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***Do Psychology Students Enjoy The Lecture In Class?
Relationship With Basic Psychological Needs Satisfaction
(Competence, Relatedness, and Autonomy)***

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Abstract

Flow is an experience of pleasure and enjoyment in doing an activity, characterized by total absorption which entangles awareness and action. Flow is an important asset for college students in carrying out their academic activities. When students experience a flow condition, they will enjoy and get an optimal learning experience. Student motivation also increases and affects better learning outcomes, and prevents students from boredom and academic stress. In fact, not all learners can get a flow experience. An effort that can be made to build flow in the classroom is to allow for autonomy, giving freedom and control to the learner. Autonomy is one of three components of the Basic Psychological Needs (BPN's) that need to be satisfied so individuals can function and grow optimally. This study aims to determine the relationship between flow in the academic and satisfaction with BPN's (competence, relatedness, and autonomy) in college students. Subjects were 292 undergraduate students in the faculty of Psychology, Airlangga University. The data was collected online right before the pandemic using the Basic Psychological Needs Satisfaction at Work Scale and The Flow Inventory for Students. Analysis using spearman's rho shows a positive relationship between satisfaction with BPN's and flow in the academic, with an all significance level 0.000 ($p < 0.05$). The correlation coefficient of the three basic needs were 0.480 (competence), 0.310 (relatedness), and 0.416 (autonomy). Thus, the higher student satisfaction with BPN's followed by higher flow in the academic.

Keywords: Basic Psychological Needs, Undergraduate Students, Flow

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Introduction

Student attendance in a lecture which mostly done inside the class has been known to be the most important thing. Attendance in class has become the first predictor in accomplishing or achieving in college, more than the time spent studying, learning skills, and exam scores (Montgomery, 2015). Following learning in class allows students to understand the material in-depth, increasing knowledge and/or skills, also developing that knowledge and/or skills which in turn will lead them to accomplish the expected academic achievement. But in reality, many students do not attend lectures in class due to various reasons. They feel that their presence is not noticed by lecturer, feel that class is boring and useless, going out with friends, and not in such a good mood (Galichon & Friedman, 1985; Dobkin, Gil, & Marion, 2007; Friedman et. al., 2014; Montgomery, 2015; Rijavec & Miljkovic, 2015).

According to Csikszentmihalyi (cited in Norman, 1996), when an individual not getting a pleasant experience from the activity that they were doing, they would feel bored, not enjoying the ongoing activity, difficult to concentrate, and prefer to do other things that more pleasant. On the other hand, individuals who experience pleasant from the activity and enjoying those activities would be willing to do these activities for a long time and also involving themselves totally in those activities. They do this because they want to obtain and feel pleasure and enjoyment. These enjoyment experiences were also known as flow (Csikszentmihalyi, 2014a). Those experiences could be built by oneself or the environment, including lecturer and parental support (Csikszentmihalyi, 1985, cited in Csikszentmihalyi, 2014a).

Flow referred to a subjective condition when a person is fully absorbed only in things that were done until they forget about time, fatigue, and other things (Csikszentmihalyi, 2014a). The flow was considered as an important modal for a student in doing an academic activity such as following lectures, studying, and doing assignments (Yuwanto et. al., 2013). According to Yuwanto et. al. (2013), when students experienced flow condition, they will be enjoyed and obtained an optimal experience in the learning process, easier in understanding material, receiving information, comprehending material in-depth, thinking clearly, and think more smoothly and creative. Moreover, student motivation will increase which could lead to more optimal learning results, better performance, more productive, produce regularity in carrying out activities, open possibility to develop their skills, and preventing students from academic burnout and stress in doing academic activities.

Bakker (2008) stated 3 main characteristics of flow, namely absorption, enjoyment, and intrinsic motivation. Absorption referred to the situation in which concentration was fully absorbed to the ongoing activity. Individuals who experienced flow can then forget everything that is around them and feel that time seems to pass quickly. Enjoyment denoted to a condition in which an individual felt comfortable and happy with the activities that were carried out. The pleasant feeling will make individuals have a positive assessment of their performance quality. Intrinsic motivation referred to motivation in doing activities based on motivation from within oneself and for the sake of oneself. A person who experiences flow would be motivated to experience pleasure and satisfaction inherent in the activities undertaken (autotelic) instead of based on an external reward (Yuwanto et. al., 2013).

Csikszentmihalyi (2014a) stated that freedom and control by students were some of the alternatives that could be carried out by lecturer in order to build flow condition among students in the class. Giving control and freedom means that lecturer provides challenges

which in accordance with the abilities of each student. Related to this, autonomy constituted of attitude toward the learning process, in which students felt ready to take and have the responsibilities to make their own learning process (Dickinson, 1995). Autonomy has been known as one of the basic psychological needs based on self-determination theory (SDT) (Ryan & Deci, 2017).

SDT explained the theory of behavior development and individual personality which focuses on the influence of social-contextual conditions that can support or hinder development through satisfying basic psychological needs consisted of competence, relatedness, and autonomy. Competence needs in learning refer to the capabilities to learn the learning process or course materials (Kusurkar, Ten Cate, Van Asperen, & Croiset, 2011). Moreover, relatedness needs to explain to the needs in feeling connected, supported, and take care with and by other people (Baumeister & Leary, 1995, cited in Johnston & Finney, 2010). This relatedness also points the neediness of individual of care, help, and real existence of people around them. Lastly, autonomy needs refer to the needs to feel that one's behavior and result obtained are self-determined or caused by oneself, as opposed to being influenced or controlled by external forces (deCharms, 1968, cited in Johnston & Finney, 2010).

Satisfaction towards these needs related closely to vitality and intrinsic motivation, while on the other hand need-frustration or feeling for removal or deprivation of basic need could demotivate, resulting in someone to functioning passively and bring out other behavior as compensation (Ryan & Deci, 2017). In SDT, students feeling and behavior closely depend on social factors such as lecturer's attitude (Reeve, 2009; Oga-Baldwin, 2015), how lecturers behaving toward their students will affect students experience in fulfilling their basic psychological needs.

The importance of lecturer support toward fulfilment of basic psychological needs and its relation to increasing positive experience among students have encouraged the author to conduct further research related to this matter.

Method

Participants

The subject criteria are undergraduate students in semesters 1-8 of the Faculty of Psychology, Airlangga University class of 2015-2018, male or female, and attended classes in the last 1 year.

Participants joined in this study consisted of 292 undergraduate students. There 80,5% of participants were women (235 participants) and the rest of 19,5% were men (57 participants). Moreover, 99% of participants were in age 18-23 years old.

Instruments

Basic Psychological Needs Satisfaction Scale used in this study is translated and adjusted from Basic Psychological Need Satisfaction at Work Scale published in Self-Determination Theory official website (selfdeterminationtheory.org) which consisted of 20 items representing 3 needs namely competence (6 items), relatedness (8 items), and autonomy (6 items). Reliability of each needs were 0,796, 0,890, and 0,775 respectively.

The Flow Inventory for Student (LIS) is used in this study to measure flow in the academic field, the scale consisted of 10 items and compiled by Yuwanto, Siandhika, Budiman, and Prasetyo (2011). Trial results of this scale by Yuwanto et. al. (2011) on 306 students showed KMO results for 0,844 (more than 0,5), Bartlett's Test for 0,000 (lower than 0,05), and reliability for 0,765.

Data collection

Data collection was carried out on May 4-8, 2019. During the time of data collection, researchers distributed questionnaires online through chat applications, Line and Whatsapp, as well as Instagram. Questionnaires were made with Google Form. Through the chat application, researchers distributed questionnaires, either personally or by distributing them to groups in which there were Active Students of the Faculty of Psychology, Airlangga University class of 2015-2018, according to the specified criteria. The distribution and the reception of responses stopped after the number of samples exceeded the required minimum.

Data analysis

Analysis Data Technique used in the current study was non-parametrical statistic techniques by Spearman's Rank (rho) using SPSS statistical program version 22.0 for Windows.

Results and Discussion

Results

Data analysis results showed a coefficient correlation between satisfaction on basic psychological need competence and flow in the academic of 0,480. Coefficient correlation score between satisfaction on basic psychological need relatedness and flow in the academic of 0,310. Lastly, a coefficient correlation between satisfaction on basic psychological needs autonomy and flow in the academic of 0,416.

Table 1: Results of Correlation Test

	<i>Flow in the academic</i>	
	r_{xy}	Sig. (2-tailed)
<i>Competence</i>	0,480	0,000
<i>Relatedness</i>	0,310	0,000
<i>Autonomy</i>	0,416	0,000

Based on results, high satisfaction on basic psychological needs namely competence, relatedness, and autonomy were followed by higher flow in the academic among students, and vice versa. According to Cohen categorization (1998, in Pallant, 2016), every basic psychological need satisfaction such as competence, relatedness, and autonomy have a moderate positive correlation to flow in the academic.

Discussion

Although flow could occur in various activities, not everyone could achieve flow (Yuwanto et. al., 2011) since flow experience tend to be dynamic (Schmidt, 2010). At a certain time, an activity can no longer build flow because someone has improved their skills while the challenges faced have not changed or a challenge is too difficult while one's skills have not

increased (Afifah, 2018). These conditions could result an individual to experience boredom or anxiety (Csikszentmihalyi, 2014a).

Based on data analysis results, 3 basic psychological needs namely competence, relatedness, and autonomy found to had a positive correlation with the flow in the academic. This result showed that the higher students' satisfaction to their 3 basic psychological need will be followed by the high flow in the academic and prevented students from anxiety and boredom. In addition, this finding was in line with SDT believe that certain environmental factors were responsible for influencing and maintaining students' motivation in the classroom. The influence was known to be not directly but mediated by satisfaction towards basic psychological needs and environmental factors have known to be the most influential to a supported situation in the classroom were lecturers (Ryan & Deci, 2017).

The current finding also supported by Jang, Reeve, Ryan, and Kim (2009) which stated that fulfilment of 3 basic psychological needs could increase pleasant learning experience and decreased anxiety. Niemiec and Ryan (2009) also found that class contexts which supported satisfaction to competence, relatedness, and autonomy needs tend to encourage students to be motivated intrinsically. Moreover, Jang et. al. (2009) revealed that three basic psychological needs to be important and needed by Asian students, which in this study found that satisfaction toward basic psychological needs among students played an important role to supported flow in the academic. According to Maulana, Helms-Lorenz, Irnidayanti, and van de Grift (2016), support toward these three basic needs were just as important as supporting students' motivation in Indonesia, and lecturers' support found to be the strongest factors influencing pleasure, challenges, and happiness for students to be involved and interested in the learning process.

Results from the current study also in accordance to flow key model characteristics to contemporary theory namely interactionism (Magnusson & Statin, 1998, cited in Csikszentmihalyi, 2014a), in which flow not only focused on human and abandoned contexts but emphasized dynamics that were built between human with the environments (person-environment interaction). Through activities that gave various opportunities to act and interact to the environment, individuals could build and spread their flow experience (emergent motivation). On the other hand, an environment that prevents individuals from increasing their skills, understanding, and mastery of a task or activity could also prevent the fulfillment of competence needs (Ryan & Deci, 2017). In fact, feeling competent known to be a very important initial condition for intrinsic motivation and intrinsically motivated actions (Csikszentmihalyi, 2014b).

According to Ryan and Deci (2017), the needs of relatedness were not only made a person physically accepted but also left them with a feeling of worth and meaningful for others. When students felt that their lecturer cared and pay attention to them, they tend to show higher academic effort (Urda & Schoenfelder, 2006, cited in Maulana et. al., 2016). Students will feel a sense of belonging and these feelings were a strong predictor to intrinsic motivation among learners (Baumiester & Leary, 1995, cited in Maulana et. al., 2016). Ryan and Deci (2011, cited in Ryan & Deci, 2017) stated that these needs were so important as part of an understanding individuals' tendency to internalized values and behaviors from cultures that exist around them. By the feeling of connected, individuals would be interested in everything that other person's belief, behavior, and what other person expected from them which resulted in individual to took a position to behave in a way that ensured acceptance and involvement.

When people around students provide support and encouragement as opposed to giving distraction, it could encourage involvement for individuals to reached flow. Support to autonomy needs also known to motivate students intrinsically (Deci & Ryan, 1985, cited in Maulana et al., 2016). Reeve and Jang (2006) found that support toward students' autonomy related to students' enjoyment, involvement, and performance which resulted in students functioning positively in learning activities. Black and Deci (2000) revealed that students who rated their lecturer as supportive to autonomy showed to have autonomous self-regulation, interest, enjoyment, and decreased anxiety. Other than that, autonomy support directly predicted higher students' performance. Andersen (2004 cited in Schmidt, 2010) stated that flow in class caused by autonomy, interest, and balance between lecturer and students' role in the learning activity.

The current study also found that competence and autonomy needs have a stronger relationship to flow in the academic rather than relatedness needs. These results were in line with a study conducted in Western countries by (Caleon, Tan, Wui, Leen, & King, 2016). Chirkov (2011, cited in Maulana et. al., 2016) revealed that most of the determinists consider autonomy needs will not excel in Eastern cultural contexts due to the high value of obedience to authority, strict discipline, and hierarchy system (the existence of authoritarian model between young and old age). Meanwhile, Chirkov found that based on their study, generally speaking, support to autonomy needs not only important in numerous Western cultural contexts (e.g. Belgium, England, Canada, France, Germany, Italy, Norwegia, and United States of America), but also in several non-Western cultural contexts (e.g. South Korea, Singapore, Pakistan, and Taiwan).

Conclusion

Based on data analysis it could be concluded that there was a correlation between satisfaction on basic psychological needs (competence, relatedness, and autonomy) with the flow in the academic. Students' higher satisfaction toward three basic psychological needs will be followed by a higher flow in the academic. Therefore, the lecturer needs to support students' satisfaction on their basic psychological needs to build their flow experience in class. Lecturer could upgrade their role and involvement directly to students during learning activity in class, provide the broadest opportunity for students to take advantage from learning activities in class as an effort to find knowledge and improved skills, minimalize demands and pressure, provide support, help, and guidance during learning process in class while continuing to provide appropriate challenges to increased students skills and build good interpersonal relationship with them.

Limitations

Study data were retrieved by online which resulted in network disruption on several students when filling out the questionnaire. Moreover, when filling out questionnaire students were able to choose lecturer or course they would like to rate. Consequently, students might choose lecturers or course that they liked and memorable or that were not very liked according to their choice.

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Ready or Not? A Critical Policy Analysis on the Implementation of Flexible Learning Policy and Its Effect on High School Learners

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Abstract

In 2019 Corona Virus Pandemic created a massive impact in the Philippines most especially in Education. All face-to-face classes from kindergarten to tertiary level were suspended because, many provinces, municipalities, and cities in the country were in lockdown. Private and Public School Teachers, Administrators, and Students were incarcerated inside their houses. And to respond to this educational crisis, the Department of Education and Commission on Higher Education implemented a flexible learning policy. However, grounded on the estimated figures of the Department of Education, enrollment in kindergarten to senior high school for the school year 2020-2021 was decreased by more than 25% from the previous year (DepEd). According to UNICEF (2020), Many of the world's children, especially in the poorest households, do not have access to the Internet, personal computers, television, or even radio, which amplifies the impact of existing learning inequalities. As a result, many students may not go back to school. Therefore, the purpose of this paper is to critically evaluate the existing policy for flexible education, to narrate the different strategies of the public-school teachers for them to ensure the learning of their students, to describe the experiences of the students in dealing with the modular learning approach and lastly to determine the support provided by the government to teachers and students.

Keywords: Modular Learning, Flexible Learning Policy, Junior High School, Public School

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Introduction

In the Philippines, face-to-face learning engagement of students and instructors inside the school has been suspended due to the COVID-19 widespread. And so, for the progression of education and for each school to still accomplish its mission and vision to deliver quality and excellent education to each Filipino learner, the Department of Education executed Modular Distance Learning. In the study of Dangle et. al (2020) they discussed the process of modular learning methods in the Philippines, according to them the learners can contact the teacher through e-mail, phone, text message, or instant messaging, among other methods. If all is feasible, the instructor can make home visits to students who require remediation or support. Printed Modules will be distributed to children, parents, and guardians by instructors or local government officials (Llego, 2020, Dangle et al., 2020). And through the policy implemented by the Department of Education and participation from teachers and parents, the agency also ensures that through the existing flexible policy the needs of each student are met. Nonetheless, the great challenge now is to ensure the attention of every learner to grasp their lessons from the module effectively. Many students especially in secondary education cannot pay much of their attention to their studies because of the responsibilities they play in their families, most especially those students who belong to the poor sectors of the society (Dangle, et. al, 2020), as result there is an increased number of dropouts from primary to secondary education.

With these challenges it is vital, therefore, to investigate the reality of this policy implemented by the Department of Education and the manner that which it guarantees the needs of students and teachers. The following therefore are the research questions of the study:

1. What is the main feature of the flexible learning policy of the Department of Education?
2. What are the obstacles and difficulties faced by learners and teachers in adjusting to the remote learning process during the Pandemic?
3. What is the effect of flexible learning on the learning process of Junior High School Students?
4. What are the supports of the Local Government in the implementation of the Flexible Learning Policy?

Research Methods

The study used Sequential Mixed-Methods Explanatory Design because it features two separate phases: quantitative and qualitative (Creswell et al. 2003). Moreover, the quantitative data of the study was administered thru surveys to students and teachers, to identify the uncovered areas that affect the social interaction of the students, the difficulties and obstacles faced by teachers and students, and the support of the local government on the implementation of the policy. The selection of respondents was done through the convenience sampling technique, and the total number of the target respondents was determined thru Slovin's formula with a 5% margin of error. On the other hand, the qualitative phase of the study utilized informal interviews with the key informants to give accurate validity to the result of the numeric data from the questionnaire. The total population gathered in the study are 1,486 students and 169 teachers from two public school in Rizal Province, Philippines, namely Bayugo National High School, and Morong National High School.

Results and Analysis

What are the obstacles and difficulties faced by learners and teachers in adjusting to the remote learning process during the Pandemic?

In the Philippines many students, associations, and groups are calling for an academic freeze, they pointed out that most Filipino families have problems in terms of computer, internet, or gadget accessibility.

Table 1: Represents the obstacles faced by students in dealing with modular learning activities

Statements	Mean	SD	Verbal Interpretation
My teachers are approachable and always have free time for my academic concerns	2.62	0.99	Agree
The modular activities and lessons make me feel motivated in my study	2.46	0.92	Disagree
I have gadget/s that help me to answer my modules	2.60	0.97	Agree
I have a strong internet connection	2.41	0.91	Disagree
My school provided a mechanism where I easily track my academic standing and progress	2.55	0.94	Agree
I do not have an electricity problem so I can easily study at home	2.60	0.97	Agree
I am supported and guided by my parents while answering the module	2.55	0.98	Agree
I am monitored by my teachers in answering the module through online classes	2.48	0.92	Disagree

Table 1 represents the obstacles faced by students in dealing with modular learning activities, they can answer all the activities and exercises in the modules on their own, they can easily talk to their teachers about the academic-related concerns, their teachers are approachable and always have a free time for the academic concerns, the school provided a mechanism where they can easily track their academic standing and progress, they also have gadget/s and have no electricity problem so that they can study at home, they are also supported and guided by their parents while answering the module yet, most of them have problem with their internet connection. As a result, most of them believed that their teachers failed to monitor them in answering the module through online classes.

Table 1 A: Represents the percentage of the challenges faced by students during their modular learning activities

Statements	Frequency	Percentage (%)
Harder to learn the subjects	334	53.4%
Fewer explanations of teachers given during online classes	375	59.9%
Technical problems during internet connection	286	45.7%
Lack of practical applications	179	28.6%

While in Table 1A shows the percentage of the disadvantage of modular learning in the learning experiences of the students during the implementation of flexible learning policies. The table reveals that 53.4% of the students said that the topics in the module are difficult to understand, 59.9% said that there are fewer explanations from teachers during the online classes, 45.7% found that they cannot comply on time due to technical problems caused by poor internet connection, and 28.6% said that the modules have been lacking on the practical applications of the topics. This implies that the reasons why they cannot submit the online activities on time are due to poor internet connections, the modules do not have a detailed explanation of the topic, and some of the teachers do not provide more explanations of some topics that are difficult to understand. This further concludes that although the modules have their essential practical applications of the topics, the teacher should take into consideration the proper explanation of how their students would easily understand them.

Table 1 B : Represents the percentage of the advantages of Modular Learning Delivery to the Students

Statements	Frequency	Percentage (%)
Health and safety	420	67.1%
Better structured classes	85	13.6%
There is no need to travel going to school	289	46.2%
Doing other activities at the same time	157	25.1%
Flexibility / Accessing course anytime	295	47.1%

Table 1B shows the percentage of the advantage of modular learning in the learning experiences of the students during the implementation of flexible learning policies. The table reveals that 67.1% benefit their health and safety, 13.6% benefit them since classes are better structured, 46.2% benefit their cost of transportation, as they do not need to travel going to school, 25.1% benefit the need to do other activities at the same time, and 47.1% benefit in terms of time flexibility since they can access their courses anytime. This implies that the health and safety, transportation cost, and time flexibility to access learning anytime are considered the most advantageous during the implementation of flexible learning policies since they have the highest percentage while simultaneously doing activities and the structured classes got the lowest percentage which considered as the least beneficial.

Table 2: Represents the percentage of the challenges faced by the teachers in dealing with Flexible Learning Modality

Statements	Frequency	Percentage (%)
Lack of social interaction	73	67.6 %
High chances of getting distracted because of my role in the household	41	38.0 %
Complicated technology	42	38.9 %
Not all students do their module wholeheartedly	90	83.3 %
Some parents spoil their children and do the task instead of their children	71	65.7 %
Some students tend to copy the answer from others without reading the module	76	70.4 %

Table 2 shows the percentage of the disadvantage of modular learning in their teaching experiences during the implementation of flexible learning policies. The table reveals that 67.6% of the teachers said that modular learning lessens their class's social interaction, 38.0% said that they are getting distracted because of their role in the household, 38.9 % find

it hard to adapt to the usage of technology, 83.3% said that not all students do their module wholeheartedly, 65.7% said some parents spoil their children by doing their modules, and 70.4% of them said that some students tend to copy the answers of their other classmates. This implies that copying the answers of their other classmates is considered the most detrimental during the implementation of flexible learning policies since it has the highest percentage (70.4%) while distractions are caused by the household chores, the lowest percentage (38.0%), are considered as the least detrimental. This further implies that the distraction caused by doing household chores is a burden to students so most of them tend to copy the answers of their classmates.

Table 2 A: Represents the percentage of the advantages of Modular Learning Delivery to the Public School Teachers

Statements	Frequency	Percentage (%)
Reduce social anxiety	21	19.4 %
Healthy and safety	97	89.8 %
Flexible scheduling opportunity	49	45.4 %
Allow self-paced learning	49	45.4 %
Less travel from home to school	45	41.7 %
Less stressful	16	14.8 %
Reduce the overall cost of school	24	22.2 %

Table 2A shows the percentage of the advantage of modular learning in their teaching experiences during the implementation of flexible learning policies. The table reveals that 19.4% of the teachers said that modular learning reduced their social anxiety, 89.8% benefit their health and safety, 45.4% benefited from their flexible scheduling opportunity, 45.4% benefited from self-paced learning, 41.7% benefited from the need to travel from home to school, 22.2% reduced the overall cost of school, and 14.8% of them find it less stressful. This implies that the health and safety of the teachers are considered the most advantageous during the implementation of flexible learning policy since it has the highest percentage (89.8%). This further implies that, although modular learning benefits their health and safety, it cannot hide the fact that it affects their level of stress while coping with it

What is the effect of Flexible learning on the learning process of Junior High School Students?

The effect of the Flexible learning process on the Junior High School was analyzed in terms of modular learning, Teacher interaction with the learners, and students' academic behavior.

Modular Learning

Table 3 shows the mean score of the level of students' challenges with modular learning during the implementation of flexible learning policies as assessed by their Junior High School Teachers. The table reveals that the teachers moderately agree that students can comprehend instruction and learn on their own through the help of their parents, have increased understanding of the lesson, has acquired the necessary knowledge from the module, has engagement and interest, and understand completely the content of the module.

The overall result in terms of the teachers' assessment of the level of students' challenges on modular learning came up with the total average mean of 2.93 and was verbally interpreted as moderately agree. This concludes that the students are not fully learning during the

implementation of the flexible learning policy since they cannot comprehend completely the instruction and cannot fully understand the content of the module.

Table 3: Represents the verbal interpretation of the effect of Flexible Learning on the learning process of the students in terms of Modular Learning

Statements	Mean	SD	Verbal Interpretation
Students can comprehend instruction and learn on their own through the help of their parents	3.06	0.78	Moderately Agree
Students have increased understanding of the lesson	2.80	0.78	Moderately Agree
Students acquired the necessary knowledge from the module	3.03	0.79	Moderately Agree
Students' engagement and interest level remain as instructions from the modules are easy to grasp	2.89	0.89	Moderately Agree
Students understand completely the content of the module	2.87	0.81	Moderately Agree
Total	2.93		Moderately Agree

Interactions with Learners

Table 4 shows the mean score of the level of teachers' challenges in interacting with the students. The teachers agree that the students are hard to reach at any time when matters need an immediate response even though they have an online platform like a messenger, which can be used to directly contact their students and parents. Meanwhile, they moderately agree that their students are easy to communicate with and the parents are the ones who provide feedback and address concerns regarding experiences of answering the module.

The overall result in terms of the teachers' assessment on the level of teachers' challenges on modular learning in terms of interaction with the learners came up with the total average mean of 3.35 and verbally interpreted as moderately agree. This concludes that the teachers find it difficult to interact with the learners, especially in answering the module.

Table 4: Represents the verbal interpretation of the effect of Flexible Learning to the learning process of the students in terms of Modular Learning

Statements	Mean	SD	Verbal Interpretation
It is hard to reach the students with matters that need an immediate response	3.54	0.88	Agree
It is easy to communicate with my student as I have the means to communicate with them	3.05	0.86	Moderately Agree
The Parents provide feedback to students' experiences in answering the module	3.11	0.79	Moderately Agree
The Parents are the students' representatives in expressing their concern regarding the module	3.31	0.78	Moderately Agree
Various online platform such as messenger provides me direct possible interaction with my students and their parents	3.76	0.90	Agree
Total	3.35		Moderately Agree

Academic Behavior

Table 5 shows the mean score of the level of students' academic behavior during the implementation of flexible learning policies. The table reveals that the teachers moderately agree that students are interested to learn more and knowing more, have a good strategy and high study effort, are highly motivated to learn the topics presented in the modules, are persistent to pursue learning even when faced with obstacles during the teaching-learning process, and have the drive to reach out their learning goals.

The overall result in terms of the level of students' academic behavior during the implementation of flexible learning policies came up with the total average mean of 2.95 and was verbally interpreted as moderately agree. This concludes that the teachers find it difficult to boost the academic behavior of the students since they find their students not motivated and interested to learn the topics presented in the module.

Table 5: Represents the verbal interpretation of the effect of Flexible Learning to the learning process of the students in terms of Modular Learning

Statements	Mean	SD	Verbal Interpretation
Students are interested to learn more and know more	2.99	0.84	Moderately Agree
Students have a good strategy and high study effort	2.94	0.76	Moderately Agree
Students are highly motivated to learn the topics presented in the modules	2.88	0.79	Moderately Agree
Students are persistent to pursue learning even when faced with obstacles during the teaching-learning process	2.96	0.77	Moderately Agree
The students have the drive to reach out their learning goals	2.96	0.70	Moderately Agree
Total	2.95		Moderately Agree

Table 6 : Represents the verbal interpretation of the effect of flexible learning on Junior High School Students

Statements	Mean	SD	Verbal Interpretation
I have enough time to answer all the activities in the modules	2.59	0.96	Agree
I can easily answer all the given activities and exercises in the modules	2.35	0.85	Disagree
I can answer all the activities and exercises in my modules on my own	2.53	0.95	Agree

To further explain, Table 6 reveals the mean score of the effect of the policy on the learning process of the students. It can be seen in the table that the students agree that they have enough time to answer all the activities in the modules,

Table 7: Represents the percentage of how the students answer the task on their modules

Statements	Frequency	Percentage (%)
My parent reminds me of the deadline, so I need to accomplish it	343	54.8%
To be able to answer my module at home, my parents explain the part of the lesson that is not clear to me	228	36.4%
My teacher gives enough time to be able to answer the whole learning task	322	51.4%
My teacher guides me and help me if they can for me to improve my academic performance	200	31.9%
My parents look at my lesson and if they can answer it, then they help me	147	23.5%

Table 7 shows the percentage of students' experiences on how they answer the modules during the implementation of Flexible Learning Policy. The table reveals that 54.8% of the students said that their parents remind them of the deadline to accomplish the task in the module, 36.4% said that their parents explain the part of the lesson that are not clear to them, 51.4% said that their teachers give enough time to be able to answer the whole learning task, 31.9% said the teacher guide them and help them answer the module, and 23.5% of them said that their parents are helping them answering the task if they cannot understand it. This implies that their teachers are considerate enough to extend the deadline for submission of the task in the module.

Moreover, most of the students agreed that their parents reminded them about the deadlines of their tasks and help them with some parts of the module during times that they do not know how to answer them. However, some parents cannot give their full support in answering the task in the module because some of them are busy with their work while some of them did not finish their high school degrees.

Table 8: Represents the percentage of how the students motivate themselves in answering their modules

Statements	Frequency	Percentage (%)
I just think that I am graduating student so I tell myself that if others can do it so do I	284	45.4%
I just think that it will end as well, and I can ask the help of my teachers	244	39.0%
If I cannot answer the lesson, I read it again, I first answer the easy task then I go back to answer the difficult task	351	56.1%
I just answer all the task I don't take it as negative side	297	47.4%
I just think that it is only a trial and sometimes I ask my classmates so that I have an idea on the lesson, or I am using the internet.	200	31.9%

Table 8 shows the percentage of how the student motivates themselves to accomplish the task in the module during the implementation of a flexible learning policy. The table reveals that 45.4% of the students said that they answer the module because they think that if others can accomplish it, they can also do it on their own, 39.0% think that they have to continue their studies since this pandemic will end soon and their teachers are there to help them to answer the task, 56.1% said that in order for them to answer the task, they begin to answer the easy tasks then answer the difficult ones, 47.4% said that they answer the given task positively,

and 31.9% of them rely on their answers from their classmates and through the educational websites on the internet.

This further implies that in order for the students to answer the task in the module, they have to browse and read the lessons repetitively until they completely comprehend the whole idea of it. This concludes also that students are motivated through positive reframing and relying upon themselves mostly on what others can do, so they can do it also.

What are the supports of the Local Government Unit/Department of Education in the implementation of the Flexible Learning Policy?

Tables 9 and 10 reveal that the Department of Education sometimes supports the teachers and students by providing internet or mobile data allowance, while the Local government unit especially the barangay aids the teachers to deliver the modules to the students.

On the other hand, the Department of Education often give teachers ample time to prepare the modules, they also provide an allowance for printing and delivering the copies of the modules, conduct online orientation, and seminars/training for their teachers.

Table 9: Represents the support of LGU and DepEd to Public School Teachers

Statements	Mean	SD	Verbal Interpretation
The DepEd provides all the modules to be distributed to the students.	3.79	0.96	Often
There are enough funds given by the government for Modular Distance Learning	3.57	0.82	Often
The LGU provides internet or mobile data allowance	2.88	1.04	Sometimes
The DepEd or LGU provides aides to deliver the modules to the student	3.17	1.05	Sometimes
There are online seminars, orientations, and training provided by DEPED or LGU in the preparation of modular distance learning	3.87	0.99	Often
There is no problem with electricity in your area, so it is easy to print the module	4.00	1.08	Often
The DepEd provides the internet data allowance	3.04	0.98	Sometimes
There is enough time in preparing course materials based on the academic calendar provided by the DepEd	3.45	0.99	Often
It is easy to monitor the attendance of the student because the DepEd provided platforms to effectively communicate with the students	3.16	0.97	Sometimes
Total	3.44		Often

Table 10: Represents the support of LGU and DepEd to the Students

Statements	Mean	SD	Verbal Interpretation
The city government provided internet or a mobile data allowance for me to contact my teachers	2.14	0.86	Disagree
The city government provided internet data allowance that can be used for my study	2.10	0.84	Disagree
The city government provided help by giving us gadgets so that I can submit my modules to my teachers	2.26	0.91	Disagree

Conclusion

The research found that the major problems faced by the learners and teachers is the poor internet connection in their areas. Due to this circumstance, teachers cannot fully monitor the academic standing and progress of the student through an online meeting. Although the module is an essential practical application of the topics that the student is assumed to learn, some students have a hard time learning the subjects due to the insufficiency of explanation and poor internet connection during their online classes.

However, the implementation of a Flexible learning policy through a modular approach provided benefits to the students and teachers in terms of transportation expenses, health, and safety. The students can also submit and access their module anytime they want yet most of them have a hard time managing their time properly due to unstructured classes which eventually, adds burden to them since they must do other activities to all their enrolled courses at the same time. Since the teachers cannot monitor their students anytime, some students do not answer their module wholeheartedly, they tend to copy their classmate's works or even ask their parents to do it for them instead. On the other hand, the study also discovered the effect of flexible learning policy on the learning process of the students in terms of the following:

- *Modular Learning*

The students did not learn much during the implementation of flexible learning policy, they sometimes experience a hard time understanding the lesson in the module.

- *Interaction with Learners*

The teachers find it difficult to interact with their students, especially in a situation where they need an immediate response from them.

- *Academic Behavior*

The teachers find it difficult to boost the academic behavior of their students since students are not motivated and interested to learn the topics in the module.

