and the main research awareness, the study is an explanatory research, investigating why international students still come to Japan and what they can benefit from given Japan's critical host environment. The research questions guild the study are as follows:

1) What are international students' motivations for studying at Japanese national universities?
2) What have they experienced at their current universities?
3) What are the outcomes of their experiences at current universities?

The study is part of a joint international project in which a six-country team participated. Using common interview questions, the study analyzed main findings from interviews with relevant international students focusing on the following questions: "When deciding a place to study, how did you prioritize between institutions/nations of choice? What features of this institution/country attracted you to come and study here? "; "How would you summarize your experience as an international student? "; " How have you changed as a person while you have been an international student? "; "What have you experienced during your period of study?"; "What kind of growth have you gained while you have been an international student?"

National universities are concerned not only with postgraduate education for government-sponsored international students and those from low and middle-income countries. It also facilitates the advancement of basic and applied scientific research. Thus, it provides a wider variety of educational programs, where their contribution to capacity building is significantly more than the other two sectors of private and local HEIs (MEXT, 2019). Differing from national universities, local public universities are established, funded and administered by local authorities. They are primarily concerned with producing undergraduates for regional economic development and engaging in service activities for the local community. Given the distinctiveness of national universities and the research approach of case study as a common method in social sciences to better understand, describe, explain, and explore complex social phenomena (Yin, 2014), the study uses two national universities as case studies. The first case university is X University, one of the former "Imperial Universities" and was established in the late nineteenth century. It is a large comprehensive institution located in a global city, and the number of students is far higher than at the second case university, titled Y University. Y University is one of the newly-founded national universities post-WWII, located in the central part of Japan. It is a comprehensive national university where teaching and research activities and societal engagements are all emphasized in its mission. These two different case studies represent important features of Japan's national university sector.

The project determines the target population. All the interviews were undertaken in the six countries according to the same number of participants regarding gender, country of origin, discipline, and educational level. The potential interviewees were approached through criterion sampling based on the following information to ensure a variety. Firstly, according to the national statistics, the top three countries from which students moved to study in Japan are all East and Southeast Asian countries: the largest number of them came from China, followed by Vietnam and Korea, we invited most of the international students from the region. Secondly, by discipline, students from Humanities, Social Sciences, Natural Sciences, and Engineering were invited: 'Linguistics' (n=2), 'Sociology'(n=1), 'Education' (n=1), 'Economics' (n=2), 'Engineering' (n=2), 'Tourism' (n=1), 'Transportation' (n=1), 'Architecture' (n=1), 'Agriculture' (n=1). Further, a gender balance was considered: 'Female=5' and 'Male=7'. Thirdly, by educational level, because many international students study at postgraduate programs in national universities, one undergraduate student, five master-level students, and six doctoral students participated in the interviews. Following ethics approval and the research project guidelines, we contacted potential key international students in national universities and asked them to accept our interviews through emails. As Table 1 shows, a wide range of international students from the two case national universities were interviewed based on the same questions.

All the interviews were undertaken from September 2017 to May 2018. We conducted face-to-face semi-structured qualitative interviews with these participants at their study places or meeting rooms in their affiliations. Participants were given a copy of a consent form to keep and refer to at any time. They were asked to complete all sections and sign the consent form if they were happy to participate. All interviews were recorded and transcribed. The duration of interviews varied depending on individual interviews and topics. Most interviews lasted between around 40 minutes and two hours. According to interviewees' convenience and language proficiency, both Japanese and English languages were used in the interviews. To ensure the validity and reliability of the interviews, the transcripts were checked, reviewed and approved by all the participants.

Table 1. Outline of Interviewees

	Nationality	Gender	Academic Level	Discipline	Interview language	University
A	China	F	M2	Linguistics	Japanese	X University
B	China	M	D1	Sociology	Japanese	X University
C	U.S.A.	M	D2	Education	English	X University
D	Iran	F	D3	Linguistics	English	X University
E	Korea	M	B1	Economics	Japanese	X University
F	Indonesia	F	D2	Engineering	English	X University
G	Uzbekistan	F	M2	Tourism	English	Y University
H	Afghanistan	M	M2	Transportation	English	Y University
I	Indonesia	M	D3	Architecture	English	Y University
J	Vietnam	M	D2	Agriculture	English	Y University
K	China	F	M2	Economics	Japanese	Y University
L	China	M	M2	Engineering	Japanese	Y University

Note: *B=bachelor, M=master, D=doctoral course: a number beside degree level indicates the year students enrolled. For example, D2 means 2nd year doctoral course student.

Regarding the analytical process, the interview data was managed based on a six-step thematic analysis proposed by Braun and Clarke (2006), comprising (1) familiarization, (2) generating codes, (3) searching for themes, (4) reviewing codes, (5) Defining themes, and (6) producing report, which contributes to describing the dataset and summarizing the main characteristics thoroughly. After getting familiar with all the interview transcripts, the useful phrases were coded, usually in the interviewee's own words or a similar statement. Then, the sub-themes were developed through reviewing and combining similar codes. Therefore, Japanese codes were translated into English and combined with other English codes. To ensure the accuracy of the sub-themes, the codes to be determined, especially those in Japanese, were checked and confirmed with the interviewees. Finally, the themes were generated and defined by aggregating the sub-themes, which were subsequently analyzed from the three main domains.

Findings

Despite being asked about a wide and vague range of topics, the interviewees shared their concreted examples from their experiences to better demonstrate their perceptions and attitudes. The provision of the data analysis is aligned with the three research questions of the study: their motivations, experiences, and outcomes at the two case national universities.

Motivations for Studying at Japanese National Universities

When asked about their motivations for studying at Japanese national universities, some interviewees mentioned that although they were aware of the challenging environment in Japan, they had various essential reasons for coming to Japan. However, academic reasons appear to be the main driver for many students. Except for the ones from the US and Korea, all the students emphasized this incentive as follows:

> *When choosing a study abroad destination…X University is one of the Imperial Universities in Japan, so I chose it. (A)*

The most important thing I perceive is the quality of education in Japan. Japan had very high technology and development, I can learn from Japan how they developed their country and followed up science and technology, and I bring back home. That was my first and main consideration, actually. (I)

Japan is developed country and well known for its technology in agriculture…I want to learn how to make a high-quality flower in Japan and bring the method into Vietnam in the future. (J)

Some decided their destination on their own, based on their incentives and existing knowledge, while some interviewees pointed out the influences on their decisions by others, which can be found from the following quotations:

Objectively people try to find better facilities for research than Indonesia. That's why they head for developed countries…this is also why I came to Japan. (F)

I heard from my (undergraduate) teacher who went to a Japanese national university for exchanging that Japan is superior in earthquake-resistant research and technology. This is exactly what I wanted to study the most. So, I decided to come to Japan. (L)

Secondly, Japanese culture seems to impact attracting international students profoundly. This is because international students may pay attention to whether the local society and culture help them live and adapt when choosing to study abroad, which is particularly likely to be the case for those with religious backgrounds. The data analysis shows that all three students from Islamic societies mentioned this. As noted by one interviewee:

Culture is more important for me (rather than country) because adaptation is easier when you go to a place which is close to your own culture and your own experience…People here are so peaceful, friendly, and open. So, that's good for me. (G)

I am a Muslim, so I try to find a country which is more friendly to the Muslim, it is quite difficult…Japan seems to be this type of country. (I)

Additionally, many interviewees acknowledged their fondness for Japanese culture as their main incentive for coming to Japan. Those interviewees include the American student and students from China, Uzbekistan, Vietnam, Indonesia, and Iran.

The reason "Why Japan" is that I was attracted by Japanese culture since I liked Japanese pop culture such as animation and manga. (B)

I had an interest in Japan, the general cultures and life since I was very young. There were quite heavy influences in California. (C)

Japanese anime was so popular in Iran. I even remember some characters' names, "Tsubasa," "Wakabayashi," in football anime. Also, there was a very popular drama, "Oshin." That drama was very popular. (H)

Finally, for the students with low-income economies, the poor economic situation in their home countries may encourage them to study abroad in rich countries. Several interviewees in the study asserted this point:

After failing many times, finally, I got a job at the Ministry of Urban Planning. But the salary is so few. When I started the job, I applied for different scholarships for studying abroad. (H)

I decided to come to Japan because after graduated from university, I worked at company, but the salary was very low, and the job was stressful. (J)

Compared to countries like Australia, the UK, and the USA, Japanese universities, especially national universities, charge much cheaper tuition fees from international students. In addition, international students can also easily get access to various scholarships from local authorities, industry, and the Japanese government. Many students from China, Vietnam, Indonesia, and Iran that maintain a close economic relationship with Japan are either invited to study in Japan's national universities by the Japanese government or get some amount of scholarships from other sources. For example, among the interviewees, although only three of them (B, D, and F) were government-sponsored students, two of them received scholarships from private foundations.

My family is not wealthy, the tuition fees in most US universities are too expensive, and I cannot pay for them. So, I chose to come to Japan partly because I can get scholarships, partly also because I can do some part-time jobs to support myself. My university charges very much cheaper tuition fees than any private university, let alone US or UK universities. (E)

Originally, I planned to go to the US, but the cost is too high. (L)

In summary, the data analysis reveals that when deciding to study abroad, despite differences in degree, international students at the two case national universities were mainly motivated by academic, cultural, and financial factors. And their decision to stay in Japanese national universities was made after weighing the pros and cons.

Experience at Japanese National Universities

Regarding their experiences at the two case universities, many interviewees firstly mentioned the barrier caused by Japanese language. Despite the provision of English programs in national universities, the fact that some students can only be functional in Japanese language has resulted in the difficulty of international students.

One thing I know is, based on my experience, Japanese students are so shy. When it comes to speaking in English, they become nervous and uncomfortable. (H)

It was very difficult for me at the beginning because I am the only one who cannot speak Japanese in my lab…it's very difficult especially with Japanese culture to mix and blend. (I)

Most likely because of the aforementioned linguistic barrier, several interviewees criticized that they were usually divided into different groups from Japanese students during their group activities, leading to the disruption of multicultural communication.

The other goal would be to internationalize the general community by allowing domestic students exposure to international students and faculty, and giving them some kind of ideas of what it is like, working in an international multicultural environment. I would say, no…what I've seen the classes are kept pretty separated. (C)

The bad thing is that when the Japanese students want to conduct some events in lab, they always separate Japanese students from international students...If they want to be more international, I think they should mix all the students together. (L)

The lack of opportunity for intercultural communication and interactions may lead to their misunderstanding, which in a long term hinders their relationship development in their academic community.

When we talk with other international students, we can click very easily. But Japanese, they are maybe shy, hesitate. So, it's hard for us even just for asking questions...Our lab has students from Pakistan, Thailand, and some others, all of us have the same idea on Japanese people. (I)

The tension stemming from the lack of Japanese language proficiency is also apparent in their social-cultural aspects. As a non-English speaking country, the dominant language used in local society remains Japanese. One interviewee clearly expressed her constraints in this regard:

We may have problems in our daily social life. For example, in social life, when you go to City Office, you cannot find information in English. This is making us confused here. Most postings here are written in Japanese. (G)

Additionally, cultural differences were also identified as a profound factor impacting their social lives in Japan, which may cause communication misunderstanding, conflicting personal values, and other difficulties. As illustrated below, despite the cultural similarities between China and Japan, cross-culture misunderstanding happened when a Chinese student interacted with a Japanese student.

There is a risk in intercultural communications since cultural background is different, misunderstanding might occur. For example, when my Chinese female friend went to hang out for a drink with a Japanese male student, then that guy thought that she likes him. The relationship between two became awkward since then. (B)

Finally, overwhelmingly some international students even felt they experienced national origin discrimination, resulting in their uncomfortable and stressful sentiments in daily life.

When I bought a mobile phone, the sales person asked me so many details probably due to my nationality. It was a little annoying experience. (A)

Not as an international student but as a Chinese, I feel occasionally being looked down on. For example, after using a university gymnasium and forget to turn off the light, international students from western countries are allowed without being blamed but Chinese and Korean students got scolded. There seems a difference in attitudes from Japanese people depending on the race. (B)

Given the special geographic location of Japan, one of the interviewees explained aforementioned issues with the assumption that:

The barrier is that Japanese language and Japanese culture are difficult to merge, because language is totally different and the environment Japanese students grew up is pretty homogeneous and they don't have the same opportunity with Western or European countries talking with foreigners in their daily life. (H)

Despite numerous barriers faced by international students, almost all of them emphasized the meticulous support provided by both their belonging universities and local communities. One of the students expressed her appreciation to her supervisor:

> *I'm really grateful for my supervisor. So, I do not have any problem with my academic life regarding credits and my research. I feel always very big support from him. He always shows me the right way...This is really I feel during these years and grateful for it. (G)*

In terms of the support from administrative staff, most interviewees agreed with the point that they were provided with high-quality service. Some of them clearly asserted the following points:

> *Most of the cases, they are doing more than what they are supposed to, especially for international students. It's not very unusual. If I go to X office and ask something, they kindly find information even calling that person talking in Japanese and trying to understand what's going on. Even though maybe that engagement is not their duty or their task. (H)*

> *We have a coordinator here who always supports us if you have any kind of problem. We can call anytime, 24 hours a day. They are so good to do their job. So, I think this is a really professional service, and you cannot imagine. So, no problem now. (G)*

In addition, there is a special system in some Japanese universities, named Tutor System. Generally, these universities arrange a senior tutor for newly come international students to help them deal with their problems in daily life and study. Several interviewees expressed their gratitude to their tutors and also had a very high evaluation of the system.

> *The support from university was very helpful, especially the tutor. When I came to Japan, two seniors from my laboratory picked me up at the airport, which impressed me a lot. (L)*

> *Also, one thing that international student has to learn about is that Japan has a senior-junior culture. In my view, those senior-junior relationship is really good because juniors are new and do not know everything. They need to learn how to work, and also how to speak to the boss. So, they could learn step by step. (J)*

Moreover, regarding the support from the community, even though sometimes English materials are not available, the effort made by local people was greatly appreciated by the interviewees.

> *I have not any difficulty now. When I go to the city hall to get some documents, it is quite easy for international students because the Japanese officers are taking care of us very carefully. (J)*

> *When you go to the city office or immigration office or any kind of governmental agency, they are doing their best. They are not pushing you away or wasting your time. They are always respecting you in a very well-mannered way. I think it's only limited to Japan. (H)*

Apparently, the interviewees described their experience at the case universities mainly from two aspects. The first is concerned with the challenges they faced in terms of academic and social life, primarily stemming from the Japanese language and culture. Secondly, despite the inconvenience caused by these issues, the majority of the interviewees emphasized the great support from both on and off-campus.

Outcomes of Being an International Student at Japanese National Universities

Regarding their outcomes of studying in Japan, benefits from various aspects were stressed. The first one being noted is often their personal growth as they were living in a foreign country away from their families and friends. As asserted by several interviewees, due to the long distance from their home countries, studying abroad provides them the opportunities to develop their independent personality:

> *I gained an independent spirit. Being distant far from my family, I have to take care of myself here. So, I think I have been strengthened in that sense. (A)*

> *The most important thing is to be independent... After surviving through a lot of first experiences, I feel like becoming stronger now. Independence and strength are assets I gained as a person here. (B)*

> *I became very independent. Because I am studying here, which is far away from my family, even though something bad happened, I never tell my family, I have to do everything by myself. (K)*

Also, studying and living abroad in a foreign country provides international students with diversified perspectives and multicultural awareness, which may lead to changes in their original perceptions and attitudes.

> *I started thinking differently when something happened. The way of looking at something has expanded, and I have learned a logical way of thinking through being here. This has never happened in the past of my undergraduate school. (L)*

> *After being here, I never feel that only Korea is a wonderful country. When I was in Korea, there are always news like "Korea is number one in this area". It's not the case, it's wrong when I came to Japan. Now I can evaluate my country more objectively. (E)*

In addition, being exposed to the environment with Japanese culture enriches international students' cultural literacy, which in a long term may help to shape their new personalities. This point was emphasized by several interviewees as shown below:

> *It changed me a lot since I came to Japan…Trying to think about others is what I learned from Japan. (F)*

> *I became more patient, I learned from Japanese people to be more patient and to pay more attention...you will look everything in detail. (G)*

The experiences of living in Japan not only increased their cultural understanding, which made them more multiculturally adaptable, but also led them to think about the differences between Japan and their home countries.

> *Moving to a place like Japan, which is a very particular way of doing things, it's been interesting to really learn not just about multiculturalism or inter-culturalism but about really stark differences between cultures. (C)*

> *One thing an international student has to learn about is that Japanese has a senior-junior culture. In Vietnam, they do not follow others and have to take care of everything by themselves. In my view, those senior-junior relationship is really good. (J)*

Moreover, given the advanced technologies in Japan, being a student in Japanese universities would be significantly beneficial for their professional development, which was highlighted by almost all of the interviewees. For example, most interviewees stressed their professional knowledge and skills acquired from this experience.

About knowledge and experiences, technical knowledge of engineering, I can say that this is very big benefit for me to earn all of them here, which is something that I could not acquire at home. (G)

The course of study in transportation fields is still beneficial for me. I learned many things, how to manage, how to handle the problems at transportation engineering. Many new interesting knowledges. (H)

I learned many things, for example, the knowledge and skills, how to write a scientific paper. (J)

Some interviewees took the experiences of living and studying in Japan as a great opportunity to improve their Japanese proficiency. It seems to be especially true in the case of international students from Humanities and Social Sciences.

My Japanese language skills have been really improved, since I have to immerse myself into Japanese speaking environment at a daily basis. (A)

In addition to the knowledge in sociology, I made a lot of Japanese friends, which enhanced my Japanese proficiency as well as social customs...Through communicating with Japanese peers, my Japanese language skill has been raised. (B)

Finally, it appears that the studying experiences in Japan are highly associated with the career establishment of international students. In addition to better career opportunities, like higher-paying and higher-skilled jobs, over half of the interviewees anticipated that a degree from their current universities would offer them additional prestigious benefits when they return home, which can be hardly achieved at their home countries.

A degree from Japanese universities, especially national universities, is highly valued in my country. (A)

It is the top-ranking national university in Japan, I believe it will be highly valued and beneficial when I return. (B)

The first benefit is opening the path for me to go to Ph.D. The second benefit might be that I can get other jobs. (H)

There is a possibility I will get promotion and a higher salary. I'm not sure but it is due to my degree. (I)

A degree from a Japanese university is more valuable than any from a Vietnamese university. If I go back to Vietnam with a doctoral degree, I can easily get a job. (J)

The master's degree from a Japanese national university is more highly regarded than the master's degree from a general university in China. (K)

I think it would be easier for me to find a job in a Chinese university since I have a degree from a good Japanese national university. (L)

As analyzed above, four broad benefits of studying at Japanese national universities were identified from the interviewees' observations: personal growth, cultural enrichment, professional development, and better career opportunities. These benefits may vary depending on individual participants, however, they are viewed to contribute to international students both professionally and socially.

Concluding Remarks and Discussion

Given the fact that the attraction of international students may be seen as a beneficial instrumental term for Japanese universities since they were closely associated with research funding (Ota, 2018) and externally visualization of internationalization (e.g. Nonaka, 2020; Phan, 2013), existing evidence has constantly criticized Japan' HEIs as a negative case for its international students. Under such a circumstance, the study is the first attempt to investigate why international students still chose to study in Japan and whether they benefit from this environment by focusing on their motivations, learning experiences, and outcomes at the two case Japanese national universities. The key findings yielded from the study can be discussed subsequently.

Firstly, the data analysis indicates that international students' motivation to study in the case universities can be explained by the factors from academic, cultural, and financial aspects broadly. From a micro perspective, a majority of the interviewees were motivated to Japan by the higher academic quality and reputation of their affiliated Japan's universities than the universities in their home countries, which is consistent with the existing evidence (e.g. Sato, 2019; Wang & Crawford, 2020). Given the limited information before going abroad, their decisions sometimes seem to be strongly influenced by other people, such as their teachers or friends. This is similar to prior research (Chen, 2008; Futagami, 2021). Additionally, some interviewees stressed their cultural considerations, such as their fondness of Japanese culture, reinforcing previous studies (e.g. Futagami, 2021). However, in the case of the students from countries with a religious background, such as Indonesia and Iran, the cultural accommodation of their possible destinations was found as a significant consideration, which has not been identified yet.

From a macro perspective, the financial gap between home country and Japan serves to encourage international students' mobility. This is more likely to be the motivation of those from low-income economies. Therefore, international mobility of students is affected by factors both operate from international students' home countries and destination countries, which largely matches with the existing research (Mazzarol & Soutar, 2002; Sánchez, et. al., 2006). The findings reveal that international students' decision-making of studying abroad is a complex process involving various considerations, including academic, cultural, and financial factors. This explains why many international students still chose to come to Japan despite the criticism of the institutional practices of Japan's HEIs.

Secondly, regarding their experiences at Japanese national universities, the study found that a majority of international students in Japan's national universities encountered language and culture issues, which is largely consistent with previous studies (e.g. Ikeguchi, 2012; Iwasaki, 2015). This is probably why existing literature has constantly criticized Japan as a negative case for internationalization and international students (e.g. Nonaka, 2020; Ota, 2018).

However, almost all the interviewees acknowledged that they are well supported on campus and outside campus in their professional and social lives. This is probably because the Japanese society and Japan's national universities realize the importance and value of attracting inbound international students to come to Japan and are making efforts to provide good support for them (Ito, 2019; JASSO, 2019-2020). Given the limited attention paid specifically to the perceived support of international students in Japan, the findings in this regard have enriched the discourses of existing literature.

Finally, despite the challenging host environment, almost all participants emphasized their benefits drawn from studying in Japanese national universities from four main domains: personal

growth, cultural enrichment, professional development, and better career opportunities. Given the fact of being an international student in a foreign country, the growth in personal, cultural, and professional dimensions, such as language improvement, cultural enrichment, and professional development, is in tandem with the findings of most prior research (e.g. Nilsson, et al., 2016; English, et al., 2016). However, the benefits of additional value, such as a more prestigious opportunity that no graduate student from their home countries could ever achieve, added from studying in Japan has not been found yet by the existing research.

Regarding the implications, firstly, the study provides possible explanations by applying interview data to address the issue awareness concerning international students who come to study in Japan despite the challenging host environment. In addition, the research findings present empirical evidence for more relevant studies in this regard. Moreover, given the perceived constraints of international students stemming from Japanese language and culture, a more comprehensive policy recommendation from the attraction to the integration of international students should be made. In other words, in addition to actively recruiting international students, it is equally significant to create a supportive environment where good multicultural communication can be achieved. This can greatly facilitate their integration and thus enhance their retention in Japan.

Several limitations of this study should be noted. As revealed earlier, this study was conducted with a limited small size of interviewees to offer some possible explanation, it may be better to interview with a large body of inbound international students with more diverse backgrounds in Japan. Also, more studies need to be made in inbound international students' experiences at a program or course level. Moreover, due to the small number of interviewees, no significant differences could be confirmed in their motivations, experiences, and outcomes among the interviewees by country of origin, gender, educational level, discipline, and affiliation. More comprehensive and in-depth research studies in this regard are needed.

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Chronic and Acute Disruptions in Higher Education: A Case Study of Malaysia

Chang Da Wan
Khayriyyah Mohd Hanafiah[a]
Universiti Sains Malaysia

Abstract: *Disruptions have direct implications on the curriculum of higher education. Some disruptions are more subtle yet chronic such as longer-term impact from ideological changes to the national agenda and societal values relating to the purpose of higher education. There are also disruptive events such as the recent coronavirus disease 2019 (COVID-19) pandemic. The combined challenges due to these disruptors have impacted the curriculum and adaptations in Malaysian higher learning institutions (HLIs). This paper aims to analyse the impact of chronic and acute disruptors on the university curriculum in Malaysian higher education. Our findings from semi-structured interviews with academics and focus group discussions with students suggest that while HLIs demonstrated rapid reactions to acute needs in the case of COVID-19 restrictions, the existing structural frameworks for curriculum design and implementation provide limited flexibility in longer-term adaptation to both acute and chronic disruptions. A series of questions are posed for various stakeholders to consider in navigating these disruptions in higher education.*

Keywords*: curriculum, employability, neoliberalism, OBE, COVID-19, assessment, remote online learning*

Introduction

Educational disruptions have been described as unplanned interruptions that may result in individual trauma or changes to established norms (Panther, 2021). Before the pandemic, disruptions were primarily discussed in the context of disruptive innovations and technologies, such as the rise in massive open online courses (Jacoby, 2014). We propose that disruptions to the higher education curriculum are akin to a perturbation in normal function in the human body. Such maladies can manifest under two main modes in the medical context: chronic and acute. A chronic disease tends to present subtly, at times undetectable, and slowly progresses to a critical point where the body can no longer cope with the accumulated damage. For example, many forms of cancer take months or years to develop before the symptoms become apparent and the medical condition is diagnosed. On the other hand, an acute disease is characterized by sudden and rapid progression, such as appendicitis or respiratory viral diseases, including COVID-19.

This paper examines disruptions to the university curriculum in the context of higher education in Malaysia. While the nuanced impacts of the disruptions elaborated in this paper are specific to the case of a developing higher education system, the disruptions themselves are globally relevant. The implications to university curriculum from these disruptions are equally pertinent and applicable to universities in developed, developing and emerging higher education systems.

a Correspondence can be directed to: kye@usm.my

The approach of this paper is slightly unconventional. We begin with a discussion of the context and methodology followed by examining the two types of disruptions independently by concurrently drawing from the literature about each disruptor and the evidence gathered from our fieldwork. We then conclude by exploring the implications of these disruptions on the development of the university curriculum and pose a series of questions for further discussion.

The Context

Regardless of their features and characteristics, curricula form the skeleton of modern education systems, serving as the primary structure used to guide various teaching and learning (T&L) activities in the path towards earning an academic qualification. To be relevant, regardless of discipline, curricula necessarily require periodic review and updating based on advances in the field and contemporary needs of the ever-changing society.

Malaysia is an upper-middle-income economy with a population of 32 million, for which the higher education system is made up of equally sizeable public and private sectors with a total enrolment of 1.3 million students (MOHE, 2020). The public sector comprises 20 public universities that in 2019 enrolled 567,625 students. The public sector also includes polytechnics and community colleges geared towards technical and vocational education and training (TVET) and skills-based programmes. The private sector has 48 universities, 10 international branch campuses, 33 university colleges and 345 colleges that collectively enrolled 633,344 students. Importantly, all academic programmes by HLIs in Malaysia are accredited by the Malaysian Qualification Agency (MQA), the key regulatory body articulated under the Malaysian Qualifications Agency Act 2007 (Act 679).