Therefore, the discrepancies in terms of Modular Learning, the Teacher's interaction with the learners, and the academic behavior of the students during the implementation of the flexible learning policy resulted in certain failure of some students to answer the activities and exercises in the module, despite the reminders of their parents and their teachers' considerations.

The study also discovered some problems faced by students and teachers in terms of dealing with the modular distance learning approach and these are the following:

- Some students admitted that their parents were the ones who answered some questions in the module.
- Some students cannot answer their module because they are too busy doing their house roles and their parents cannot help them since most of their parents are busy at work while some of their parents are elementary graduates.
- Some students are comparing themselves mostly to what their classmates can do.

The Local Government and the Department of Education should support more teachers in terms of giving them enough funds for the distribution of the learning materials, allowances for the data and internet, and seminars/training about the skills that they needed for distance education and the city government also should support the teachers by providing the internet/mobile data allowance and give the students gadgets to be used for the online classes.

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Examining Chinese Students' Motivations for Overseas Education and the Implications of the Study Abroad Experiences on Their Transitions to Adulthood

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Abstract

Studying overseas is a popular option for many young individuals to undertake as part of their educational journey. Since China has emerged as the world's largest source of international students, Chinese students' motives of pursuing foreign education have gained remarkable scholarly attention. Furthermore, as the cross-border sojourn often occurs in the youthful period of one's life course, the implications of this journey on Chinese youths' transitions to adulthood have also been of interest to recent research. Situated in the field of international education and youth studies, this paper discusses the motivations behind Chinese students' decisions to study abroad and how this international sojourn shapes their transitions to adulthood. Through literature review, this paper found that the target group's study-abroad decision making is influenced by various macro-level drivers, including globalisation, neoliberalism, and China's economic and socio-cultural conditions. From a micro-level perspective, this paper identified that studying overseas is not only a sought-after route to overcome individual academic failures and systemic deficits in China, but also to accrue valuable resources and satisfy the desires to explore the world. Moreover, this paper noticed that with respect to their transitions to adulthood, Chinese youths' study-abroad experiences are fraught with struggles, tensions, and complexities. Specifically, the overseas journeys can both accelerate and delay their adolescence-adulthood pathways in the aspects of physical freedom, self-responsibility, economic independence, as well as marriage. Broadly, this paper offers practical implications on international student recruitment in higher education. It also serves as a basis for future research on international education and youth studies to explore diverse study-abroad destinations and experiences.

Keywords: Overseas Education, Transitions to Adulthood, Globalisation, Young People

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Introduction

In 2014, Michelle Obama delivered a powerful speech at Peking University on the importance of studying abroad for youths in the present era of global interdependence. She highlighted the role of overseas education in enhancing young people's intercultural competencies and employment competitiveness. For reasons like these, studying abroad has become a sought-after option for many young individuals to undertake as part of their academic journey. This is particularly true in China, where the number of domestic students pursuing overseas education soared to around 662,100 in 2018 (Ministry of Education [MOE], 2019), indicating a more than three-fold increase compared to the figure (179,800) in 2008 (MOE, 2009). As China has emerged as the world's largest student-sending nation (Textor, 2020), Chinese students' motives of pursuing foreign education have drawn considerable academic attention (e.g., Bodycott, 2009; Zwart, 2013). Moreover, since this cross-border sojourn usually takes place in the youthful period of the life path, how this experience shapes Chinese youths' pathways to adulthood has been of interest to recent research (e.g., Chua, 2015; Martin, 2018). In this paper, I endeavour to discuss young Chinese citizens' study-abroad motivations and the subsequent implications of overseas education on their transitions to adulthood. This paper defines youth as a liminal stage where individuals are transitioning into adult lives, rather than a fixed chronological age range (Robertson et al., 2018). Furthermore, it confines the discussion to those who physically engage a portion of their tertiary education in a foreign country. This paper begins by considering the macro-level drivers in which contemporary Chinese student international mobility is situated. Then it explores the micro-level drivers that play a role in their study-abroad decisions. This is followed by a discussion of the implications this cross-national experience hold for Chinese youths' adolescence-adulthood transitions. The final section draws some conclusions, acknowledges limitations, and provides directions for future research.

Macro-level Drivers

Global Context: Globalisation and Neoliberalism

Increasing educational mobility is promoted by contemporary *globalisation*, a series of ecopolitical and sociocultural transformations that intensify cross-national interactions (Li & Bray, 2007). Manifestations of globalisation, such as advancements in modern technology and transportation, have significantly reduced the geographical constraints on cross-border sociocultural arrangements (Brooks & Waters, 2011). These developments have enabled students to move across countries to pursue education (Rizvi & Lingard, 2000). Added to these physical enablers are the rising prevalence in global communication and cultural exchanges. According to Fong's (2011) ethnographic study on transnational Chinese students, the globalised nature of mass media has spurred many young Chinese individuals to yearn to become part of an imagined cosmopolitan global community, and thus has stimulated their desire to study abroad. Globalisation is, therefore, a crucial driver for facilitating and promoting Chinese youths' cross-border educational mobility.

Despite distinct conceptualisations of globalisation, a neoliberal perspective is considered most salient to the topic being discussed. Neoliberal ideologies advocate free global markets and individual accountability (Adams, 2014; Shields, 2013). Higher education institutions in most industrialised countries have become part of these global markets by massively expanding their enrolment of students, notably international students, to remain financially

viable (France, 2016). This increase in places for international students means that universities have become part of the global *knowledge-based economy*, which emphasises the trade of knowledge and skills, rather than mere manufacturing commodities (Guruz, 2008). As a consequence of this change in the global economic structure, societal needs for highly educated personnel and concomitant mass demand for higher education have been naturalised (Altbach, 2004). Young individuals thus "gravitate toward educational investments that most efficiently produce desired outcomes, including studying abroad" (Shields, 2013, p. 612). As a fundamental group of this study-abroad phenomenon, many Chinese youths undertake this journey to improve their future prospects, which will be discussed more in-depth in a later section.

Domestic Context: the Embedded Culture and Socioeconomic Transformations

Aside from these global drivers, China's cultural idiosyncrasies have also set the scene for the study-abroad wave. In Confucian heritage societies such as China, families are seen as a collective being and play an integral role in individuals' life decisions, including education, employment, and marriage (Bodycott, 2009; Martin, 2018). A strict hierarchical parent-child relationship exists, which assigns parents the responsibility to guide children, who in turn should practice *filial piety* by obeying parents' wishes (Wu, 1996). Concerning their children's education, Chinese parents tend to play an active role by making enormous investments (Bodycott, 2009; Chao & Sue, 1996), as they believe that education is a crucial means of achieving personal development and familial social mobility (Chen & Uttal, 1988; Gu, 2006). Undoubtedly, this entrenched cultural consciousness regarding parent-child relationships and education plays a significant part in Chinese youths' study-abroad decision-making.

Furthermore, China's economic transformations during the past decades, including its incorporation into the global neoliberal economy, have led to an expanding middle class with more disposable income and professional knowledge (Chew, 2009). The ability and ambition of these Chinese middle class to invest in their children's education is strengthened by the decades-long one-child policy, which allows more parental resources to be diverted towards nurturing the single child (Fong, 2004). As a result, reverse motivations, such as high tuition fees and living expenses abroad, have been drastically reduced for many Chinese families (Hao et al., 2016). Therefore, due to these domestic socioeconomic changes, the option to study abroad has become more affordable for growing numbers of Chinese parents, who are likely to seek the best education available for their children.

While this section provides some contextual factors, it does not sufficiently explain Chinese youths' varied motives of studying abroad. The following section will examine the drivers of studying abroad from a micro-level

Micro-level Drivers

University Entry Failures and the Deficient Domestic Education System

Failing to gain access to prestigious home universities pressures many Chinese families to seek education abroad. Statistics illustrate that the percentage of domestic candidates offered a place to the elite home universities, aka "985" universities, remains low: varying between 1.14% and 5.98% across different provinces in 2016 (Shang, 2018). In the Chinese community, academic underperformance regarding university entry not only has

repercussions to one's future career, but also brings shame to the entire family (Archer & Francis, 2006; Lee & Morrish, 2012). Thus, to avoid or compensate failures in the intensely competitive domestic education system, many aspiring Chinese families turn to overseas institutions (Chao et al., 2017) so as to "seize that second chance" of studying in a top university (Chua, 2015, p.55). Clearly, for the Chinese, studying abroad is perceived as an "honourable substitute" (Brooks & Waters, 2009, p. 1094) that provides an escape from educational failures in the domestic system.

Discourses of deficiency about the Chinese education system constitute another study-abroad driver. Aside from being high-stakes and excessively competitive, the Chinese education system has also been criticised widely for its teacher-centred pedagogy that offers few opportunities for interactions and discussions among students (Bodycott, 2009; Hao et al., 2016). Moreover, in Chao et al.'s (2017) study, Chinese international students in the US revealed the rigidity and lack of innovation in their home education system, where students are required to spend long hours memorising socialist doctrines rather than attempting to be inventive. Additionally, vices such as bribery and cronyism are reported to be rampant in Chinese education (ibid.). Due to these perceived deficiencies, Chinese students and their parents may therefore be reluctant to engage with the home universities and seek overseas alternatives.

The Pursuit of Capital, Social Mobility, and Exploration of the World

Beyond serving as a tactical move to circumvent educational failures and flaws at home institutions, studying abroad is also tied to Chinese families' capital accumulation strategies. Pursuing valuable cultural, social and, eventually, economic capital (Bourdieu, 1986) through attending renowned overseas universities is in line with Chinese families' aspirations to reproduce the middle-class identity or facilitate upward social mobility (Chua, 2015; Ong, 1999). *Institutionalised cultural capital*, in the form of educational qualifications (Bourdieu, 1986), signals individuals' positive qualities, especially professional competencies (Spence, 1978). Furthermore, *embodied cultural capital*, expressed typically as skills, knowledge, and attributes (Bourdieu, 1986), raises individuals' productivity at work from the *human capital* perspective (Becker, 1975). Undoubtedly, these forms of cultural capital attained through studying overseas, especially in western developed countries (Zwart, 2012), will be converted into abundant economic capital in the future (Hao et al., 2016). Notably, Waters (2006) found that the economic rewards are maximised when young Chinese individuals return to the globally integrated local labour market, where their traits of being cosmopolitan, multilingual, and habitually transnational are distinctly valued.

A further impetus to undertake the overseas educational journey is to accrue *social capital*, which refers to resources within social ties (Wu, 2014). Social capital can be obtained by forming an "exclusive club" of returnees with common educational and migratory experiences (Waters, 2007, p.480). This network of important alumni contacts could serve as reliable intellectual resources and offer various tangible economic privileges in one's career (Hao et al., 2016). Furthermore, the elite group identity of overseas-educated Chinese citizens produces significant symbolic capital (i.e., social recognition and prestige) (Waters, 2007), which is particularly valued in the Chinese culture. Therefore, pursuing an overseas degree can be regarded as Chinese families' instrumental drive to maintain or advance social class by acquiring social, cultural, and economic capital.

Emplaced in the transitional life period, the temporary migratory journey also intersects with young people's desire for adventure (Waters et al., 2011). This is pertinent in the Chinese setting, where the exposure to foreign influence brought about by globalisation and China's political reforms has resulted in young people's deep senses of inquisitiveness about the world outside China (Cheng & Berman, 2012; Fong, 2011). Just as one of the participants in Chua's (2015, p.40) study expressed "the moon is rounder on the other side", their images of more affluent and cosmopolitan foreign societies have made the global experience an attractive and desirable option to undertake. Nevertheless, this "youthful escape" for excitement and entertainment (Waters et al., 2011, p.455) is not limited to the aspirations of young Chinese people themselves; it is shared by their parents who hope to compensate for what was once impossible to their generation (Chua, 2015). Hence, studying overseas can be seen as an exploratory trip that satiates one's curiosity about the outside world.

Transitions to Adulthood: Acceleration or Delay

"The meanings produced through student mobility ... are intricately linked with projects of the self and life transitions to adulthood" (Holdsworth, 2009, p.1857). This transition corresponds to a period where one slowly leaves behind adolescence and takes on a range of adult responsibilities (Gauthier, 2007), such as completing education, attaining financial independence, leaving the parental house, and forming families on their own (Arnett, 1998). While heterogeneity of transitions across social groups, times, and spaces has been observed in extant literature (e.g., Chase, 2020; Frändberg, 2015), this section focuses on the meanings of the cross-national educational sojourn on Chinese youths' transitions to adulthood.

Studying abroad can be treated as a *rite de passage* into adulthood (Eade et al., 2007), as young people have to navigate a completely new challenging life. They experience more self-autonomy and self-responsibility as spatial separation restricts parental control and other support networks (Tse & Waters, 2013). This translates to a plethora of new demands, such as the need to solve quotidian problems and negotiate social communication issues independently (Hao & Welch, 2012). Brown's (2009) study on Asian graduate sojourners (including Chinese students) in England highlights the transforming nature of overseas education, where out of a necessity for survival, students developed the capacity to withstand life stress and tolerate different practices. In terms of academic studies, Chua (2015) notices that, without parental surveillance, many Chinese students fostered a greater sense of self-discipline concerning their own education. Plainly, due to prolonged absence from the home environment, this individuation experience accelerates young Chinese people's transitions to adulthood, especially for those who previously "enjoyed the full care of their parents" (Hao et al., 2016, p.26).

Nevertheless, the overseas educational experience also allows some to prolong their youth by "living in the extended present" (Chua, 2015, p. 71), which coincides with the life phase of *emerging adulthood*, characterised by possibilities, flexibility, and exploration (Arnett, 2014). For example, Chua's (2015, p.71) study witnesses Chinese university students' appropriation of the freedom awarded by the overseas sojourn, where some "muddle[d] along without a concrete goal" and others postponed the risk of their transition to employment by pursuing further studies immediately upon graduation. Apparently, due to higher tuition fees and various living expenses incurred abroad (Liu et al., 2018), these sojourners (less applicable to those on bursaries or scholarships) continue or even exacerbate financial dependence on their parents, and thus delaying their transitions to adulthood. On the other hand, Gareth (2005) argues that overseas-educated young people generally have brighter employment prospects,

be they opting to return to China or settling in the host country. Hence, from a cultural perspective, such graduates will be better equipped to fulfil filial duties by providing more solid future financial support for their parents (Bodycott, 2009). In this regard, while studying abroad defer the progress to adulthood and extends the financial burden on families, a higher possibility of success can be secured for their impending transitions.

Another oft-cited aspect of the transition is marriage, which carries a strong gendered element in the Chinese culture (Yeung & Hu, 2013). Modern Chinese society is still under the influence of traditional views that young people, primarily women, are expected to honour their parents' request by getting married early and bearing children (To, 2013; Wang & Abbot, 2013). In Chua's (2015, p.88) research, going to Singapore for further studies forms "a space of sanctuary" for female Chinese students, as it permits them to temporarily elude from familial pressures for marriage and relatives' scrutiny of their marital status. This concurs with Martin's (2018, p.689) construction of "a zone of suspension" for female Chinese students in Melbourne, where new romantic relationships were developed and the expectations of marriage and family obligations in relation to the life course was suspended. However, he also notices that a "split value scheme" (p.699) between the restrictive Chinese sex-gender norms and the western life patterns has created a significant sense of contradictions for these female Chinese youths. Therefore, the allegedly delayed transition to marriage during their "time out" (Griffiths et al., 2013, p.6) is still fraught with hegemonic social pressures from China.

Conclusion

Situated in the field of international education and youth studies, this paper has discussed Chinese youths' study-abroad motivations and implications of the overseas journey on their transitions to adulthood. By considering the macro-level drivers, it has found that globalisation enables international educational mobility by reducing geographical barriers and facilitating cultural flows. Relatedly, neoliberalism stimulates young people to invest in education to enhance future prospects in the global knowledge-based economy, indirectly contributing to their study-abroad decisions. Domestic factors, including China's cultural peculiarities and socioeconomic transformations, have also been noticed to create conditions for Chinese youths' overseas journey. From a micro-level perspective, this paper found that studying overseas is a popular alternative to counter domestic educational failures and systemic deficits. The pursuit of capital to enhance life chances and the eye-opening desire also motivate Chinese youths to embark on the international sojourn. Regarding transitions to adulthood, this paper has found that while sojourners experience more adult responsibilities and freedom, it is the same freedom that creates opportunities for relaxation and play, thus complicating the debate about transitions. Similarly, despite the seemingly prolonged transitions to economic independence, the overseas experience is likely to lead to a financially more stable future. Concerning marriage, time studying abroad reveals the contradictions between home and overseas value systems, and thus making the delayed transition to marriage fragile.

In the final analysis, this paper has identified multiple macro- and micro-level motivations behind Chinese students' decisions to study abroad and the complexities involved in their transitions to adulthood. One noteworthy limitation is that the exploration is restricted to the stream of cross-border mobility from China to developed countries. Thus, various other international mobility routes taken by Chinese youths await further scrutiny. Another limitation of this paper worth exploring in future studies is regarding the weight of each

driver and the extent of influence exerted by the family on the study-abroad decision-making process. Lastly, a hidden assumption in this paper is the definite mobility of young Chinese people. In reality, however, just like any other life choices, the mobilisation of agency is bounded by social structures, and thus many would be deterred from studying abroad in the first place. That said, this paper contributes to the understanding of the motivations behind Chinese students' study-abroad decisions and their adulthood transitions, which are particularly valuable for educators and policymakers in higher education to take into account in recruiting international students.

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Distance Learning: Its Challenges and Opportunities to Adolescents Relationship

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Abstract

Pandemic became one of the most feared unseen enemy where people are forced to stay at home. The pandemic forced everybody to stay at home. Hence, the study focused on adolescents who are under the distance learning modality. The study delved on the perceived challenges and opportunities of distance learning to their family relationship. This study will add dearth to parent- child relationship specifically on adolescents as they are in the stage of storm and stress. The study utilized the use of qualitative research design using an online version of pen and paper type of interview through google form. The qualitative research design explores the different effects of pandemic specifically in the education system and family relationship where majority of schools offered distance learning modality in the Philippines. Purposive sampling was employed to the 60 adolescents from senior high school to second year college students under distance learning modality since they are at the stage where social interaction is vital. Content analysis was also utilized to interpret the result of the study. The results of the study showed a relationship shift in the adolescents' development where adolescents shift to closeness rather than conflict, dependence rather than independence and spending more time with their family than friends in social media. The distance learning became an avenue for adolescents to seek help from their parents and parents be closer to their children.

Keywords: Adolescents, Challenges, Distance Learning, Opportunities

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Introduction

Distance learning through online or virtual classes became the educational trend when COVID-19 had suddenly forced everyone to stay at home in order to prevent the widespread of the virus (Baticulon et al., 2021; Yu, 2021; Garbe et al., 2020; Joaquin et al., 2020; Avila et al., 2020;). Researches around the world focused more on the effects of COVID-19 pandemic in educational setting such as distance learning outcomes, parents' coping mechanism such as difficulties in coping with the distance learning and as learning facilitators (Sonnenschein et al., 2021; Yu, 2021; Garbe et al., 2020), and family and school relationship (Martinez et al., 2021). Other researches focused on children and adolescent's mental health (Imran et al., 2020), family dynamics such as economic, social and psychological aspects (Shah et al., 2021), and the impact of COVID-19 on families is currently unknown (Vertalaus et al., 2021). Hence, this study will add dearth to parent- child relationship specifically on adolescents as they are in the stage of storm and stress. This will also add to the body of knowledge on the impact of COVID-19 on adolescent relationship with their family members.

In the Philippines, researches focused more on the effects of COVID-19 to students and educational system (Baticulon et al., 2021; Belgica et al., 2020), parent's experiences in pandemic (Agaton & Cueto, 2021; Chapay, 2021) as parents are forced to take the role of teachers and learning facilitators. Hence, the study seeks to fill the gap in the literature by looking at the challenges and opportunities of distance learning in adolescent relationship through the lens of adolescents.

The sudden lockdown caused by COVID-19 in 2020 resulted to pedagogical and instructional shift from traditional to online, modular, and flexible distance learning (Belgica et al., 2020; Avila et al., 2020). Parents became instant teachers of their children especially the young ones to combat the need for continuous education. In terms of human development, the natural environment for developmental opportunities for children and adolescents such as school and community suddenly became virtual. The face-to-face social interaction is part of human basic need and for specific age group, peer interaction is a vital aspect of human development (Orben et al., 2020) but because of pandemic, the interaction became virtual. Everybody was physically cut off from face-to-face interaction which gave way to social media interaction and virtual communication. However, the absence of interaction in school and presence of social gathering disrupted the children's social support and networks (Vanderhout et al., 2020). Sikali (2020) claimed that physical interaction is part of our daily social interaction and in the face of pandemic, social media such as facebook became the venue for our daily social interaction. Hence, the need for face-to-face social interaction forced every family member to talk to each other whether for mental health purposes or human development. Erik Erikson's theory on psychosocial development (Orenstein et al., 2021), social relationship is important especially in establishing their identity. This is where adolescents also start to development friendships and according to Erikson failure to develop identity and intimacy will lead to isolation. The presence of the family members in this developmental stage of the adolescents during pandemic provides a great help for adolescents to develop their self-esteem as they know more about themselves, face physical changes and experience peers in the presence of their family members.

This pandemic allowed the adolescents to spend more time with their family and less time with their friends (Lake et al., 2022) despite the need for peer interaction (Orben et al., 2020). Similarly, Vanderhout et al. (2020) The house became the only venue for human

development as compared before that the school and community helped in the different developmental opportunities for children and adolescents. The theory of Bronfenbrenner's Ecological System Theory shows the sociocultural influence of the environment in the family relationship or interaction (Evans (2020)). The theory stated that child development is a complex system of relationship affected by their surroundings or environment from their family environment to broader environment outside their home such as school and community. The lack of interaction of children in the school and community setting in pandemic provides the family an opportunity to become the sole source of face-to-face interaction despite the presence of social media for virtual interaction. Also, Urie Bronfenbrenner's Ecological System Theory under microsystem helps explain the influence of the environment in adolescent's interaction to the member of his/her family. The change in adolescent's environment allows them to realize the presence of their family members as they interact with them at home.

The Philippines is known for having close family knit (Asis, 1994), however Gonzales and Vargas (2021) claimed that modern Filipino family under pre-pandemic spend more time with their gadgets than spending time interacting with their family members. This pre-pandemic scenario of Filipino family situation provides us a clear picture of the absence of interaction among family members. In March 2020, pandemic took away everyone from their work, school, colleagues, friends, and other activities. People were forced to stay at home and family members are forced to spend more time together. The adolescents who spend more time with their friends are given no choice but to interact with their family members.

Adolescence is the stage of storm and stress according to G. Stanley Hall (Buchanan & Hughes, 2014). Furthermore, storm and stress are also the time where trouble with behavior, emotions, and relationships with parents is high. This is due to internal factor such as changes in hormones and external factor such as life stresses. Adolescence is similar to the United Nations concept of Youth, the transition period from dependence of childhood to adulthood's independence. In terms of age, the United Nations Educational, Scientific and Cultural Organization (UNESCO) stated that it is from age 15-24 years old. In the Philippines, Filipino children are perceived to have no mind of their own and lack of understanding (Alampay, 2014) that is why even when they become adolescents the parents still treat them as children that still need guidance. However, with changes in the environment parents gradually shift their parenting style to dependency to independence and restrictiveness to permissiveness (Medina, 2001). Hence, the study focused on the adolescent relationship as adolescent deal with distance learning where peer interaction is absent and the only source of face-to-face interaction is found in the company of their family members.

Statement of the Problem

The study aimed to determine the effect of distance learning to parent-child relationship among adolescents. It specifically answers the following:

1. What are the perceived challenges in distance learning when it comes to family relationship?
2. What are the perceived opportunities in distance learning when it comes to family relationship?

Methodology

The study used Qualitative Research Design using online version of pen and paper type of interview. Purposive sampling was employed to the 60 respondents. The respondents are from senior high school and college students specifically from first to second year college who experienced the sudden shift of educational system. The table below shows that majority of the respondents are college students (53%) which reflects the more exposure of college students to online since majority of tertiary institutions are in online distance learning whereas senior high school especially the public schools shifted to modular distance learning.

Table 1 Respondents

Respondents	Frequency	Percentage
Senior High School	28	47
College Students	32	53
Total	60	100

In the conduct of data gathering, the researcher asked permission to the respondents through the letter included in the google form. To ensure confidentiality, the researcher included also a statement regarding Republic Act No. 10173 known as Data Privacy Act to protect all forms information. The Google form was utilized to gather data in order to determine the experience of adolescents in distance learning, as they also experience changes in family relationship. The form was utilized since all the respondents are under distance learning. The form consisted of two parts. The first part is the profile of the respondents whether they are senior high or college students. The second part composed of two open ended questions, "What are the challenges you encountered while having distance learning?" and "In terms of family relationship, what are the perceived opportunities of distance learning in your family relationship?" In terms of interpreting and analyzing the result, Manual Thematic Analysis was first utilized to be able to have themes to help organize the gathered data. Frequency and percentage were utilized to have a clear picture of responses. After that, content analysis was used to determine the meaning of responses of the respondents.

Results

Challenges in Adolescent Relationship in the Context of Distance Learning

Tale 2 shows that distance learning provides challenges in adolescent's relationship in terms of environmental factors (35%), focus in their studies (26.67%), lack of communication (15%), house responsibility (6.67%), frequent use of gadget (5%), dependence in making decision (5%), independence as parents cannot help their children in their studies (5%) and missing their friends (1.66%). The results show that adolescents perceived that their time spent to their family also affects their studies in terms of paying attention to classes and in doing their academic requirements.

Environmental factors such as noise and distractions from family members are perceived to negatively affect their relationship with their family members. This implies that adolescents find their family members as factors affecting their concentration in classes as they are noisy and sometimes disturbed them by talking to them and asking them to run errands. The challenges in adolescent relationship can be rooted in the sudden change of classroom venue, where the house becomes the classroom. The noise and distractions that come from the family members results also to misunderstanding and sometimes adolescents to separate

themselves from their family members so that they can concentrate on their studies. Also, parents often argue with their children specially when they are using their phones because they perceived their children to be on their phones doing activities unrelated to their studies which sometimes resulted to conflict.

This is reflected in the statement “Often argue with parents specially when I am into technology the whole day”. This can be associated with their pre-pandemic experience that family members spend more time with their gadgets as mentioned by Gonzales and Vargas (2021). Also, Öngören (2021) affirmed that domestic conflict and mobile phone addiction are the negative aspects of parent-child relationship during pandemic. The adolescents enrolled in College mentioned that they experienced more this environmental factor as they are always in their gadget because of their online classes unlike the Senior High schoolers that they are more on modules.

The adolescents also claimed that they focused more on their studies than in interacting with their family members. The result implies that adolescents tend to focus more on their studies which sometimes hinder them to talk to their family members. It also implies that despite the difficulty in concentrating with their studies, the adolescents still strive to focus on their studies. There are more adolescents in senior high school who stated that they focus more on their studies and this is due to their modules that they need to finish. However, adolescents in college are also focused on their studies and since they are online they spend more time with their gadgets than talking to their family members. This is reflected in their statements “Always in my online class so I do not have time to talk to my family” and “If I have a class I cannot go out of my room.”

The results also show that lack of communication is perceived by the adolescents to be a challenge while in distance learning mode of instructional delivery. There is a lack of communication because the adolescents are concentrating with their studies be it online or modular which is affirmed by the result that they focus on their studies than communicating with their family members.

The house responsibility also hinders the adolescents to concentrate in their studies and sometimes results to conflict with their family members. This is because parents specially the mother expects their children to help in household chores but due to adolescent’s academic requirement they failed to help. This is reflected in the statements “There are too many activities to be submitted so I can’t help them with the chores, couldn’t do some of the household chores due to early online class” and “Mother gets angry and calls me lazy because I am not doing household chores even if I’m currently studying.” Öngören (2021) confirmed that conflict is experienced due to being at home and it is because of obeying rules. In the Philippines, the unwritten rule that children must help in household chores and balance their studies and their responsibility at home. Helping and balancing studies and household chores are believed to be effective training development for children to become responsible individual. Since children stayed at home, they are expected to finish and take part in doing household chores.

Adolescents perceived decision making, being independent and missing their friends as challenges while under distance learning. This can be because there are no peers to influence their decision so they seek help from their family members. This is reflected in the statements “Became dependent on my family in terms of my decision making.”, “Ask may family before I make decision.” and “Seek the advice of my family when making decision.” However, the

adolescents are also challenged by becoming independent reflected in the statement “They can’t help me in my lesson because they don’t know about it.” and “Children no longer seek the help of parents, they google everything.” This is because adolescents cannot ask their family members to help them with their studies. This allows the adolescents to learn to become independent since there is no classmate or friends to help them with their studies especially in individual activities in school such as essay writing. This is the reason also why they miss their friends despite the presence of technology.

The challenges encountered in adolescent relationship affirms the claim of Öngören (2021) that negative parent-child relationship is attributed to domestic conflicts and phone addiction.

Table 2: Challenges in Distance Learning

What are the challenges you encountered under distance learning when it comes to family relationship?	SH f	College F	Total f	%
Environmental Factor	9	12	21	35.00
Fighting because they are noisy, they are noisy, <i>Naiinis minsan kasi maingay sila habang nagklaklase</i> (sometimes irritated because they are noisy while I am having my class), <i>maingay at hindi masyadong marinig ang sinasabi ng teacher</i> (Noisy and cannot hear the teacher), <i>hindi makapagfocus sa study kasi minsan may kumakausap sa akin</i> (Cannot focus because sometimes they talk to me), Madalas kaming nagkakaroon ng hindi pagkakaintindihan ng mga kapatid ko lalo na kapag nag aaral ako tapos sila nag iingay (Often have misunderstanding with my siblings specially when I am studying because they are noisy), Can’t focus properly, distract me and say whatever they want, they are noisy, I am distracted with their presence, noisy and sometimes my parents thought I do not have a class so they disturbed me, noisy, my siblings are noisy, I get into arguments everytime they tell me to do something when Im doing school requirements, madalas kaming magtalo ng parents ko lalo na kapag maghapon akong nakatutok sa technology (Often argue with parents specially when I am into technology the whole day), Often insensitive when they are talking to me specially when I’m online, Physically present but mentally absent in my class because of too many distractions, Nakakatamad gumawa ng assignments lalo kapag maraming ganap sa pamilya (When there is family event I am lazy to do my assignments), I and my brother play all night instead of studying, Minsan sa sobrang bonding namin nakakalimutan ko ng sumagot ng modules (Sometimes because of family bonding I forgot to answer my modules), Fogot to study because I want to spend more time with my family, noisy and distractive environment sometimes				
Focus More on my Studies than my Family	10	6	16	26.67
Always think of my study, Di sila masyado nakakausap gawa ng marami pang modules na kailangan tapusin (cannot talk much because of so many modules to finish), Always in my online class so I do not have time to talk to my family, Became focus with my study that is why I do not have time to bond with my family, focus more on my study than communicate to them, I use almost all my time in my academic task, kapag may klase hindi ako nakakalabas ng room (If I have a class I cannot go out of my room), Even in bonding time gumagawa pa rin ng activities (Even in bonding time I still do activities), So many modules to finish so no time to talk with them, Sometimes I am loaded with activities in my modules, I almost forgot talking to them because of modules, Nasa kwarto na lang lagi dahil gumagawa ng module kasi tahimik (I am always in my room doing my modules because it is quiet), I rarely get out of my room and see their situation outside, No time to bond because I need to finish my modules, Instead na ang topic ay about family, nauwi pa rin ang pag uusap about sa mga activitie (Instead that the topic is about family, it still end up talking to activities), Sometimes asked them to help me in my modules so we talk about the modules, Because of				

modules, I do not have time to bond with my family				
Lack Communication	2	7	9	15.00
Lack communication because I am focus on my studies, Hindi makausap dahil nakatutok sa online class (They cannot talk to me because I am focus in my online class), Communicate less when studying, May time na kapag kinakausap nila ako at naka earphone ako kasi may klase (There is a time that they talk to me but I have earphone because I have a class) , magagalit sila kasi hindi daw ako sumasagot (They got mad because I am not answering), Become more listener because I cannot pay attention to them				
House Responsibility	2	2	4	6.67
Sometimes, there are too many activities to be submitted so I can't help them with the chores, couldn't do some of the household chores due to early online class, Mother gets angry and calls me lazy because I am not doing household chores even if I'm currently studying, Feeling nila kapag nakaupo ako at nagce-celphone wala na akong ginagawa kaya inuutusan nila ako pero ang totoo may ginagawa ako (they feel that when I am sitting and using my phone, I am not doing anything but in truth I am working)				
Frequent Use of Gadget	2	1	3	5.00
Always in gadget, spend more time on gadgets, always browsing the internet				
Dependence in Decision Making	0	3	3	5.00
Became dependent on my family in terms of my decision making, ask may family before I make decision, seek the advice of my family when making decision				
Independence	2	1	3	5.00
They can't help me in my lesson because they don't know about it, Children no longer seek the help of parents, they google everything				
Missing Their Friends	1		1	1.66
Even though I am with my family I still tell them I miss my friends				
Total	28	32	60	100.00

*f= frequency

Opportunities in Adolescent Relationship in the Context of Distance Learning

Table 3 shows that distance learning provides opportunity for adolescents to become closer to their family members, get more time to bond (50%), communicate (10%), be closer to each other (10%), develop strong relationship (6.67%), know more about the family members (6.67%), provide support (6.67%), help each other do household chores (5.00%), feeling of safe and productive (3.33%), and eating together (1.67%). The results show that parents and their children had more quality time and opportunities to watch movies together and activities together. Also, having more time with their family, makes their relationship stronger. The family members also become more appreciative of the family's support in making decisions. This according to Morelli et al. (2020) due to the fact that parents suddenly became their only point of reference. This implies that adolescents are forced to lean on to their family members in helping them in their decision making.