In higher education, the curriculum itself is a challenging concept to define, in part due to different stakeholder perspectives on the purpose and nature of higher education and the role of higher learning institutions (HLIs) (Hicks, 2018). For instance, in the context of Malaysian higher education, specifically outlined in Malaysia Education Blueprint (Higher Education) 2015-2025 (MEBHE), the curriculum is regarded as the framework under which aspirations to produce graduates who are industry-ready employees, job-creating entrepreneurs, and adaptive members of an "ever-changing future" (MoE, 2015, p. E-1) can be realized. However, such aspirations hinge on the idea of curriculum design, which is still largely ambiguous due to the diversity in interpretation of the curriculum itself.

For this article, the curriculum is defined broadly as 'the planned learning opportunities offered to learners by the educational institution and the experiences learners encounter when the curriculum is implemented' (Print, 1987, p.9), whereby planned curriculum encompasses knowledge, skills and capabilities, as well as the learning activities, used to achieve the learning of the content in the university (Dewey, 1938; Eraut, 2009; Stenhouse, 1975). Using this definition, the curriculum is discussed not in the context of the outcomes (e.g. graduates) but instead from the perspective of the teaching and learning processes.

Specifically, the discussion about curriculum in the context of higher education in Malaysia requires the mention of outcome-based education (OBE) being the major approach for quality assurance under the MQA. Although the concept of OBE has existed since the 1950s, increasing emphasis on this concept in Malaysia only precipitated in the last decade (Mohayidin et al., 2008). From the OBE perspective, a programme's curriculum is developed based on the skills and knowledge that students are expected to possess upon graduation and designed to enable students to achieve the stipulated outcomes. In brief, these outcomes are categorized as cognitive (regarding what has been learned), psychomotor (practical skills acquired) and affective (covering 'soft' skills such as communication and teamwork). The cognitive outcomes are further divided into increasing levels according to Bloom's taxonomy, specifically knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom et al., 1956). The more dynamic concepts of these classifications, focusing on verbs such as to remember, understand, apply, analyse, evaluate and create, are proposed

in the revised taxonomy (Anderson et al., 2001). We shall return to the discussion about OBE in the section on chronic disruption.

Methodology

Apart from the conceptual perspective gathered from related literature, we derived an understanding of disruptors from empirical evidence gathered from interviews and focus-group discussions. A total of 41 interviews were conducted with academics across five public universities and three private universities. The academics were selected from the disciplines of biotechnology, economics, and engineering, as these represent different disciplines from science, social science and applied science (associated with strong professional bodies). In addition, we interviewed selected academics with experience in policymaking or administrative positions in the Ministry of Higher Education, Ministry of Education or other higher education agencies, including MQA and Higher Education Leadership Academy (AKEPT). In addition, 45 final-year undergraduates participated in seven separate focus group discussion sessions for each discipline and institution. All participants and their institutions provided informed consent, were anonymised and assigned codes that do not contain identifiable information.

Interviews and focus-group discussions were conducted between October 2019 and March 2021, first in-person, then online via video conference platforms due to social distancing requirements. The interviews and discussion followed a protocol prepared to explore various dimensions of the curriculum, including the content, teaching and learning activities, development and revision, and specific issues relating to the extent of relevance and currency including topics of employability, incorporation of Sustainable Development Goals and entrepreneurship. An additional section to investigate responses to the COVID-19 pandemic was added for sessions conducted after 1 April 2020, after Malaysia went into the first Movement Control Order (MCO) lockdown on 18 March 2020.

Interviews and focus-group discussions were digitally recorded, transcribed, and interview notes and summaries were prepared. Conceptually, we attempted to differentiate disruptions into 'chronic' and 'acute' where the former refers to medium- to long-term changes including ideology and key purpose, and the latter on ad-hoc, emergency and unpredictable changes. Thematic content analysis was used to identify themes that emerged in the interviews and focus-group discussions relating to the two over-arching disruptions (Corbin & Strauss, 2008; de Vaus, 2001).

The Chronic Disruption

Conceptual Discussion

Neoliberalism is a loose and shifting form of political-economic ideology (see Blyth, 2015; Brown, 2015; Harvey, 2005; Robison, 2004; Springer, 2009). Not only was neoliberalism acting as an economic policy, but neoliberalism has also been considered a modality of governance and an order of reason with globalisation. Importantly, neoliberalism strongly influences 'economising' all spheres and activities, including higher education. As Brown (2015) argues, neoliberalism should not be seen as a mere economic policy. Instead, neoliberalism is "a governing rationality that disseminates market values and metrics to every sphere of life and construes the human itself exclusively as *homo oeconomicus*" (p. 176).

Therefore, driven by the ideology of neoliberalism, managerialism as a modality of governance in higher education gained momentum and influence. In the case of public entities, such as public universities, the New Public Management (NPM) became the new form of governance. Among the common characteristics of managerialism and NPM include advocating metrics, key performance indicators (KPI), measurable outcomes, and accountability. As a result, they became a significant force that changed every aspect of HLIs, including their curricula.

However, there remain defining characteristics of Malaysian higher education that contradict neoliberalism and NPM. For instance, as acknowledged in the MEBHE (MOE, 2015), the government exercised 'tight control' over public and private institutions on the curriculum, tuition fees, and quality assurance and accreditation. The tight control on these key academic aspects, importantly, contradicted the dominant understanding of neoliberalism that reduces government intervention and enhances market forces. Likewise, despite the influence of NPM, higher education in Malaysia has not seen de-bureaucratisation nor decentralisation of public universities. Hence, despite maintaining strong and tight governmental control, higher education in Malaysia has evolved towards 'economising' higher education and extensive usage of metrics, KPIs and measurable outcomes to demonstrate performance.

Zooming into the influence on curriculum, we return to OBE to discuss this further to understand how this concept has changed university curricula and T&L activities in these institutions. At the crux of OBE is the need for constructive alignment between planned outcomes, curriculum design, and assessments. In and of itself, a curriculum following OBE principles may be useful for clarifying the relationship between T&L activities of a course/programme with attributes of the graduate upon completion. This is perhaps one of the reasons OBE has been adopted by the Malaysian higher education system, given the prevailing perspective that the role of universities is to produce employable graduates.

A curriculum rooted in OBE has been argued for more consistent T&L design, especially across various teaching staff, who at times may have only acquired discipline-specific expertise and very little pedagogical training (Cooper et al., 2015; Vereijken & van der Rijst, 2021). However, the recurrent criticism is that the OBE structure has become a basis for rigidity and serves managerial purposes rather than achieving curriculum outcomes (interview with Academic E02, HE Agency 01). Given that the rise of OBE, at least in Malaysia, began within the engineering discipline from the Washington Accord (interviews with Academic E02, HE Agency 01 and Academic F03, Engineering, Public University/HE Agency 02), OBE was then enforced onto other disciplines within the OBE framework. Yet, such practice raises questions whether the OBE framework is suitable to be adapted into other disciplines and whether discipline-specific nuances, such as those in life sciences, social sciences, or humanities, are being ignored. Regardless, such rigid and bureaucratic framework and extensive documentation required to enable audit of OBE practice became deterring factors for rapid review and adaptation of curricula to arising needs and developments.

Several disruptive elements further challenge curriculum design and delivery of different programmes in Malaysian HLIs. These include disruptions such as the ideology to economised and changed societal values about higher education and the function and nature of universities. Thus, the next section examines from the perspectives of university stakeholders in terms of how they make sense of chronic disruptions and ways that impact the curricula in Malaysian HLIs.

Insights from the Ground

From the thematic analysis, two inter-related themes have emerged which illustrate a gradual yet significant change to the curricula of universities. These changes are alike chronic disruption to higher education, namely: (i) enforcing new components into the curriculum and (ii) expansion of curriculum stakeholders.

New Components into the Curriculum

Academic programmes, at least across the three disciplines of economics, biotechnology and engineering, have in recent years incorporated new components. The first is a range of General Education Subjects (MPU) mandated by the Department of Higher Education and enforced through the accreditation process under the MQA. These compulsory courses were intended to promote nation-building by consolidating and broadening knowledge about Malaysia and enhancing the

humanity skills of students. However, these externally enforced components in the curriculum across public and private universities in Malaysia tend to be poorly implemented in practice, thus resulting in a disconnect between the core programme curricula and appearing irrelevant to academics and students alike. Across all sessions with students, the irrelevance of MPU subjects was a common sentiment, as succinctly summarised by Student C205:

> *MPU subjects are useless. … I do not need a lecturer to teach me common sense. MPU [subjects] like ethnic relations, TITAS (Islamic and Asian Civilizations), personal finance has no relevance. … Well, (about TITAS) is good to know about civilization and things like this, but it is irrelevant to what we learn and practice.*
> *Student C205, Economics, Private University*

Another recently incorporated new component is industrial training. In the past, having industrial training or a work attachment was largely optional. However, increasingly, industrial training or attachment has become mandatory, as observed in seven of the eight programmes in this study, but importantly, the structuring of this work attachment component aimed to enhance the opportunities for students to secure employment immediately upon graduation (Mohd Saruan et al., 2015), which a senior professor, Academic B02, further affirmed:

> *[Industrial training] was always in the third year [of a four-year programme]. What we did was we put it now into the final year, last two semesters. … So in that way, we feel that when they finish [the industrial training], they have a chance of continuing [with the job and company]. This is to improve graduate employability as well; when the companies are happy with them, they will be employed.*
> *Academic B02, Biotechnology, Public University 03*

In other words, incorporating industrial training and making it mandatory has been driven to help students secure employment. To further strategise this new component, the positioning and structuring of the curriculum were also modified accordingly.

In addition to the inclusion of new components into the curriculum, another major addition in the last two decades in Malaysian higher education has been the culture of quality assurance and accreditation. The days where the respective University Senate approves the academic programme, the highest academic entity of a university, have passed. That internal process is deemed insufficient.

External influences from regulators have now superseded the internal academic authority of a university. As explained by a retired academic, Academic E02, who has extensive experience being attached to a central higher education agency, such external influence primarily developed due to increasing emphasis on quality assurance. Yet, the understanding of quality assurance and its practice across HLIs have fundamental differences:

> *QA (quality assurance) is mostly about complying with requirements. … with public and also private institutions, meeting requirement is still the dominant way to think about QA. Although they may use words like quality enhancement and many other terms but if you strip things off from this trapping, you looked inside, and they still talking [sic] about addressing [or] meeting requirements of someone. [They are] not really thinking in terms of owning this requirement and adapting as your own in your own context, history, culture, vision. So [after more than two decades], it is still very much complying with external requirements.*
> *Academic E02, HE Agency 01*

Importantly, the underlying principle to this external influence driving quality assurance and accreditation is known as the OBE. This process has not developed a genuine culture of making the outcome and process of learning clearer and more transparent to all stakeholders but instead has remained very much an act of compliance by HLIs. While discussion about OBE and various concepts

have been published (see Avis, 2000; Jackson, 2000; Wan, 2021; Wolf, 1995), how OBE penetrated to become the dominant force of this external influence is as described:

> *The pioneers of OBE [in Malaysia] are the engineering group. … [While] the engineering fraternity has the power to compel [engineering] schools [in universities] to do it, and it may be not that much of a challenge in engineering because it is a set body of knowledge with boundaries of this field quite well defined. But once you take that idea and you put it into humanities, then you find it runs into the ground almost immediately. … [The OBE] has become so mechanical. I used to tell them you are the only guys in the world who can tell me the student has 69.7% on leadership skills. I do not think any leadership expert in the world could put that kind of a number; only engineers can. But they have put numbers on almost all the outcomes. … By and large, most people brought into this were with an engineering background, starting from Washington Accord in 2004 and [subsequently] the Malaysian Qualifications Framework in 2007.*
> *Academic E02, HE Agency 01*

Thus, as Academic E02 aptly described, the mechanistic ways in which OBE has been used in QA and curriculum development have over-emphasised the use of measurable competencies and outcomes, at the expense of the intangible elements of cognitive, affective and capability of learning through the curriculum.

Expansion of Stakeholders

The university and academic fraternity is no longer the sole custodian and stakeholder of curriculum and academic programmes. Apart from external influences, as postulated earlier, the industry and the so-called market have now become important stakeholders to the curriculum, very much influenced by the ideology of neoliberalism of economising higher education and giving more emphasis on the market. The increasing role of the industry in the development and accreditation of programmes is as explained by Academic F01:

> *When we (HE agency) process any applications [for the new academic programme], we look at the input from the stakeholders. One of the major stakeholders, in this case, should be the industry. So all the institution or programme owners need to engage with the industry to ensure that when they come out with the curriculum, it is in line with what the industry needs. We do not want a programme to be offered just for the sake of offering them. Even at the ministry level, when we talk about the public institutions, they will actually scrutinize this. They will look at whether that programme is marketable, the students can actually be marketable upon graduation. So, I think that is the most important thing.*
> *Academic F01, HE Agency 01*

The involvement of the market and industry can be further observed in the once every five-year curriculum review. As Academic A01 shared from the experience of a recent curriculum review, feedback from employers, market analysis, and alumni became an important determinant of what should be included and what should change in an academic programme, in this case, to increase the quantitative component in an economics programme:

> *[Curriculum review to strengthen the quantitative core in an economics programme] is to meet the industry need. This comes back from employers and market analysis that our students are not strong in the quantitative part. They [employers, market analysis, alumni] even demanded that [computer] programme be included.*
> *Academic A01, Economics, Public University 01*

However, the market and industry involvement is not straightforward and often problematic. As articulated eloquently by Academic A02, who questioned the role and authority of university and academics, challenging the increasing influence of the industry and market on academic programmes and curricula:

> *When we want to revamp the curriculum, what did the people say? What did everyone say? Find out what the market wants. Since when do we [the university] care what the market wants? Who is this market? The market is people in the private sector, and they will call all these private sector people. In the last meeting [of curriculum review], we have people from (name of company removed) [a trading conglomerate], the bank, different sectors. So I said, since when did university academics ever ask the market how to structure the curriculum? [The answer is], if you do not give the market what they want, those students cannot get employed. Then they tell me the parents look at the course [and said], this is what the market wants. So what this means is the meaning of the university is being questioned. The university and education should not be seen as something utilitarian, [where] you go and get an education so that you get a high-paying job in the private sector. That is not what the university is all about.*
> *Academic A02, Economics, Public University 01*

The many questions raised by Academic A02 are all geared towards asking who is the market that now has a central role in determining a university curriculum. The dominance of this so-called market is directly related to the influence of neoliberalism. Hence, a fundamental question underlying and precipitated by this change pertains to the role and purpose of university and university education. Clarifying this fundamental question is important before we re-examine the role and involvement of the industry and the market. Importantly, the concept of the industry and the market is also problematic, as articulated by a retired academic who has experience in leading the university as well as being a policymaker:

> *We produced 6,000 graduates every year. … Ask one company, how many will you take? 50. Another said 100. [But] you expect the university to meet the needs of everyone when [the university] have to produce 6,000. So tell me, if we are teaching the software [used currently], with disruptive technology, everything will change three years from now or even three months. So what can I teach [if we listen to the industry]?*
> *Academic F02, HE Agency 01*

The unclear characteristics of exactly who is the industry and the market reiterate the importance of understanding the role and purpose of university education. But importantly, the emphasis on responding to the industry and the market has been almost exclusively driven by the government, acting as a conduit to these forces (Pring et al., 2009). Regulatory agencies such as accreditation bodies have required and mandated universities to address the needs of the industry and the market as part of their curriculum design and review. However, such requirements and practices are problematic. As Academic F03, from their previous experience as a policymaker, rightly pointed that a broader overview and/or guidance for universities in producing graduates and developing the knowledge, skills, competencies and capabilities according to the needs of the economy, society, and the nation remains missing.