The results show that adolescents find distance learning as an opportunity to know more their family members by doing activities together. This according to Bhamani et al. (2020) allows parents to become source of comfort and remove their worries. In terms of communication and become closer to each other, both adolescents from senior high and college perceived it as an opportunity to become closer to their family members as because they can open up to them. This helps them build strong relationship as Asis (1994) claimed that Filipino has a close family knit. The results in knowing more my family members, and support affirmed the previous results. This implies that the time spent by family members results to a positive

relationship. Family members were able to strengthen more their family ties by enjoying the company of each other, doing activities together, becoming more open and avoiding misunderstanding, settling and understanding individual differences, and showing their support in their academic requirements. Also, this allows the adolescents to become safety cautious and financially help by becoming productive. Some adolescents build small online business usually selling items in the internet to help in their family's daily expenses.

Adolescents perceived distance learning as an opportunity to help in household chores. In pre-pandemic, students spend most of their time in school that is why they cannot help much in household chores. Similarly, eating together becomes again a normal scenario in every household.

The opportunities perceived by the adolescents contributed to the positive relationship which affirms the findings of Öngören (2021) that the positive parent-child relationship during the pandemic period is found to be spending more time together, sharing, doing activities and communicating to each other.

Table 3: Opportunities in Distance Learning

What are the opportunities you encountered under distance learning when it comes to family relationship?	SH f	College f	Total f	%
More Time To Bond	11	19	30	50
More time to bond with my family, more time to bond, Bonding with my family, Can spend some time with my siblings without quarreling, more time to share jokes and stories, to seize and enjoy the moment”, Laugh with my lolo and lola, More time to visit relatives, “nakakasama ko ng matagal ang aking kapatid” (Spend more time with my siblings), Spend time with love ones, more time to help and less conflict, Bonding lagi sa pamilya (always bonding with family), More time to bond in our house, More time for serious talk, nakakapagbonding araw araw (can bond everyday), More time for serious talk, watch movies together, Create wonderful memories that last a lifetime, bonding helps our family become more strong, Can see me every day, Can be with them while studying, Nakakasama ang buong pamilya (Be with the whole family), Always with them, More time to talk together, Always bonding time with the family when I am not busy with my studies, eating and cooking together, more time to bond, Nagkaroon ng oras para makilala and makipagbonding sa pamilya (have time to know and bond with the family), Masmarami ng oras para masmakilala ang ugali ng isa't isa (have more time to know more the attitude of each other), More time to share stories and play together, Often have time for each other except when busy sa classes, More time for bonding with my family, Spend more time to talk, play, do household chores and to do things together with my family				
Communication	3	3	6	10
Communicate with them anytime and it becomes easier to talk to them and open up what is going on with my studies and my life, Can talk to each other without misunderstanding, More time to talk with my family members like talk about problems, Have someone to talk to when I am alone, Develops my verbal communication by sharing ideas at nakakapag usap ng mabuti (and can talk seriously) , Able to be open and tell to them about my struggles in studies and sometimes may mapagtatanganan ka (you have someone to ask)				
Become Closer to Each Other	4	2	6	10
Lalong nagiging close sa isa't-isa (Becomes closer to each other), Get closer and open to my family, Had closer and stronger relationship because we also spend time reading bible and praying together, Got to understand each other, Mas involve na sila ngayon sa aking buhay kesa noon(They are more involved in my life now), Become more open to my parents and				

siblings				
Develop Strong Relationship	2	2	4	6.67
Napatibay pa nito ang samahan namin sa pamilya (It strengthen our family relationship), Masna-bui-build iyong malalim na samahan (It build deeper relationship), Nagiging deep and firm pa ang aming samahan (Our relationship becomes deep and firm), Strengthened and build up our relationship				
Know More my Family Members	2	2	4	6.67
Know my family members more, Still in the process of knowing each other behavior, Know more their interest, Become faithful to their family as I come to know them better				
Support	3	1	4	6.67
I feel appreciated at some point lalo na kapag sinsabi nila “kaya mo iyan” (especially when they say “You can do it) but not always, Mas naaappreciate ko sila kasi masnakikita ko kung gaano sila kasupportive sa akin (I appreciate them more especially when I see how supportive they are to me), Naging available kami sa isa’t isa (We become available to each other) lalo na kapag humingi ako ng advice sa parents ko bago magdesisyon (especially when I ask for advice to my parents before I make decision), Help my younger sibling and my nieces answer and finish their module				
Help in Household Chores	2	1	3	5.00
Help doing household chores, Help mother in household chores, unity in doing household chores				
Others- Safety and Productiveness	1	1	2	3.33
Lots of realization about my family, when member is isolated the parents need to take better care of their children, can’t go out to bond in order to be safe and others be safe from us; More money to save because I don’t need to go to school that is why I help earn money				
Eat Together		1	1	1.67
sabay-sabay na kumain tuwing kainan and nagkwekwentuhan (Eat together every meal time and sharing stories)				
Total	28	32	60	100.00

Conclusions

The study concludes that challenges face by the adolescents while in distance learning are the environmental factors that disturbed them in their classes. In terms of opportunities, the adolescents have more time to bond with their family members, become closer to their family members, become dependent to them in making decisions and enjoy their meal with their family members.

Recommendations

For further study, include parents’ view on the effect of distance learning to their relationship with their children in terms of communication. Also, the researcher recommends to conduct a study on the difference of male and female adolescents’ perception on the effect of pandemic to their family relationship. The result will provide vital information that will help parents to deal with their children in terms of communicating with them.

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***Psychometric Properties of MRRF-Academic Resilience Scale (MRRF-ARS):
A Multifaceted Measure of Resilience***

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Abstract

Resilience views as a multifaceted construct anchored on the strength of the human being to withstand and bounce back despite adversity. MRRF- Academic Resilience Scale (MRRF-ARS) is a newly developed instrument that will help measure the academic resilience of Senior High School Students. Hence, this paper aims to establish the psychometric properties of the MRRF- Academic Resilience Scale in terms of factor structures, reliability, and validity. The sample consisted of senior high school students (N=340) from different educational institutions. Preliminaries in test construction were anchored on factors identified based on existing literature. Exploratory factor analysis was employed to evaluate the factor structure of the initial 108-items of MRRF-ARS. Using Varimax Extraction Method, the initial 108-item questionnaire was reduced to 68 items with only two factors, while other factors were excluded due to the low commonalities. The factors that emerged after the extraction are (1) Positive coping and regulation and; (2) Negative coping and Perception of academics. The result proved high internal reliability and constructed validity for the final 68 items inventory. It suggests that the MRRF-Academic Resilience Scale has a good implication in measuring academic resilience and the emerging identified factors represent standard features evident in existing research investigating resilience. Thus, this research can be used both academic and counseling intervention.

Keywords: Academic Resilience Scale, Resilience, Academic Resilience, Coping, Adversity

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Introduction

The implementation of the Senior High school programs throughout the Philippines was instigated to cater to and address the pressing trend of education. However, the transition from the old to the new curriculum and its academic guidelines has further adjusted Filipino students. These affect the students' cognition, affect, and behavior in terms of dealing with/handling their academic demands. In connection with this, some Filipino researchers observed that the implementation of Senior High School affects the student's academic standing and psychological wellness predominantly. With this, the present study aims to develop an instrument that can measure the Academic Resiliency of Senior High School students in the Philippines.

Since resilience was used to measure the functioning of an individual in a general context, there is limited research that focuses on measuring resilience in the school context. Although literature proved the strong association of resilience and academic performance, further research is essential to identify other factors and measures that will help strengthen and establish the association of resilience and academic performance (Arif & Mirza, 2018). With this, Resilience is defined as the ability of an individual to bounce back and cope despite adversity and hindrances (Sarwar et al., 2010). Therefore, resilience indicates that individuals have stable and healthy functioning after experiencing adverse events (Bonanno, 2004). According to Pietrzak and Southwick (2011), argued that researchers must clearly define resilience since resilience is a construct with a multi-dimensional aspect that can be viewed as a trait, process, or outcome. Also, it can be considered to be the mechanism that aids individuals in coping with different adversity that keeps them going and moving towards the present. In this study, resilience is treated as a process of coping with academic adversities that bring them to academic success.

As defined in this instrument, academic resilience is the ability to adapt and withstand academic diversity, challenges, and stress from academic requirements and experiences; it can also recover and maintain wellbeing and effective coping strategies to attain academic success in Senior High School. According to Cassidy (2015), it was observed and discussed that the students in the high Success Group were found to have reported higher resiliency skills than students in the Low Success Group. It implied that students' reported level of construct and resiliency skills would predict future high school success. With this, resilience entails that the student's level of academic resilience creates an impact on their academic success.

Resilience, along with positive psychology, comes with a typical dynamic. Both are, indeed, showing a humanistic view of Perception. In the observation of Rao and Krishnamurthy (2017), the resilient individual is those person who demonstrate "the ability to remain well, recuperate, or even succeed in the face of adversity." Although most individuals are coping, they are ordinary people dealing with the challenges and tragedies of everyday life (Masten, 2001). In these two statements, the dynamics of being resilient and positive psychology play a beneficial role for the individual given the same situation. Pietrzak and Southwick (2011) also support these two dynamics. He emphasized the process and described resilience as a psychological activity that energizes goal-directed behavior, cognition, and emotions. Goal-directed behavior is congruent to finding our meaning and purpose in the positive psychology discipline. This was also supported by Harvey and Delfabbro (2004); and De Haan et al. (2002) that resilience is a factor that may function as a risk factor or protective factor depending on the circumstance. For instance, running away from home might fall into

protective factors if the home environment is more dangerous than the streets. Still, the opposite is true if not, which creates scoring problems for such items on the questionnaires.

Different studies pointed out the various components that affect academic resilience, including social influences, cognitive, emotional, and behavior. For instance, it is not only the student alone who contributes to his academic success but also the environment. A recent study concluded that a powerful predictor of the academic outcome for children might be the quality of the immediate caregiving environment (Adriance & Shaw, 2009). A caregiving environment is equivalent to the supportive environment that the student is subjected to. These include the immediate family members, school authorities, peers, and other individuals the student recognizes as a significant other. According to Chung et al. (2017), “despite the burden of parental, family concerns, or chronic poverty, most children identified as resilient have had the ability and opportunity to form a close bond with at least one person [not necessarily the mother or father] who provided them with stable care” (p. 46). A family member takes a role in building the student's resilience through their effort and constant contact with their children.

Along with the social influence is the cognitive or students' academic competence. Kuyper (2014) that “above average and above” students had a sense of belonging to the school, which was a predictor of academic resilience. They also concluded that high-achieving students reported reading more pages per week, doing more homework, and having higher grades than low-achieving students. The students' intrinsic motivation and its value to the importance of studying feeds the resiliency, respectively. On the other hand, the “below average” students, Fernandez et al. (2018) concluded that human relationships are the most critical factor in student resiliency which at some point falls to be a factor contributed by social influences.

This study includes assessing the student's emotional capacity to complete the dynamics of academic resilience and success. Masten (2011) concluded that a person who adapts well to stress encountered in the academic setting might fail to adapt well in terms of their personal life and relationships. Stress is one of the academic adversity. It is majorly categorized as the academic requirements, meeting deadlines, and achieving expectations. But stress for a highly resilient student could be another thing. Pietrzak and Southwick (2011) observed that the more we can learn about resilience, the more potential there is for integrating salient concepts of resilience into the field of medicine, mental health, and science.

Masten (2014) reported that resilience is composed of the ability and capacity of a dynamic system to cope successfully with hindrances that threaten system function, viability, or development. Literature also supported that resilience carries a connotation of positive or typical developmental adaptations despite exposure to explicit threats or adversity. With this concern, there is a high need to explore the psychological aspects of the students. Thus, it supports the findings of Pietrzak and Southwick (2011) that determinants of resilience include a host of biological, psychological, social, and cultural factors that interact with one another to determine how one will respond to stressful experiences. However, Masten (2014) and Mwangi et al. (2015) supported the claim that resilience is multidimensional encompasses different domains such as academic, social, and emotional resilience. In connection with this, the present study determined and addressed academic resilience in the school context, which is crucial in education.

In the Philippines, there are no established norm/psychological tests that will measure students' resilience in terms of academics/school context. It will also explore the

manifestation of external and internal factors affecting the academic resilience of the students. Therefore, this test utilized the use of resilience in academics and adapted the theoretical framework of resilience in education. This test may offer keys to improved school organization, instructional delivery, data analysis, and teacher training that will enhance and improved student outcomes in Senior High School (Grade 11 & 12).

With this, the present research aims to answer the following research questions to the newly develop Melvin Roda Rave Faye-Academic Resilience Scale (MRRF-ARS):

1. What are the psychometric properties of the MRRF- Academic Resilience Scale in terms of factor structures?
2. What is the Reliability and validity Analysis of the MRRF- Academic Resilience Scale?

METHODS

Participants and Design

MRRF- Academic Resilience scale is a newly developed academic resilience scale. MRRF was derived from the name initial of each author. The present study utilized Exploratory Factor Analysis to investigate the factor structure of the newly constructed questionnaire, the MRRF- Academic Resilience Scale. Also, the present study explored Psychometric Properties using Inter-item Reliability Analysis and Validity Analysis.

The sample consisted of 340 Senior High School Students with an age range of 14-21 years old. Senior High School (SHS) refers to Grade 11 (n=176) and Grade 12 (n=164) in both private and public educational institutions in Camarines Sur, Philippines. DepEd has implemented the K-12 program since 2012. The researchers completed the MRRF-Academic resilience Scale measure during a single data collection point, at which time participants' gender, age, and grade-level data were also recorded.

Materials

First, the present study utilized the Academic Resilience Scale-30 (ARS-30), which was developed by Cassidy (2016). It is a recently developed measure used to assess resilience in a particular context, specifically, academic success. The items in scale fall into one of three factors: "Perseverance, Reflective and Adaptive Help-Seeking, and Negative Affect and Emotional Response" (Cassidy, 2016, p.7). High scores on component (factors) 1 and 2 and low scores on factor 3 indicate high resilience. The scale mentioned above was found to be highly internally reliable, and scores correlated significantly with the measures of self-efficacy. The ARS-30 is also used in various academic contexts; however, the MRRF-ARS also specializes in academics. The researcher adds some factors that will measure the cognitive, affective, and behavior of the student.

Second, the MRRF-ARS scale was used to measure the academic resilience and academic success of Senior High School Students. Participants responded to 108 statements relating to their level of resiliency in terms of academic context using a 4-point Likert scale (1-Highly Disagree, 2-Disagree, 3-Agree, and 4-Highly Agree). Example items include: "*I monitor and evaluate my achievements and effort in my academics*"; "*I am able to apply my academic learning when I am facing conflict with my friends.*"; "*I always finish my school task despite my personal issues.*" The scale has three (3) main components during the pilot testing:

Academic Components, Emotional Well-being, Motivation, and Adaptive Social/Help-Seeking. Under academic components, there are three (3) sub-areas: Academic Performance, Social Competence, and Personal Competence. There are four (4) sub-areas on emotional wellbeing: Acceptance of Change/Perseverance, Self-Esteem, Ability to handle stress, and Sense of Well-being. Lastly, motivation and adaptive social/help-Seeking are also three (3) sub-areas known as the ability to set goals, Strong Connections or Relationships with Adults and Peers, and Seek for help when needed.

The authors of the scale report high reliability with .888 using Cronbach Alpha in all 108-item. The MRRF-ARS scale has a theoretical range of 108-432, with higher scores indicating more excellent academic resiliency. There are a total of 320 participants who completed the MRRF-ARS measure.

Test Development Procedure

The initial goal was to develop a single set of items that could be administered to Senior High School Students to provide objective measures of their academic resiliency. Related studies found changed our theoretical conception and assumptions about the variable; thus, the goals and procedures were modified. Now, measures of subcomponent items on factors affecting academic resiliency were included. Hence, the researchers are also opening the possibility of the emergence of the new components that might emerge in the data despite the pre-existing pieces of literature used for questionnaire development. Before the data gathering, all participants wrote an informed consent and all institutions involved were adequately informed about the nature of the study. The researchers followed and complied with all ethical guidelines in conducting research.

When the test construction began, the initial pool of items was compiled. The items demonstrated a relationship to factors that affects a student's academic resiliency. Such factors were based on previous literature pieces: student's Academic Competence, Emotional Wellbeing and Motivation, and Adaptive/ Help-Seeking Behaviors were included in 110 items.

The scale presented was then submitted to three content validators with Ph.D. degrees for content validation. Some changes and revisions were made to measure the academic resiliency of Senior High School Students accurately. After content validation, the test with 110 items was revised and reduced to 108 items.

Then, the test developers run the test for Pilot testing in four Universities and schools. The test booklet was composed of two sets of tests, the MRRF-ARS and ARS-30. Then, two groups of examinations were administered to 340 students. After the pilot testing, the test developer encoded all the Items in Statistical Package for Social Sciences (SPSS) for data analysis.

Exploratory factor analysis was employed to measure the factor structure that might emerge in the preliminary data gathering. After factor analysis, only 68 items were accepted out of 108 items occurs using Principal Component Analysis. After removing the factors with low commonalities, which did not contribute much with representing components, only two (2) components (Factor Loading) emerged in the data set using Varimax as rotation method. Thus, a Reliability test was used to re-assess the internal consistency of all items. The researcher uses Pearson r correlation to MRRF ASR4 and ARS-30 to establish concurrent

validity. ARS-30 is an established resilience scale that served as a standardized test for concurrent validation.

RESULTS

Factor Structure

Exploratory factor analysis was employed to measure the factor structure essential to the 108-item Academic Resilience Scale for Senior High School Students. Results of the sampling adequacy measure of this instrument reported a high KMO of 0.812, and Bartlett's test of sphericity ($\chi^2 = 16044.973$, degrees of freedom = 5578) yielded a statistically significant $p = 0.000$, which suggests that variables are associated and therefore appropriate for extraction.

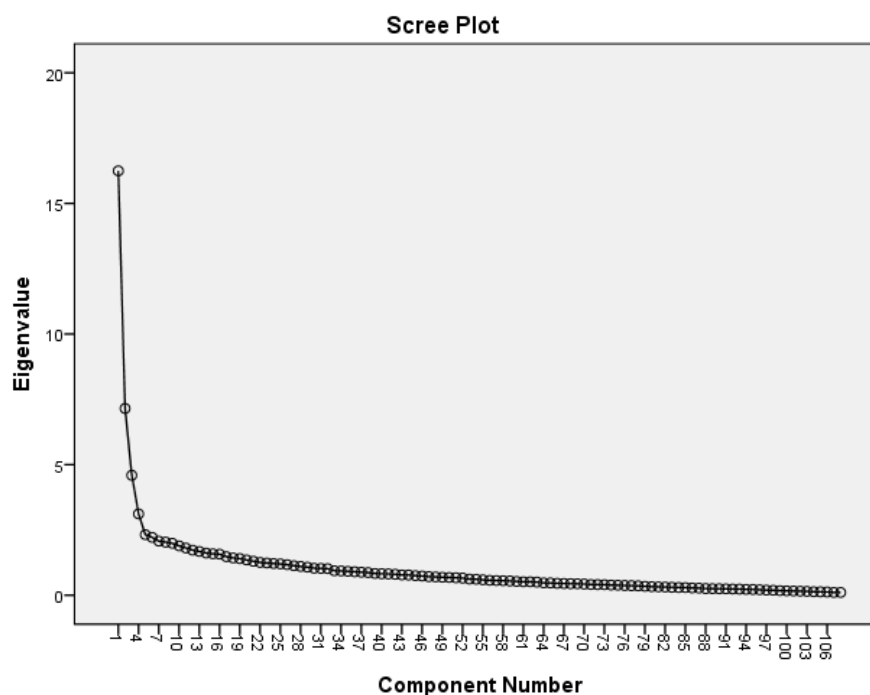


Figure 1. Scree Plot for the MRRF-ARS showing the amount of variance described for each factor loading (SPSS Output).

Figure 1 shows the scree plot, which presents items with a minimum of .40 factor magnitude, which accounted for the amount of variance described for each factor loading. Thirty-two components emerge from 108 items. The initial 108-item questionnaire was reduced to 68 items through the Varimax Extraction Method, with two factors accounting for 21.662 % of variances. At the same time, other components were excluded due to the low communalities or unaccepted factor loadings. After the extraction method, only 68 items qualified in the final inventory. Components 1 and 2 consist of items that are included in the last inventory. However, components 6, 8-17, 19-32 do not have any item included on the final list, while components 5 & 4 each have one item included on the last inventory. Although, there are items that have negative factor loading from components 1, 2, 3, 4, 7, and 18.

Table 1. *Factor Loadings, Eigenvalues, Percentages of Variance, Mean and Standard Deviations of the 68-item Academic Resilience Scale (First factor)*

Academic Resilience	FL	M	SD
Factor 1: Positive Coping and regulation on Academics Eigenvalues: 16.245; Percentage of Variance: 15.041%			
1. I monitor and evaluate my achievements and effort in my academics.	.564	3.1471	.72186
2. I study my lessons and topics before coming into class.	.432	2.6559	.72205
3. I always read the instructional materials that my teachers have assigned.	.573	3.1941	.74309
4. I do my assignments and my projects ahead of time.	.541	3.0147	.74653
5. I put a high standard on the projects and assignments that I need to comply with.	.539	2.9971	.73069
6. I am able to utilize my learning when I am interacting with people.	.581	3.0824	.68635
7. I am able to apply my academic learning when I am facing conflict with my friends.	.451	2.9559	.79885
8. I am able to interact with friends when we are doing related academic activities.	.553	3.1324	.77772
9. I am open-minded when other people explain new ideas.	.511	3.3971	.72339
10. I am able to empower myself when I am helping other people with their schoolwork.	.603	3.0412	.74355
11. I give high value in achieving challenging schoolwork and achievement.	.552	3.1324	.71032
12. I always finish my school task despite my personal issues.	.499	3.1971	.75218
13. I tend to analyze my problem in school and come up with wise decisions.	.532	3.0824	.69489
14. I commit to putting effort into my task despite my priorities.	.511	3.0735	.72291
15. I am confident in my effort and performance, even under challenging subjects.	.408	2.8559	.74060
21. I am assured that I will be able to accomplish the performance tasks given by our teacher.	.605	3.2029	.70187
22. I can fully understand the lesson, ideas, and skills taught in school.	.406	2.9059	.61684

30. Keeping track of my stressors helps me manage them efficiently.	.528	2.7735	.72373
31. Exercising helps clear my mind and allows me to absorb the ideas and skills taught at school.	.468	2.9412	.81074
33. I allow myself a treat whenever I finish my academic requirements.	.508	3.0676	.84043
34. Having quality time with my friends inspires me to have better grades.	.502	3.1206	.78717
35. I breathe and rest for a while whenever I feel tired from my academic tasks.	.606	3.3088	.79929
36. Surrounding myself with loving and supporting family and friends drives me to achieve more and have high grades.	.547	3.4706	.72606
37. My motivation in my studies is essential to reach my academic goals.	.621	3.3618	.74964
38. The belief that I can do whatever I put my mind to pushes me towards my academic goals.	.584	3.1412	.72711
42. My academic goals keep me inspired to continue studying.	.652	3.2412	.76852
43. It seems interesting to set academic goals.	.555	3.1059	.79487
52. I could admit that I need help from others.	.454	3.1912	.78814
53. My room for improvements could be supplemented by others.	.408	2.8500	.71509
56. I always <i>submit</i> my class output/requirements on time.	.476	3.0765	.77955
59. I always check my notebooks, pen, projects, and school materials ready.	.505	2.8676	.87077
60. When I have difficulty with a particular topic, I take note of it and study in the evening.	.447	2.6853	.80801
79. Having the ability to cope with academic stress helps me know how I should perform at school.	.635	3.0647	.69251
80. I am able to respond to academic challenges quickly.	.503	2.8618	.71334
82. I am able to cope up with my stress every time I encounter it in school.	.449	2.8500	.71096
84. I breathe and rest for a while whenever I feel stressed about the performance tasks given by our teachers.	.520	3.1441	.78319

90. Eating the right foods is important for me to understand the things taught in school fully.	.479	2.9412	.82873
91. I accept challenges given to me by others.			
94. The encouragement I receive from my friends helps me to do better.	.554	3.2471	.76279
95. I am motivated when I am doing my school tasks.	.514	3.0912	.66557
96. I would be completely in charge of my academic goals.	.531	2.9941	.76035
97. Challenges make me firm with my academic goals.	.468	3.0118	.76415
98. I could stay focused on my academic goals despite struggles.	.457	2.9206	.68884
105. I would feel motivated if I could share all of my thoughts.	.476	3.0912	.74107
106. I could comfortably accept suggestions from others.	.492	3.1618	.72483

Table 1 above illustrates the final 68 items after the 108 items Academic Resilience Scale factor analysis. Table 1 shows Factor Loadings, Eigenvalues, Percentages of Variance, Mean and Standard Deviations of the 68-item Academic Resilience Scale. There were a total of two factors for the final 68-item Academic Resilience Scale, such as (1) Positive Coping and regulation on Academics, (2) Negative coping, and Perception on academics.

Moreover, the table above shows the first factor, Positive Coping and regulation on Academics, which consisted of items 1-15, 21-22, 30-31, 33-38, 42-43, 45, 47, 52-53, 56, 59-60, 79-80, 82-84, 90-92, 94-98, and 105-106. Statements from all of the items indicate the positive Coping and regulation on Academics. These include the student's academic competence and ability to withstand academic pressures and demands. In this factor, positive regulation of wellbeing and the ability to seek support when needed are also highlighted.

Table 2. *Factor Loadings, Eigenvalues, Percentages of Variance, Mean and Standard Deviations of the 68-item Academic Resilience Scale (Second factor)*

Academic Resilience	FL	M	SD
Factor 2: Negative coping and Perception on Academics Eigenvalues: 7.151; Percentage of Variance: 6.621%			
24.I am not as good as my classmates.	.452	2.6206	.80569
26. My routine in-home and school would change every time I am pressured in academics.	.464	2.2000	.88648
28. I outwardly express my stress in school in the form of anger and/or sadness.	.526	2.6382	.87661
39. A slight criticism of how I do my projects discourages me.	.431	2.4000	.84070

40. Having low grades on major exams dismays my spirit to work towards my academic goals.	.437	2.3176	.86166
41. I find it burdensome to set academic goals.	.413	2.6324	.80749
55. The tendency of being rejected holds me back from asking for help.	.471	2.2588	.79679
61. I am not competent enough when I am doing projects with my group mates.	.422	2.5206	.81080
62. I tend to withdraw from any responsibility when exposed to a bad situation.	.488	2.7500	.80878
64. I have difficulty understanding others' opinions.	.516	2.8882	.79777
65. When I am expressing my idea, I feel that my classmates always disagree with my idea.	.580	2.6382	.86646
66. I have difficulty in identifying my personal strengths that help me in my academics.	.643	2.3735	.82291
67. I have difficulty in recognizing how my feelings affect my performance.	.627	2.3735	.84064
68. I am not good at identifying my perspective/viewpoint about myself whenever I faced challenges in my academics.	.526	2.4471	.85884
69. Sometimes, I am not quick at decision making particularly in uncertain and pressurized academic circumstances.	.533	2.2324	.78075
70. I always tend to lost control of my academic priorities.	.645	2.6059	.77037
71. It makes me uncomfortable when the professor gives surprise tests and quizzes.	.483	2.3029	.84804
75. I often avoid changes.	.408	2.4118	.79146
85. I cry and isolate myself every time I feel stress out.	.452	2.3500	.98865
100. I could hardly know what I really "want."	.433	2.1088	.80002

Table 2 above shows the second factor, Negative coping and Perception of academics, which consisted of items 24, 26, 28, 39-41, 55, 61-62, 64-71, 75, 85, and 100. Statements from all of the items indicate how a senior high school student's negative traits or behavior could influence a student's academic resilience. These include the students coping and Perception of academic demands like stress, negative views about self-esteem, and harmful practices that affect a person's wellbeing.

Reliability AnalysisTable 3. *Reliability of 68 items of academic Resilience*

Items	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item1	.475	.909
Item2	.403	.909
item3	.495	.908
item4	.485	.909
item5	.421	.909
item6	.526	.908
item7	.420	.909
item8	.516	.908
item9	.437	.909
item10	.523	.908
item11	.479	.909
item12	.431	.909
item13	.517	.908
item14	.428	.909
item15	.380	.909
item21	.520	.908
item22	.406	.909
item24	.247	.911
item26	.024	.913
item28	.204	.911
item30	.459	.909
item31	.403	.909
item33	.424	.909
item34	.407	.909

item35	.522	.908
item36	.421	.909
item37	.527	.908
item38	.524	.908
item39	.061	.912
item40	.021	.913
item41	.190	.911
item42	.559	.908
item43	.437	.909
item45	.439	.909
item47	.345	.910
item52	.330	.910
item53	.271	.910
item55	.094	.912
item56	.385	.909
item59	.472	.909
item60	.387	.909
item61	.138	.911
item62	.189	.911
item64	.179	.911
item65	.202	.911
item66	.216	.911
item67	.095	.912
item68	.239	.911
item69	.128	.911
item70	.272	.910
item71	-.024	.913

item75	.099	.912
item79	.536	.908
item80	.476	.909
item82	.392	.909
item84	.471	.909
item85	.147	.912
item90	.414	.909
item91	.437	.909
item92	.540	.908
item94	.461	.909
item95	.437	.909
item96	.472	.909
item97	.353	.910
item98	.412	.909
item100	.074	.912
item105	.331	.910
item106	.404	.909
Internal Consistency of the MRRF-ARS		
MRRF-ARS	α 0.91	
N= 340		

The item-scale analysis is presented in table 3 for the MRRF- ARS. Cronbach's α of 0.91 indicates high internal consistency reliability for the full scale (i.e., summation of the 68 items). All item-total correlations were above 0.1 except items 39 (0.061), 40 (0.021), 55 (0.094), 67 (0.95), 68 (0.239), 71 (-0.024), 75 (0.099), and 100 (0.074); as omitting of these items does not increase the overall Cronbach's α , it is recommended that all items positively contribute to the scale's reliability, supporting the case for retaining these items. 'Alpha if item deleted' revealed and indicate that deleting items 16-20, 23, 25, 27,29, 32, 44, 46, 48-51, 54, 57, 58, 63, 72-74, 76- 78, 81, 83, 86-89, 93, 99, 101-104, and 107-108 would increase—marginally—the reliability of the test.

Table 4. *Correlation of the MRRF-ARS and ARS-30.*

Variables	ARS-30
MRRF-ARS	.468**
N	340

Note: N= 340, *p<0.05

Validity Analysis

Table 4 presents the Correlation of the MRRF-ARS and ARS-30. The present test, MRRF-ARS, correlated it to ARS-30 to identify and find the theoretical connection between the existing standardized instruments. The significant positive correlation between MRRF-ARS scores and ARS-30 ($r=0.49$) reported in the present study demonstrated the scale's concurrent validity. Therefore, the component in ARS-30 shows the similarity and theoretical foundations are relevant.

DISCUSSION

The present study used Academic Resilience to measure and identify the various construct used in the assessment. This study includes assessing the student's emotional capacity to complete the dynamics of academic resilience and success. The present study aims to construct a test that will measure the Academic Resilience of the Senior High School student. MRRF-ARS measures academic resilience and ability to withstand academic diversity, challenges, and stress from academic requirements and experiences as senior high school students. Factor analysis was used to analyze the data from 340 senior high school students.

Exploratory factor analysis was used to investigate the factor structure of the MRRF-ARS. Two factors emerged: factor 1 is interpreted as Positive Coping and regulation on Academics, while factor 2, analyzed as Negative Perception in coping with academics. The emerging factors reported for a total of 21.62 % of the variance in academic resilience scores and bear a resemblance to factors previously reported in studies focusing on the assessment of resilience construct and reflecting aspects of self-regulation and self-efficacy. The most crucial factor was Positive Coping and regulation on Academics, accounting for 15.04 % of the variance. A Negative perception followed this in coping with academics, accounting for 6.62 % of the variance. Thus, the emerging factors reflect previously identified and meaningful aspects of resilience.

The first factor, Positive Coping and regulation on Academics, includes items featuring academic performance, social and personal competence, highlights the implication of self-esteem, coping to stress, and ability to promote a sense of wellbeing. Some of the items also include students; motivation to set goals, have strong connections/relationships with peers, and seek help when needed. This research also has a parallel construct with Lereya et al. (2016) researched that self-regulation and effective coping to handle academic demands in the school setting are determinants of the student's resilience.

On the other hand, the second factor, Negative Coping and Perception of academics, includes the items with negative Perception in self-esteem, personal and social competence in academics, difficulty accepting change, and difficulty handling stress. Some items include

low motivation to succeed, negative Perception of setting goals, and difficulty in asking for help when needed. The factors identified were parallel to Masten's (2011) findings that concluded that a person who adapts well to stress encountered in the academic setting might fail to adapt well in terms of personal life and relationships. Since maintaining balance with wellbeing and withstanding academic pressures is challenging.

On the other hand, Item analysis presents a strong indication for internal consistency reliability of the items, with the reported Cronbach's alpha of 0.91 exceeding levels customarily considered acceptable. Low item-total correlations did raise uncertainties regarding the functioning of forty items (items 39, 40, 55, 67, 68, 71, 75, and 100). Meanwhile, the researcher retained items that contributed positively to the internal reliability of the scale since its deletion did not raise the overall reliability of the global scale and did so only minimal at the factor level.