> *No entity in this country can say five years down the road, "We need this kind of qualification". That should be the job of the Economic Planning Unit or any related agencies, but where the country is actually heading [in terms of talent development], nobody can tell. And this is when we want to offer new programme [in the] university, we do market survey. This is all rubbish just to get the curriculum to approve, but the bigger picture is not there.*
> *Academic F03, Engineering, Public University (also HE Agency 02)*

Yet, similar to the problematic concepts of the industry and the market, who exactly is the government? While there is a ministry in charge of higher education and several related agencies, the issue of university education and curriculum has a wider reach even within a government. Hence, as Academic F02 suggested from narrating the complexity related to higher education policy and national development:

> *The total government approach is the only way to deliver. But now, every ministry is [trying to be a] superpower. When you speak to them, they will listen but then will stick to their own plans strategies and follow their own KPIs. Where is the grand master plan? This [post-COVID] is the time to converge all the masterplans, industry, STI (science, technology and innovation), biotech, higher education; because it is not [only] about higher education. It should be from the schools all the way to cater not only for the industry, [but] for humanity, for Malaysia in moving forward as a nation builder.*
> *Academic F02, HE Agency 01*

However, while more stakeholders seem to have a say on university education and curriculum, arguably the most important stakeholder has been neglected. Where are the voices of students who are going through the curriculum? The following excerpts from a student best captured this neglect to understand the difficulties and challenges students encountered in navigating a rigid curriculum structure:

> *Moving across the specialization to get some other skills that are available is a bit difficult. Because for each track or specialization, [we have to complete] at least nine elective courses. [Also] because we have limited time, three and half years, we cannot take courses, not in our track or specialization.*
> *Student C103, Economics, Public University 01*

The neglect of students in curriculum development was further reaffirmed and best summarized by the following excerpt:

> *I think our curriculum is still lecturers centred rather than students centred. And I think if we can apply what we called as personalised medicine, we should also apply personalised education.*
> *Academic F03, Engineering, Public University (also HE Agency 02)*

The Acute Disruption

Conceptual Discussion

Acute disruption to higher education comes in many forms. Wars and natural disasters are among the common forms of disruption that would close the campus and halt T&L activities. Other forms of acute disruption, such as the rapid expansion of online technology, can to some extent be considered as a disruption that changed how HLIs operate. Specifically, this paper focuses on the implication to T&L due to the acute disruptions that took place in 2020 due to the sudden emergence of a widespread pandemic.

Although infectious disease and public health experts have long warned of a disease X that would threaten human survival (Heymann & Rodier, 2004), few foresaw the speed, severity, and level of disruption the COVID-19 pandemic has brought to society at large (Hu et al., 2021), and to higher education in particular.

According to the global survey by the International Association of Universities, T&L was significantly impacted by the pandemic, with two-thirds of responding HLIs reporting that traditional delivery has been replaced by remote T&L (Marinoni, van't Land & Jensen, 2020). While this sudden

shift posed challenges related to technical infrastructure, competencies, pedagogies and specific fields of study, many HLIs reported that COVID-19 has increased uptake of collaborative online learning. Regardless, planned semesters suffered heterogeneous disruptions, particularly concerning final examinations. Some HLIs forged through while others significantly modified timelines and assessment designs. Within all this, maintaining current and clear communication and coordination across the university administration and teaching staff and students while responding to rapid changes from the epidemic and government policies became glaring determinants of how adverse these disruptions were to an HLI. Albeit a large survey suggested that students were mostly satisfied with the support provided by teaching staff and their universities' public relations early in the pandemic (Aristovnik, 2020), this remains to be seen as the world progresses into subsequent years of living with COVID-19. Critically, while the transition to online learning appeared to have 'saved' the curriculum and academic calendars for many HLIs, the rapid, forced, and total technological reliance for T&L has undeniably widened existing digital gaps across university communities (Garcia-Penalvo, 2021).

In addition to the COVID-19 pandemic, for Malaysia, disruptions of the pandemic were superimposed on a political crisis arising from the defection of several key members of parliaments and the resignation of the sitting Prime Minister (dubbed the "Sheraton Move"), resulting in the collapse of the ruling coalition and a new government sworn in on 1 March 2020 (Saravanamuttu, 2021). The change of government almost immediately affected the system governance of higher education in Malaysia, whereby HLIs migrated from being under the purview of the Ministry of Education (which was otherwise more focused on primary and secondary education) to the re-established Ministry of Higher Education. Consequently, the appointment of a new Minister of Higher Education re-focused attention on higher education and given that higher education in Malaysia is heavily centralized with the minister and ministry overseeing this portfolio having a strong and direct influence on HLIs, a small change in the government indubitably had a direct and significant effect on institutions (Morshidi, Abdul Razak & Azman, 2012). Hence, in such a top-down, centralised system as Malaysia, higher education in the year 2020 suffered overlapping acute disruptions in the form of a change of government amidst uncertainties of a rapidly evolving pandemic. We attempted to capture the effect of these disruptions on the curriculum and T&L from the perspective of programmes, academics and students faced with these unprecedented circumstances.

Insights from the Ground

In Malaysia, all T&L and research activities (and other non-essential services) were initially halted during lockdown starting 18 March 2020 in response to a rapid rise in COVID-19 cases (Kamaluddin et al., 2020). Before lockdown, many HLIs have incorporated 'blended' learning, combining in-person and online T&L over the last decade or so (Nuruzzaman, 2016; Torrisi-Steele and Drew, 2013). However, these uptakes remained low even though globalized online learning is one of the nine shifts outlined in the MEBHE (Morshidi & Wan, forthcoming).

Thus, as the COVID-19 pandemic precipitated face-to-face learning risks within a few days and weeks (varying by specific HLIs), academics and students were expected to migrate all T&L activities and communication into remote online learning platforms and mediums. These included official university platforms – Google Meet, Webex, Zoom, and communication via social media applications such as Whatsapps and Telegram. Important to note all these took place in an emergency response manner (Hodges et al., 2020).

With teaching staff and students no longer present in the campus environment, and instead were off-campus in their homes or other locations they were bound to during lockdown, multiple aspects of T&L activities were affected. The acute disruptions are discussed in terms of (i) their implications to T&L activities on the practical dimensions and (ii) the changing dynamics to T&L due to remote learning arrangements.

Implications on Practical Dimensions

While many respondents observed that most courses were adaptable to emergency remote learning (ERL) (barring variation in technical challenges associated with class size and internet access), the most significant implication to T&L activities under the remote learning arrangement is achieving the programme/course outcome on practical components. For example, psychomotor skills and industrial placement are critical elements in science and engineering programs (Hofstein & Mamlok-Naaman, 2007; Shana & Abulibdeh, 2020). However, in general, most if not all lecturers interviewed lamented the difficulty if not downright impossibility of developing psychomotor skills, for instance, laboratory-based skills, using online methods.

> *[No matter] how many YouTube videos or demonstration videos you watch, you simply cannot achieve that same level of outcome or learning outcome at the end of a practical [session]…. We had to start looking into apps that helped with practical [aspect], [but] I do not think the apps really help. It is still virtual, and you know, it has not been as advanced as all those virtual reality things for you to put on goggles, [like you are] holding a pipette. It is not that advanced yet. I think the best strategy is still to get the students back [on campus, but] in smaller batches.*
> *Academic A01, Biotechnology, Private University 02*

In addition to this, the requirements for industrial placements were also severely disrupted depending on the industry related to the field of study. Students placed within essential work were still able to proceed as planned. Still, others who were set for placements in organizations or companies deemed non-essential work had to complete their internships remotely.

Finally, for programmes that required completion of a final year project (FYP) that typically involved laboratory-based or field-based research, this component has been particularly affected by the lockdown and social distancing restrictions. Many respondents were forced to change FYP topics into reviews, data mining or dry-laboratory research since they could not return to campus to access laboratories or travel to field sites for sampling and data collection. The responses from Academic A01 and Student C802 aptly summarized the sentiments of both lecturers and students:

> *Their final year project was another nightmare for us… A lot of them are used to laboratory projects, and we had to convert a significant amount of those projects into dry lab projects, but the students were not too happy about that.*
> *Academic A01, Biotechnology, Private University 02*

> *The biggest impact is you are not able to have your FYP. You cannot enter the lab and do a hands-on experiment. That is a very big impact.*
> *Student C802, Biotechnology, Private University 02*

Thus, even with adaptive strategies to ensure graduation requirements are met, the longer-term impact on psychomotor training, experience and technical skills for the graduating cohorts affected by these disruptions remains to be seen.

Changing Dynamics of T&L

There were significant implications associated with the altered dynamics of remote T&L and assessments compared with in-person arrangements on the campus. Consequently, the change in the T&L modality led to new forms of challenges and disparities among the students. Removed from the security of campus-wide internet connection, the most common issue faced was the disparity in internet access. Students and lecturers in rural areas lacked stable internet connections and often had to bear the increased cost of participating in T&L activities that consumed high amounts of data. Consequently, lecturers were faced with the dilemma of providing less data-consuming teaching

materials and activities versus conducting more stimulating online activities such as synchronous lectures using video conferencing, which despite providing more opportunity for live interaction, would also incur significant costs for students relying on mobile data.

> *Internet connectivity is a problem for the students. Some of them do not have access in rural areas, and some do not have access to fibre broadband. Second thing, even if you have 3G connectivity, it is not that sufficient, and to stream a 2-hour lecture, it is very expensive for them to stream and access. … I can see in the YouTube analytics, I can see how many students [have] viewed my lectures, and not many stayed and watch until the end.*
> *Academic B01, Biotechnology, Public University 07*

Unlike during in-person lectures, lecturers struggled to gauge student understanding even for live lectures online. Often, videos were turned off to conserve data or privacy issues. However, even when cameras were turned on, lecturers faced difficulty assessing body language and stimulating student responsiveness, which are otherwise important elements of the learning experience (Zeki, 2009).

> *[In online lectures], we have to consider [usage of data to access] internet. We do not want a one hour class that [would] cost too much to students [in terms of paying for mobile data]. So we have to consider that. But I think when we do the short class, I mean, just 15 minutes, it is not enough for students. I just wonder [whether they will] understand that or not. … So in every class, after I finished my lesson, I do a quiz, so I can understand whether students understand and do not understand which part of my lesson [since] you cannot [see the] face of your student directly. So, there is a [lot of] challenges with online teaching.*
> *Academic B02, Biotechnology, Public University 07*

Conversely, some lecturers reported more engagement through chat platforms available during ERL than in-person lectures. Students appeared more comfortable posing questions without needing to speak up. Both lecturers and students also noted that the increased adoption of online platforms such as Google Jamboard to increase T&L interaction, use of online resources such as YouTube videos, and recorded lectures were helpful for continuous revision and would be beneficial even in a post-pandemic environment.

> *This online arrangement helped students to feel much closer with their lectures because they can ask you anything at any time as well as any kind of questions. I do not know about others, but before this, at best only one or two students will come and meet me to ask questions.*
> *Academic B04, Biotechnology, Public University 07*

Students' receptiveness to chatting and texting online may also reflect generational differences and the influence of and their comfort in social media use (Seemiller & Grace, 2018). With the switch of T&L to the online mode, many lecturers found their students to be more vocal in expressing their thoughts through texts and chats, and shy students tend to be more expressive online. Importantly, some students and lecturers also noted the benefits of more creative assignments that moved beyond rote memorisation, as Student C801 shared:

> *The one positive aspect that I like is that can be kept in an interesting way to carry out the final assessment [examination]. It is no longer just memorizing everything and going into a 'verbal diarrhoea'. I really find the online assessments are more relevant to [future] work [settings] because it is based on a case study. We are required to do a bit more analysis a little research here and there. I actually like [online assessments] as compared to [written examination where we] sit down, 'eat the book' and 'throw into the paper straight away'.*
> *Student C801, Biotechnology, Private University 02*

Across different universities, there was also different levels of comfort and support in using online T&L platforms for teaching staff. For example, one academic from a university noted that the transition to online as seamless as most of them had already been trained as part of a teaching diploma which included an introduction to online tools. Another academic from a different university noted that, in general, junior academic staff were more equipped for the transition than more senior staff. This is due to the incorporation of various levels of training for blended learning in recent years, albeit general practice across the board was low until the pandemic unfurled.