In terms of validity, Senior High School Academic Performance scores were associated with increased academic resilience. MRRF- ARS, its concurrent validity, scores are related to other scores on other measurements, ARS-30, that have already been established as valid. Related literatures both of MRRF- ARS, and ARS-30 reported significant associations between Academic performance and academic resilience. The essential scores between ARS-30 and MRRF- ARS and its considerable positive correlation had demonstrated good concurrent validity of the scale. These two tests have a significant relationship that would assess the same constructs.

Conclusion and Recommendation

The psychometric properties of the MRRF-ARS were reported as convincing and as a constructed measure of resilience in academics and the ability to withstand from academic diversity of 340 Senior High School Students. It proved that MRRF- Academic Resilience Scale has good psychometric properties and can measure its academic resilience. The two factors/components identified, such as Positive Coping and regulation on Academics and Negative Coping and Perception on academics, measured and served as a predictor of Academic Resilience. Therefore, a high score on this scale revealed that positive coping and self-regulation in academics. A high score can also suggest that a student can cope and withstand the stress and adversities that he or she encountered. Therefore, the present study clarified that the previous emerging factors identified served as a meaningful aspect of resilience.

Generally, this test measures academic resilience with two factors that identify the students' ability to adapt and withstand academic stress and demand. Each of the emerging factors represents standard features evident in existing research that investigate resilience. Although there is limited research on academic resilience in the Philippines, the resilience concepts and constructs identified were contextualized in the Philippines' setting. Thus, the emerging factor structure, and the degree to which it relates to accepted theoretical definitions and relevant constituents of resilience, support the construct validity of the MRRF-ARS as a resilience construct. Therefore, further research is encouraged to increase its generalizability and scope. Hence, an improvement on several areas and components was needed, particularly involving further assessment to establish the concurrent validity and reliability of the scale. Administering the test result to different school/grade levels, such as college students, can strengthen and widen the scope of this instrument. Administering the MRRF-ARS scale to other nationalities or cross-cultural norming can also enhance its psychometric properties.

On the other hand, this instrument can also measure the academic resilience of the student in times of the COVID-19 pandemic. This pandemic might affect the resilience of students while coping in times of pandemics. Future program developers and school institutions can use this test to strengthen their policy, programs, and curriculum that can aid the students to enhance their resilience to cope in their difficult situation and stress encountered on their academics.

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***Involvement of Related Populations in Tourism Community Development:
DMOs in the World Heritage Horyuji District***

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Abstract

This paper aims to focus on related population, recently the object of expectation with regard to a new regional revitalization policy in Japan, and to elucidate its actual activities. The study first defines and categorizes related population. Next, from among the four types categorized, it examines the case study of Destination Marketing/Management Organizations (DMOs) in the World Heritage Horyuji district. The analysis results enable observation of the actual status of the knowledge creation spiral centered on DMOs, the existence of core leaders promoting this spiral, and knowledge transfer from tourism community development to everyday work.

Keywords: Related Population, Tourism Community Development, Service Ecosystem, Knowledge Creation

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Introduction

Related population, a concept newly established in 2016, does not yet have an organized definition or categorization. Therefore, this study begins by redefining and categorizing related population—currently subject to diverse interpretations—as a precondition to the research objective of clarifying its actual activities.

Next, a case study is addressed in the form of Destination Marketing/Management Organizations (DMOs) promoting tourism community development in the World Heritage Horyuji district. Through this case, the study elucidates the transformation of “related population in the region,” conventionally lacking motivation for community development, into “active related population.” Specifically, the analysis adopts three perspectives: motivation for participation in tourism community development, actual status of knowledge creation within the region, and transfer of knowledge acquired through activities.

This study presents implications for countries around the world that, like Japan, are faced with issues arising from declining and aging populations, as a new population policy and regional revitalization model.

Background

According to the United Nations World Population Prospects [2019], although Japan’s rate of aging was as low as 7% in 1970, it reached 20% in 2005 and is now the highest in the world, including in predicted values for 2060. Aging populations are expected to become an issue in multiple areas of the world, starting with East Asian countries including China and South Korea. As a global era of declining and aging populations comes to pass, Japan, one of the first countries to confront these issues, is a focus of attention as to how the problem should be addressed.

In this context, Japan has produced various policies intended to do away with the unilateral concentration of the population in urban centers. Typical among these is the “regional revitalization” central to the policies of the Second Abe Cabinet of 2014. Based on the Masuda Report, this policy raised alarm over the “disappearance of local communities” and triggered competition for population gain among the regions. Conversely, it also led to the criticism of quantitative population increase policies aimed at correcting concentration in urban centers.

From 2016, arguments have been made in attempts to convert the regional population decline issue from a quantitative to a qualitative concept, giving rise to the keyword “related population.” This new concept differs from the division of non-resident population—people visiting a region for short periods of time—and resident population—the subjects of long-term migration. Similar studies overseas include Schlyter [2003] on multi-habitation (multiple families sharing a living space), Benson [2009] on lifestyle migration (migration intended to improve quality of life), Becker [2008] on outsiders, and Hannonen [2020] on digital nomads (a new style of work that has recently attracted attention) among others.

Definitions and Categorizations of Related Population

Definitions of Related Population

This section reviews previous research and organizes the existing definitions of related population. Takahashi [2016] defines related population as “people latent between resident and non-resident populations who regularly visit the provinces from the city.” Sashide [2016] likewise uses the definition of “people who become involved with a region for purposes not including migration or tourism.” The Ministry of Internal Affairs and Communications (MIC) defined the concept in 2018 as “those involved in diverse ways with a region and its people who are neither long-term residents nor short-term non-residents.” The commonality among these definitions is their context of people involved in diverse ways with the region based neither on conventional migration and residence policies nor exchange and tourism policies.

Odagiri [2018] divides this “diverse involvement” into the elements of “interest” (awareness) and “involvement” (action), defining related population as “urban residents who are interested and involved in provincial areas.”

Common to the above four definitions is the approach to related population using the framework of urban versus rural communities.

Tanaka [2021] points out that urban areas also include “regions facing declining population issues,” defining “related population” as “outsiders continuously interested and involved in a specific region.” Tanaka’s definition is characterized by its use of the word “continuously” to express the frequency of involvement rather than taking a chronological approach and as the first to employ a clear identification of the subjects involved in the region as “outsiders” (Table 1).

Table 1: Definitions of related population

RESEARCHER/SPECIALIST	DEFINITION
Hiroyuki Takahashi [2016]	People latent between resident and non-resident populations who regularly visit the provinces from the city
Kazumasa Sashide [2016]	People who become involved with a region for purposes not including migration or tourism
Ministry of Internal Affairs and Communications [2018]	Those involved in diverse ways with a region and its people, who are neither long-term residents nor short-term non-residents
Tokumi Odagiri [2018]	Urban residents who are interested and involved in provincial areas
Terumi Tanaka [2021]	Outsiders continuously interested and involved in a specific region

With regard to the inclusion of “outsiders” in the definition, Tanaka [2021] adopts a “sociological positioning based on the concept of the subject outside the region.” However, according to Shikida [2005], a proponent of the “outsider effect” in community development, “not all outsiders come from outside; outsiders may also emerge from within the region.”

Conversely, the conventional outsider theory in regional development tends toward the “theory of outsiders as resources,” in which the region makes use of the outsiders [Noda, 2000; Shikida, 2009]. In this sense, related population further develops the conventional outsider theory as premised on the transformation of awareness and attitudes from the “object” to the “subject” of regional development, expected to lead to the realization of cooperation with the region and value co-creation.

Based on the above, this study presents two new definitions of related population: broad and narrow. The former is “people from inside or outside a region who are (actually or potentially) continuously interested in and involved with the region.” This broader definition includes the concept of “outsiders within the region” [Shikida, 2005] as well as those with the “potential” for development into future related population. This point was made with an eye to “those involved in diverse ways” as defined by MIC.

However, if as the government hopes, related population is defined as “those potentially responsible for the region” [MIC, 2018], the regions must segment their related population more precisely and come up with targeted policies. To this end, the narrower definition proposed is “people from inside or outside a region who belong temporarily to the region or its organizations and participate in regional development in cooperation with local actors.” This definition positions related populations as those who, even if on a temporary basis, have entered the region and become actively involved as the subjects of regional development.

Categorizations of Related Population

Next, let us consider the categorizations of related population. MIC [2018] uses the axes of involvement with the region and feelings toward the region to create the categories of “near residents” (living nearby, with roots in the region), “faraway residents” (living far away), “wanderers” (who come and go within regions), and “those who have worked in, lived in, or visited the region in the past.” Odagiri [2018] uses the axes of interest and involvement to create the categories of regional goods purchasers, taxpayers (under the artificial “hometown” tax system), frequent visitors, and residents of two regions. Sakuno [2019] uses the axes of urban/rural perspective and emphasis on value creation/lifestyle maintenance to create the categories of regional support orientation, “slow life” orientation, regional contribution orientation, and non-resident regional maintenance. With regard to the categorization of outsiders, Shikida et al. [2019] and Morishige et al. [2021] use the axes of resource ownership and service consumption/creation to create the categories of resident, service creator, customer, and resource owner.

As seen here, categorizations currently cover as diverse a range as definitions. In accordance with the broad and narrow definitions indicated above, this study presents a new categorization. The axes used are positions inside/outside the region (vertical) and relationship, that is, the degree of interest and involvement in the region (horizontal) (Figure 1).

First, those inside the region with high interest and involvement in the region are categorized as the “active” group. This applies to groups collaborating with regional revitalization through resolving regional issues over a limited period of time, region–academia collaborations in which university students work with community residents to resolve issues, local innovators developing regional businesses based on the resolution of local issues, and so on. This group uses “related population” in its narrower sense, including “outsiders” making temporary visits to the region from outside as well as the MIC [2018] category of “wanderers.”

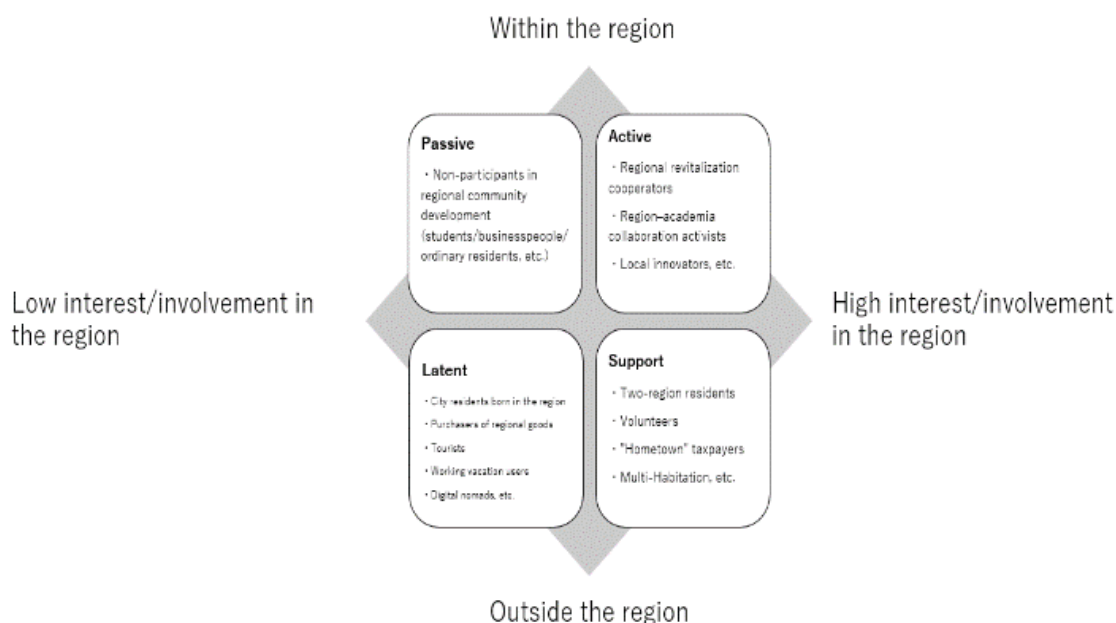


Figure 1: Categorization of related population

Next is the “support” group or those residing outside the region with high interest and involvement in the region. This includes residents of two regions who return to their hometowns on weekends to care for elderly parents, volunteers providing support in disaster-afflicted areas, “hometown” taxpayers, and so on. This group is composed of those who want to support the region in some shape or form, similar to the concepts of “dual-region residents,” “taxpayers” [Odagiri, 2018], “regional contribution” [Sakuno, 2019], and “multi-habitation” [Schlyter, 2003].

Likewise, those residing outside the region with low interest and involvement are categorized as the “latent” group. This includes city residents hailing originally from the region, purchasers of regional goods, tourists, those on working vacations, digital nomads [Hannonen, 2020], and so on. Compared to the other three groups, this group is only loosely connected to the region.

Last is the “passive” group of those residing inside the region with low interest and involvement therein. This group includes local residents, businesspeople based in the region, students at local universities, and so on. Although they do not participate in community development activities intended to resolve regional issues, their existence within the region enables them to be positioned as “related population in the region.”

Above, this study has established four categories of related population. With the exception of the active group, all can be considered potential members of the study's narrower definition of related population. In the future, regions will be in need of a strategy aimed at increasing the active related population in order to cultivate a related population capable of taking responsibility for the region in the future.

Case Study Research

Overview and Background of the Target Region

The region addressed in this case study is Ikaruga Town in northwest Nara Prefecture. With a population of approximately 27,000, this town is a major Japanese tourist site owing to its historical and cultural heritage, including the Fujinoki tumulus and Horyuji Temple, the world's oldest wooden building, said to have been built 1400 years ago by Prince Shotoku and registered in 1993 as Japan's first World Heritage site.

While the presence of Horyuji as a major tourism resource has been a blessing for Ikaruga, the town has also been dependent on it for many years, resulting in a passive approach to the development of new tourism resources. The number of tourists visiting the town to see Horyuji peaked at 1.28 million in 2010 and has been on the decline ever since, as a result of the decrease in school trips caused by the decline in child population, the shift in tourism trends from group to individual travel, the change in preferences from sightseeing to experiential, etc. Alarmed by the situation, the town produced its first tourism strategy in 2011, aiming to find and develop new tourism resources rather than remain dependent on Horyuji alone.

Research Targets

Involved in the business project perspective in Ikaruga Town's tourism strategy was Masahito Inoue. Originally the proprietor of his family's real estate business, he developed an interest in community building and created a Community Development Division in his company in 2013. In 2017, he registered as a DMO and began full-scale tourism community development work. In this study, interviews were conducted with Inoue, Koichiro Yanai, a civil servant who worked with Inoue through his position at Ikaruga Town Hall, and Aya Tsutsumi, a florist also involved in tourism community development with Inoue (Table 2). Both Inoue and Tsutsumi, born in Ikaruga, are non-outsider "related population within the region." In this case, their involvement in regional tourism community-building while running their real estate and florist businesses enabled them to transform from "passive" to "active" related population.

Table 2: Interview targets

Name	Affiliation	Title
Masahito Inoue	Regional DMO/Ikaruga Industries, Inc.	CEO
Koichiro Yanai	Ikaruga Town Hall	Head of Tourism, Culture and Commerce Section
Aya Tsutsumi	Kutsurogi kukan – Orange no niwa	Representative

Research Methods

The data collected included results of interviews held via an online remote conference system in March 2021, as well as two semi-structured interviews conducted on site in July 2021. The analysis used Otani's SCAT method (2011).

Analysis Perspective

The analysis uses Tahara's [2021] framework, integrating the service ecosystem of Vargo and Lusch [2014] and the knowledge creation cycle of Nonaka et al. [1995, 1998] (Figure 2). This framework integrates the three-level spatial perspective of the service ecosystem and the four "places," tacit knowledge, and explicit knowledge of the knowledge creation process. This enables the elucidation, on the one hand, of tourism community development activities within knowledge co-creation and the service ecosystem and the status of movement between these activities and the daily work (practice) of the main businesses, which cannot be fully grasped by levels of the service ecosystem alone, and, on the other, of the aggregation of actors at each level of the service ecosystem and characteristics of the systematic logic therein, which cannot be fully grasped within the knowledge creation process.

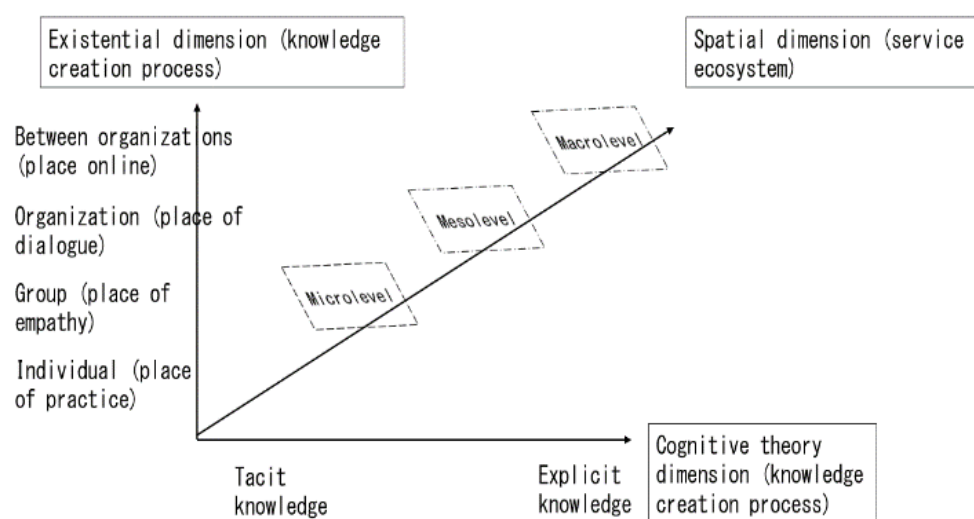


Figure 2: Analysis perspective
[Tahara, 2021]

Research Results

Storyline Generation

Inoue's Storyline

The background for Inoue's involvement in tourism community development is, he says, an indirect influence from the previous generation, whom he watched working in community development while running their real estate business. While Inoue himself has likewise been involved in community development through city hall work, the PTA, and volunteering, the direct opportunity for participation in tourism community development was his membership

in the Chamber of Commerce's Youth Division. Coming into contact through his Chamber of Commerce activities with businesses closing down and those with no successors, Inoue came to consider what kind of business would make the most of Ikaruga's strengths. He focused on tourism, which has a low barrier to entrance from other business categories. The only distinguishing factor of a tourism business is whether it targets tourists or not, enabling "tourism businesses to be created by a shift in attitude alone." He began to see the issue thus: "A lot of tourists visit Horyuji and then jump right back on the bus and leave. Is there some way we can keep these pass-through tourists in the town longer?" In 2013, he established a Community Development Division in his company, and in 2017, he registered as a candidate DMO and began full-scale participation in tourism community development. Inoue worked to convince his local businesses that "[they] too could become tourist businesses." Shortly after he entered the field of tourism community development, five restaurants opened in the Horyuji area. While the direct economic effects have not yet been fully realized, many local residents use the restaurants along with tourists. In 2019, the WAQOO Horyuji hotel opened in town; even amid the COVID-19 pandemic, it hosted 5,985 people in FY2020, approximately 8 times the number of the previous year, beginning to show steady results. In addition, when Inoue drives his tourist-experience buggy around town, local farmers wave at him, showing an unprecedented effect of creating communication with local residents. In April 2021, the West Nara Wide Area Tourism Promotion Council, a wide-area collaborative project among six local municipalities, including Ikaruga Town, was launched with Inoue as its secretary general. Its goal is to bring in tourists from neighboring prefectures, such as Osaka and Hyogo, reaching six million tourists in the area within five years.

Yanai's Storyline

In 2011, when the town embarked on tourism community development in earnest, with a policy focusing on tourism in the general town plan, Yanai was transferred to the tourism division. The context included a drop by half in the number of visitors to Horyuji, over a million at its peak, and thus, the need to plan a move away from dependence on Horyuji. Thus began Yanai's partnership with Inoue. At the time, however, they were both "tourism amateurs," "throwing out opinions at random." With their 2017 registration as a DMO, extensive external information became available. Yanai and Inoue became part of a network extending outside the region, including not only local groups such as the Chamber of Commerce and tourism associations but also other municipalities and their tourism organizations. Taking cues from the information gleaned through this network, the "Pokémon Manhole Project" began in January 2021. Its aim is the extraction of a new target group different from visitors to Horyuji.

Tsutsumi's Storyline

Tsutsumi says she became involved with the tourism community development plan when asked to do so by Inoue, who was then (2012) serving as chair of the prefectural association of the Chamber of Commerce. At the time, she was frustrated with the florist shop she had opened as a sideline to the welfare facility originally established by her grandfather. Hoping to find a way through, she joined the association as requested by Inoue, a trusted childhood friend. Recently, on introductions through the DMO, she has been taking part in large events held by Osaka businesses as well. In addition, she has found a new line of work as a flower arrangement instructor through tourists who posted on social media about their experience trying flower arrangement. She also has a sense of an expanding network as she reaches new tourists by changing the store's background music, etc., based on the advice of tourists.

Tsutsumi herself has achieved knowledge transfer to practice by drawing on the colors and arrangements selected by tourists in their flower arrangement experience in her business.

Theoretical Discussion

Theories were created based on the structural concepts generated from each storyline (Table 3).

Table 3: List of theoretical discussion through SCAT

Target storyline	Service ecosystem level and system perspective	Four places of knowledge creation cycle	Theoretical discussion (underlined sections in storyline)
Inoue	Agent to micro	Practice to empathy	<ul style="list-style-type: none"> Indirect influence from previous generation and direct influence of joining Chamber of Commerce Youth Division Attempt to identify business using Ikaruga's strengths to resolve issues of closing businesses and those without successors Focus on low barrier to entrance (just change target) Plan to encourage tourists to stay within the town rather than pass through
	Micro to meso Meso to macro	Empathy to dialogue Dialogue to online	<ul style="list-style-type: none"> Involvement of related people with regional business revitalization as a concept Wide-area collaboration with six neighboring municipalities in order to draw in tourists from areas such as Osaka and Hyogo
	System (values and norms)		<ul style="list-style-type: none"> Sharing ideas (values) of community development aimed at increasing satisfaction of regional producers, businesspeople, and residents
Yanai	Agent to micro	Practice to empathy	<ul style="list-style-type: none"> Lack of alarm at town's dependence on Horyuji General town plan focused on tourism from 2011 to move away from dependence on Horyuji
	Micro to meso	Empathy to dialogue Dialogue to online	<ul style="list-style-type: none"> Exchange of opinions/brainstorming by tourism amateurs Expansion of network collecting and providing information, based on DMO
	Meso to agent	Online to practice	<ul style="list-style-type: none"> Start of new town projects through internalizing knowledge gained from network
Tsutsumi	Agent to micro	Practice to empathy	<ul style="list-style-type: none"> Joined Chamber of Commerce Youth Division to escape frustration with individual business Deep trust in Inoue, a childhood friend
	Meso to macro Macro to agent	Dialogue to online Online to practice	<ul style="list-style-type: none"> Value co-creation with tourists and external businesspeople through DMO Transfer of knowledge gained from tourists to individual business

Discussion

The implications obtained from the interviews are as summarized below.

Opportunities Leading to Participation in Tourism Community Development

Each of the three interview targets was a tourism amateur. Inoue, who focused on the tourism resource of Horyuji, a World Heritage site and the town's symbol, became interested in tourism community development; the town's strategic policy, aiming for the development of new tourism resources in order to move away from dependence on Horyuji, was in line with Inoue's thinking, enabling Inoue and Yanai to begin their tourism community development initiative. In contrast, Tsutsumi, the florist, was well aware of the tourists visiting Horyuji but was not sure how to connect tourism to business. Invited by Inoue, who happened to be a childhood friend, to join the Chamber of Commerce Youth Division, she decided to take part in tourism community development. From the perspective of knowledge creation, this is a shift from the place of practice to that of empathy. Through the shift from their places of practice (daily work at a real estate company, florist shop, or town hall) to a place of empathy in the form of tourism community development, they deepened their connections to the region. In other words, they were transformed from comprising the passive related population to the active related population within the region. However, at this point, they were sharing

only tacit knowledge, bouncing ideas off one another; in terms of the service ecosystem, their activities took place within a limited group of actors at the microlevel.

The Role of the DMO as an Aggregator for People and Information

Upon the establishment of the DMO in town in 2017, the DMO itself came to function as a gathering point for information and people: it brought together the Chamber of Commerce, the tourism association, businesspeople, producers, and other related people and organizations within the town, developing organized tourism area management. New tourism resources such as restaurants, souvenir shops, hands-on experience facilities, and accommodation facilities began to appear. A space for dialogue was generated with focus on Inoue and Yanai, based on the concept of moving away from dependence on Horyuji, thus making tacit knowledge explicit. With the DMO registered as a candidate corporation, its service ecosystem level can be considered to have moved up from the microlevel to the mesolevel.

The West Nara Wide Area Tourism Promotion Council, launched jointly by six municipalities including Ikaruga Town amid the COVID-19 pandemic in April 2021, is expected to function as an online space with still more people and organizations involved. They are already forming a macrolevel service ecosystem including not only major domestic companies such as JR and JAL but also United Nations World Tourism Organization. This may be considered the stage at which the explicit knowledge developed in the town is linked with the likewise explicit knowledge provided by external actors. Here as well, the DMO centered on Inoue is functioning as a secretariat.

Knowledge Transfer From Tourism Community Development to Places of Practice

Both Inoue and Tsutsumi are making use of the knowledge obtained through tourism community development in their daily work. This stage may be called the internalization of explicit knowledge as well as the process of making it tacit once again. Inoue noted that the communication activities with diverse partners that take place during tourism community development provide pointers for training younger employees. Next spring, Ikaruga Industries will accept new graduates from national universities outside the prefecture; they are the upcoming generation responsible for the region, as well as an example of the acquisition of active related population. Tsutsumi has also succeeded in increasing her customer base through the help of advice from tourists. This has also led to the acquisition of latent related population in the form of tourists. In this way, going back and forth between tourism community development and the place of practice of their own daily work, they repeatedly create knowledge and draw in new related population, constituting a virtuous circle. The entire service ecosystem is shown below (Figure 3).

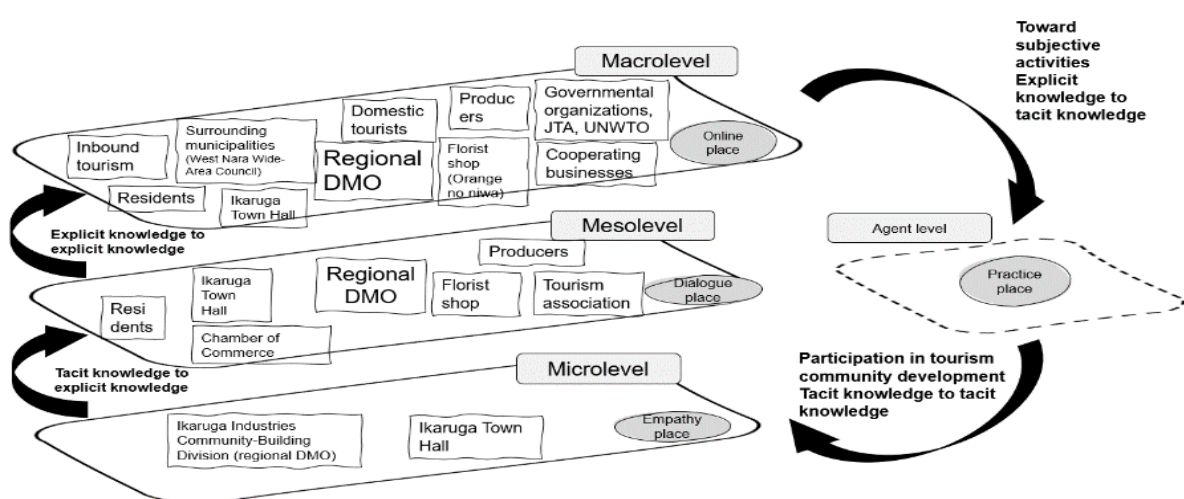


Fig. 3: The Ikaruga Town service ecosystem

Summary and Remaining Issues

This paper concludes with a summary of its content and issues for future research. The study defined and categorized related population and examined how one of its categories, passive related population within the region, can be transformed into active related population. Through their presence in the region, residents were able to sense attraction in the potential presented by Horyuji as a tourist resource. However, the use of “tourism” content to pursue tourism community development was unknown. In this context, the DMO functioned as an organization aggregating people and information, leading to a knowledge creation spiral among actors within and outside the region. The DMO has also relied heavily on its core human resources, one-time tourism amateurs like Inoue and Yanai who have developed into tourism community development leaders.

Although Japan’s declining birth rate and aging society have led to a notable drop in population and its concentration in urban areas, the shift in population policy from the conventional “quantity” to “quality” represented by related population can help resolve the shortage of regional leaders in Japan. Related population within the region, as addressed in this study, may serve as a policy to propose new models for region-led practices, reversing the conventional concept of bringing people in from outside.

The Japanese government has announced a goal of creating 1000 regional public entities involved in creating or expanding related population by FY2024, amounting to nearly 60% of such entities nationwide. However, various issues remain unsolved in order to develop Japan’s related population policy as a global model, given Japan’s position as the vanguard of declining birth rate and aging population. For example, undue haste in acquiring active related population to form potential regional leaders may result in driving away related population who prefer looser connections, thus defeating the purpose of the initiative. To avoid repeating the mistakes of past policies on resident and non-resident populations, it is important not to be distracted by numerical indicators.

Finally, tasks for the continuation of this study include the need to focus on categories other than the “passive related population” addressed here. In particular, a promising topic for

continued research is an investigation of how “support” and “latent” related populations outside the region enter the region and transform into active related population.

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Education for Sustainable Development (ESD) and Its Incorporation Into Formal Education in Japan: An Explanatory Case Study

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Abstract

Education for Sustainable Development (ESD) is vital to create sustainable societies. Successive governments in Japan have advocated the incorporation of ESD into its education system. This paper investigates teachers' understandings of Sustainable Development (SD) and ESD and the extent to which ESD has been incorporated into lessons. The current work is an explanatory case study, conducted in a private senior high school. Data collection involved a literature review, looking at international iterations of ESD and its interpretation by relevant Japanese ministries; an interview with the school's curriculum coordinator; and finally the collection of quantitative data. The instrument was designed by the author. The results indicate teachers view SD primarily through an environmental lens. They consider it of vital importance; however, the majority of respondents find ESD difficult to understand. ESD-related themes are integrated into lessons, although this varies by department and its inclusion is determined by the content of textbooks. Inter-disciplinary learning is largely absent. Respondents supported the development of ESD's core competences and values; however, many of the pedagogies used do not aid that development, even though greater use is being made of Active Learning. To implement ESD more effectively, the school needs to adopt a holistic approach. Teachers must be better acquainted with ESD literature and greater use must be made of active learning methods.

Keywords: Sustainable Development, Education for Sustainable Development, Environment, Values, Pedagogies, Transformation

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Acronyms and abbreviations

DESD	The Decade of Education for Sustainable Development
DeSeCo	Definition and Selection of Competencies
EE	Environmental Education
ESD	Education for Sustainable Development
GAP	Global Action Programme
MEXT	Ministry of Education, Culture, Sports, Science and Technology
NIER	National Institute of Education Research
OECD	Organisation of Economic Cooperation and Development
SD	Sustainable Development
SDGs	Sustainable Development Goals
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific, and Cultural Organization

Introduction

Chapter 36, Agenda 21 (1992) set out the central role of education in the creation of sustainable societies. This was reaffirmed in the Johannesburg Declaration, at the World Summit on Sustainable Development, 2002 (UN, 2002: 64), where education was described as ‘critical’ in the attainment of SD.

Successive governments in Japan have provided for the incorporation of ESD into the country’s formal education system. Its introduction was set out in the Basic Plan for the Promotion of Education, 2008 and again in the Second Basic Plan for the Promotion of Education, 2013 (MEXT, undated). ESD is also a core component of the Courses of Study, 2008 and 2009 (MEXT, 2016).

The objective of this work is to investigate teachers’ understandings of SD and ESD and to consider the extent to which the principles of ESD have been incorporated into the senior high school where they work. It is hoped that this study will add to the literature on ESD in Japan and it will help ESD to be more effectively implemented in other educational institutions.

Significance of the study

ESD occupies an important place in the government’s current and future plans on education (Kodama, 2017 and MEXT, 2016). Yoshiyuki (2017) writes, however, there has been a lack

of critical analysis regarding the implementation of ESD into formal education in Japan. Additionally, many of the studies conducted (see, for example, Cotton et al, 2007 and Thomas, 2014) have focused on ESD in higher education, overlooking its implementation in either junior or senior high schools. This study will help to address that deficit.

Structure of the study

There shall first be a literature review which will look at the relationship between SD and ESD, the nature of ESD and the incorporation of ESD in Japan. The work will then move on to the case study and a presentation of the data. This shall be followed by conclusions and recommendations. The paper will finish by looking at some of the limitations of the study.

Literature Review

The literature review will consider, first, the contribution of ESD in the attainment of SD; second, key features of ESD, specifically in terms of competence development and the need for pedagogies with a focus on Active Learning (AL); third, the incorporation and interpretation of ESD in Japan, including: ESD as transformational education, competencies and concepts within ESD, the use of Active Learning, suggested ESD content, and finally a brief description of 'Zest for Life' and its connection to ESD

ESD and the attainment of Sustainable Development

It is envisaged that ESD will facilitate the attainment of SD in a number of ways. First, it will ensure that, 'all learners acquire the knowledge and skills needed to promote Sustainable Development' (UNESCO, 2020: 14). Learners, having acquired the required knowledge and skills, will then be empowered to, 'take informed decisions and responsible actions for environmental integrity, economic viability and a just society for present and future generations' (UNESCO, 2020: 8). The significance of ESD lies in its goal of fostering change agents, who can help society to transition away from unsustainability.