> *In our university, all lecturers must attend a postgraduate diploma for teaching at the tertiary level. This course covered how to design curriculum, how to do flipped classrooms, teaching with technology. So, it is easier for us [in this institution] to be more aligned to the technology and teaching online. … Within a day after our campus is closed, we managed to switch everything online. What we have learned from the course has prepared us.*
> *Academic B04, Biotechnology, Private University 02*

Regardless of technological proficiency, a key challenge as part of the transition to online learning is reducing or replacing the final examination component with various forms of continuous assessment. Such assessment is often in the form of assignments and/or open-book tests, which has several implications on workload and quality of assessments. The need to replace higher weightage final examination with multiple smaller weightage assignments and tests (including conducting quizzes after every lecture to monitor online 'attendance') resulted in a significant amount of workload for lecturers and students, for preparing T&L materials, conducting, and grading assignments and completing these, respectively. This workload included informal time commitments that arose from the increased contact between lecturers and students beyond the traditional hour-two hours of lecture—as questions were able to be posted on forums by more students or even directly by messaging on social media platforms (Alawamleh et al., 2020). The limitless online communication has the double-edged sword of increasing engagement at the cost of intrusion of both the lecturer and student personal time. Indeed, the impact of the sudden transition from traditional delivery to emergency online delivery in terms of teaching load and student learning time associated with the standard calculation of credit hours is only being appreciated in retrospect.

> *There is another problem when all the lecturers give their online assessments at the same time. So, for example, four subjects released the assignment [details] on Monday, and then all assignments have to be submitted on Wednesday. So, [such uncoordinated assignments], it is very taxing on us because you have to face the laptop for like so many hours to finish all assignments at the same time.*
> *Student C805, Biotechnology, Private University 02*

The increased quantity of work faced during ERL was also complicated by questions raised regarding assessment quality under such circumstances. In addition to questions about ethical adherence, which was challenging to ensure besides the use of plagiarism software, all lecturers interviewed reported a trend of grade inflation and higher passing rates when the weightage for continuous assessments was increased up to 80-100% of course marks and/or without timed invigilated final examination. Ironically, despite getting higher marks, without the final examinations, students remarked less confidence in their understanding of the course.

In summary, many negative sentiments surrounding COVID-19 as an acute disruption highlight the fact that while Malaysian HLIs had some practical ability to quickly respond to circumstantial interruptions via utilising existing technologies and expanding on pedagogical approaches such as blended learning, the speedy shift neglected to effectively incorporate the underlying purpose and nature of different T&L activities. This may relate to the fact that while pandemic restrictions had overwhelmed university norms, structures and frameworks that have been set in place, such as

OBE requirements, were not re-interpreted cohesively. Instead, the onus was placed on individual courses instructors to find alternative methods to meet existing requirements. While this seemingly was a reasonable option early in the pandemic, moving two to three years into living with COVID-19 shows that Malaysian HLI may have severely underestimated the long-term effects of this acute disruption. The price of the failure to recognise early on the more permanent impact of the pandemic and ERL on curriculum, and an attitude of 'how do we return to business-as-previous?' rather than hard questions of 'how do we move forward?' remains to be seen. Nevertheless, it is encouraging that the need to adapt to pandemic norms has finally provoked a long-needed wave of change and re-thinking what and how the university curriculum can remain relevant in modern times.

While the change of government in March 2020 would have been an acute disruption, however, partly due to the severity of the disruption from the pandemic that took place simultaneously, the effect has been relatively small. Additionally, the study was framed in the curriculum context for which discussion of political and governance changes (unlike the shift to online learning due to pandemic restrictions) would have been out of scope. Yet, we touch on the impact of nationwide campus closure, which came from a ministry directive. Therefore, the challenges and mishaps in policy and communication from the campus closure to some extent illuminated the turbulence in the government at that time.

Discussion and Conclusion

While disruptions are inevitable, identifying different types of disruption and how they impact and change the curriculum and educational processes in higher education are crucial lessons to be learned. This paper has illustrated two major forms of disruptions in higher education.

On the one hand, chronic disruptions, which are more gradual and subtle, significantly change the purpose, rationale and ways in which higher education operate, especially on T&L. New components, new stakeholders and new ideas, for instance, can alter the discourse about the purpose of university education. Furthermore, the concepts of graduate employability, employment outcome, and the idea of students as consumers are examples of how a utilitarian mindset chronically disrupts and shapes the idea of university education.

On the other hand, acute disruptions, which came more abruptly and forcefully, also catalysed changes in university education, curriculum, educational processes. Specific to the case of Malaysia, two inter-related acute disruptions – the COVID-19 pandemic and change of government that took place within days of each other – have further raised many more pertinent questions for us to reconsider regarding the purpose and manifestations of university education, the curriculum and educational processes.

To recognize these disruptions is important for us to understand the development of university education that led us to the present situation. Importantly, this understanding is expected to guide future development, especially for higher education to adapt and progress into the future. We shall conclude by raising five questions for different actors and stakeholders to ponder concerning these disruptions.

First, to the university as an institution that owns academic programmes, to what extent have these programmes been resilient and steadfast in adhering to the educational purpose and objective while concurrently adapting to both acute and chronic disruptions? This question requires institution and academic programmes to have a clear purpose and objective, not merely meeting regulatory requirements. Given this, even when confronted with disruptions and initiating measures to adapt to the disruptions, the purpose and objective will remain while balancing the different elements that have become a part of university education.

Second, to the academics who are instrumental in ensuring that educational processes achieve their purpose, how have these disruptions changed their approach, and in what ways have they been able to withstand changes? This question is directly related to academics' autonomy and pedagogical

competency (Nasrallah, 2014), especially on T&L, as well as the support and 'space' for them to navigate the different kinds of disruption in the process of educating their students.

Third, to the students who are primary beneficiaries and recipients of the educational experience, are the changes in line with their aspirations, and how have they coped with these disruptions? Have their voices been heard and taken into account? The neglect to listen and pay attention to the voices and needs of students can be detrimental because students should rightfully be the most important actor in the educational processes, not as a customer but as a learner (Nordqvist & Aronsson, 2019).

Fourth, to the other stakeholders, including policymakers and regulators acting as a conduit of employers and parents, have the changes brought the intended outcome and what would have been the alternative opportunity cost to pursue the changes intended? Finally, the abrupt shocks of acute disruptions have further exposed the many fundamental issues and structural misalignment that have subtly permeated due to the chronic disruptions on university education's purpose, structure, and idea.

Fifth, the real challenge to the future of higher education will come after the disruptions have subsided. What is left behind, and what are the non-negotiable essential elements that define university education? Is conforming to a factory-like production model by time and cohort, such as graduate-on-time, still relevant? Is the over-zealous structure of defining outcomes without considering the processes still appropriate when met with these disruptions? Is the ecosystem of higher education supportive and adaptive to the disruptions and resilient to the needs of the students for the future?

By critically examining and recognising disruptions to the curriculum questions that are pertinent to guide the way forward in developing university curriculum have surfaced. Importantly, the quest for these answers will also require engagement and collaboration of stakeholders towards steering university education to become more relevant, impactful and meaningful for all.

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Pedagogical Implications of Stance-taking and Identity Construction in Lecturer-Student Interaction

Rami Maher Delli
University of Malaya

Francisco Perlas Dumanig
University of Hawaii at Hilo

Abstract: *During a consultation at the postgraduate level, interactions between lecturer and student are essential in completing a thesis or dissertation. In most interactions, both speakers tend to construct their identities with their stance. Consequently, this paper examines how the postgraduate lecturers and students take a stance and construct their identities in lecturer-student interaction. Moreover, it explores the pedagogical implications of conversational stance and identity construction. This study combined the Stance Triangle and Stance Marker as a theoretical framework to analyze the construction of identity between lecturers and students and employed conversation analysis as an approach in the data analysis. Ten conversations between lecturer and postgraduate students during consultations were examined. The findings of the study reveal that attitudinal, deontic, epistemic, and textual stance markers are frequently used and linked to how they construct their identities. Results further show that lecturers position themselves as mentors, experts, counselors, and leaders, while the students position themselves as mentees, non-experts, counselees, and followers. Such diverse identities may impact the lecturer-student relationship and students' academic performance. In addition, it provides opportunities for lecturers to enhance their supervisory skills and strategies and develop better classroom interaction.*

Keywords: *Stance-taking, Stance triangle, lecturer-student relationship, classroom interaction, Identity Construction, Stance marker*

Introduction

Many postgraduate students nowadays struggle to graduate on time due to difficulties in completing their theses. Students are often confused about what they are doing and feel that they do not have the full support from their lecturers, who serve as thesis supervisors. Such perception towards the lecturers as less supportive can be traced from their interactions with their students during research consultations. Studies show that a school environment that is less supportive and has disagreement and conflict between lecturers and students hinders academic success and contributes to students' mental health issues (Corcelles et al., 2019; Leveque et al., 2017; Holbrook e al., 2014). On the other hand, any supportive supervision results in less emotional exhaustion to students (Devine & Hunter, 2017).

Lecturer-student interaction is significant because it impacts their relationship and becomes a basis for measuring the students' academic success. The academic relationship between the lecturer and student is not different from any relationships because it is characterized by many challenges and

a Correspondence can be directed to: fdumanig@hawaii.edu

requires mutual understanding to succeed. In graduate school, an excellent academic relationship between the lecturer and student enhances the students' performance and helps them complete the thesis on time. Therefore, choosing lecturers or supervisors where students can establish a good relationship is vital towards success (Burton & Steane 2004). However, a tense relationship between lecturers and students can be stressful, resulting in a delay in completing the thesis.

According to Masembe and Nakabugo (2004), lecturers and students should know their respective roles to maintain a good relationship. Some studies reveal that graduate students did not succeed or failed because of their bad relationships with their lecturers (Burton & Steane, 2004; Masembe & Nakabugo, 2004; Muller et al., 2001). Bowlby and Ainsworth argued that students develop a sense of security and stability because of their relationship and attachment to their teachers (Bretherton, 1992). This leads to the idea of the attachment theory that is labeled as "homeostatic" because it controls the distance of emotions, sense of security, and sense stability where both teacher and student stay close to each other to support learning (Riley, 2010).

It is evident that the academic relationship between lecturers and students influences success. Such success is achieved through better interaction or communication and understanding the interactional stance and identity they construct. The identity constructed by the lecturer and student is also dependent on how they position themselves during their interaction. This study examines the use of stance-taking in lecturer-student conversation and the construction of identity in an interaction. Consequently, this study provides some pedagogical implications in supervising graduate students in universities.

Stance Taking

Stance taking is slowly gaining popularity in some education research (Dumanig, 2021; Kafes, 2018; Mainhard et al., 2009). For many years, researchers have explored stance taking as a research approach, resulting in an increasing number of studies (Englebertson 2007; Wu 2004; Kärkkäinen 2003; Gardner 2001; Hunston &Thompson 2000). Foregrounding the concept of stance will help elucidate the notion of stance taking. Biber and Finegan (1989, p. 124) argued that stance is "the lexical and grammatical expression of attitudes, feelings, judgments or commitment concerning the propositional content of a message." These characteristics of stance assert and highlight its subjective and evaluative nature. This means that there is a clear form-meaning relationship, and it is located in form, i.e., in the lexical and grammatical expression.

Kiesling (2009, p.172) emphasized the two types of stance, such as "epistemic stance (commitment) and attitudinal stance (judgments, attitudes, and feelings)." The epistemic stance refers to the interlocutors' commitment to their talk, e.g., the speakers' certainty level about their assertions. In contrast, attitudinal stance refers to the speaker's expressions that reveal their relationship, e.g., friendly or bossy. However, the epistemic and attitudinal stances are related and may occur simultaneously (Kirkham 2011).

Many scholars view stance differently, resulting in various definitions of stance. Myers (2010) explained that the stance has a broader scope, and it covers many linguistics approaches, like modality, evidentiality, politeness, evaluation, hedging, or metadiscourse.

On the other hand, Du Bois (2007, p. 220) viewed stance as "a public act by a social actor, achieved dialogically through overt communicative means, of simultaneously evaluating objects, positioning subjects, and aligning with other subjects, concerning any salient dimensions of the sociocultural field." Du Bois's definition of stance highlights the viewpoints of the speaker. This means that when taking a stance, speakers always present their attitude, evaluation, judgment, and viewpoints towards the proposition and to whom they interact (Johnstone, 2007; 2006). Stance takers reveal their relationship to what they say, involving their intensity, friendliness, degree of certainty, and personal feeling (Reza & Paria 2012; Johnstone 2009).

In the academic setting, stance-taking is a crucial skill that students must achieve to succeed academically (Zhang & Zhang, 2021). Iinuma (2015) and Rismark & Solvberg (2011) argue that any

academic setting functions as a place to share new thoughts, knowledge, beliefs and build common grounds. In addition, it is a place where the teachers can facilitate learners' knowledge and encourage an exchange of personal views and opinions (Abrar, 2020). In addition, stance-taking will help the teachers assess the students' certainty of knowledge on a particular subject (Abrar, 2020).

The occurrence of stance taking in an academic discourse happens in the classroom and in students' writing. Studies show that many students effectively establish critical evaluation, reader solidarity, and persuasive argumentation when they take a stance in their writing. However, other studies also argued that second language learners of English encounter difficulties in stance-taking (Lee & Deakin, 2016). Dumanig (2021) claimed that students' success in argumentative essay writing depends on students' ability to take and support their stance. Stance taking either in spoken or written discourses is directly observed and noticed through stance markers.

The stance markers can index stance. According to Xu and Long (2008, p. 3), "stance markers are similar to linguistic signs by which the information conveyed in the propositions or events are often coded, with some devices functioning primarily, but not necessarily, for an objective description of the world, and others for the language user's self-expression." Stance markers are classified into four types: attitudinal, deontic, epistemic, and textual, which are discussed in the following sections of this paper (Xu & Long 2008).

Stance-taking is vital in many academic interactions, and such a stance signals the identity constructed by the speakers. In every interaction, the speaker's stance is also seen as identity construction (Johnstone 2007; Kärkkäinen, 2006). This means that when interlocutors interact, they take a stance and at the same time co-construct their identities. "Speakers do not focus much on actions or events during conversations, but they show their identities, express their emotions and attitudes, and discuss their views about the world" (Thompson & Hopper 2001, p. 28). Consequently, speakers tend to construct multiple identities when they take a stance. Multiple identities are always expected since identity is not static and is co-created by two interlocutors. "Every individual creates and displays an identity that is claimed, created, and expressed in conversation through the act of performance" (Johnstone 2007, p. 30).

In many academic interactions, studies show that the identity that students and teachers construct is realized through their stance (Abrar, 2020). Consequently, both teachers and students have the tendency to take a different stance and multiple identities. The dynamics of teacher-student interactions result in multiple identities, showing the fundamental nature of identity that is fluid and not fixed (Abrar, 2020).

Du Bois (2002, p.220) argued that "stance taking includes some interacting linguistic features which mark the speaker's alignment in conversation and can be described as 'modus operandi' to construct identity." Bucholtz and Hall (2005) stated that linguistically stances could index identities. They argued that a frequent or repeated pattern of stance-taking of moves might emerge as an identity. It is necessary to highlight that a person occupies each subject position in the stance triangle. Through this, participants' interpretations of their stances are based on some background knowledge of the stance takers.

From the scholars' perspectives, it is evident that the construction of identity when taking a stance in conversation is associated with the roles that each interlocutor possesses. For example, lecturers and students have certain specific functions that are socially constructed.

To understand the notion of stance taking, it is essential to discuss the concepts of the Stance Triangle, Model of Stance Markers, and Conversation Analysis (CA). They are all employed in this study to analyze lecturer and student conversation.

Stance Triangle

The Stance Triangle explains how the lecturers and students position, evaluate and align themselves during consultation. It is a geometric model that visually represents the interrelations between three elements of stance taking. It asserts the dialogic and intersubjective nature of stance taking

by drawing attention to conversation participants' turn-by-turn negotiation of stance (Damari 2009, p. 18). The stance triangle consists of three different aspects: positioning, evaluation, and alignment (Du Bois, 2007). Positioning refers to the "act of situating a social actor concerning responsibility for stance and for invoking sociocultural value" (Du Bois 2007, p. 143). This means that the focus is on the stance taker. For example, when a speaker says, 'I am sad,' it shows that he is positioning himself as sad. The first person pronoun 'I' refers to the stance taker followed by a predicate that positions the speaker as sad. "Evaluation refers to the process whereby a stance taker orients to an object of stance and characterizes it as having some specific quality or value" (Du Bois, 2007). For instance, when a speaker says, ' that's great,' he states his evaluation on something. A stance, in this case, is oriented to give an evaluation about a specific target. This kind of evaluative target can be called the object of stance (Du Bois et al., 2003).

In comparison, alignment determines the relationship between two stances and implicitly between two stance takers (Du Bois, 2007). Alignment plays a vital role in the stance triangle. For instance, in a conversation, when a speaker says, 'I agree,' it means that the speaker (subject$_2$) aligns himself to the prior speaker (subject$_1$). This type of stance is different from position and evaluation because it is interactional. Therefore, when giving such utterance ', I agree,' the speaker aligns his stance concerning the other speaker. The alignment shows the agreement of the speaker with someone. By using the first-person point of view of the speaker, Du Bois (2007) gave a clear explanation of the mechanism of stance-taking, and he stated that when someone takes a stance, he evaluates something (object), and thereby positions himself, and thereby align with another stance taker. However, these three elements of stance taking, such as positioning, evaluation, and alignment, could explain stance taking and identity construction in interaction.

Stance triangle suggests that the three stance acts such as position, evaluation, and alignment are not separated types of stance, but they are simply different aspects of a single stance act (See Figure 1). These three elements are considered subsidiary acts of a single stance act, and these subsidiary acts differ from each other under their distinctive consequences. Therefore, the stance can be understood as three acts in one.

The stance triangle can be illustrated in Figure 1

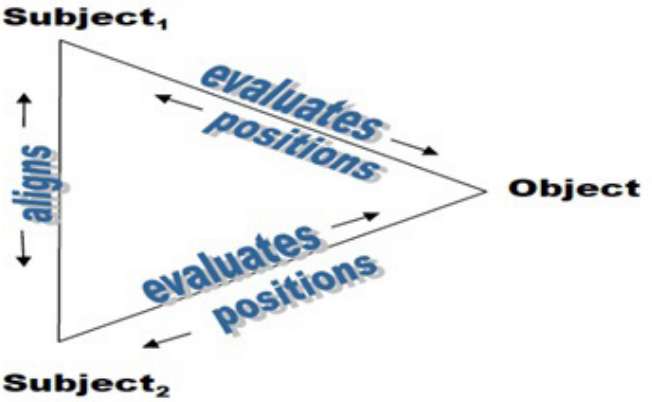

Figure 1: Stance Triangle
Source: Du Bois (2007)

It is evident through interaction that stance-takers evaluate something (object) and position their identities because the subject in the stance triangle stands for the stance taker. In an interaction, the stance taker's interpretation of the stance taken somehow relies on his background knowledge (Damanig, 2009).

The Stance Triangle can be the most appropriate theory to explain how lecturers and students take a stance in an interaction. It provides a clear framework for examining stance-taking and the portrayal of identity among interlocutors.

Stance can be identified through the stance markers used by the speakers. Studies show that stance markers indicate that the speakers take a specific stance in conversation (Xu & Long 2008; Reza & Paria 2012). The occurrence of stance taking in every interaction is always signaled by the stance markers used by the interlocutors. Therefore, this paper also discusses the model of the stance markers as proposed by Xu and Long (2008).

Stance Markers

Stance markers are common and frequently occur in conversation, academic writing, news, and fiction (Biber et al., 1999). The concept of stance markers was proposed by Biber et al. (1999) and later developed by Xu and Long (2008). Consequently, stance markers are classified into four types: epistemic stance, deontic stance, attitudinal stance, and textual stance. Epistemic stance markers refer to the speaker's or writer's background knowledge, degree of certainty, uncertainty, precision, or actuality. However, they share the same function with an epistemic modality such as, I think, of course, etc. On the other hand, deontic stance markers refer to the writer's or speaker's position on obligation/ necessity. They show the speaker's or writer's stance towards the social knowledge of information obligation, responsibility, and permission (Xu & Long 2008, pp. 11-12). They share the same function with the deontic modality.

Attitudinal stance markers show the speaker's position and evaluation of emotion and personal feelings such as good, better, useful, etc. They have the same function as Hyland's attitudinal markers:

> Attitude markers indicate the writer's affective, rather than epistemic, attitude to propositions, conveying surprise, agreement, importance, frustration, and so on, rather than commitment... By signaling an assumption of shared attitudes, values, and reactions to the material, writers both express a position and pull readers into a conspiracy of the agreement so that it can often be difficult to dispute these judgments. (Hyland 2005, pp. 108-109).

Finally, textual stance markers refer to the ways of organizing the conversation, which reflects the speaker's line of reasoning and involvement to convince the interlocutor. However, the appropriate use of textual stance markers will contribute to the speaker's argument for his ground and enhance the logicality and rationality of the interaction (Xu & Long 2008).

Such stance markers help identify and analyze the stance taken by the speakers in conversation. To have a comprehensive understanding of the mechanism of stance triangle theory, there is a need to explain the concept of conversation analysis as an approach since analyzing stance taking requires an understanding of turn-taking in conversation.

Conversation Analysis

Conversation Analysis (CA) is an approach to the study of talk in interaction, developed from ethnomethodological tradition and later developed further by Harold Garfinkel (Liddicoat 2007). The main objective of using CA as a framework is to describe the interaction's structure, sequential patterns, and orderliness. Furthermore, it highlights the significant role that language plays in the organization of talk and the logicality and rationality which underlie human practice (Sidnell 2010). Consequently, Schegloff (1979) identified talk-in-interaction as one of the topics of CA.

Using conversation analysis as an approach when analyzing stance taking requires understanding the concept of turn-taking and adjacency pairs in the conversation. Analyzing stance taking in conversation requires examining each turn and the adjacency pairs to see how the interlocutors take a stance and how they align with another interlocutor when they interact.

Turn-Taking

Turn-taking is an essential feature in conversation analysis that helps in the organization of talk. It is a process by which interactants allocate the right or obligation to participate in an interactional activity (Sacks, Schegloff & Jefferson 1974). It consists of the turn constructional and turn allocational components (Liddicoat 2007), which help understand how turn-taking works in conversation. The turn constructional component describes the basic unit known as turn constructional unit (TCU), a grammatical unit that can be a word, phrase, clause, or sentence (Liddicoat, 2007). It is context-sensitive, and any decision about what constitutes a TCU can only be made in the context.

However, a turn can be considered an allocation component if it describes how the participants in a conversation allocate the turns. In this context, the current speaker may select the next speaker using specific strategies such as using the pronoun "you," mentioning a person's name, and self-selecting the next speaker. In general, the turn allocational component in conversation may consist of three ordered options: the current speaker selects the next speaker, the next speaker self-selects as next, or the current speaker continues (Liddicoat, 2007).

Some linguistic devices are helpful in order not to take turns but still attend to the speaker's message. According to Dumanig (2010), these linguistic markers or back-channeling devices like, *yeah, right, no, yes, sure, mm and ah-ha*, signal that the listener is paying attention to what the speaker is saying.

In this study, turn-taking is examined closely, particularly in analyzing the occurrence of stance-taking and identity construction. However, such an analysis in the conversation could not be comprehensive without considering the adjacency pairs.

Adjacency Pairs

Many turns of talk in a conversation occur in pairs like greeting- greeting, question-answer, or request-acceptance/rejection, and these paired utterances are called the adjacency pairs (Schegloff &Sacks 1973). According to Liddicoat (2007), adjacency pairs are the basic unit in a conversation where an organization or sequence of talk is built. Such pairs can be easily recognized because it has certain features. Liddicoat (2007) emphasized some features of adjacency pairs; it has two turns (turns are from different speakers), and it follows an order (pairs are differentiated into pair types).

It should be noted that the sequence of the pairs does not follow at all times in similar order because some insertions within the pair might occur. The insertion is called the insertion sequence, which can sometimes be a long stretch of talk.

In this paper, the adjacency pairs may help identify how the speakers align in the conversation when they take a stance. Alignment is best described when the pair of conversations are clear.

Method

This study used the qualitative approach in collecting and analyzing the data. The concepts of conversation analysis, particularly on turn-taking, adjacency pairs, and sequential order, were emphasized to analyze the data.

To carry out the study, five lecturers and ten postgraduate students from the Faculty of Languages and Linguistics at the University of Malaya participated in the study. Convenience sampling was used to select the lecturers as participants, although their qualifications and experience in supervising postgraduate students were also considered. Five (5) lecturers with Ph.D. degrees and

who had at least one year of supervisory experience with postgraduate students were selected. On the other hand, ten postgraduate students were selected as participants using the convenience sampling method. The participants were identified by the lecturers who provided the list of students to be contacted. Oral and written permissions were done to record their conversations with their lecturers. During the data collection, all the chosen participants (students) were currently taking their Masters's degree, either Master of English as a Second Language or Master's in Linguistics. The selected students were writing their proposals, while others had just started gathering and analyzing their data. None of them have completed their research yet.

The data collection was conducted for five months. This was conducted for the entire semester of Semester 2. Before recording the conversations, permission was made from the lecturers and the students. Both the lecturers and students were given a letter of consent to prove that they agreed to participate in the study before the conversation was recorded. All lecturers also agreed that conversations would be recorded in their offices during the schedule they provided for the data collection.

The conversations included in the study were limited only to a maximum of 45 minutes and a minimum of 10 minutes. Setting a minimum time for interaction is essential because the presence of the recorder and the observer may affect the participant. Therefore, the first 1 minute of conversation was not included in the data analysis to interact more naturally between the lecturer and student.

The data for this study were all spoken data and were transcribed using Du Bois' (1991) transcription convention. The conversations between lecturers and students were recorded using an audio recorder during research consultation. Ten (10) conversations were recorded, and all conversations were considered casual conversations during research consultations with a minimum of 10-minute to a maximum of 45 minute-conversation. The total duration of the ten conversations was 5 hours and 45 minutes.

After the transcription, the data were also shown to the participants (lecturers and students) to double-check whether there were parts of the conversations that they need to be deleted.

Results and Discussion

Stance Marker Used in Lecturer-Student Interaction

The findings of the study show that the epistemic stance marker has the highest frequency of occurrence, having 203 occurrences (33.28%) in the entire interaction between lecturer and student. A textual stance marker follows it with 183 occurrences (30%), then attitudinal stance with 151 occurrences (24.75%), and last the deontic stance with 73 occurrences (11.97%). Table 1 shows the summary of occurrences of stance markers in lecturer-student interaction.