ESD: key features

The key features of ESD are that it is holistic, value driven and transformative. (UNESCO, 2014). It requires the use of Active Learning pedagogies rather than more traditional teaching methods (Howell, 2021). There is a focus on the need to develop a set of core competencies (Leicht et al, 2018) and the content of ESD must be related to the 17 SDGs (UN, 2015) and it must be relevant to the context in which teaching and learning is taking place (Leicht, 2018). The literature review conducted for this study focused on two of these features: competence development and the use of Active Learning pedagogies.

From the second half of the DESD, competences occupied an increasingly prominent place in ESD (Mochizuki and Fadeeva, 2010; Rieckmann, in Leicht, Heiss and Byun, 2018; UNECE, 2011). Caravita and Clement (2014) write, however, that definitions of competence remain controversial. According to the authors, however, it is the OECD's definition of competency that has succeeded in achieving some consensus. According to the OECD, a competency involves, 'the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context' (OECD, 2005: 4).

Different sets of competences have been set out for teachers and educators (ESD competences) and students (sustainability competences) (Cebrian et al, 2020). The focus of this work is on sustainability competences. UNESCO (2017b) sets out eight key competences that need to be developed, and these are presented below.

UNESCO: Sustainability Competences	
1. Systems thinking competency	2. Anticipatory competency
3. Normative competency	4. Strategic competency
5. Collaboration competency	6. Critical thinking competency
7. Self-awareness competency	8. Integrated problem-solving competency

Source: UNESCO, 2017b: 10

Cebrian et al (2020) write that developing sustainability competences among all levels of education is critical to the development of sustainability literacy, which is a precondition for people to become positive change agents. Stibbe and Luna (2009: 11) define sustainability literacy as, ‘... a wide range of practices people are empowered to participate in, through having skills in using language in particular ways.’ The authors further state that by acquiring sustainability literacy skills people will be ‘...empowered to read society critically, discovering insights into the unsustainable trajectory that the society is on and the social structures that underpin this trajectory’ (2009: 11).

The development of sustainability competences is facilitated through the use of appropriate pedagogies. The International Implementation Scheme (UN, 2006: 31) stipulates that ESD must be interdisciplinary and that ‘...a range of pedagogical techniques that promote participatory learning and higher-order thinking skills’ must be used.

Lozano et al (2017) note, however, that little research has been conducted on the connection between pedagogies and the development of sustainability competences. To address this gap, the authors conducted a meta-analysis mapping pedagogical approaches to the competences that they might develop. The majority of the pedagogies identified by Lozano et al (2017) (Appendix 1) as being likely to foster sustainability competences can be classified as a part of an active learning methodology.

ESD and Japan

The Ministry of Education, Culture, Sports, Science and Technology (MEXT, 2016) sets out three goals for ESD:

- to provide everybody with the benefits of a high quality education
- to, ‘incorporate the principles, values and behaviours necessary for sustainable development ...
- to transform, ‘...values and behaviours in order to bring about a sustainable future...’

Moving on to its key features, first ESD is supposed to be transformative. According to

MEXT, the purpose of ESD is to enable everyone to affect a, ‘positive societal transformation’ (IGES, 2009: 55). Yoshiyuki (2017) writes ESD as transformational education is at the heart of ESD in Japan.

Second, there is a focus on the development of competencies. MEXT (2016) identifies seven competences and attitudes that need to be fostered (see table 1). According to MEXT (2016), however, schools must have the autonomy to define new competences and attitudes as well as to select and tailor the different competences so that they are relevant to local circumstances and the developmental stage of students.

Table 1: Competencies and attitudes to be emphasised in ESD	
1. Ability to think critically	2. Ability to plan with anticipation of a future scenario
3. Multidimensional and integrative thinking	4. Communication skills
5. Ability to cooperate with others	6. Respectful of relations and connections
7. Proactive participation	

Source: MEXT, 2016: 7

Additionally, according to MEXT (IGES, 2009), attention had to be paid to developing learners who are able to think globally and act locally; who respect their connection to other people, society and the environment; and who are able to both visualize a future society and then act upon those plans. In *Japan’s ESD Implementation Plan, 2006* (cited in MEXT, 2016) thinking globally and acting locally was presented as a form of learning that would enable learners to develop new values and behaviours that would pave the way for more sustainable futures.

In addition to competences, MEXT (2016) sets out six concepts (see table 2), which it describes as being important when ESD is being integrated into lessons. It is the responsibility of teachers, when planning lessons, to consider which of the concepts will guide the lesson’s socio-emotional dimensions.

1. Diversity (variety exists)	2. Interdependence (relating to each other)
3. Limitation (limits exist)	4. Fairness (valuing everybody)
5. Cooperation (cooperating with others)	6. Responsibility (taking responsibility)

Source: MEXT 2016: 6

Regarding pedagogies, MEXT (2016) states that traditional teaching techniques will not prepare students for the challenges that they will face. In accord with the position espoused in the *Roadmap for Implementing the Global Action Programme on Education for Sustainable Development* (UNESCO, 2014), MEXT advocates the adoption of active learning methodologies. Active learning was, in fact, described as being the ‘main pillar’ of the 2018 revision of the Course of Study (McMurray, 2018). Giving specific advice on how to incorporate ESD into classrooms, MEXT (2016: 14) calls for teachers to ‘Apply a participatory approach that emphasizes experience and feelings’, and teachers ought to ‘Develop a participatory attitude and problem-solving skills’. These pedagogies echo those identified by Lozano et al (2017) as being conducive to the development of core competences within ESD.

The themes that are to be addressed within ESD, are presented by MEXT in a concept map (figure 1) and there are areas of both convergence and divergence with international iterations of ESD. Further direction was given by MEXT (IGES, 2009), according to which among developed countries, programs had to be promoted in which there was an emphasis on environmental conservation, which, concurrently addressed the integrated development of the environment, economy

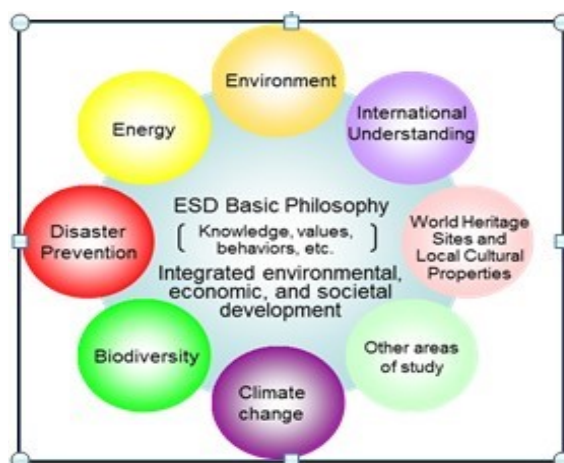


Figure 1: Content areas for ESD

Source: Japan National Commission for UNESCO, 2012: 1

Finally, in terms of Zest for Life, y Nakayasu (2016) writes this is one of the basic goals of current educational practice. The author states there is significant overlap between zest for life and the key competencies defined in the OECD's DeSeCo project. Kimura and Tatsuno (2017) detail the main elements of zest for life as: having solid academic prowess, to be rich in humanity and to be healthy and fit in order to lead a vigorous life.

Case Study

Included in this section are: the three research questions; an explanation of the methodology used for data collection; a description of the site and its ESD policy; and finally the findings.

Research Questions

Three Research Questions were set out to address the question posed in the title:

1. How do teachers conceptualize sustainable development?
2. What is teachers' understanding of ESD?
3. To what extent does teachers' classroom practice support the stated goals of ESD?

Methodology

The data collection methods are a literature review and a questionnaire.

Literature Review

The literature review was conducted to, 'establish a rationale for the research questions or hypotheses' (Creswell, 2014: 62) and to identify the central issues in the field. The literature that has been presented draws heavily on UN, UNESCO and Japanese government policies so that the results of the case study can be located within broader discussions of national and international ESD policy, which can then be understood within broader debates on the nature of sustainable development.

Questionnaire

The questionnaire was developed by the current author. Concepts of SD and ESD, as described in the literature, were rephrased as statements, thus ensuring a high degree of content validity, described by Cohen, Manion and Morrison as the extent to which the instrument, 'comprehensively covers the domain or items that it purports to cover' (2015).

The questionnaire contains 62 questions in total (60 closed and 2 open). When the questionnaire was piloted, it took respondents, on average, 15 to 20 minutes to complete. The items were measured using a five-point Likert scale. The questionnaire was in Japanese to ensure that it was readily understandable. Finally, in terms of its implementation, the instrument was administered in hard copy. While it was the intention of the author to use a Computerized Self-administered Questionnaire (CSAQ), this method was rejected by the school.

Sampling Method

The unit of analysis chosen for the current study is the school at which the researcher works. The rationale upon which the case was selected was its intrinsic interest, a choice supported by Creswell (2007).

Moving on to the sampling methods for the units of observation, the current author did not attempt to delimit a portion of the population (Etikan, Musa and Alkassim, 2016), i.e. the teachers employed at the site. Because ESD is supposed to be both interdisciplinary and holistic it was the intention of the author to gain as wide a range of views as possible.

Description of the Site

The study was conducted in a private senior high school, close to the center of Tokyo. There are 100 teachers: 56 full time, 40, part time and four Assistant Language Teachers (ALTs). There are roughly 1,500 students currently enrolled, ranging in age from 15-18.

Like many other private schools in Japan, the institution is part of an escalator system. In the escalator system ‘a school corporation’ provides education often from pre-school all the way through to university, with primary and lower secondary schools being affiliated to senior high schools and universities.

ESD Policy

The position of the school with regards to ESD was presented by the curriculum coordinator in a recorded interview. He describes ESD as being ‘very important’. However, he went on to state that the school does not have either a formal ESD policy or calendar.

According to the curriculum coordinator, the school’s priorities in relation to ESD are to focus on global issues, such as poverty and environmental problems. It is hoped that this approach will enable students to develop a global mind, which, as has been described above, is one MEXT’s ESD objectives.

Regarding pedagogies, two years ago the school started to encourage teachers to transition away from lecturing to a more active approach, which is more likely to develop ESD’s core competencies. The ratio of lecturing to more active approaches stands at roughly 80:20. The school, for instance, encourages increased use of project and problem-based learning, identified by Lozano et al (2017) as developing the competences required for ESD.

Looking at the competencies that the school is trying to develop among students, these can be located within the set of competencies identified by MEXT. The competencies identified by the school’s management were:

- critical thinking,
- collaboration,
- communication,
- the ability to plan with the anticipation of a future situation
- and proactive participation.

The ability to plan with the anticipation of a future situation and to independently identify and solve problems was described as a key competence, which will enable students to survive in a rapidly changing and increasingly globalized world.

Finally, in terms of transformative learning, the interviewee asserted that the school is focused on meta-cognition and second order change. This approach was described by Sterling (2010) as being reformative rather than transformative. It seeks to examine and change assumptions rather than to affect a paradigm change. Balsiger et al (2017), however state what is required for transformative learning is third order learning, described by Sterling (2010: 23) as being learning that affords learners ‘the experience of seeing [their] worldview rather than seeing with [their] worldview’ and that will lead to a paradigm change.

Findings

The findings will be presented, moving from teachers’ attitudes to Sustainable Development to their understandings and implementation of Education for Sustainable Development, with regards to the inclusion of ESD-related content and the use of Active Learning pedagogies.

Attitudes to Sustainable Development

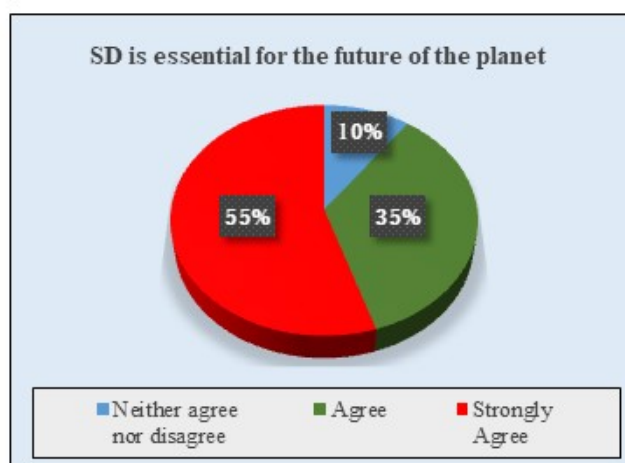


Figure 2: SD is essential for the future of the planet
($n = 20$, $Std. = .687$, $\mu = 4.45$)

A significant majority of respondents see sustainable development as being essential for the future of the planet (figure 2). This view was entirely expected, as few people are likely to say that they want development that is not sustainable!

Consequently, teachers’ views had to be explored in more detail, as there are conflicting views on how SD can be achieved and what degree of change is required to facilitate it. Figures 3-6 look at teachers’ views on SD in more detail.

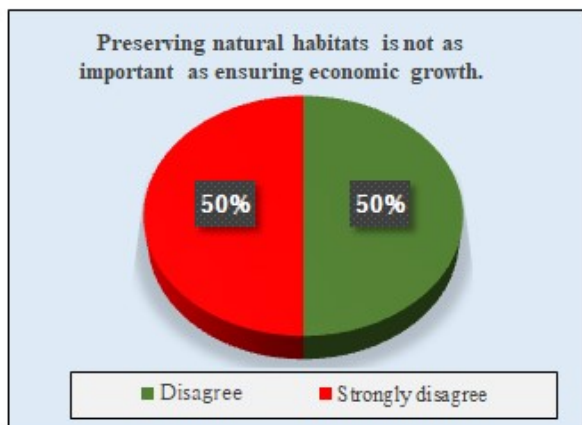


Figure 3: Preserving natural habitats as Important as ensuring economic growth ($n = 20, Std. = .513, \mu = 1.5$)

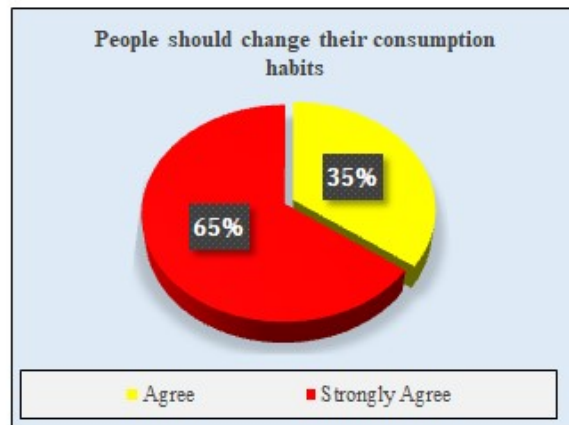


Figure 4: People should change their consumption habits ($n = 20, Std. = .489, \mu = 4.35$)

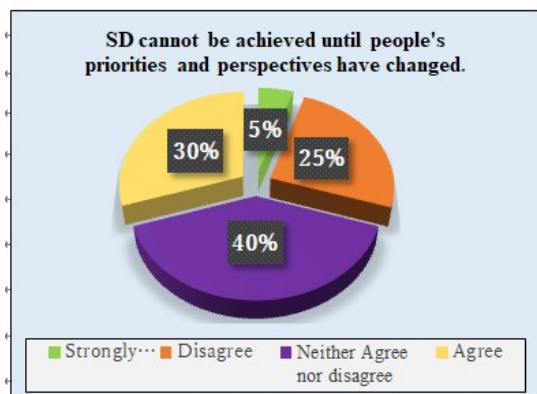


Figure 5: SD cannot be achieved until People's priorities and perspectives have changed ($n = 20, Std. = .887, \mu = 3.60$)

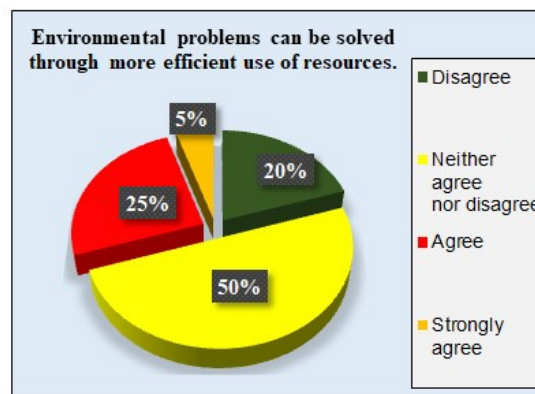


Figure 6: Environmental problems can be solved through more efficient use of resources ($n = 20, Std. = .813, \mu = 3.15$)

The data presented above suggest that respondents attach considerable importance to the protection of the environment and they are prepared to accept some reduction of economic activity in order to attain it (see figures 3 and 4). However, figure 5 indicates that, in general, respondents do not believe that a paradigm change is necessary. Further, the majority of respondents who expressed a definite opinion stated that environmental issues can be solved through more efficient use of resources.

Attitudes to ESD

A significant majority of teachers describe ESD as having a central role in current Japanese educational policy (figure 7) and yet, at the same time, the overwhelming majority of respondents find it a very difficult concept to understand (figure 8). Further, there is considerable confusion regarding the difference between Environmental Education and Education for Sustainable Development (figure 9)

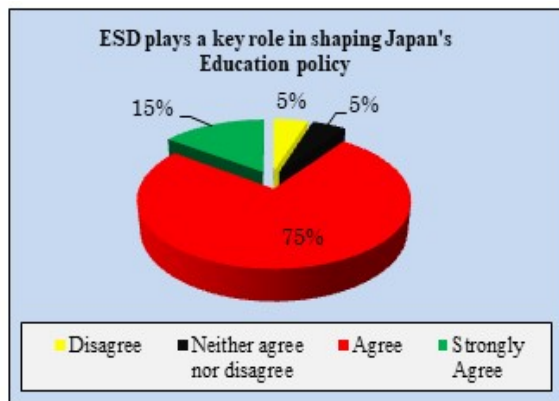


Figure 7: ESD plays a key role in shaping Japan's Education policy
($n = 20$, $Std. = .649$ $\mu = 4.00$)

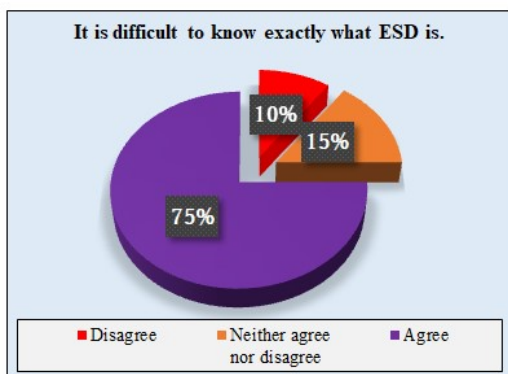


Figure 8: Is difficult to know exactly what ESD is
($n = 20$, $Std. = .671$ $\mu = 3.65$)

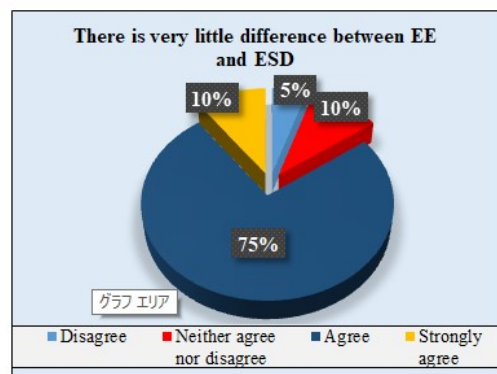


Figure 9: There is very little difference between EE and ESD
($n = 20$, $Std. = .641$ $\mu = 3.9$)

The implementation of ESD in the classroom

To assess the degree to which ESD has been implemented in classes, two factors were analyzed. First, consideration was given to the content of lessons and the extent to which themes associated with ESD have been incorporated. Second, whether the pedagogies respondents use support the development of sustainability competencies.

The Incorporation of ESD-related Content

A significant majority of respondents, who voiced a definite opinion, agreed that the three pillars of SD – economy, society and environment – should be addressed equally in ESD (figure 10) Crosstabs analyses (figures 11 and 12) indicate that ESD's core themes are included in lessons to some extent, with some variation depending on the teacher's department. However, in terms of including content on poverty reduction – Goal 1 of Agenda 2030 – only 15% of respondents could agree with the statement that students will learn about how poverty can be reduced (figure13)

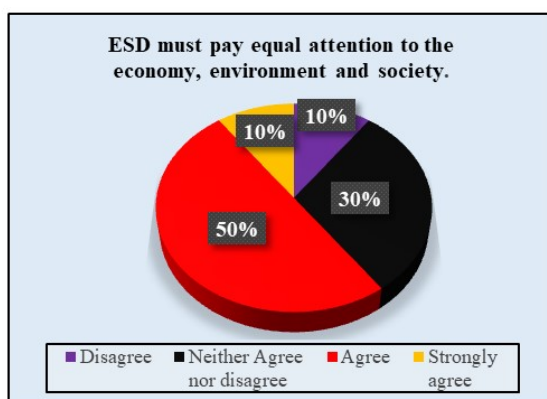


Figure 10: ESD must pay equal attention to the economy, environment and society ($n = 20$, $Std. = .820$, $\mu = 3.60$)

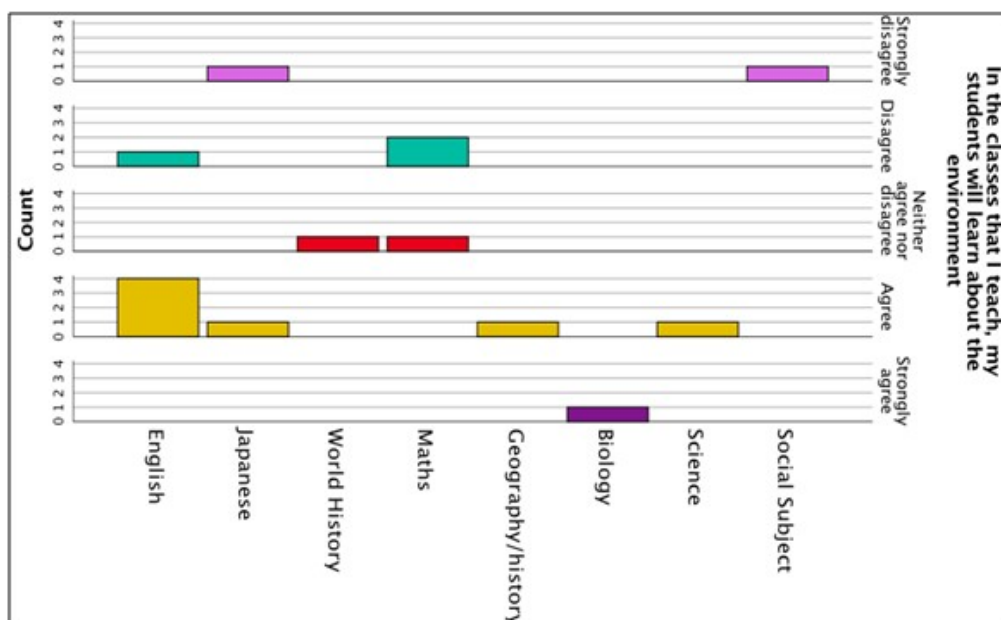


Figure 11: In the classes that I teach, my students will learn about the environment ($n = 20$, $Std. = 1.16$, $\mu = 3.25$)

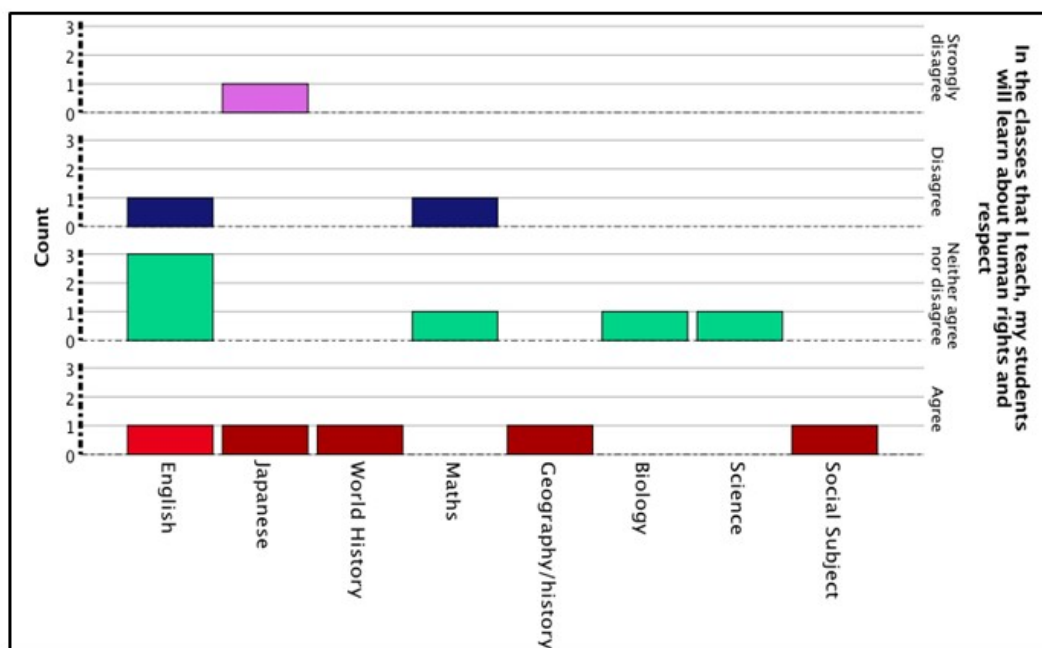


Figure 12: In the classes that I teach, my students will learn about human rights and respect
 ($n = 20, Std. = 1.08, \mu = 3.00$)

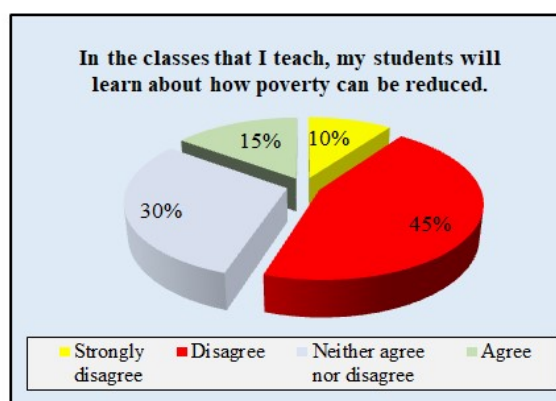


Figure 13: In the classes that I teach, my students will learn about how poverty can be reduced
 ($n = 20, Std. = .889, \mu = 2.5$)

Changing Pedagogies

A significant majority of teachers agreed that how students learn is more important than what they learn (figure 14). The following figures (figures 15, 16 and 17) reveal, however, that, in general more traditional pedagogies are favoured rather than those that have been identified as being most likely to develop sustainability competences.

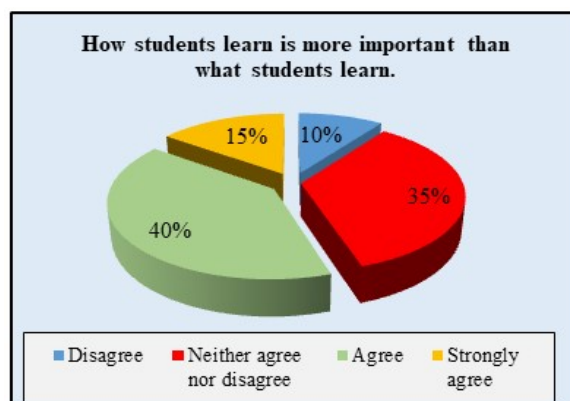


Figure 14: How students learn is more Important than what students learn
($n = 20, Std. = 820, \mu = 3.68$)

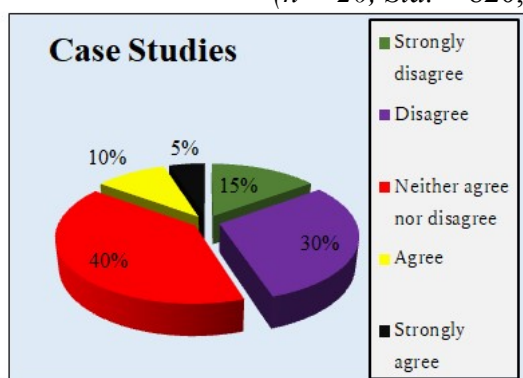


Figure 15: Case Studies
($n = 20, Std. = 1.04, \mu = 2.68$)

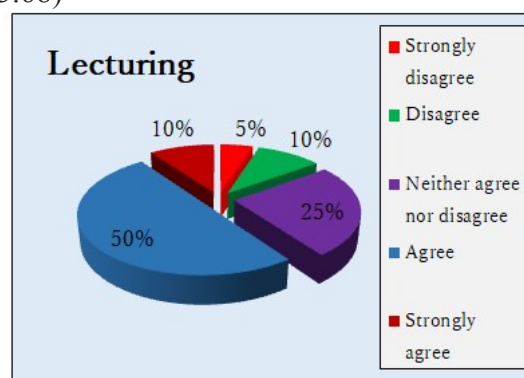


Figure 16: Lecturing
($n = 20, Std. = 1.02, \mu = 3.52$)

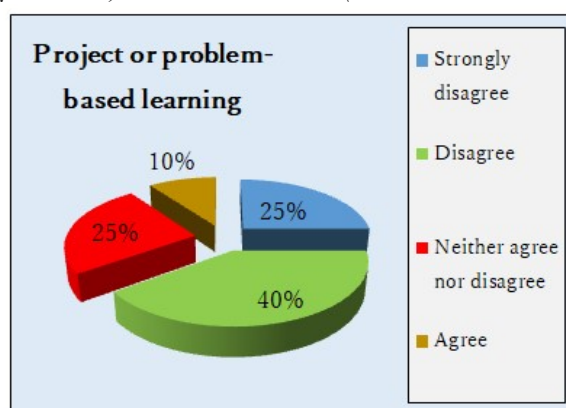


Figure 17: Project or problem-based learning
($n = 20, Std. = .951, \mu = 2.26$)

Conclusions & Recommendations

In this section, the three research questions are addressed. Next, recommendations will be made on how ESD can be better implemented at the school and for future research in the field.

R.Q.1: How do teachers conceptualize SD?

A significant majority of respondents see SD as being essential for the future of the planet. In order to transition to a more sustainable form of development, in which the environment is better protected, most respondents accepted that people's consumption habits would have to change. All of the respondents placed a strong emphasis on preserving natural habitats. On the other hand, most respondents did not believe that people's priorities and perspectives had to change to achieve SD. Further a slight majority of respondents agreed with the statement that environmental problems can be solved through a more efficient use of resources

These responses can be interpreted through the lens of Hopwood, Mellor and O'Brien's (2005) mapping technology (Appendix 2). Using this approach, it is possible to assert that teachers follow a techno centered reform approach, where often profound changes in policy and lifestyle are needed but these can be achieved incrementally and within existing social and economic systems.

R.Q.2: What is teachers' understanding of Education for Sustainable Development?

A striking feature of the data is that although ESD was described by the vast majority of respondents (75%) as playing 'a key role in shaping Japan's education policy', at the same time, 75% of respondents described ESD as being a difficult concept to define. Moreover, many of the respondents to the questionnaire were uncertain as to whether there was any difference between EE and ESD. The view was also expressed in the instrument's open-ended questions that teachers were, in general, insufficiently informed of the subject or even that they had no knowledge of it, in spite of the fact that MEXT has produced so much literature on the subject and the Japanese government played a lead role in launching DESD and GAP.

R.Q.3: To what extent does teachers' classroom practice support the stated goals of ESD?

To answer this question, two points shall be considered. First, to what extent have ESD-related themes been integrated into lessons and second, how far do teaching practices support the development of the core competences described in the literature on ESD and zest for life?

ESD-related themes are included to some extent. A significant majority of teachers stated that students will learn about both the environment and international understanding in their lessons, and a slight majority said that students will learn about biodiversity. However, key themes related to Sustainable Development are still insufficiently addressed, as can be seen with the very low percentage of teachers who include content on poverty reduction in their lessons (SDG 1) and the slight majority of respondents who do not include content on gender discrimination (SDG 5).

Further, it can be surmised that ESD-related themes are not addressed in a holistic way, in spite of this being described as a key feature of ESD by both MEXT and UNESCO. To give an example, in Social Subjects, content on the environment is not included, which suggests that the connections between the environment, society and the economy, which is a key part of ESD, are not being made.

Finally, that ESD content is not taught across the different subject areas is also indicative of the school not having developed an inter-disciplinary approach, although its importance was set out by UNESCO. As an example, while gender discrimination is addressed in World History, it is not addressed in either biology or science.

In terms of pedagogies, it will be remembered that the adoption of active learning methods has been described as essential to develop core competences within ESD (MEXT, 2016 and UNESCO, 2006). The data obtained suggests that increasing use is being made of AL. According to the curriculum coordinator, the school is committed to transitioning away from more traditional pedagogies.

However, the extent of the progress made towards AL should not be overstated. The data points to the continued use that teachers are making of lecturing, with very few of the respondents indicating that they used any of the AL pedagogies that were included in the questionnaire. In terms of competence development, referring back to Lozano et al's (2017: 10) study, it will be remembered that lecturing, at best, 'may address' some of the competences identified as important within the framework of ESD.

Further, the value of knowledge transmission with regards to content on the environment – defined within ESD as an instrumental approach (Balls, 2016) – has been questioned by Boeve-de Pauw (2015). Citing studies by Krnel and Naglic, and Hallfredsdottir, the author posited that having knowledge of environmental problems will not automatically lead to more positive attitudes to the environment.

Recommendations

In this section, recommendations are made for the better implementation of ESD at the school and for areas of further research.

Implementing ESD

First, the school needs to introduce an ESD calendar. According to MEXT (2016: 17), this will enable lessons to be designed around key concepts identified within ESD. In a case study conducted by MEXT (2016), it was found that having an ESD calendar ensured that teaching activities could be continued even when a teacher left or was moved to a new grade.

Second, the school needs to continue transitioning away from traditional pedagogies, specifically lecturing, to the pedagogies associated with the development of ESD core competences. There needs to be a more varied approach in the use of pedagogies and this should also have a positive impact on the level of student involvement.