Table 1. The Occurrence of Stance Markers in Lecturer-Student Interaction

ES	TS	AS	DS	Total
203 (33.28%)	183 (30%)	151 (24.75%)	73 (11.97%)	610 (100%)

ES – epistemic stance, DS – deontic stance, AS – attitudinal stance, TS – textual stance

Table 1 shows that epistemic stance markers frequently occur in the interaction. The frequent use of an epistemic stance indicates that when a lecturer and student interact, there is a certain level of formality in the interaction in which the discussion is based on the certainty and truthfulness of the message. This means that the epistemic stance is prominent in the interaction, which indicates the epistemic status between the lecturer and student. In most cases, lecturers are perceived as epistemic authorities by their students (Raviv et al., 2003)

On the other hand, the textual stance marker plays a vital role in the interaction. This is essential because every time a lecturer discusses to the student, clarity of the message is needed.

Since the lecturer's role is to guide the student, it is always expected that clear and logical messages are deemed to be important (Orakci, 2020).

Since lecturers and students must work together for a certain period until the research is finished, they need to maintain a good relationship. Such a relationship is observed through their interaction which is evident in the use of attitudinal stance. It shows that both interlocutors must emphasize their responsibilities and obligations to complete the research throughout the interaction. On the other hand, the use of a deontic stance is also important because it indicates the degree of necessity and obligation.

On the other hand, in lecturer-student interaction, the stages of interaction and the occurrence of stance markers provide a lead in identifying the stance taking by each interlocutor. Moreover, every stance taken signals the identity of the interlocutor. Detailed analysis and discussion on stance taking and identity construction are provided in the next section.

Stance-Taking and Identity of Lecturers and Students

The study reveals that lecturers and students take a stance in every interaction, which indexes certain identities constructed. Such identities are seen to have influenced the various turns in the entire conversation. The data show that lecturers and students construct multiple identities during their interaction and have impacted the lecturer-student relationship and students' academic success (Sakiz et al., 2012).

Mentor-Mentee Relationship

In the conversations recorded between lecturers and students, it is evident that lecturers construct particular identities as people who guide and advise the students about their research. Lecturers position themselves like counselors who start the conversation by asking their students about conceptualizing the research. In short, they are constructing an identity as a mentor as they start the conversation. Such identity is shown in Conversation 5.

On the other hand, students feel that they need someone to guide them as they start their research. As the conversation begins in lecturer-student interaction, students construct certain identities like a mentee. They provide their lecturers with the necessary information, including some issues in understanding their topics. Studies show that the lecturer-student relationship is a mutually reinforcing system, and it contributes to the quality of the relationship and results in higher student achievement (Hattie 2009; Hamre & Pianta, 2006).

When lecturers and students construct their identities as mentors and mentees, such identity construction is evident in how they take a stance in every conversation. Mentors and mentees try to make the conversation friendly and well-organized. This is why textual and attitudinal stance markers are often used when they start the conversation. However, as the conversation progresses, the stances of both interlocutors are enhanced through their alignment.

In conversation 5, the lecturer acts as a mentor by asking a few questions to the student. The conversation starts with a question in turn 3, "*What kind of project do you want to do?*" Such questioning indicates that the lecturer would like the student to think and give him an idea of what to research. However, it is evident in turn 3 that the lecturer could not figure out the topic, so the student says in turn 4 "*So: anything concerns syntax*." Such a response indicates the student's limited understanding of the topic, and it also indicates that the student shows that he needs to be guided to come up with a topic about syntax. But the student tries to be coherent with the lecturer's utterance through the use of textual stance by saying "so..." and in the fifth turn, the lecturer said "*ok...*" which is an attitudinal stance marker that shows the solidarity. At the same time, it is a form of alignment to the stance taken in the previous utterance.

In both subjects, the lecturer and student align themselves through question and answer and using words like "*ok*" and "*yeah*."

Conversation 5

3. SL: What kind of project you want to do?
4. SS: So: anything concerns syntax
5. SL: O:k a:nd which exactly (0.1) you want to do, what kind of syntax? =
6. SL: Do you have any ↑ idea any ↓ plan for that?
7. SS: Um may be concerning the: X-bar theory, something related (0.1) the framework of X-bar theory
8. SL: Oh th- the X-bar theory only =
9. SS: Yeah, (0.1) or including thematic rule
10. SL: ↑ Semantic analysis .hhh
11. SS: Yeah, (0.1) theta role =
12. SL: Oh you want theta role
13. SS: Yeah

From conversations between lecturers and students as mentors and mentees, a schematic diagram is illustrated to show the use of stance-taking and identity construction.

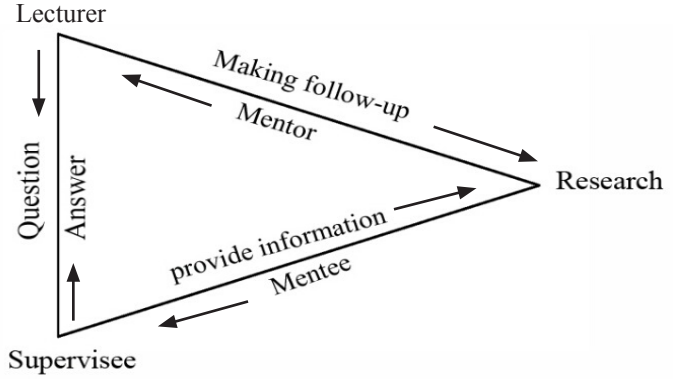

Figure 2. Stance Triangle: Lecturer as Mentor and Student as a Mentee

Expert-Non Expert Relationship

Lecturers are always concerned that their students understand their research entirely. Lecturers sometimes test to what extent the students know about their research. Consequently, lecturers tend to position themselves as experts who can critique and measure the students' understanding of the research. On the other hand, the students also position themselves as non-experts in research writing and try to show they do not yet have the expertise. This reflects that the teacher-centered approach views lecturers as the content dispensers (Keiler, 2018). Such identities become salient in the conversation as the interlocutors take a stance and align themselves in the conversation. Such identity construction is evident in Conversation 7.

In turn 39 of the conversation, the lecturer starts with the textual stance marker "*so*" to maintain the correct and logical flow of conversation, then he asks the student, *"[so]* ↑ *how would you analyze the text from here?*" The student replies in turn 40, saying, "it is in the exclusion part, right?" Furthermore, the lecturer answers in turn 41 using the epistemic stance, saying "Yeah [right]," which confirms the student's answer in turn 40. It is evident in turn 39 that the lecturer is testing the student's knowledge by evaluating the student's understanding of the proposal by asking about how he will analyze the text, which is evident in turn 41, "Yeah [right]." Saying "yeah," which is an epistemic stance, indicates that the lecturer has the knowledge and knows more than the student about the analysis. Such use of the Wh-question of epistemic stance marker shows the certainty of the lecturer's question in testing the student's knowledge.

Conversation 7

39. SL: ↑ [so] how would you analyze the text from here?
40. SS: ( ) it is in the exclusion part, right?
41. SL: Yeah [right]
42. SS: [you] ask [about the exclusion]
43. SL: ↑ [so are you going] to analyze [using(0.2), label] this one as a nomination
44. SS: ↑ [I'm going to analyze]
45. SS: Yeah
46. SL: Then [predication]
47. SS: [because under] exc- under exclusion there is a suppression here like in the example I told you just now, is the government or the name of the government is suppressed or like hidden
48. SL: Uhm
49. SS: But the name could instead s- the families and relatives ( ) people who died =
50. SL: Do you have an idea of how to analyze this?
51. SS: Yeah

From the conversations analyzed, a schematic figure has been formulated.

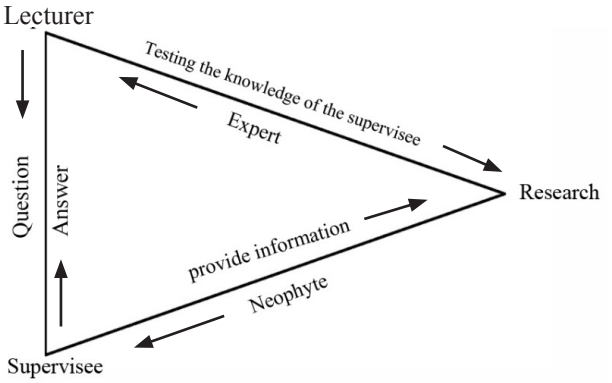

Figure 3. Stance Triangle: Lecturer as Expert and Student as Non-Experts

Counselor and Counselee Relationship

In conversation 4, the lecturer positions himself as a counselor who clarifies some issues encountered by the students. On the other hand, the student positions as counselee by inquiring to the lecturer on what to do in the chosen topic of research. It is essential that lecturers must provide assistance, support, and prevention of different problems that students encounter, by ensuring a favorable environment for the students' development (Dumitro, 2015). This is evident in turn 577 when the student says, "*Not every paragraph for three objectives?*" who tries to inquire for clarification and explanation from the lecturer. The lecturer replies with an epistemic stance, "*No,*" in turn 578 instructing the student not to do so. Then he gives more explanations saying, "*No, no, it is too messy*." Furthermore, the student asks in turn 602, "*And should I: uhhh (0.1) add some questions to this questionnaire as [( )]*". The lecturer again replies with an epistemic stance, "*Of course,*" in turn 603, saying, "[*Of course] because this is uhh (0.1) may be easy*" such a reply shows that the clarification was given with certainty, so it will not bring confusion to the student.

It is also evident in the conversation that there is alignment between the student and lecturer. When both interlocutors reach the stage of agreeing on what they say, it shows that they align themselves. This alignment is evident in turns 577-578, 581-582, 597-598, and 602-603. Moreover, the lecturer and student reach certain agreements in the interaction in turns 598-600 and 605-606, which show alignment in conversation.

Conversation 4

577. SS: Not every paragraph for three objectives?
578. SL: No, no, it is too messy
579. SS: Uhm
580. SL: Each paragraph (0.1) one [objective]
581. SS: [Looking] for one objective
582. SL: Yes
583. SS: [O:h I didn't know, I] didn't know
584. SL: [If you mix all together you mus-]
585. SL: Yeah, because (0.1) ↑ some people like do like that but ha- you must be very professional
586. SS: Uhm
587. SL: You see, ↑ so do like this ha
588. SS: Um
589. SL: For each objective one paragraph
590. SL: ↑ You can uhhh ↓ it is not problem, I I I'm saying one paragraph (0.1) you might put two paragraphs
591. SS: Uhm
592. SL: For each objective, no problem
593. SS: Oh ok
594. SL: Paragraph one (0. 2) two: uhh, objective one-two paragraphs
595. SS: Uha
596. SL: Objective two one paragraph, no [problem]
597. SS: [Uhhh I] design it like this
598. SL: Yeah organize very [organized], ↑ till: the end =
599. SS: [Organized]
600. SS: = Uha ok
601. SL: OK
602. SS: And should I: uhhh (0.1) add some questions to this questionnaire as [( )]?
603. SL: [Of course] because this is uhh (0.1) maybe easy
604. SS: Yes
605. SL: = Because you have to put questions (0.1) related only to collocations
606. SS: Yes

In the conversation, a schematic diagram is formulated.

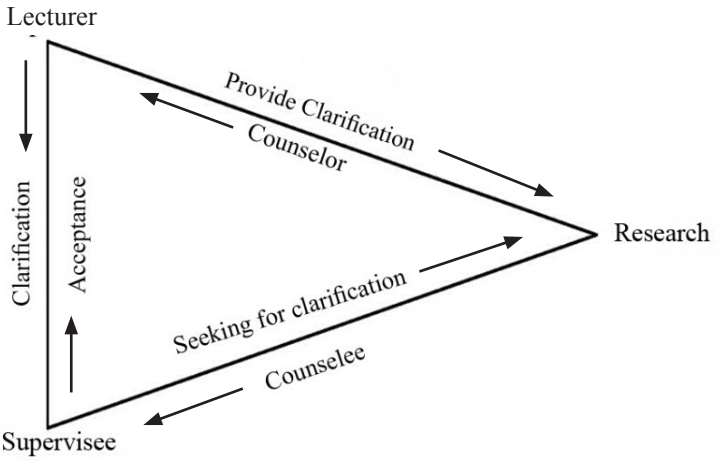

Figure 4. Stance Triangle: Lecturer as Counselor and Student as the Counselee

Leader and Follower Relationship

The interaction between lecturer and student, mainly when the lecturers give recommendations, shows that both construct specific identities like leaders and followers. Studies show that students as followers benefit a lot from their lecturers who take the lead to extend their boundaries and stretch their capabilities (Wattleton, 2000). Such identities are manifested through the stance that they take.

In conversation 5, the lecturer imposes what he must do when he goes back to the student. In turns 335 and 336, he says, "*So good if you have this idea (0.1) then while you're going back there,*" and "*do what I'm telling you*." Such utterance, in turn, 335 reflects the controlling attitude shown by the lecturer. Moreover, a firmer stance is taken in turn 336, reflecting the lecturer's controlling identity. On the other hand, the student seems to follow what the lecturer recommends to do. The student's response, in turn, 337, "*Ok,*" shows that he is constructing an identity that simply follows what the lecturer recommends. Such reactions from the student are also evident in turns 340 and 344. In turns 338, 339, 341, 342, and 343, the lecturer further constructs an identity that he controls.

Conversation 5

335. SL: So good if you have this idea (0.1) then while you're going back there
336. SL: do what I'm telling you
337. SS: Ok
338. SL: ↑ Try to meet a farmer, but before meeting him ↓ try to set a few questions, (0.1) ↑ ten to fifteen questions .hhh about uhhh farm: activities, ok? =
339. SL: So you ask him and you have to record, (0.1) ok?
340. SS: Ok
341. SL: After that d- d- uhh you follow what I'm what I told you (0.1) at least you have ↓ data = ↓
342. SL: ↑ Once you are here when you register you have the data and you have (0.1) somehow experience in how to analyze the theta role from undergraduate and master level
343. SL: And then uhhh (0.1) of course later we'll follow specific theories (0.1) because we have to go deeply (0.1) then we set three objectives (0.1), and that is it
344. SS: Ok

In the conversation, a schematic diagram is formulated.

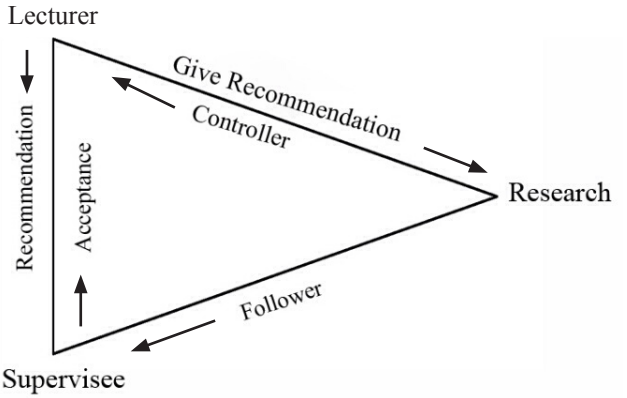

Figure 5. Stance Triangle: Lecturer as Controller and Student as a Follower

Pedagogical Implications

The data show that the use of stance markers in lecturers' and students' interactions brings success and failure in developing student-teacher relationships. Moxham et al. (2013) argued that good interpersonal relationships might impact the students' academic progress and satisfaction. Therefore,

students' academic performance depends on the kind of relationship they establish with their teachers. Similarly, the quality of the teacher-student relationship affects the teachers' psychological needs and wellbeing (Klassen, Perry & Frenzel, 2012; Spilt, Koomen & Thijs, 2011).

The findings of the study reveal that frequent occurrence of epistemic stance markers during interaction reflects that lecturers and students are particular about the certainty and truthfulness of information or events during the conversation. As a result, lecturers are always perceived positively as epistemic authorities (Raviv et al., 2003). Having epistemic power in the classroom allows the lecturers to efficiently manage the class and able to increase their influence on students.

It is also evident that lecturer-student interaction varies depending on the context where the interaction occurs. In most instances, academic interactions are more formal, although they can also be informal in some contexts. The findings of the study show that the formality and informality of conversations are evident through the occurrence of textual and attitudinal stance markers. The use of textual stance markers indicates a higher level of formality in conversation, which is less likely to be found in an informal setting. On the other hand, the attitudinal stance markers are commonly used when conversations become more personal which are typically informal.

However, it is also evident that when lecturers and students interact, they portray cooperative identities from beginning to end. The construction of such identities helps facilitate a successful interaction and maintain a good relationship between the students and lecturers (Hattie 2009; Hamre & Pianta, 2006). The findings of the study show no occurrence of arguments between lecturers and students, and they tend to converge since they always accept and respect their viewpoints. Campbell (2003) found that teachers who are compassionate, committed, fair, kind, patient, respectful, understanding, trustworthy, caring, warm, and supportive embody these ethical principles and virtues based on professional ethics of teaching.

Based on the conversations recorded in this study, postgraduate students in the Master's program did not argue with their lecturers, and they simply accepted and agreed with their lecturer's views, comments, and suggestions. These findings confirm with Tracey, Ellickson, and Sherry (1989), who explained that neophyte students who are not well-experienced researchers seem to follow their lecturers, prefer more structured supervision and tend to be cooperative. Studies reveal that positive, warm, and supportive teacher-student relationships have been associated with successful classroom management, effective teaching, and greater student achievement (Wubbels et al., 2015; Roorda et al., 2011; Kyriacou, 2009; Hattie, 2009).

The identities that emerge from the interaction between the lecturer and student explain the importance of stance-taking. This means that in an interaction, both interlocutors must be sensitive to the stance being taken because it signals the identities of both speakers. When identities become salient, speakers have somehow influenced the way they react or respond to a situation. For instance, when the lecturer becomes demanding and controlling, then it may limit the students' responses. Such relationships can be perceived by students as disrespectful, inconsistent, untrustworthy, and unfair (Power et al., 2018; Krane et al., 2017). Thornberg et al. (2020) suggested that in order to be successful, students stated that they require a supportive, friendly, calm, emotionally safe classroom in which they would feel welcomed and included. Consequently, students become just followers and hesitant to present their research arguments.

Stance-taking and identity construction in lecturer-student interaction provides a clear platform for improving the relationship in an academic interaction. This also can be applied in various academic contexts where teachers and students frequently interact in class. In the classroom, teachers tend to take a stance to show command control while maintaining an ideal relationship with the students. On the other hand, the students take a stance to show respect to the teachers. Teachers and students tend to construct a multitude of identities as they take a stance in classroom interaction to enhance the student-teacher relationship and facilitate better teaching and learning. The positive outcomes of lecturer or teacher-student relationships support the notion highlighted in the attachment theory that when students develop confidence when interacting with teachers, they improve their academic performance (Mustary, 2018).

The multiple identities constructed particularly in the classroom provide opportunities for interactions. Abrar (2020) argued that diverse identities might indicate that classroom interaction is reasonably communicative and dynamic. A communicative approach in education is student-centered and encourages students to be more active learners (Eekelen, Boshuizen, & Vermunt, 2005). Consequently, students' relationships with teachers result in positive and long-lasting implications for students' academic, social, and emotional development (Kaufman & Sandilos, 2010).

The findings of the current study reflect the importance of teacher-student interactions inside or outside the classroom to enhance better learning, a conducive learning atmosphere, and excellent teacher-student relationships. Although this study limits its data collection and analysis with the postgraduate students and thesis supervisors, this can be a basis for further research on stance-taking and identity construction in any classroom discourses in various levels of learners.

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Book Review

Shadow Education in Myanmar: Private Supplementary Tutoring and its Policy Implications. By: Mark Bray, Magda Nutsa Kobakhidze & Ora Kwo (2020), 134 pages. ISBN 9789292236496/ 9789881424181. Paris/ Hong Kong: UNESCO/ CERC.

Myanmar's education sector is challenging. Embodying paternalistic attitudes, a rote concept of knowledge, and receiving little funding, the system of education in Myanmar has a stunting effect on the development of the country. Part of this system is the customary practice of 'tuition'—i.e., out-of-school academic support, or shadow education. Tuition in Myanmar, while not compulsory for students, has been embedded in Myanmar's education system for generations. Bray et al provide a much-needed analysis of this readily observed but often overlooked aspect of education in Myanmar.

The text, produced as a book, effectively reads as a research report. Chapters one and two provide the necessary conceptual and cultural context in which Bray et al conducted their research. In chapter one shadow education (SE) is considered in a global context across a range of countries, with commonalities being that SE is widespread across regions and continents, occurs at all levels of household income, and exists throughout education systems from primary through to tertiary levels.

The second chapter provides a brief summary of Myanmar's history, social and economic features, the changes taking place in the education system, the pedagogy employed, and the structures of SE tuition. Here, the authors importantly report that teachers felt that their classes were too large and their salaries too low, and that for those reasons SE tuition was an attractive way for teachers to experience smaller classes and supplement their income. Also important is the authors' pointing to three key reasons why rote learning continues to dominate local pedagogical practices. First, teachers are themselves products of the traditional rote-based system. Second, the examination system encourages rote-learning. Third, alternative approaches, such as the child-centred classroom, are time-consuming. These points are symptomatic of a dated and under-resourced system.

These points are important. But chapter two also raises several questions. The authors list the major 'races' in Myanmar (p. 13), pointing to the commonly quoted and colonial-based taxonomy of over a hundred national 'races' (*taingyintha*). But the idea of 'race', both in general and in the specific context of Myanmar, remains unexamined. The idea of *taingyintha* is politically potent in Myanmar, and since education is inherently political, it warrants deeper consideration. Without such consideration, the text is open to being interpreted as tacitly maintaining the status quo of structural violence that these 'racial' divisions create. On this political note, the authors also refer to article 28 of Myanmar's 2008 constitution, but this is not interrogated. Of particular curiosity is the adverbial nature of article 28(a), the inclusion of 'national people' in article 28(b), and the assumptions incorporated in notions of 'correct thinking' and 'good moral character' in article 28(d). On a different note, the authors go on to indicate the attendance rate of students from primary school to middle- and high-school, in which male students are "pushed out" faster than females (pp. 15, 16). But, this push factor is not explained, and pull factors are not considered. Similarly, it is widely noted and easy to verify the predominance of female teachers in Myanmar, which the authors point to with a rate of 86.7% of female teachers at the secondary level. This is an important point, but in this chapter dedicated to the socio-economic factors influencing education, this point is left unexamined. This statistic of 86.7% manifests from deeper social values that shape the structure of Myanmar's education system. Digging a little deeper to identify factors that contribute to this statistic would add value to the text, to the research conclusions, and to the audience's understanding of the issues at play.

Chapter three outlines the methods used in the research. The research used a stratified random sampling design sourcing both quantitative and qualitative data sets. Stratification proceeded according to administrative levels, starting from a list of schools at the Regional (Yangon) level, through District to Township levels, after which schools were then randomly chosen. At the level of schools, sampling of respondents then became a matter of convenience. At this point, it is worth noting that the scope of the research was limited to the Yangon Region. The stated reason for this is that SE is apparently less common in rural and remote locations. This reason is supported by prior research that employed a purposive sampling approach and is thus not generalisable, and on 'informal evidence' that is equally unable to be generalised. With the supporting reason in question, it is then unfortunate that the geographical scope of the research was limited to Yangon Region. This Region contains the country's major commercial metropolis and is not representative of the country since approximately 70% of Myanmar's population live in rural areas and 30% in urban areas, while in Yangon this number is effectively inverted with 70% of Yangon Region living in urban areas and 30% in rural areas. This, together with multidimensional poverty being least prevalent in Yangon Region and most prevalent in rural States and Regions, causes this reader to question the ability of the research to have implications for other parts of the country.

Chapter four provides a platform for students and parents to share their voices. There are two notable virtues to this chapter. First, the streaming system (science or arts stream) used in Myanmar's basic education schooling is explicitly identified, as is the levels used in year groups, ranging from 'A' for the highest to 'K' for the lowest. The rate of SE tuition is unsurprisingly found to be most frequent for students in the highest levels and less frequent for students in the lower levels. This tends to make it difficult for students to climb the academic ladder. Second, the chapter is studded with numerous extended quotations from respondents, which together paint a vivid picture of students' and parents' experiences of SE in Myanmar. Qualitative insights such as this add value to the research and the broader literature.

Chapter five moves on to teachers' perspectives. "[F]ew teachers can afford their living expenses without tuition" (p. 61) remarks one principal. This is common knowledge in Myanmar, and is confirmed by 79.3% of teacher respondents in the authors' research. Close to two-thirds of teachers report that they do not encourage rote learning, though this practice remains widespread as a traditional teaching method, especially in rural areas. Interestingly, a good portion (40%) of teachers felt that SE tuition "encouraged critical thinking about cause and effect" (p. 66). However, critical thinking has long been a buzzword in Myanmar, though with relatively little understanding of its logical and evidence-based dimensions. It would be interesting to read the Burmese translation used for 'cause and effect' to gauge any connotations and if it was conceptually related to the Burmese Buddhist notion of *kan* (karma). A particular curiosity is the line of questioning involving teachers' "perceptions of principal's attitudes" (pp. 71, 108). The primary data collected here is the respondent's speculative interpretation of another's attitude. It is unsurprising to find a disparity between teachers and students regarding this question, which the authors account for by way of an equally speculative modal verb on three occasions. For this reader, it is unclear what value this speculative data provides.

Chapter six shifts focus to policy implications. The authors note that community dialogue and public participation are key to developing alternative practices that reduce the negative impact of SE tuition and strengthen the learning outcomes of the regular classroom (p. 77). To that end, the authors mention that "the public should pay some collective attention to interrelationships between sectors and ensure that teachers receive needed support" (p. 93). This is a reasonable recommendation, but the context of Myanmar makes it difficult in reality. Civic support networks are strong in Myanmar, but the public sphere is weak, and it is the public sphere and communicative action that is required for the kind of attention the authors refer to. The authors' observation is followed-up in practical terms by focusing on school principals as education team leaders and policy mediators. Yet, in Myanmar school heads (principals or rectors) will typically conform to the

requirements set by the Ministry of Education due to the long-established centralised command and control structure of governance.

Shadow Education in Myanmar was published in 2020. In February 2021 Myanmar's military enacted a coup d'état of the elected civilian government. The result of this is that the delivery of public education services and multilateral education projects will now have a lighter impact than previously envisioned. This deeply lamentable political upheaval tends to enhance the value of research into Myanmar's SE system, and of Bray et al's text, since the SE system has long been a feature of the formal education system and, owing to the coup, there is little likelihood in it featuring any less in the near future. If this research is replicated in the future, value would be added by increasing the scope of the research in all respects—especially geographical coverage and cultural context. This would provide education and development actors with vital information and a deeper understanding of the socio-economic complexities involved in Myanmar's SE. Bray et al's research is a first step toward providing that information and attaining that understanding.

Mark Brown
Parami University