Finally, following the literature on ESD, the three pillars of SD need to be addressed in a more balanced manner. By omitting the social and economic dimensions of SD, it will be extremely difficult for students to develop the systems thinking that will enable them to conceive of solutions to the problems that the world faces and this, after all, is the essence of ESD.

Areas for further research

First, the nature of teaching on ESD related themes should be scrutinized to see what issues are being addressed. Where content on poverty reduction is being taught, for example, is this done purely in reference to other countries or are local issues also addressed?

Second, in order to assess the impact that ESD is having, it would be useful to conduct a longitudinal study among students, in ESD oriented schools, in order to establish the degree to which ESD shapes their values and behaviours. Such a study would need to be conducted in a number of sites so that comparisons could be drawn on the efficacy of different approaches and in this way best practice could be established.

Limitations

Following Verschuren (2003), as a case study, this work can be said to have limited external validity because only one research unit was included. According to Yin, however, the goal of case study research is to, 'expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization) (Denscombe, 2014: 61). Further, according to Simons (2012), validity is grounded in, 'professional agreement as to the usefulness of particular insights, and in the trust and confidence that may be placed in colleagues offering them' (2012: 6).

The quality of the findings can also be questioned on the basis of bias or the subjectivity of the researcher (Cohen, Manion and Morrison, 2015). In defense of this study, Simons (2012) writes that rather than trying to eliminate subjectivity, a more fruitful approach is to acknowledge the subjectivity of the account and to detail the steps which have been taken to identify and correct the bias.

The subjectivity of the researcher involves a focus on the environmental dimension of SD. Further, because of the author's teaching experience in Japan, he is skeptical regarding the extent to which ESD has been or will be incorporated into teaching and learning.

How the study was implemented will also have had an impact on the findings. Of concern is the non-response bias of 80%. This contrasts poorly with Fincham's (2008) assertion that researchers should strive to attain a response rate of 60% for questionnaires. Following Tourangeau and Plewes (2013), the low response rate in this study 'creates the potential for bias in estimates, in turn affecting survey design, data collection, estimation, and analysis' (2013: 40). The authors note, however, that a high non-response rate does not necessarily equate to a high level of bias.

Applying these considerations to the current study, it was the intention of the author to gather data that would reflect the attitudes of the generality of teachers at the site. Breaking down the respondents, it is evident that the English department was over-represented ($n = 5$), while teachers in the science departments were considerably under-represented. Female respondents are slightly over-represented. In terms of the ages of respondents, there was little difference between respondents and the average for the teacher population. Finally, the number of full-time teachers was slightly over-represented ($n = 12$).

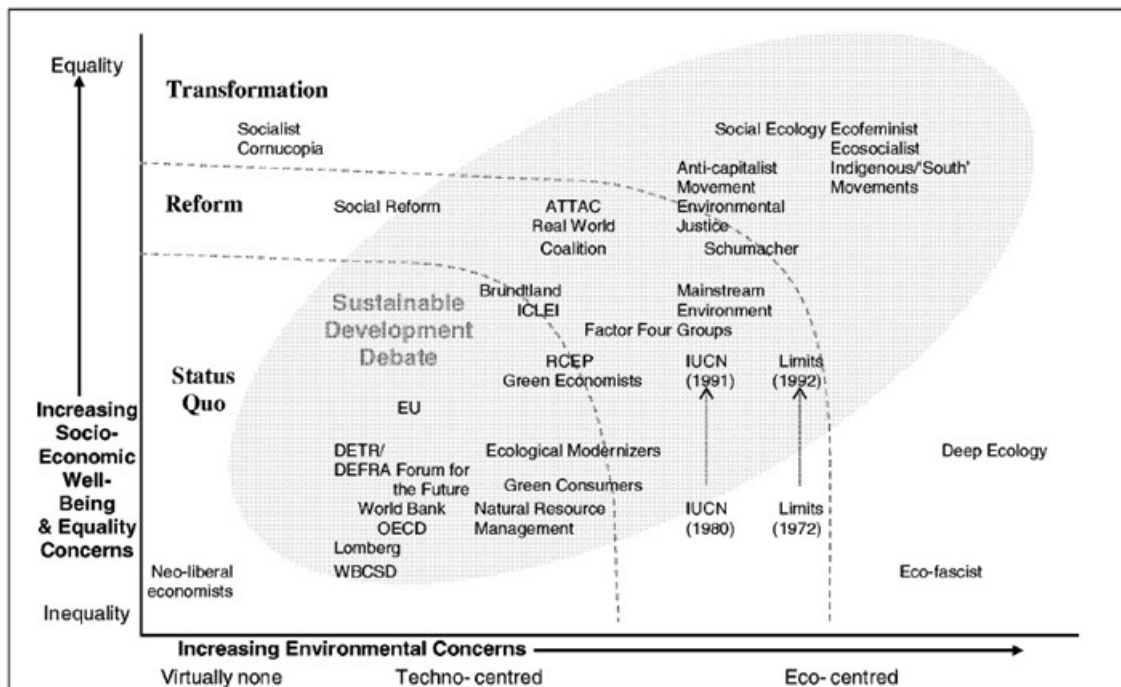
Appendices

Appendix 1: A meta-analysis of pedagogies to support ESD competences

Competence	Pedagogy												
	Universal					Community and social justice				Environmental Education			
	Case studies	Interdisciplinary team teaching	Lecturing	Mind and concept maps	Project and/or Problem-based learning	Community Service Learning	Jigsaw / Interlinked Teams	Participatory Action Research	Eco-justice and community	Place-Based Environmental Education	Supply chain Life Cycle Analysis	Traditional ecological knowledge	
Systems thinking	Green	Yellow	Yellow	Green	Green				Green	Green	Green	Yellow	
Interdisciplinary work		Green											
Anticipatory thinking	Yellow		Yellow		Yellow				Green				
Justice, responsibility, and ethics										Green			
Critical thinking and analysis	Green									Green			
Interpersonal relations and collaboration						Green	Green						
Empathy and change of perspective							Green		Green				
Communication and use of media							Green						
Strategic action			Yellow		Green			Green					
Personal involvement					Green	Green	Green						
Assessment and evaluation	Yellow				Yellow						Green		
Tolerance for ambiguity and uncertainty	Yellow	Yellow			Yellow								

Source: Lozano, Sammalisto, Ceulemans, and Lozano (2017: 10)

Appendix 2: Hopwood, Mellor and O'Brien's SD mapping technology



Source: Hopwood, Mellor and O'Brien (2005: 41)

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How the Japanese Intelligentsia of the 19th Century Got Educated Based on Books in the Dutch Language (Rangaku)

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Abstract

This study aims to rectify the perception that the Shogunate (the Japanese government of the 19th century) mainly received know-how about medical sciences through their information acquisition via the Dutch presence in Nagasaki. Studies of that time, based on the information acquired from the Dutch are referred to '*Rangaku*' or Dutch Studies. When discussing '*Rangaku*,' the advance of western medical sciences immediately comes to mind as this is the field that is nowadays remembered best for its big advance at that time. Based on the inventory of a cache of more than 1,000 books (discovered in 1954) purchased by the Shogunate and following up on the earlier related studies, this study reports on a simple statistical analysis demonstrating that medical related books and reading materials were merely ranked sixth among the genres while the top ranking was about military sciences. The study introduces three examples that are respectively from three different genres, all of which are significant in the development of the modern Japanese nation.

Keywords: Dutch Studies, Dutch Learning, *Rangaku*, 19th Century, Japan, Medical Sciences, Education

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Introduction

Japan is a country which has been eagerly trying to adopt new knowledge and information from abroad throughout its history (Nishikawa-Van Eester, 2014). Before the Edo era (1603 – 1868), Chinese¹ (Classical Chinese, or *Kan-bun*) was the main language through which the Japanese used to acquire novel cultures and technologies (Shimizu, 2010). It was the language Japan needed as a tool for academic people to access fresh information.

Up till the arrival of the Dutch language in the 17th century, Chinese was still the dominant foreign language for the intellectual and aristocracy (Montgomery, 2000), and Gottliebe reported that “educated” meant, for a long time, being able to read Classical Chinese (*kan-bun*) and write numerous Chinese characters (*kan-ji*) (2005). In the 18th and 19th century, wealthy merchants joined the intelligentsia, enjoying cultural and academic activities (Nishikawa-Van Eester, 2014). This is also related to the historical and social background, being a time in which Japan had its longest period of relative peace across the nation, mainly because of the governmental policies by the Tokugawa Shogunate in the mid-eighteenth century (Jackson, 2016).

In 1600, a Dutch ship named “Liefde” (meaning “love” in English) reached Japan. The Dutch arrived at the end of the Azuchi-Momoyama period (1573 – 1603), when the Spanish and the Portuguese had already established relationships with Japan. However, at the beginning of the Edo era (period), the Spanish and the Portuguese were banned because of their ties with the Christian mission, regarded by the central government as a liability to their rule. After its independence of Spain in 1648, the Netherlands became powerful and it became the only European power that got permission to trade with Japan (Nishikawa-Van Eester, 2019). Except for traditional Chinese Studies (*kan-bun*), Dutch became the first and essential contact language for Japan to engage with the rest of the world.

Rangaku, or Dutch Studies (Dutch Learning) in the 18th – 19th century, and its general perception today

The Netherlands was the only western country that was allowed to operate in Japan during the period of *Sakoku* (isolation policy, literally meaning ‘Closure of Country’ by the government in the Edo era².) The relationship further grew, from simple importing and exporting goods into exchanging knowledge, and ‘Dutch Studies’ began under the reign of the eighth Shogun, Tokugawa Yoshimune, who relaxed the Book Ban in 1720 and encouraged to import Dutch books as information source, still excluding the ones related to Christianity (Japan-Netherlands Exchange in the Edo period, National Diet Library) .

¹ According to Shimizu, the Classical Chinese writing system had been already conveyed to Japan by the 4th – 5th century.

² *Sakoku* means ‘national isolation’ (1639 – 1853). “The 1630s also marked an important dividing line in foreign relations with the issuance of a series of directives enforcing a policy of national seclusion, later called *sakoku* (literally, “closed country”). The seeds of this policy had been sown in trade control and in measures against Christianity by the Nobunaga and Hideyoshi regimes. Hideyoshi, although strongly attracted to trade as a source of national wealth and military strength, had issued an order for the exclusion of the missionaries. Ieyasu, even more strongly attracted by profits, made efforts to trade not only with the Portuguese Roman Catholics but also with Protestant Holland and England, protecting trade with the southern regions by granting special licenses, or *shuin-jō* (“red-seal license”), to oceangoing merchant ships. But Ieyasu’s encouragement of trade was aimed at establishing a *bakufu* trade monopoly... The Dutch and the Chinese were allowed to trade as before, although this trade was restricted and confined to the island of Dejima at Nagasaki”. <https://www.britannica.com/topic/sakoku>

Today, the word ‘Rangaku’ is strongly associated with the arrival of a totally new type of medicinal sciences, which is regarded as the starting point of modern western medicine in Japan. This is because of the publication of ‘Kaitai-Shinsho’ translated from Dutch into Japanese by Ryotaku Maeno and Gan-paku Sugita in 1774 (See Appendix A). This was originally written in German as ‘Anatomische Tabellen’ by Kulmus (1689 – 1745), and later translated into Dutch as ‘Ontleedkundige Tafelen’ by DICTEN in 1722 and 1732³.

Sakai reported, in ‘Journal of the Japanese Society of Medical History’ in 2010, as below:

The great impact of European medicine was furthered by the publication of “Kaitai Shinsho” (1774), meaning “new book of anatomy”, which was a translation of the Dutch book on anatomy “Ontleedkundige tafelen” (1734), originally written in German by Johann Adam Kulmus (1689–1745) with title of “Anatomische Tabellen” in 1722. The project of translation had been undertaken by Gempaku Sugita (1733–1817) and Ryōtaku Maeno (1723– 1803), when they observed dissection of a female body after execution in 1771 at Kotsugahara in Edo (today called Tokyo). After “Kaitai Shinsho”, Japanese doctors frequently attended dissections of executed bodies, and observed precisely the interiors of the cadavers.

We can read a series of episodes concerning the birth of ‘Kaitai-Shinsho’ as an epoch-making incident in official high school textbooks for the class of Japanese history. (See the figure below.) As seen on the page, this picture in the right middle gives high school students a tremendous visual impact regarding ‘Kaitai-Shinsho’.

ら脱しようとする動きがいくつも生まれた。鎖国のもとにおかれたことから、西洋の学術・知識の吸収や研究は困難であったが、18世紀の初めに天文学者である西川如見や新井白石が世界の地理・物産・民俗などを説いて、先駆けとなった。また將軍徳川吉宗は、漢訳洋書の輸入制限をゆるめ、青木昆陽・野呂元丈らにオランダ語を学ばせたこともあって、洋学はまず蘭学として発達し始めた。

洋学をいち早く取り入れたのは、実用の学問(実学)としての医学である。1774(安永3)年、前野良沢や杉田玄白が西洋医学の解剖書を訳述した『解体新書』は、その画期的な成果であった。ついで大槻玄沢や宇田川玄随が出て、洋学は各分野でいっそう隆盛をみせ、玄沢の門人稲村三伯は蘭日辞書である『ハルマ和解』をつくった。また平賀源内は、長崎で学んだ科学の知識をもとに物理学の研究を進めた。

『解体新書』原書はドイツ人クルムスの著した『解剖図譜』をオランダ語訳した『ターヘル・アナトミア』である。図は序図の扉絵。扉絵・解剖図は、平賀源内に絵を学んだ秋田藩士の小田野直武が写し描いた。(東京都江戸東京博物館蔵)

洋学者系図

2. 宝暦・天明期の文化 225

- イタリア人宣教師シドッチは、1708(宝永5)年にキリスト教布教のため屋久島に潜入して捕えられ、江戸小石川のキリシタン屋敷に幽閉されて、5年後に死んだ。白石は、その試問で得た知識をもとに『采覧異言』と『西洋紀聞』を著した。
- 医学では、元・明の医学を重んじる当時の流れに対し、臨床実験を重視する漢代の医療に戻ろうとする古風が現われた。とくに山崎闇斎は、18世紀中頃、刑死人の解剖をおこなわせ人体内部を直接観察して、日本最初の解剖図録『蔵志』を著した。
- 大槻玄沢は「蘭学階梯」という蘭学の入門書を著し、江戸に芝蘭堂を開いて多くの門人を育てた。宇田川玄随は、西洋の内科学を訳して『西説内科撰要』を著した。
- 平賀源内は高松藩の足軽の家に生まれ、長崎でオランダ人・中国人とまじわり本草学を研究した。のち江戸へ出て摩擦発電器(エレキテル)の実験をし、寒暖計や不燃性の布などをつくって人びとを驚かせた。戯曲や滑稽本も書き、博学多才の人であった。また蘭学書によって西洋画法を学び、秋田に銅山開発のためにまねかれた際に、その技法を伝えた。

Figure 1: Japanese History B (Senior High) by Yamakawa Shuppansha Ltd (Publisher), 2017

³ Maeno and Sugita translated the 1732 version. <https://www.kohjinkai.or.jp/kurakata/txt/01.html>

Although *Rangaku* brought a large volume and of quality knowledge to Japan in diverse fields, we tend to remember just this picture and the name ‘Kaitai-Shinsho’ to go with it, and memory of the rest of *Rangaku* fades away.

Real *Rangaku*

In 1954, a number of old books, mostly written in Dutch, were coincidentally discovered at a library in Tokyo. It was revealed that those piles of books were purchased by the Shogunate (The Tokugawa administration) in the 19th century, or earlier. A project was launched to classify the books and compile a report. The work resulted in a listing of the collection (See Figure 2).

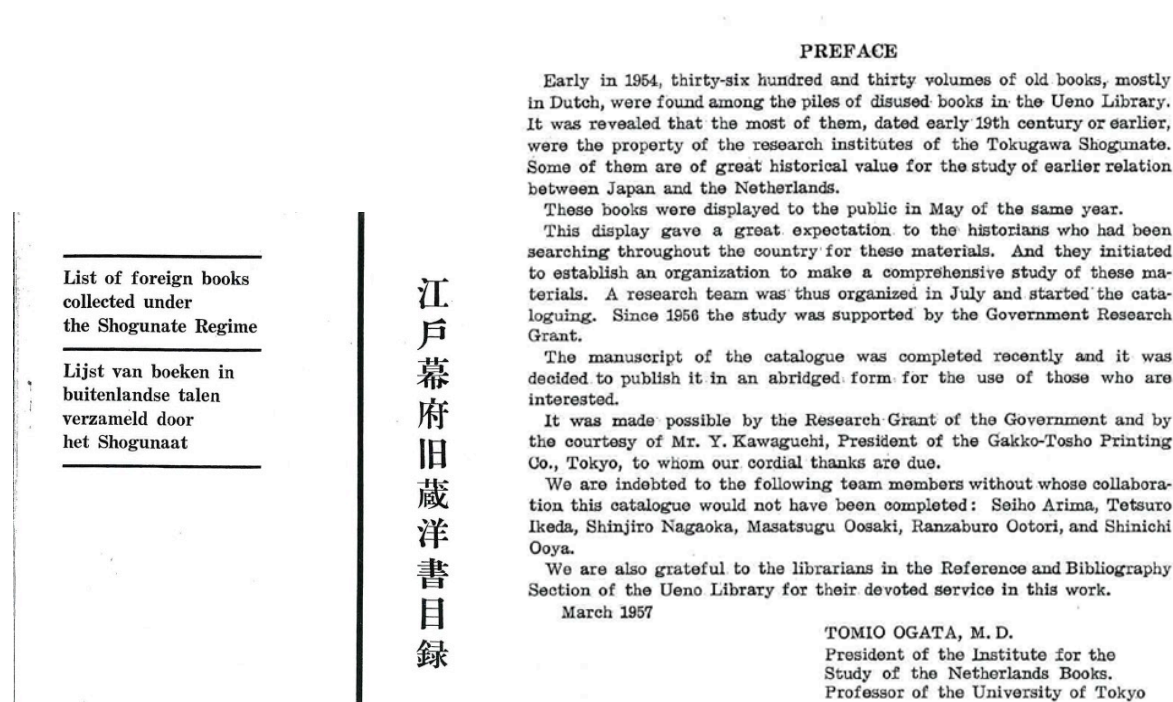


Figure 2: List of foreign books collected under the Shogunate Regime (1957).

This list shows how diverse the fields of the books are, which is far beyond just medical knowledge. In this study, we examined the said list by categorizing mentioned books as much as possible (see Figure 3):

Nieuw handwoordenboek voor de spelling der Nederduitse taal. Zalt-Bommel, 1846. 240 p. 14×12 cm. (N) (a-5) (3450)

Nieuw Hollandsch-Fransch en Fransch-Hollandsch woordenboek. 2de druk, Leiden, n. d. 525 p. 15×12 cm. (T) (760) (761)

Nieuw woordenboek der Nederduitse en Engelsche taal. 4de druk. Nijmegen, 1851. 1254 p. 17×12 cm. (B) (Kana) (82)

Opstellen met fouten, inzonderheid tegen de spelling der Nederlandsche taal. Zutphen, 1854. 88 p. 19×12 cm. (N) (2556) (2557) (3424)

Uitspraak der letters in de Nederlandsche taal. Zutphen, 1854. 60 p. 19×12 cm. (N) (2530-2532) (3419)

Vollständiges Deutsch-Holländisches und Holländisch-Deutsches Taschenwörterbuch. 1 theil: Deutsch-Holländisch. Leyden, 1756. 958 p. 14×11 cm. (Sya) (327)

Booms, P. G.
 Veldtogt van het Fransch-Afrikaansche leger tegen Klein-Kabylië in de eerste helft van 1851. 's Hertogenbosch, 1852. 198 p. 23×13 cm. (N) (a-4) (a-5) (406) (1657)

Verhandeling over het schot der draagbare vuurwapens. 's Hertogenbosch, 1855. 74 p. 17×11 cm. (N) (3277) (2561) (2630) (2690) (3232)

Boot, G. W.
 De steroscoop en zijne verschillende inrichtingen. Wageningen, 1855. 83 p. 22×14 cm. (N) (1504) (2778)

Borski, G. van Wierighen
 Handleiding voor de praktische oefening in de zinsontleding; naar de 2. verb. en verm. uitg. van het werk van den Hoogleeraar T. Roorda: Over de deelen der rede en de rede-ontleding. Delft, 1856. 86 p. 23×14 dm. (B) (N) (a-6) (126) (127)

Bosch, D. van den
 De stoommachine van lage drukking voor vaartuigen. Amsterdam, 1845. 16 p. 22×14 cm. (N) (2071) (2138) (2764) (2766) (2767) (2785) (3227)

Verklaring van het stoomwerktuig. 3de druk. Amsterdam, 1852. 212 p. 23×14 cm. (N) (a-4) (542) (544) (1080) (1125) (1276) (1364) (1478) (1479) (1485) (1536) (1729) (2021) (2122) (2123)

Bosch, D. W.
 Geschied- en aardrijkskundige beschrijving van Nederlands Oost- en West-Indische bezittingen. 2de druk, Amsterdam, 1856. 200 p. 17×10 cm. (N) (3483-3485) (3154)

Bosch, J. van den
 Nederlandsche bezittingen in Azia, Amerika en Afrika. 's Gravenhage, Amsterdam, 1818. 309 p. 23×14 cm. (B) (601)

Bosch, W.
 De dysenteria tropica. 's Gravenhage, 1844. 335 p. 22×14 cm. (N) (a-5) (1506)

Bosscha, H. C.
 Bedenkingen tegen de wijze van bouwen van pakhuizen. Deventer, 1856. 40 p. 23×14 cm. (N) (2184) (2777) (3220)

Bosscha, J.
 Blikken in het leven der natuur. Leeuwarden, 1860. 284 p. 13×11 cm. (K) (681)

Het leven van Willem den Tweede; Koning der Nederlanden ex Groothertog van Luxemburg. 2de druk. Amsterdam, 1854. 777 p. 23×15 cm. (N) (2051)

Nederlands heldendaden te land. 3 din, 2de druk. 1838-1845. 22×13 cm. (B) (a-3) (325-327)

Schets der algemeene geschiedenis en van die des Vaderlands. 11 de druk. Breda, 1863. 269 p. 23×13 cm. (B) (a-4) (388)

Bottiger
 Algemeene geschiedenis voor school en huisgezin, vertaald door W. C. Mauve. [←Ger.] 1* gedeelte. Utrecht, 1856. 237 p. 18×12 cm. (N) (1108) (2693)

Boutan, A.
 Leerboek der natuurkunde en van hare voornaamste toepassingen, vertaald door Dr. J. Bosscha; [←Fr.] 4 din, 2de druk. Leiden, 1867-1870. 23×15 cm. (R) (225-234) (3540-3542) (3577) (3630) (3631)

Figure 3: List of foreign books collected under the Shogunate Regime (1957), pp. 8 – 9.

Simple statistical analysis

First of all, the languages used in the collection were sorted out. Among 1,062 books, 846 were written in Dutch, and 134, translated into Dutch from other languages. All the results are as below:

Language used		
number of books	%	language
846	80	Dutch
134	13	Dutch (translated into Dutch)
44	4	English
23	2	French
7	1	German
2	0	Latin
6	1	Could not be decided from the title

Table 1: Languages used in ‘List of foreign books collected under the Shogunate Regime’

We read in Ogata’s remarks that most of the discovered books were in Dutch, and indeed, 93% (80 + 13) of the whole collection was in the Dutch language.

Then, in a second phase, it was checked what types of books and documents were in the collection (See Table 2 below).

<u>Type of publication</u>		
number of books	%	kind
776	73	book
72	7	dictionary
62	6	report / set of rules
56	5	schoolbook (to be used in class)
31	3	almanac
22	2	magazine
16	2	paper
12	1	chart / graph
10	1	list
4	0	map
1	0	diary

Table 2: Types of publication in ‘List of foreign books collected under the Shogunate Regime’

As seen in the table, most of the publications were categorized in the section of books and dictionaries, which makes 80% together. After that, reports, rulebooks, regulations, and textbooks for class follow.

Finally, categorization of topics was conducted. (See Table 3 below).

<u>TOPIC</u>		<u>TOPIC</u>	
157	military sciences	23	astronomy
127	language learning	19	botany / agriculture
116	geography / travel	19	didactics
114	engineering	14	economics / commerce
63	mathematics	10	crafts
60	medical sciences	9	people (biographies)
58	maritime sciences (incl. ship building)	7	administration
47	nature / natural sciences	6	physics
46	history	6	society / sociology
35	chemistry	5	other topics
29	topic could not be decided	5	religion / morality
28	reader / literature	4	biology
25	law	4	philosophy
24	general	2	cooking / housekeeping

Table 3: Topics dealt with in ‘List of foreign books collected under the Shogunate Regime’

In first place, we see 157 books on military sciences and 127 on language learning. It is noteworthy that the categorization of medical sciences (n = 60) appears only after the sections of engineering and mathematics.

Three examples

In the previous section, we saw that

1. Dutch is used in most publications
2. most publications are books
3. 'military sciences,' 'language learning,' and 'geography/travel' are the most dealt with topics
4. 'medical sciences' comes only in the sixth place.

Then, what is actually described in those books? What are those books about? Here three examples are presented, one in the field of military sciences, one in the field of geography, and one in the field of didactics.

Example 1: 'Oorlogs-Vuurpijlen' (1829) from the field of military sciences (Appendix B). This is written by a Dutch military engineering officer describing the history and use of 'oorlogs-vuurpijlen'.

There is no modern word that is the exact equivalent: 'oorlog' = 'war', 's' = genitive-indicator, 'vuur' = 'fire', 'pijl' = 'arrow', 'en' = plural-indicator.

This is a treatise about the early use of rockets (as in Rocket-Propelled Grenade), including calculations regarding the speed and the targeted location based on the elevation-angle of the launcher etc.

Example 2: 'Algemeene Geographie of Beschryving des Geheelen Aardryks' (1769) from the field of geography (Appendix C).

This book is volume 2 of a 6-volume series on geography. This volume deals with Great Britain, Ireland and the Netherlands.

The meaning of the title: 'Algemeene' = 'General', 'Geographie' = 'Geography', 'of' = 'or', 'Beschryving' = 'Description', 'des' = genitive-case version of definite article, 'Aardryk' = 'Earth', 's' = genitive-indicator

Example 3: 'Handleiding bij het Zangonderwijs in de Lagere Scholen' (1854) from the field of didactics (Appendix D).

This book is describing theory and teaching methods for the use of music teachers in elementary schools.

The meaning of the title: 'Handleiding' = 'Manual', 'bij' = 'for', 'het Zangonderwijs' = 'the Teaching of Singing', "de Lagere Scholen" = "the Elementary Schools"

Discussion

As observed and analyzed, the 'Three examples' demonstrate that the books cover very interesting and unique fields, not only 'medical sciences.' For instance, the first case is a very clear example of a typical document that is very different from the 'medical sciences' books that are assumed by the general public to be the main topic of *Rangaku*.

The other two are unique as well. the second book offered Japan at the time, a closed country, significant geographical, and furthermore, geopolitical information regarding Great Britain,

Ireland, and the Netherlands in Europe. The other books in the series covered other areas of importance. Japan was in the state of so-called ‘Sturm und Drang’ toward the end of the Edo era, which made the government seriously consider reconstructing or changing the entire national system.

The third one was obviously intended for music teachers of European (western) music which is fundamentally different from that of Japan. In 1872, the Ministry of Education of the new (Meiji) government (after the Edo era) announced to implement ‘singing songs’ as an official school subject nationwide because of its supposed effectiveness in raising Japanese people’s awareness for patriotism as taught in a German pedagogical theory (Ishida, 2007).

The common denominators shared by those three books are that they offered Japan of the 19th century valuable information, and that the information was practical and immediately useful. Japan went through one of the major changes as a nation in its history during the period of the end of the Edo era and the beginning of the Meiji. When a nation tries to change itself, it wants and needs some measures that are immediately effective. *Rangaku* was, in that sense, what they used as a major tool to later open the country.

Conclusion

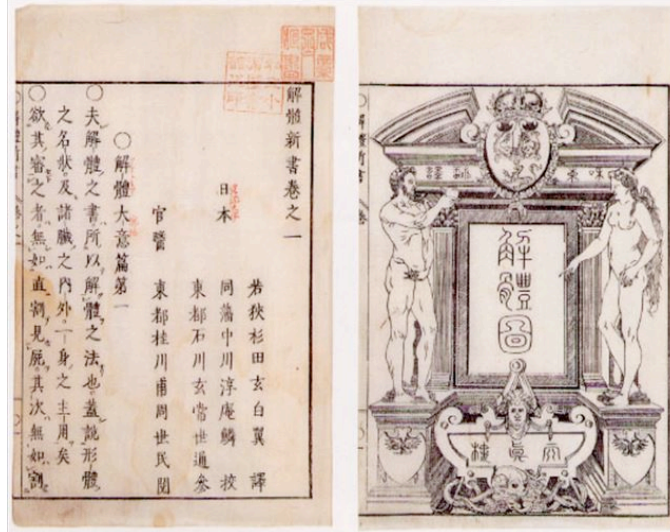
It is interesting to see that the Shogunate purchased such a huge collection of *Rangaku* books covering a wide range of fields offering Japan cutting-edge information, knowledge, culture, and technologies of that time. It is not just about medicine (as most of us remember as the result of *Rangaku*), but we can find many more profound insights.

The study of the mentioned list showed us the variety of books that were imported. The current worldwide drive to digitize old books (partially thanks to Google’s efforts) helps us as researchers to also access the contents of these books without traveling to remote or secluded libraries.

Appendices

Appendix A

‘Kaitai-shinsho’ by Maeno and Sugita, published in 1774 (National Diet Library)



Appendix B (Digitized by Google)

Oorlogs-Vuurpijlen (Military)

STELSEL
DER
OORLOGS-VUURPIJLEN.

NAAR
CONGREVE, MONTGÉRY EN ANDEREN;

VOORZIEN VAN EEN AANHANGSEL OVER HET
PERKINSCHÉ STOOM-GESCHUT.

Met Platen en Tabellen.

Het Hoogduitsche van den Generaal

J. G. VON HOYER

Samgewerkt, uitgebreid en met aantekeningen verrijkt,

DOOR

J. G. W. MERKES,

1steij Luitenant-Ingénieur.

TE 's GRAVENHAGE, BIJ
A. K. L. O. O. T. S.
1829.

Voor de snelheid bij eene elevatie van 30° is:
 $v = \left\{ 2 b^2 \log^2 \frac{am}{am-ct} + \left(\frac{1}{2} b \log \frac{am}{am-ct} - 2 gt \right)^2 \right\}^{\frac{1}{2}} \dots (7)$
en voor eene elevatie van 60°
 $v = \left\{ \left(\frac{1}{2} b^2 \log^2 \frac{am}{am-ct} \right) + \left(\frac{1}{2} b \log \frac{am}{am-ct} - 2 gt \right)^2 \right\}^{\frac{1}{2}} \dots (8)$
wijl voor den straal = 1, de $\sin. A = \sin 30^\circ = \cos 60^\circ = \frac{1}{2}$; en $\cos 30^\circ = \sin 60^\circ = \left(\frac{3}{4} \right)^{\frac{1}{2}} = \frac{1}{2} \sqrt{3}$.

Om de geheele worpsverheid des vuurpijls te berekenen, wanneer de elevatiehoek en de durig der drijfsas gegeven zijn, zoo merke men op, dat het eerste deel $x = z \cos A$ is en het tweede deel de abscis eener parabool, welke den vuurpijl doorloopt, wanneer de drijfsas vertceerd is: om dus deze kromme te bepalen, moet de snelheid des pijls op dezen oogenblik en de rigting bekend zijn. De eerste hebben wij reeds gevonden; terwijl de sinus van den hoek welke deze rigting met den horizont maakt = $\frac{v}{V} \cos A$ is; alzoo de sinus en cosinus dezes hoeks door i en k voorstellende en u de snelheid des vuurpijls in de paraboolvormige tak der baan, dan vindt men voor de geheele worpsverheid, na zekeren tijd t , $P = \frac{ku}{\sqrt{g}} \left(\frac{i^2 u^2}{4g} + z \sin A - gt^2 \right)^{\frac{1}{2}} + \frac{ik u^2}{2g} + z \cos A$ (9)

Appendix C (Digitized by Google)

Geographie (Geography)

ALGEMEENE
GEOGRAPHIE,
OF
BESCHRYVING
DES GEHEELEN
AARDRYKS;

Behelzende het Merkwaaardigste, dat tot deze Weetenſchap behoort, als de Verdeeling der Gewelten in byzondere Staaten, Koningryken, Vorſtendommen, Republieken, enz.; derzelver Ligging, Grenzen, Grootte, Zeën, Baaiën, Meiren, Rivieren, Bronnen, Havens, Kasten, Gefeltenis van Lucht en Grond, Bergen, Bergwerken, Gewaſſen, Dieren, Steelen, Vellingen, Kasteelen, Vlecken, Dorpen, voornaame Gebouwen en Zeldzaamheden; eene beknopte Verhandeling van derzelver oude en hedendaagſche Inwooneren; van hunnen Aart, Zeden en Gebruiken; van de gewichtige Staatsveranderingen der Ryken en Staaten; van derzelver Regeeringsvorm, Godsdiensſten, Krygsmagt, Inkomſten, Koojhandel, Fabrieken, Staat der Geleerdheid; eene naauwkeurige Bericht van de Ridderdorden; Gefachtyſten van thans regeerende Koninglyke en Vorſtlyke Huizen; Lyſten der beſte Landſcapen, der Hoogſcholen; enz.

Erſt ontworpen en merklyk voorrigit door den beroemden
JOHAN HUBNER.

Daarna in het Nederduiſch Vertaald, met Invoeging van al het Merkwaaardige van den Franſchen Druk. Vervolgens met eene gantsch nieuwe Beſchryving der Nederlanden en doorgaans met nieuwe Aanmerkingen verrijkt, door den Heer

W. A. BACHIONE.

Ters Predikant te Kullenburg, thans Hoogſtrent in de Sterre- en Aardrykkunde en Predikant te Maaſſicht.

En nu op nieuw over het geheel verbeterd, vermeerdert, tot den tegenwoordigen Tyd voorrigit, en met eene Algemeene Inleiding tot de Aardrykbeſchryving voorzien, door

ERNST WILLEM CRAMERUS.

Met een Stel LANDKAARTEN van een gantsch nieuw Ontwerp.

TWEDE DEEL,
Bevatende GROOT-BRITANJE, IERLAND
en de NEDERLANDEN.

TE AMSTELDAM,

By PIETER MEIJER, op den Dam.
MDCCLXIX.

GROOT-BRITANJE beftond, voorheen, ook uit twee byzondere Koningryken, Engeland en Schotland, inſgelyk ieder zyn byzonder Parlement hebbende; maar, onder de Regering van Koningin Anna, zyn zy, in den jare 1706., tot één Koningryk gebragt, onder den naam GROOT-BRITANJE. Het Parlement van Schotland werd aan dat van Engeland ingelyfd, waardoor de byzondere Regering van Schotland is opgehouden: gelyk wy in 't vervolg breder zullen melden.

Het Koningryk GROOT-BRITANJE beftaat dan tegenwoordig uit ENGELAND en SCHOTLAND, noemende de Engelfchen, ter onderscheiding, het eerſte ZUID- en het laaſte NOORD-BRITANJE.

Appendix D (Digitized by Google)

Didactics (Music - Singing)

HANDLEIDING

BIJ HET

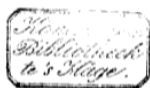
ZANGONDERWIJS

IN DE

LAGE SCHOLEN;

DOOR

B. BRUGSMA.



TE GRONINGEN, BIJ
R. J. SCHIERBEEK.
1854.

2^e CURSUS.

1. Toepaſing van het dus ver geleerde op het Notenſtelſel.

1. Kennis van de noten, de verſchillende ſleutels en de ſchalen voor de verſchillende toonsoorten in de Harde- of Duur- klankbladder.

Two musical staves. The top staff is labeled 'Vioel - of Sleutel.' and the bottom staff is labeled 'Bas - of Sleutel.' Below the staves is the text: 'G A B c d e f g a b c d e f g a b c d e f g m.' and 'Groot octaaf. Klein octaaf. Een gestroopt octaaf. Twee gestroopt oct.'.

Two musical staves. The top staff is labeled 'Discant-Sleutel.' and the bottom staff is labeled 'Alt-Sleutel.' Both staves show musical notation with notes and rests.

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Parental Support, Cooperative Learning, and Peer Awareness in Students' Exposure to School Bullying: Predicting Bullying in China

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The Asian Conference on Education & International Development 2022
Official Conference Proceedings

Abstract

School bullying negatively affects adolescents at both cognitive and psychological levels. In China, a relatively high prevalence of school bullying has been observed with researchers and educators beginning to identify bullying-related factors in order to foster a healthy school environment. However, parental support, cooperative learning, and peer awareness as forms of intervention support, are still under-researched predictors when portrayed holistically for bullying prevention and control. This study aims to explore how the three forementioned forms of intervention support affect Chinese students' indirect, psychological, and physical exposure to and their overall experience with school bullying using data from the 2018 Program for International Student Assessment (PISA). Utilizing binary logistic regression analyses while controlling for demographics, this research confirms previous literature that boys are nearly twice more likely to be exposed to bullying than girls while students repeating grades experience bullying at a relatively high rate. The study also indicates that both parental support and cooperative learning are effective intervention factors for lowering bullying frequency. Simultaneously, peer awareness augments students' reporting of bullying involvement. The integration of different mediating factors in this study depicts a clear picture for Chinese educational practitioners to take action to minimize bullying involvement in the pre-pandemic era, providing patterns of intervention measures to achieve equity and inclusivity for all schoolchildren during and after COVID-19.

Keywords: School Bullying, Parental Support, Cooperative Learning, Peer Awareness

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Introduction

Bullying has long been identified as a serious form of school violence and is closely associated with aggressive behaviors that are really intentional, highly repetitive, and based on imbalanced power (Olweus, 2013; Smith, Morita, Junger-Tas, Olweus, Catalano, & Slee, 1999). Statistics from the United Nations Educational, Scientific and Cultural Organization (UNESCO) have revealed a growing prevalence of self-reported bullying cases across the globe (UNESCO, 2017, 2019). School bullying, in particular, negatively affects children and adolescents at both cognitive and psychological levels, including academic incapability and social inadaptability (Woods & Wolke, 2004), depression and anxiety (Kaltiala-heino, Rimpel, Rantanen, & Rimpel, 2000), as well as loneliness and suicidal tendencies (Delprato, Akyeampong, & Dunne, 2017). However, school bullying comes in different forms and categories. Olweus (1991) divided the term into direct and indirect bullying: the former refers to open, obvious attacks against a person in public places while the latter is characterized by social isolation and deliberate exclusion from a group. Direct bullying can further be interpreted both physically (involving violent behaviors) and psychologically (concerning harm to one's emotions and social standing).

China is no exception to the common occurrence of bullying incidents and school violence with 2,600 cases heard by people's courts at all levels from 2015 to 2017 (Global Times, 2021). Given the high incidence of school bullying and its severe social impacts, *Guidance on the Prevention and Treatment of Bullying and School Violence*, a nationwide anti-bullying policy, was adopted by Chinese Ministry of Education in 2016, calling on schools across the country to take an active part in bullying control and prevention efforts. Hence, it is of vital importance for Chinese researchers and educational practitioners to identify the intervention factors pertaining to school bullying and introduce regulations that support and protect at-risk students (Huang & Zhao, 2018).

Of the influencing factors for bullying intervention in China, parental support (PS) and peer awareness (PA) are recognized as important predictors in the reduction of bullying behaviors (Huang & Zhao, 2018; Zhang, 2020). Prior empirical studies in the west have also pointed to cooperative learning (CL) as a significant contributor to anti-bullying measures (Ryzin & Roseth, 2019) while grade repetition, or the practice of having students remain in the same grade without promoting them to the next grade, is more likely to press students for exposure to physical and verbal bullying (Crothers, Schreiber, Schmitt, Bell, Blasik, Comstock, Greisler, Keener, King, & Lipinski, 2010; Lian, Yu, Tu, Deng, Wang, Su, & Zuo, 2021; Ozada Nazim & Duyan, 2019). However, when jointly added, the bullying predictors of PS, PA, and CL are still under-researched. Thus, it is essential to integrate the three factors in one single research to portray a more thorough anti-bullying landscape and further assist schools to work out plans in bullying control and prevention.

Based on the above consideration, this empirical study aims to explore the association between three forementioned forms of intervention support and frequencies of experiencing physical, psychological, or indirect bullying (Olweus, 1991) mediated by such demographics as gender, age, and grade repetition. Two overarching research questions have guided this exploration: (a) what intervention factors predict the likelihood that students would indirectly, physically, or psychologically experience high or low frequencies of school bullying? And (b) what mediating factors predict the likelihood of students' exposure to high or low levels of bullying in these three bullying categories?

The social-ecological framework (CDC, 2004) has guided us in addressing the complex interplay between individual, family, school, and societal factors in relation to school bullying and violence as well as facilitated our understanding of bullying prevention efforts over time and beyond human-level impact. As Figure 1 shows, at the individual level, prevention strategies may involve personal attitudes, beliefs, or behaviors that prevent or stop violence. At relationship and community levels, a person's close connection to family members and active interaction with schools/workplaces/neighborhoods may provide a pathway for risk reduction and violence prevention, including parent-child communication, positive peer relations, and reliable school/work environments. The final level (societal factors) features social and cultural norms that encourage or hamper violence. The overlapping circles in the model indicate how one level of factors influences another and how different levels of factors coexist to work on the entire model. In linking the social-ecological framework for prevention and anti-bullying efforts on campus, we hypothesize that (H₁) PS (at the relationship level) as an intervention factor can lower the frequencies of being indirectly, physically, or psychologically bullied, (H₂) CL (at the community level) as an intervention factor can lower exposure to indirect, physical, or psychological bullying, and (H₃) PA (at the relationship level) as an anti-bullying predictor helps to reduce indirect, physical, or psychological bullying.

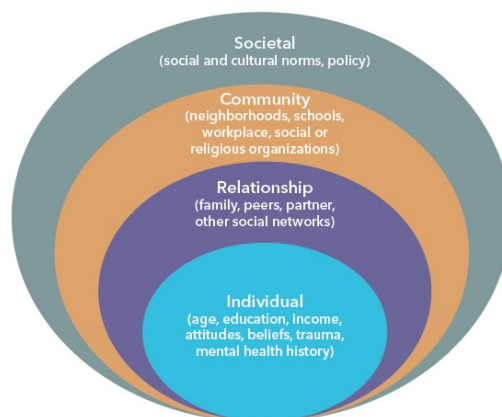


Figure 1: Social-ecological model—a framework for prevention
(Adapted from Centers for Disease Control and Prevention, 2004, p. 5)

Methods

The quantitative study employed the available data from the 2018 Program for International Student Assessment (PISA 2018) conducted by the Organization for Economic Cooperation and Development (OECD). A two-stage stratified sampling method was adopted to assess adolescents' knowledge and skills essential for real-world challenges. In the end, 12,058 15-year-olds from 362 schools in Beijing, Shanghai, Jiangsu, and Zhejiang provinces in China were selected. Meanwhile, informed consent forms were prepared and required from schools, teachers, and students.

Dependent Variables

The four dependent variables (revealing the frequency of students' exposure to school bullying) in the PISA data were depicted from the perspective of the victims (OECD, 2019) and measured with one total bullying scale and three sub-categories including indirect, psychological, and physical bullying. In PISA 2018, participants were invited to rate their

exposure to school bullying in the past 12 months on a 4-point Likert-type scale ranging from *1 = never or almost never*, *2 = a few times a year*, *3 = a few times a month*, to *4 = once a week or more*. For the total bullying scale, all six types of bullying items evaluated participants' overall experiences with bullying at school. For indirect, psychological, and physical bullying scales, there were respectively two, three and one items to measure each of them. Specifically, we adopted Item 1 ("Other students left me out of things on purpose.") and Item 4 ("Other students took away or destroyed the things that belonged to me.") to represent the indirect bullying scale; we used Item 2 ("Other students made fun of me."), Item 3 ("I was threatened by other students."), and Item 6 ("Other students spread nasty rumors about me.") to describe the psychological bullying scale. The only item to measure the physical bullying scale was listed as "I got hit or pushed around by other students." The detailed information of bullying scales and categories is presented in Table 1. In addition, in order to calculate the score of each bullying scale, we added up the answers for each item and split them into dummy variables to check high or low frequencies of being bullied in response to the research questions. Low frequency indicated that participants were never or almost never exposed to all or some of the bullying forms while high frequency reflected students' experiences with the bullying events on the basis of a few times a year or more. Prior to that procedure, the internal consistency or reliability for each scale was tested. However, Cronbach's Alpha for the two items in the indirect bullying scale did not exceed .70 and the only item in the category of physical bullying was not considered as a scale. Hence, the dependent variables of indirect and physical bullying were excluded from our analysis.

Table 1: Bullying scales and categories

Scales/ Categories	Bullying items
Total bullying	Other students left me out of things on purpose. Other students made fun of me. I was threatened by other students. Other students took away or destroyed things that belonged to me. I got hit or pushed around by other students. Other students spread nasty rumors about me.
Indirect bullying	Other students left me out of things on purpose. Other students took away or destroyed things that belonged to me.
Psychological bullying	Other students made fun of me. I was threatened by other students. Other students spread nasty rumors about me.
Physical bullying	I got hit or pushed around by other students.

Independent Variables

The independent variables utilized in this study include PS scale, CL scale, and PA scale. PS points to any "parental behaviors toward the child, such as praising, encouraging and giving physical affection, which indicate to the child that he or she is accepted and loved" (Barnes, Reifman, Farrell, & Dintcheff, 2000, p. 179). In this study, PS scale was assessed by three items in PISA 2018 ("My parents support my educational efforts and achievements.", "My parents support me when I am facing difficulties at school.", and "My parents encourage me to be confident."). A four-point Likert scale was applied to the items ranging from *1 = strongly disagree* to *4 = strongly agree*. As for CL scale and PA scale in the dataset, the

former refers to a small group of students working together to accomplish shared learning goals (four items, e.g., “It seems that students are cooperating with each other.”) while the latter can be peer presence at or peer consciousness of bullying scenes (five items, e.g., “It irritates me when nobody defends bullied students.”). Students were asked to respond to CL-related items on a four-point Likert scale ranging from 1 = *not at all true* to 4 = *extremely true* and to answer PA-related questions again on a four-point Likert scale ranging from 1 = *strongly disagree* to 4 = *strongly agree*. We added up the items for each of the three scales with internal consistency respectively tested (all Cronbach’s alphas > .86) and divided them into high or low degrees to represent intervention factors at different levels.

Control Variables

Previous studies have revealed the impacts of demographic information upon students’ exposure to bullying (e.g., Ba, Han, Gong, Li, Zhang, & Zhang, 2019; Smith et al., 1999). Applying the social-ecological framework to find out potential confounders, we selected such basic demographics (gender and age) as control variables. Age was viewed as a continuous variable while gender was used as a dummy variable with 1 for boys and 0 for girls. Also added to the control variables, grade repetition was obtained from students’ responses to the questions “Have you ever repeated a grade (at ISECD 1/2/3)?” The International Standard Classification of Education (ISCED) is a framework for collecting participants’ statistics of education organized by UNESCO. Students were asked to respond on a three-point Likert scale ranging from 1 = *no, never* and 2 = *yes, once* to 3 = *yes, twice or more*.

Data analysis

A binary logit model was constructed (Pallant, 2017) using SPSS software Version 26 after we identified the variables and realized the abnormal distribution of the remaining three dependent variables (excluding the indirect bullying model). However, preliminary assumption tests indicated that for psychological and physical bullying scales, the Hosmer and Lemeshow Goodness of Fit Tests were not passed (significance values all below .05), thus suggesting no support for these two models. Therefore, this study only concentrated on the total bullying model.

We conducted the research in two steps: (a) the descriptive statistics for the dependent, independent, and control variables were first produced, and (b) binary logistic regression was then performed to explore the likelihood that Chinese students were exposed to high or low frequencies of being bullied in general. All six predictors (i.e., PS, CL, PA, age, gender, grade repetition) were included in the total bullying model. Table 2 shows the descriptive statistics (including means and standard deviations) for the total bullying model and Table 3 reveals the results of logistic regression for the model.

Table 2: Descriptive statistics for variables

		Variables	Frequency	%			
Categorical dependent variable(s)	Total Bullying Scale	Low	6,463	47.9			
		High	5,390	52.1			
Continuous independent variable(s)		Minimum	Maximum	Mean	SD	N	
	Age (years)	15.33	16.25	15.77	.29	12,058	
		Variables	Frequency	%			
Categorical independent variables	Gender	Female	5775	47.9			
		Male	6283	52.1			
	Grade Repetition	No	11237	93.2			
		Yes	753	6.2			
	Parental Support (PS)	Low	6864	57.4			
		High	5088	42.6			
	Cooperative Learning (CL)	Low	8810	73.1			
		High	3088	25.6			
Peer Awareness (PA)	Low	7289	64.1				
	High	4576	38.6				

The statistical significance of the total bullying model (χ^2 (6, N = 11690) = 474.266, $p < .001$) implied that the model was able to distinguish between respondents' high or low exposure to school bullying. Besides, the model as a whole explained 4.0% (Cox & Snell R square) and 5.3% (Nagelkerke R square) of the variance in total bullying groups, and correctly classified 58.8% of the cases with a small improvement of 4.2% in predictions. As presented in Table 2, five of the six independent variables made unique statistically significant contributions to the total bullying model except for age ($p > .05$). The strongest predictor of being in the high-level bullying groups was gender, recording an odds ratio of 1.704 ($p < .001$). Likewise, the odds of being in the high-level bullying groups was positively associated with grade repetition and peers' anti-bullying awareness ($p < .01$). For each additional increase in repeating a grade or anti-bullying awareness, there were respectively 1.315 and 1.284 likelihood increases to be found in the high-level bullying groups. Conversely, students with more parental support and skills of cooperation were .751 and .545 times less likely to be found in the high-level bullying groups as negative associations were found between the PS predictor and exposure to bullying as well as between the CL factor and overall experiences with bullying ($p < .001$).

Conclusion

Aimed at investigating multiple intervention factors influencing students' exposure to bullying, this research has added to the empirical experience by applying binary logit regression analyses. Consistent with some previous literature (e.g., Ba et al., 2019; Scheithauer, Hayer, & Petermann, 2006; Smith, López-Castro, Robinson, & Görzig, 2019), the study has confirmed that boys are nearly twice more likely to be victims of bullying than girls. Second, students repeating grades, regardless of their genders, are generally exposed to bullying at a relatively high rate. This adds further to the extant literature in pointing to the increased risks of school bullying brought to grade repeaters compared with their promoted peers (Crothers et al., 2010; Lian et al., 2021; Ozada Nazim & Duyan, 2019). Third, since negative correlations were observed between the PS predictor and bullying involvement as

well as between the CL predictor and bullying experiences, this means supportive ties between parents and children as well as skills of cooperation in school settings are conducive to students' well-being, anti-bullying efforts, and the building of a harmonious, sustainable school culture. Hence, the first two hypotheses were supported (H_1 : PS as an intervention factor can lower the frequencies of being indirectly, physically, or psychologically bullied; H_2 : CL as an intervention factor can lower exposure to indirect, physical, or psychological bullying.) Fourth, contrary to what we have hypothesized (H_3 : PA as an anti-bullying predictor helps to reduce indirect, physical, or psychological bullying.), the positive relationship between PA and high-level exposure to bullying implies that PA as an intervention factor can make a statistically significant contribution to students' reporting of bullying involvement ($p < .001$), or more precisely, augment students' overall experiences with it. Thus, Hypothesis 3 was not fully supported.

Table 3: Logistic regression analysis of total bullying model

Variables	Total Bullying Model		
	<i>B</i>	<i>S.E.</i>	<i>Exp(B)</i>
Age	-.034	.065	.966
Gender	.533***	.038	1.704
Grade Repetition	.274**	.079	1.315
Parental Support	-.287***	.042	.751
Cooperative Learning	-.607***	.049	.545
Peer Awareness	.250***	.043	1.284

Notes. ** $p < .01$, *** $p < .001$

However, a slight improvement of 4.2% in predictions for the total bullying model suggests that it is feasible but not ideal enough to predict high or low frequencies of bullying experiences. Besides, failure in the assumption tests of physical and psychological bullying models may probably prevent us from approaching and analyzing the interaction of intervention predictors and specific bullying categories. Third, although we could intuitively attribute PA's reverse effects upon anti-bullying endeavors to students' proactive behaviors towards more self-report cases that are not necessarily in great numbers, this is an area that still lacks both theoretical and empirical support and hence deserves researcher's attention for further studies. Fourth, we have not yet taken into account cyberbullying, a form of bullying that has risen to prominence with some overlaps in and differences from traditional bullying. Future studies can be realized in introducing more predictors at individual, relationship, community, and societal levels (e.g., ethnicity diversity, teacher support, neighborhood influences, and cultural norms in China) to see their combined impacts acting on school bullying involvement as well as in considering predictors of both traditional bullying and cyberbullying that will be integrated into detailed planning of China's anti-bullying programs (Ba et al., 2019).

Despite the above limitations, this study provides a route to the understanding of correlation between multiple intervention predictors and anti-bullying consciousness guided by the social-ecological framework for violence prevention: parents' encouragement and emotional support as well as skills of learning to collaborate with peers avoid high-level bullying exposure while male students and grade repeaters are reduced to bullying victims. The integration of these mediating factors in this study depicts a clear picture for Chinese educational practitioners to take action to minimize bullying involvement in the pre-pandemic era, providing patterns of intervention measures to achieve equity and inclusivity for all schoolchildren during and after COVID-19. In particular, the transition

from the pre-pandemic to the pandemic periods in addressing the issue of bullying requires all of those at various levels of the social system—policymakers, principals, teachers, parents, neighborhoods (or communities), and students themselves—to jointly take proactive measures to ensure safe learning environments for all in both online and in-person classes (Vaillancourt, Brittain, Krygsman, Farrell, Landon, & Pepler, 2021). If generalizable to other age groups (not only 15-year-old adolescents at school), this study may contribute to the wellbeing of schoolchildren in China and adolescents worldwide and induce workable solutions to the bullying problem that increasingly favor evidence-based interventions (UNICEF, 2020).

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Parent-Child Dialogic Reading: A Conversation Analytic Case Study

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Abstract

A large body of work has addressed the positive impact of parent-child interactive reading (also referred to as dialogic reading or shared reading) for children's language and literacy development. What has been lacking in research is how interaction takes place in a parent-child read-aloud. How interaction takes place is the domain of conversation analysis (CA), an approach which studies turn-taking in naturally-occurring conversations for the moment-by-moment organization of interaction as oriented to by the interlocutors. Using a CA lens, this article centers on a focused analysis of a dialogic read-aloud of one picturebook between a mother and her 7-year-old daughter, both of whom are speakers of English as a foreign language. In the stretch of dialogue examined in this article, the discussion is about the title of the picturebook and how it might relate to the cover picture. The analysis highlights the sequential organization of the dialogue, and the findings reveal that knowledge is co-constructed through interaction between the two interlocutors. Most interestingly, the analysis showed that the child is able to playfully resist the mother's insistence on how to interpret the story portrayed on the cover picture, and also closely monitored the sequential progression of the dialogue as gleaned from her turn design. The study argues for the detailed analysis of parent-child read-aloud interactive practices to come to a better understanding of how dialogues can contribute to the construction of meaning, particularly as children learn about image-text relations as a part of their expanding literacy practices.

Keywords: Dialogue Reading, Interactive Reading, Shared Reading, Conversation Analysis, Picturebook Read-Aloud

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Introduction

Interactive read-aloud, frequently referred to as shared reading (e.g., Zhang, Djonov, & Torr, 2016) and dialogic reading (e.g., Cohrssen, Niklas, & Tayler, 2016), is “an approach in which the story itself is used as a springboard for adult-child dialogue and extended thinking” (Lennox, 2013, p. 363). The large body of work in this field has invariably confirmed the positive impact of adult-child shared reading on children’s language and literacy learning (e.g., Anderson, Hiebert, Scott, & Wilkinson, 1985; Morgan & Meier, 2008). To date, research on adult-child reading has mainly developed in two distinct but related strands, i.e., interactive read-alouds between a teacher and her students in the classroom and dialogic reading between a parent and her child at home.

Teacher-Student Shared Reading

Literature on teacher-student interaction during whole-class shared reading encompasses two main areas. Studies either seek to extract the types of things that teachers do to elicit meaningful responses, i.e., focusing on teacher practices (e.g., Maine & Hofmann, 2016; Pappas, Varelas, Patton, Ye, & Ortiz, 2012), or they examine the correlation between teacher questions and student answers (e.g., Collins, 2016; Dunst, Williams, Trivette, Simkus, & Hamby, 2012). Together, these two lines of research on teacher-student interactive reading illuminate not only what kinds of teacher practices can best promote student contribution but also the impact of specific ways of teacher questioning on the likely type of student responses.

Many studies have sought to examine interactive read-alouds from the perspective of teacher practices. For example, Wiseman (2011) focused on what makes a discussion interactive, and found four effective practices on the part of the teacher, including confirming student responses, modeling ways to engage with texts, extending ideas shared by students, and building meaning around the text and its discussion to students’ lives. Other studies have been mainly concerned with the types of teacher questions, either literal or inferential. As van Kleeck (2006) explained, literal content refers to “information that is perceptually present in the pictures of a book or directly stated in the text” while inferential content refers to “information about objects, actions, or events that are not directly available from the perceptual sense of the picture or in the text of a book” (p. 282). Zucker, Justice, Piasta, and Kaderavek (2010) examined preschool teacher-student read-aloud interaction and found that children are more likely to give inferential responses when teachers asked inferential rather than literal questions.

Parent-Child Dialogic Reading

As Haggstrom (2020) observed, research on parent-child read-aloud has seldom examined the interactional aspects of the shared reading, but rather, have unvaryingly concentrated on how such practices impact upon children’s language and reading development. These studies have consistently confirmed the positive impact of dialogic reading on different aspects of children’s cognitive development.

Studies have also documented parent reading behaviors in an effort to identify best practices (e.g., Neuman, 1996; Whitehurst et al., 1988). Bojczyk, Davis, and Rana (2016), for example, differentiated between reading strategies (such as labeling or asking wh-questions as examples falling on either end of the spectrum) that promoted low, medium, or high levels of

child participation. Kuchirko, Tamis-LeMonda, Luo, and Liang (2016) focused on the different cognitive demand of the questions that mothers ask (i.e., whether these questions are referential, story-specific or open-ended questions) and their influence children's contributions in book discussions. Unfailingly, these studies found that questions requiring interpretation of the story and extended answers from children are superior in their capacity to stimulate children's engagement in text discussion and should serve as the guiding principle for parents during shared reading.

Despite obvious contextual differences between teacher-student (in the classroom) and parent-child (outside of school) shared reading, there are numerous parallels in the interaction between these two types of adult roles. For instance, research on parent-child reading have also examined parental use of inferential versus literal language (e.g. Tompkins et al., 2017) and have reported similar and comparable results to studies of teachers and students discussed earlier. Another way in which parent-child and teacher-student interactions are similar concerns the discourse types that occur between both in and out of school of adult-child dialogues. For example, as with Lennox's (2013) observation that classroom interaction during read-alouds often follow the "initiation, response, and then evaluation" pattern (p. 384), Zhang et al. (2016) also found that mothers' interaction with children during reading habitually involve "the Initiation/Question-Response-Feedback/Evaluation structure typical of classroom discourse" (p. 440). They explained this to be because, like teachers, parents are also better-informed and more knowledgeable than their young children, and therefore are inevitably in a position to "actively initiat[e] conversations with the children and offe[r] feedback to children's contributions" (p. 440).

A Conversation Analytic Perspective

As stated earlier, research on interactive read-aloud has developed in two distinct but related strands, i.e., shared reading between teacher and students in the classroom and dialogic reading between parent and child. What the aforementioned discussion has revealed is that these two strands of research are not only overlapping in their concern but have also yield similar findings in these areas: best practices for promoting child contribution, the beneficial effect of inferential questions on the complexity of child response, and adult-led initiation-response-evaluation pattern of interaction. What has consistently been missing in both these strands is the focus on the moment-by-moment details of interaction, that is, a conversation analysis (henceforth CA) perspective that zeros in on *how* adult-child dialogues proceed sequentially. This is the focus of the current study.

Very few studies of adult-child shared reading (either between teacher-student or parent-child) have been conducted following CA principles. One rare example is Freebody and Freiberg (2001), whose research investigated adult-child interaction both in and out of school. Through a conversation analytic approach which emphasized "unmotivated looking" (Davidson, 2012, p. 36) without imposing a priori categories on the data, they found "distinctive set[s] of interactional rights and responsibilities enacted" (p. 230) by the teacher-students and the parent-child whose shared reading practices they examined. Specifically, the former oriented to the teacher's "text-interpretive authority" while the latter oriented to the parent's "word-saying authority" (p. 229). In other words, the students followed the teacher's lead in an attempt to discover the one correct way to understand the pictures and words in the picturebook as interpreted by the teacher while the child sounded out letters and words in an attempt to arrive at a correct pronunciation as guided by the parent. (Note that this study follows Nikolajeva and Scott's (2001) conceptualization of

“picturebooks” as a distinct type of iconotext with particular sets of image-text relations, and therefore, spells picturebooks as one word rather than two words.) What is significant about Freebody and Freiberg’s (2001) findings is that all the adult and children they studied, in ways unique to their contexts, “co-ordinated interactional rights and responsibilities” to jointly produce the social practice of shared reading.

While there has been much more interest in recent years in the conversation analytic view of classroom interaction (e.g., Gardner, 2019; Mehan 1979; Tanner, 2017), these works have rarely focused on interactive read-aloud practices per se. Even less attention has been paid to the interactional practices of parent-child dialogic reading from a CA perspective. The current study fills the gap in this area of research by studying the “interactional rights and responsibilities” (Freebody & Freiberg, 2001, p. 228) enacted by a parent and her child during their shared reading, with the goal of illuminating the “characteristic ways that participants orient to and display the interaction” (Buttny, 1998, p. 47) as doing dialogic reading. The results of this research add to the documentation of the range of practices in conversations in a rarely studied context. This research is guided by the following questions:

- What interactional rights and responsibilities are oriented to and displayed by the parent and child co-participants in their shared reading of picturebooks?
- Relatedly, how are the co-participants’ rights and responsibilities realized in the sequential context of the talk-in-interaction?

Method

The current research is a conversation analytic study of talk-in-interaction in the context of a parent-child shared reading, focusing on the sequential unfolding of the conversation and the roles and responsibilities oriented to by the parent and child, respectively. Data comes from a larger study of video-recordings of the shared reading between a mother-child dyad (myself and my daughter, who was seven years old at the start of data collection) over a period of 14 months from June 2019 to August 2020. During this period, a total of 125 books were read. Generally, each shared reading lasted between 30 to 90 minutes, averaging around 1 hour each time/day a recording was made. The data consists of an estimated 131 hours of video-recorded picturebook discussions, making up a large corpus of longitudinal video-recordings of naturally occurring conversations in a parent-child shared reading situation. The shared reading discussions were conducted in English. While English is a foreign language for my daughter, she is able to comprehend and express herself in the language, as can be seen from the two excerpts below.

In the analysis of the data, the recordings were viewed multiple times and transcripts were made following CA conventions (see Appendix). The recordings were viewed along with the transcripts following the next-turn proof procedure (Sacks et al., 1974) in order to examine how each interlocutor understood what the other said (in the prior turn) as displayed in how they responded (in the next turn). In other words, any claim the CA analyst makes should always find evidence not in “theoretically-driven assumptions” or “pre-determined features of context” (Hutchby, 2019, p. 3), but rather, in the “observable structures and features of the participants’ talk and other conduct, through which the analysts may be able to infer the participants’ own understanding” (Mori and Zuengler, 2008, p. 17). Following this principle, the recordings were viewed with an open mind in order to look for particular phenomena of interest. After the phenomenon has been identified, the recordings were viewed again in order to collect all the instances of the particular phenomenon. The analysis identified the

importance of the sequential context of interaction in realizing the rights and responsibilities of each participant of the talk.

Results and Discussion

In what follows, I will discuss one dialogue between the mother and her child concerning the possible story portrayed on the front cover (and also the back cover) of the picturebook *My Friend Rabbit* by author and illustrator Eric Rohmann. (In the two excerpts below, M stands for “mother” and C stands for “child.” They will be referred to as Mom and Sophie, which is the child’s name.)

[Excerpt 1: *My Friend Rabbit* (lines 67-90)]

- 67 M: Oh:: I see:: Just like this. ((*gestures catching*))- The mouse
 68 catches the- the ball [and then what.]
 69 C: [Yeah but then] suddenly (.) the plane fell
 70 and then the mouse died. ((*looking at M and smiling*))
 71 M: Hey::: that is not a good story. Hey who is the narrator.
 72 C: (3.0) The mouse.
 73 M: Ye::ah. How can the mouse narrate if he died in the plane crash,
 74 C: =Huh huh [huh huh huh huh]
 75 M: [like you suggest.]
 76 C: Huh huh huh huh. \$And then the rabbit was very sad and he
 77 cried and cried and then he died too::.\$
 78 M: Yeah but who would be telling the story.
 79 C: Huh huh [huh huh]
 80 M: [My] {{{(*gesturing at book*))- Friend °Rabbit°}
 81 \$\$So that cannot be it.\$ Let’s take a look {{{(*turns the book*
 82 *to look at the back cover*))- at the back cover.} Oh let’s
 83 {{{(*shows front cover of book to camera*))- show. Maybe they
 84 did not die. Look at the two of them.}
 85 C: °Yeah. °
 86 M: {{{(*shows back cover of book to camera*))- They’re quite happy.}
 87 Wha- what’s happening in the picture, {{{(*turns the book to look*
 88 *at the back cover*))- in this [picture] }
 89 C: {{{(*looks at the book*))- [They are] com- going ho::me,
 90 skipping ho::me}

The analytical focus here begins at line 67 (see Excerpt 1), before which Sophie, with Mom’s prompting, was sharing her thoughts about the possible plot of the story based on the front cover. Sophie suggested that the rabbit and the mouse were playing catching the ball, with the rabbit throwing the plane, and then throwing the ball, and the mouse piloting the plane to

catch the ball. Mom then asked, in line 67, “the mouse catches the ball and then what?” In line 69, Sophie continued with her story, saying “but then suddenly the plane fell and then the mouse died.” She then looked at Mom and smiled, suggesting that she is being playful with the storytelling.

Line 71 is an interlocking organization, i.e., a turn that includes “two (or sometimes three) components, combining in the same turn the last part (the second pair part of an adjacency pair or a sequence-closing third) of one sequence and the first part of a next sequence” (Schegloff, 1986, p. 131). Here, mom first responded to the plot suggested by Sophie before she pursued a justification by asking “who is the narrator?” After Sophie responded that the narrator is “the mouse” (line 72), Mom confirmed the answer, with prolonged stress, before then moving on to elaborate on her question by spelling out the gap in the logic that she saw: “How can the mouse narrate if he died in the plane crash?” (line 73). Subsequently, in line 74, continued into line 76, Sophie filled her slot, made conditionally relevant by Mom’s question in line 73, first with laughter, and then with a response. However, interestingly, Sophie’s response did not address Mom’s question, but ignored the question completely, and pursued her own telling of the story. Specifically, she began her answer (in line 76 after the laughter) with the connective “and,” which showed that she is not answering the question Mom posed in her preceding turn, but rather, is continuing her own previous talk. In essence, Sophie’s turn in line 76 followed her own previous turn in lines 69-70, displaying that the intervening talk by Mom may have interrupted her narration of the plot.

Mom continued to pursue an answer to her question by responding (in lines 78 and 80): “Yeah, but who would be telling the story? My Friend Rabbit.” Niemi (2014) explained that there are two types of “yeah but” utterances based on the prosodic relationship between the “yeah” and “but”: the integrated and the non-integrated, depending on whether the two parts are verbalized as the same or separate intonation phrases. When pronounced as “the same intonation phrase with the disagreeing utterance”, i.e., the integrated usage, the “yeah” has a weaker acknowledging force and “can merely signal reciprocity” (p. 55). This is the case with the “yeah but” in Mom’s pursuit in line 78, which first signalled the receipt of Sophie’s previous turn before going on to counter it with her own question, a reformulation of line 71. This is actually the third time Mom issued such a pursuit, first in line 71, then again in line 73, and finally yet again in line 78. In each, the question is phrased differently, as contingent on its first pair part. In response to Mom’s pursuit in line 78, Sophie only laughed (line 79), without providing any verbal reply. Mom then prefaced her next turn (line 81) with “so” (i.e., “So that cannot be it”) to signal that her turn is the upshot of what she oriented to as Sophie’s agreement (i.e., the laughter in line 79). As Raymond (2004) has found, *so*-prefaced utterances can “articulate the upshot of prior talk” and functions to “pursue a limited range of actions from their recipients” (p. 186). In this case, Mom does not even invite further discussion from Sophie but immediately followed with evidence for her own assertion by referring to the back cover that shows that “they did not die” (lines 83-84), to which Sophie promptly agreed (in line 85). Their dialogue then digressed into a discussion about cartoons, wherein the type of picture shown on the back cover is often found. Due to limited space, this digression in the dialogue is not discussed here, as it does not immediately pertain to the focus of the current analysis.

In line 138 (see Excerpt 2), Mom attempted to bring the conversation back to their previous discussion in lines 81-84 (regarding what the picture on the back cover showed about the fate of the two protagonists). The *so*-preface can be understood to signal that what is said in this turn emerged from incipency (Bolden, 2009). That is, “so’ is one solution available to the

interlocutors for dealing with a common interactional problem: how to show that the current utterance is occasioned by something other than the immediately preceding talk” (p. 996), which in this case was about how cartoons sometimes end with a circle getting smaller and smaller. Sophie, however, treated this *so*-prefaced question as “the upshot of prior talk” (Raymond, 2004, p. 186), answering that this type of picture means “it’s a cartoon.” Mom then used a “yeah but” utterance to indicate her disagreement with Sophie’s interpretation and then to revised her question.

Mom’s turn in lines 146-148 and 150 were both *so*-prefaced, indicating the “upshot of prior talk” (Raymond, 2004, p. 186). This was also the case in her turn in line 158 (“so what do you think happened,” using the *so*-preface to suggest to Sophie that she should come up with a different plot about what happened in the story based on their immediately prior agreement (in lines 146-149 and especially lines 150-155) that no one died. Interestingly, even though Sophie agreed (in line 155) that both characters are still alive at the end of the story, she repeated her answer, in line 159, that “the plane crashed.” Moreover, this was prefaced with “I said,” which stressed that she was sticking to her original proposed plot that the plane crashed. The “I said” shows that Sophie was insisting on her original proposed plot rather than her inability to understand their previous discussion (summed up by Mom in line 154). This is evidenced by the fact that when Mom again pursued a different answer from Sophie by issuing a challenge in her response in lines 160-161, Sophie revised her answer to one that fitted with the result from their previous discussion (summed up by Mom in line 150-154 and again in line 160-161), saying “and then the plane landed and they both went home” (line 162).

[Excerpt 2: My Friend Rabbit (lines 138-168)]

- 138 M: ((*shows back cover to C*))- So when we see this type of picture,
 139 we can guess it means what.
- 140 C: (1.0) It's a cartoon
- 141 M: Yeah, but- uh- when ((*put the book down with back cover*
 142 *facing up*)) in the cartoon do they show this.=
- 143 C: =The last part.
- 144 M: Yeah, the end, [right?]
- 145 C: [Yeah]
- 146 M: Yeah. So they began {((*points to front cover and shows*
 147 *camera*))- like this,} and then they ended {((*shows back cover*
 148 *to camera*))- like this.
- 149 C: Yeah
- 150 M: So thank fully no one died in the [plane crashed]
- 151 C: [hehehehehe]
- 152 M: like you suggested. ((*turns book to look at the back cover and*
 153 *then immediately shows back cover to camera and then puts the*
 154 *book down*))- It means they're still alive at the end.}
- 155 C: °Yeah. °
- 156 M: Yea:h.
- 157 C: [heh heh heh heh heh]
- 158 M: [So, wha- what- what do] you think happened
- 159 C: (1.) I said the plane crashed. [heh heh heh]
- 160 M: [Yeah, well,] apparently it did not
 161 {((*briefly shows back cover to camera*))-crash look}
- 162 C: And then the plane landed and they both went home.
- 163 M: Oh, landed safely.
- 164 C: ((*nods*))- huh huh huh
- 165 M: Okay. Maybe. That's why {((*pointing to the front cover*))- he
 166 could- the mouse could tell} the story, right? [My]=
- 167 C: [°Yeah. °]
- 168 M: =friend rabbit.

Note the turn design (Drew, 2013) in Sophie's response in line 162. Line 162 is a revision of Sophie's answer to Mom's question in line 158 ("So what do you think happened"). She revised her answer from "I said the plane crashed" (line 159) to "and then the plane landed and they both went home" (line 162). There is no reason, in the sequence from line 158 to line 162, for Sophie to have designed her answer in line 162 to have been prefaced with "and then." The significance of the design of this turn can only be understood sequentially, taking into account of the conversation from the beginning of the transcript. In line 73, when

questioned by Mom about “how can the mouse narrate if he died in the plane crash,” Sophie prefaced her answer in line 76 with “and then” to ignore Mom’s challenge and oriented her answer as following immediately from her narration in lines 69-70. In line 162, by prefacing her answer with “and then,” Sophie is linking her revision not only to Mom’s prompt in lines 160-161, but also, retrospectively, to Mom’s prompt in lines 73-75 and also line 68 (in the last part “and then what”), essentially revising her own answer in lines 76-77 and also in lines 69-70. This sequential choreography on Sophie’s part shows her intense engagement with the progression of the discussion throughout this whole stretch of dialogue, displaying her awareness and acknowledgment that the whole stretch of talk has been to solve the “problem” identified by Mom in line 73 (“How can the mouse narrate if he died in the plane crash”) and yet again in lines 160-161 (“apparently it did not crash”) as a result of her answer (in lines 69-70) to the question that Mom originally posed in line 68 (“and then what”). In other words, Sophie’s answer in line 162 not only is a revision of her answer in line 159 but is also a revision of her answer in lines 69-70. Thus, the sequential organization connects the whole stretch of talk as systematic and orderly throughout the many smaller sequences in which the discussion unfolded.

Sophie’s response (accompanied by laughter) in line 159 also suggests, retrospectively, that her laughter in line 79 could have been *doing* the same thing as what she did/said in line 159, i.e., insisting “I said the mouse” as her answer to the question posed in line 78, which was a reformulation of the question posed in line 71. This laughter signalled her insistence, albeit in jest, on her own plot development even though it may not be the one proposed by Mom (in her challenges posed in lines 71, 73, and 78 about who can be telling the story if the mouse died, especially when the title of the book is “My Friend Rabbit”). In line 159, Sophie upgraded her insistence by more explicitly spelling out her resistance to Mom’s focus on story and picture logic as warranted by the back cover. In other words, even though one could already have interpreted, at the moment when the conversation proceeded to line 79, what Sophie implied by using only laughter to fill in her slot, it is in the sequential account (i.e., many sequences later in line 159) that one finds verbal evidence to further support the interpretation.

Conclusion and Implications

In the parent-child reading interaction examined above, the mother oriented to her rights and responsibilities to manage the direction of the discussion and to hold her child accountable to her interpretation of the front cover. The child, correspondingly, oriented to her responsibility to follow the mother’s line of questioning as the locus of discussion, but at the same time, also her rights to interpret the picture and insist on her own ideas. Thus, text-interpretive authority in this parent-child dyad was negotiated and co-constructed by the co-participants. The child’s text-interpretive authority was challenged by the mother when it defied the logic set out in the title and in the back cover. Thus, the sequential unfolding of the discussion was realized in the mother’s pursuit of accountability in the child’s text-interpretive authority as that which should be warranted by the clues provided by in the pictures on the front and back covers.

In particular, the child’s “interactive options” (Freebody & Freiberg, 2001, p. 228) were not limited to only that of a follower. The child repeatedly insisted on her own plot creation even when she agreed that there were holes in the logic of her plot. This occurred in three instances in three different ways: First, she filled in her slot, which was supposed to be an answer, by continuing with her narration as if she had not been interrupted by her mother. Second, when

challenged again by the mother, she only filled in her slot with laughter. Finally, towards the end, the child clearly resisted the mother's request to revise her proposed plot. Thus, it would be interesting to look for how much this characteristic of conversation (i.e., resistance as one of a child's interactive options) occurs in the rest of the data as a possible feature of this parent-child shared reading.

These findings demonstrate that a lot goes on in a parent-child dialogic reading than language and literacy skills being developed when viewed through a CA perspective. The findings also show that examining interactional practices through the CA method of looking at sequential unfolding of conversations is a worthwhile focus in parent-child reading research. Moreover, how children go about insisting on their own text-interpretive authority under the general boundary of the parents' text-interpretive control should be explored further in future research.

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Appendix: Transcript notations

(.)	Untimed perceptible pause between or within a turn
(# of seconds)	The time, in seconds, of a pause between or within a turn
<u>underline</u>	Stress
CAPS	Very emphatic stress
↑	High pitch on word
.	Sentence-final falling intonation
?	Yes/no question rising intonation
,	Phrase-final intonation (more to come)
-	A glottal stop, or abrupt cutting off of sound
:	Lengthened vowel sound (extra colons indicate greater lengthening)
=	Latch
[]	Overlapped talk
°soft°	Spoken softly/decreased volume
> <	Increased speech
()	(empty parenthesis) transcription impossible
(words)	Uncertain transcription
\$words\$	Spoken in a smiley voice
(())	Comments on background, skipped talk or nonverbal behavior
{{()}- words.}	{ } marks the beginning and ending of simultaneous (indicated by the dash) occurrence of the verbal/silence and nonverbal; the absence of { } means that the simultaneous occurrence applies to the entire turn
Huh	Laughter
Heh	Laughter
(<u>hhh</u>)	<u>Inbreath</u>

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Enhancing 'How to Learn' Skills: Its Impacts on Academic Performance and Students' Motivation

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Abstract

In the current situation of the Covid-19 pandemic, remote learning requires students to learn independently to find information and understand the concept of subject matter. However, distractions like scrolling on social media have been a common issue faced by students during remote learning. This challenge leads to procrastination and affects the quality of their learning experience. Students must have “learning how to learn” skills to help them enhance the quality of their learning (Oakley, 2018). This study examines how “learning how to learn” skills promote significant results in students’ academic performance and motivation. Classroom Action Research (CAR) design (Sagor, 2004), involving participants from multi-age classes (grade 8 and 9) as one age group; there were three (3) classes with 53 students in total. Participants were categorized as high achievers and only low achievers who received the intervention to see if the techniques could improve their performance. The intervention took place for 6 (six) months with 2 (two) days of initial sessions and 2 (two) days of evaluation sessions. The result shows that ‘how to learn skills’ improves students’ academic performance in mathematics. Their self-reflection regarding their learning techniques being used was shown to a high percentage of being ‘fully understood’ when they applied the Pomodoro technique, and the Chunking technique was shown to be less preferable for students. Overall, the ‘how to learn skills’ has helped improve students’ academic performance and accommodated students’ ability in time and ideas management.

Keywords: How to Learn Skills, Academic Performance, Student’s Motivation, Directed Learning

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Introduction

During the Covid-19 pandemic, students were required to study remotely. Most schools conduct the learning by combining both synchronously and asynchronously through several learning media. Synchronous learning provides sessions where teachers and students meet virtually in real-time. The main advantage of the asynchronous session is students can receive immediate feedback and use natural language (Blau et al., 2017) meanwhile, asynchronous session allows students to learn at their own pace (van der Keylen et al., 2020), unfortunately not all students use this opportunity to get the maximum benefit of their learning due to lack of learning skills. In asynchronous sessions, students are required to have self-study skills to stay on track and achieve the learning goals by having enough motivation throughout the learning (cf. Hartnett, 2015). Besides, students encounter several issues during asynchronous learning such as social media distraction and gaming temptation. Those activities are chosen by the students as a way out of their stress and confusion in learning the topic without teacher assistance. The number of students who procrastinate has improved and it leads to learning loss.

Asynchronous sessions will be effective if the students are responsible for their learning and possess adequate learning skills. To escalate the quality of the learning experience, how to learn skills are essential to be equipped by the students. Learning 'how to learn skills is the ability to pursue and persist in learning, to organize one's learning, including through effective management of time and information, both individually and in groups. Learning how to learn skills is beneficial for students to gain a deeper understanding of the content and be more empowered to take risks in learning. The skill will lead the students to establish goals, determine essential information, find patterns, chunk the information, prioritize their work and seek help when is necessary. As a result of this skill, students will be self-directed learners.

Based on Oakley and Sejnowski (2018), to improve students' memory and learning quality, students can use the Pomodoro technique, chunking, and many more learning skills. The Pomodoro is a technique where the students set a timer to 25 minutes, turn off all interruptions or distractions, and focus. After that, they are allowed to give themselves a self-reward for 5-10 minutes break, such as watching a video, playing games, or listening to their favorite song. The reward is the important part of the whole Pomodoro process because when an individual is looking forward to a reward, the brain helps the person focus better. This technique is effective to solve procrastination as well. Moreover, the other learning skill used is the chunking method. Chunking is the mental leap that helps students unite bits of information together through meaning. This method makes the information that is chunked to be easier to remember and also helps the brain run more efficiently.

Therefore, most of the research focuses on the general approach of learning skills improvement, and few of them examine specific learning skills implemented by the learner in mathematics. The current study aimed to investigate the effectiveness of the learning skills implemented by the learner during asynchronous sessions in Mathematics lessons and the Pomodoro technique and Chunking technique and their impact on students' motivation and academic performance. Lastly, the variable of students' achievements and motivations are limited to Mathematics subjects at a certain level of secondary education, hence the results of this study are not meant to generalize the correlation of students' achievements and motivations concerning learning skills.

1. Theoretical Framework

1.1 Remote learning

Remote learning that occurs during the Covid-19 pandemic can be identified as emergency remote learning as it is not usual for distance learning but happens in an unusual situation. Some emergencies can happen at the local, national, and global levels, such as natural disasters (such as floods, earthquakes, eruptions, and hurricanes), war (terrorist attacks, local, national, or global war), and pandemics (HIV, Malaria, Tuberculosis, and Covid-19). There are main differences between mainstream remote learning and the emergency one, like a massive situation where sudden changes in some aspects of the learning format have affected students and teachers throughout the process. A massive change due to emergencies is defined as emergency remote learning (Hodges et al., 2022). Different contexts and countries implement different policies to manage the emergency remote teaching to make sure the learning experience continues and better accommodate students' needs and situations.

As societies are made up of layers and diverse socio-economic and geospatial features, in most cases, governments prepare various platforms to reach as large a group as possible, ensuring the deliverability of all aspects of society. In an emergency, remote teaching, electrical supplies, and internet connection are the main ways to be able to access the service (education and learning session). The internet connection may be one of the cases that even in a prosperous country like the United State, over 3 million children are reported to be non-Internet linked at home or the Service is unsuitable for engaging in online learning forums (Hodges et al., 2020). Hence, in most cases, the government also provides services through Radio, Television, and smartphones for young children's learning and other public media initiatives for parents and caregivers.

1.2 Learning Skills Theories

Students' facing difficult challenges during remote learning where distraction or interruptions are uncontrollable. There are two types of interruption that need to be addressed:

- a) Internal: These interruptions are triggered by the students e.g. "I want to play games" or "I need to check my social media".
- b) External: Triggered by other entities. E.g., "request from friends"

To address the distraction issue, learning how to learn skill is necessary to equip the students. Learning how to learn is essential when teachers are no longer a main source of information and knowledge.

Pomodoro technique

The Pomodoro technique is a learning skill that helps students break their procrastination habit that is caused by distraction. This technique will help the students be more focused on their learning. Pomodoro Technique was found by an Italian student Francesco Cirillo who faced difficulties such as managing distractions during the learning process (Ahmed, Chambers, Frontz, & Volda, 2014)

According to Oakley (2018) here are the steps to implement the Pomodoro technique:

1. Shut off all distractions such as your phone, the TV, your music or anything that gets in the way of your ability to focus. Find a quiet place to study where you will not be interrupted or consider noise-canceling earphones to remove all distraction.
2. Set the timer for 25 minutes.
3. Get going and focus on the task as well as you can for 25 minutes.
4. After 25 minutes, reward yourself. Watch a dance video or listen to your favorite song or chat with friends for five or ten minutes.

Neuroscientists have discovered that the brain works in two different ways called the focused mode and the diffuse mode. Both modes are essential in helping the students to learn. When students' brain is in focus mode, students put specific parts of the brain to work. Which parts of the brain that are working depend on what students' doing. When students are trying to learn something new, they must first focus intently on it to "turn on" those parts of the brain and get the learning process started. Break time after the focused mode is called a diffused mode. Diffuse mode is when students' minds are relaxed and free. Students think about nothing in particular. It turns out that the brain must go back and forth between focused and diffuse modes to learn effectively.

The goal of the Pomodoro technique is to encourage consciousness, concentration, and clarity of thought through effective time management (Wang et.al, 2010). The Pomodoro technique can improve the productivity of individuals including students' productivity to complete their work or learn independently.

Chunking technique

Chunking is a strategy to break down information into bite-sized pieces so the brain can more easily digest new information (Malamed, 2015). Gobet et al. (2001) differentiate between two main meanings of chunking concerning memory: deliberate chunking and automatic chunking. Deliberate chunking is conscious, explicit, intermittent, goal-directed, and strategically intended to structure the material to memorize. Therefore, automatic chunking is unconscious, implicit, and continuous. Chunking has been found as one of the crucial elements of human cognition mechanism and plays a significant role in how internal cognitive processes are linked to the external environment (Gobet and Lane, 2012).

Chunking up is looking for a more generalized understanding. For instance: a car is a form of transportation, transportation is a movement, and movement is part of existence. Chunking down is getting more detail about high-level information that the students already have. The goal is to move the information from general to specific. For example, Probability is the general topic and can be chunked down into likely, less likely, and more likely that the event might happen. However, chunking sideways involves finding other examples at the same level of information. When the students chunk sideways, the students are going to mention or remember one member of a class to another member of the same class, for example, cars to planes trains to boats. Chunking helps students identify keywords and ideas, develops their ability to paraphrase, and makes it easier for them to organize and synthesize information (Maharani, 2021).

1.3 Students' Motivation

When students feel more motivated to learn, they perform better academically, show improved classroom behavior, and gain a higher sense of self-esteem (Hattie, 2011, P. 252; Usher et al., 2021 p.1). Data shows that many students lack motivation which increases every year from middle school to high school. It can be seen from the number of absenteeism as they get older. It seems that a motivation crisis is happening and real.

Based on Ryan and Deci (2000), there are 4 elements to nurture intrinsic motivation:

- a) Self-autonomy: Having a degree of control over what needs to happen and how it can be done
- b) Competence: feeling that one has the ability to be successful in doing it
- c) Relatedness: doing the activity helps the students feel more connected to others, and the feel cared about by people who they respect
- d) Relevance to their present lives and/or to their future

Jones (2018) proposed instructional design that aims to nurture students' intrinsic motivation using the MUSIC model.

MUSIC component	Statements to consider
eMpowerment	<ul style="list-style-type: none"> • The design gives students choices, control, or freedom to make decisions within the course.
Usefulness	<ul style="list-style-type: none"> • The design will lead students to believe that the course content, assignments, or activities are useful for their future.
Success	<ul style="list-style-type: none"> • The design will allow students to believe that they can achieve at a high level on the coursework if they put forth effort.
Interest	<ul style="list-style-type: none"> • The design will lead students to believe that the instructional methods or coursework are interesting and enjoyable.
Caring	<ul style="list-style-type: none"> • The design will help students believe that the instructor or others in the course care about whether they succeed in the course or care about their well-being.

Table. 1 Students' Intrinsic Motivation using the MUSIC Model

It is contrary to Morgan's (1984) that intrinsic motivation was not lessened or enhanced by conditions such as praise, positive connections, freedom of choice and rewards associated with competent performance.

2. Methodology

2.1 Research Design

This study employs a Classroom Action Research (CAR) design with participants from multi-age classes (grades 8 and 9) as one age group with total of 3 classes in this age group. Participants were categorized as high achievers and low achievers, as this research aims to help students who have a low academic performance enhance their academic skills. A total of 27 students participated in this study. CAR is a systematic process, and relevant classroom context, and it focuses on teaching practices (O'Connor et.al., 2006). The research was done

through these main steps; planning, implementing, developing, and reflecting (Mertler and Charles, 2005 in O'Connor et al., 2006). The planning stage included the literature review and preparing the materials (pre-test, self-reflection, learning guide module, students' motivation survey, and post-test). The implementing stage consisted of; a pre-test session, introduction to learning techniques sessions, and practicing learning techniques in mathematics (Data Analysis and Probability topics) for the duration of 6 (six) week lessons. In the developing stage, it took place the development of self-reflection and students' motivation survey, post-test, and re-evaluating of the current materials from the implementation stage. Lastly, in the reflecting stage, the correlation and elaboration of results were made to find specific reasons and further steps to create better teaching practices. Below is the research's flow:

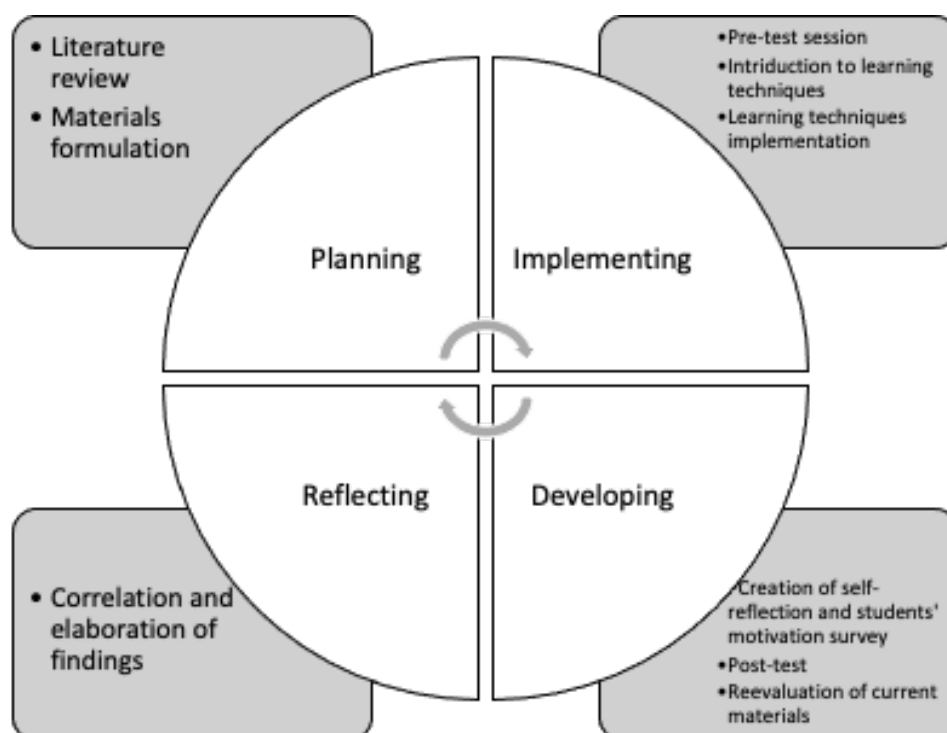


Figure 1: Research Flow

(Source: own elaboration)

2.2 Sample: Participants and Setting

The population of this study is 53 students from 3 different classes in grades 8 and 9. The samples were chosen based on a purposive sampling technique with specific criteria to specifically address the issues in mathematics class. Students with overall low performance in some topics were chosen to participate in this study. The context of this research is mathematics class on the topic of Data Analysis and Probability.

2.3 Instruments: Survey and Materials

Self-reflection was formulated to help students to track their learning journey when implementing Pomodoro and Chunking. It contains a self-assessment of their understanding (fully and partially) of specific topics with specific learning techniques in a checklist format. This self-reflection was adopted from a study on personalized learning: growing self-directed learners (Zmuda & Kallick, 2017, 2021).

The *learning motivation* survey consists of 18 (eighteen) items with 6 (six) on the Likert scale, covering students' self-assessment of their extrinsic and intrinsic motivation toward specific learning topics. The numeral six indicated 'strongly agree', a five indicated 'agree', a four indicated 'somewhat agree', a three indicated 'somewhat disagree', two indicated 'disagree' and one indicated 'strongly disagree'. The survey was adopted from research on motivating students by design (Jones, 2018). All the statements require students to fill in what they believe in for some learning contexts.

The learning guide contained both Pomodoro and Chunking learning techniques which showed specific steps to follow and practice during their independence studies.

2.4 Data Collection and Data Analysis

The pre-test was given before the formulation of intervention and implementation to help the researcher categorize students who needed improving their performance in Mathematics (specifically for the topic of Data Analysis and Probability). Afterward, the collected data which include pre-test results, self-monitoring of learning skills implementation, self-assessment survey on motivation, and post-test were analysed using qualitative (narrative coding) and quantitative (Pearson correlation) approaches.

3. Results

3.1 Students' self-reflection of Learning Skills (Pomodoro and Chunking techniques) used during asynchronous session

Learning skill	Self-reflection	Percent
Pomodoro technique	Partially understand	26%
	Fully understand	67%
Chunking	Partially understand	33%
	Fully understand	11%

Table 2. Students' self-reflection
(a direct benefit of implementing Pomodoro and Chunking technique)

The self-reflection form aims to raise students' awareness of their progress in implementing the technique. The table shows that most students implement the Pomodoro technique more than the chunking method. The Pomodoro technique benefits the students to focus on a task and comprehend the information thoroughly, comprising 67 percent of students, and few of the students claimed that it helps them partially understand the topic. In contrast, less than half the proportion of students assumed that chunking methods slightly impacted their understanding of math lessons either fully or partially.

3.2 Students' academic performance

In the first data collection, the pretest was conducted using a written instrument. The result of the pretest is evaluated using a rubric which is categorized into high performance, proficient and not yet (those who did not meet the minimum criteria).

Criteria	Grade	Pretest		Posttest	
		F	Percentage	F	Percentage
High Performance	A	0	0%	2	7.4%
	B	0	0%	16	59.3%
Proficient	C	19	70.4%	9	33.3%
Not Yet	NY	8	29.6%	0	0%
TOTAL		27	100%	27	100%

Table 3. Students' performance Pre-Test and Post-Test

According to the pre-test result, about 70 percent of the students are proficient, and around one-third of the students underperformed. The lower achievers are selected as a group who have implemented the learning technique.

The post-test result shows significant enhancement in students' academic performance. About one-third of the students achieved the minimum criteria in Mathematics which is proficiency, and a tiny proportion got an A. The majority of the students performed better, previously those who were at a proficient level, substantially improved to a higher grade, which is grade B or A. Approximately 3 percent of lower achievers did not make any significant improvement in their academic performance. This result proved that the "how to learn" skill is beneficial for enhancing students' achievement. The students who were not fulfilling the minimum criteria in the pre-test show better performance at the minimum criteria

3.3 Frequency of trials and students motivation

Number of trials Pomodoro and student	N	27
	r value	-0.46
	p value	-
Number of trials Chunking	N	27
	r value	0.19
	p value	0.32

Table 4. Pearson correlation between number of trials in the learning skills towards students motivations

The Pearson's Product Moment Correlation coefficient is a measure of the strength and direction of association that exists between two variables. A Pearson's correlation attempts to draw a line of best fit through the data of two variables, and the Pearson's correlation coefficient, r , indicates how far away all these data points are from this line of best fit. The frequency of implementing the learning skills is recorded by the students. This data is used to find its correlation with the students' motivation scores. It is predicted that the more frequently the students used the learning technique, the higher their motivation. Pearson correlation is measured to analyse whether one variable affects another variable. The correlation between the number of trials in using the Pomodoro technique to motivation percentage is negative. The r -value is -0.46 , indicates that the correlation between the number of trials using the Pomodoro technique is weak and negatively correlated. It is worth noting the number of trials in chunking methods positively correlated with students' motivation with the r -value of 0.19 , indicates that there is a weak positive correlation between the variables.

4. Discussion

The result indicates that the Pomodoro and Chunking techniques had a significant effect on students' achievement. It can be seen from the pre-test result that 30 percent of the students underperformed in the prior stage before the intervention was implemented, and those students showed better performance at minimum on proficient criteria and no students failed referring to the post test result. In addition, a group of students who were achieving proficient criteria showed noticeable progress on their academic performance where the majority of them fulfilled high performance criteria (grade B) and a tiny proportion got an A grade. The improvement on students' performance showed that both learning skills effectively help students to maximize their asynchronous session to learn and it is impacted to their quality of the learning. This result is aligned with students' self-reflection where the students' claim that they obtain the benefit of applying the "how to learn skill" (Pomodoro and chunking techniques) which results in improving their understanding of math subjects when they learn about statistics and probability topics and apply it during asynchronous session. These findings are supported by a previous study correlate to the benefits of executive function level in regard to the use of Pomodoro technique. An overall effect of students' learning experience using time management, self-regulation, creating goals, and recording the data, have shown prove to the improvement of executive function, hence, it greatly impacts to students' academic performance (Singer & Bashir, 1999 in Akers, 2015).

According to the learning skills monitoring record, the Pomodoro technique is more likely to be used by the students to help them overcome distraction during asynchronous sessions. During the weekly discussion, students convey that this learning skill is easy to implement and foster them to focus on a task rather than multitasking and improve productivity. Also, the break that they have after focusing for 25 minutes allows them to relax and be less tense. This statement proved that Pomodoro technique could make tasks feel more manageable (Tabackman, 2021). How the brain works during the implementation of Pomodoro technique, Oakley (2016) mentioned that for 25 minutes student' brain is in a focus mode. During the focus mode, the brain concentrates intently on something that the students are trying to learn or to understand. Then, during the break, student' brain is more diffused. Diffuse mode allows the students to generate new ideas or approaches that they need. Also, the diffuse mode makes new neural connections traveling along new pathways. It can be said that pomodoro technique enhances students' time management that contributes to productivity during independent learning.

To improve the effectiveness of the Pomodoro technique, there are some activities that students can do such as set upcoming activities or goal (planning), tracking and record by listing the daily performance, identify distractors and find a way to cope with it, and visualize the improvement of the Pomodoro technique (Shinoda, 2020). In this study, the tracking, recording, and visualizing the progress when using the Pomodoro technique has been done completely. Likewise, having a goal setting, identifying distractors as well as finding a way to cope with them, for example, unexamined.

Meanwhile, the students less preferably implemented the chunking technique. It was due to the implementation of the chunking technique required an analysis to break down the information into bite-sized pieces. Some students who implement it claim that they understand the information easily. This analysis supports the theory that the chunking technique can help students direct attention to the important features of the material, and in turn help the acquisition of perceptual chunks that are appropriate, given the task at hand (Gobet, 2005). The students who implement this learning skill consistently show significant improvement in understanding the math topic. As shown by the result of the post test, about 7.4% of the students got an A grade. The results of this study are similar to the previous research of Hardiana (2019) that the chunking method is undoubtedly beneficial for students to improve students' reading comprehension in 8th grade. This learning technique helps students for ideas management.

This study also demonstrates a correlation between the number of trials the students took in implementing the "how to learn" skills and students' motivation. As for the Pomodoro technique, the scatterplot shows a weak negative correlation between the number of Pomodoro techniques and students' motivation. Pomodoro technique corresponds with students' time management and improves focus which also affects the quality of their learning; however, it does not positively correlate with their intrinsic motivation. In contrast, the number of trials in the chunking method shows positive correlation with students' motivation. According to Ryan and Deci (2000), there are 4 elements as factors of improving students' intrinsic motivation: self-autonomy, competence, relatedness, and relevance. The Pomodoro technique and chunking apparently improves their competence but still needs further intervention that also enhances students' self-autonomy, relatedness, and relevance towards the learning to enhance their intrinsic motivation. According to Gottfried (1990) In longitudinal study of children, motivation and achievement in learning math was found to be affected by prior math achievement or math motivation. It means that the students' prior motivation and achievement contributes to the current motivations.

Conclusion and Recommendation

By testing the effect of "how to learn" skills: Pomodoro and Chunking methods on students, this study established that the implementation of these learning skills does indeed have a significant effect on students' academic performance. Accordingly, chunking methods have a positive correlation between the frequency in implementing the methods towards students' motivation. Yet, the Pomodoro technique was less likely to improve students' motivation, and more to help students promote their time management.

Further research is needed to establish teachers' planning in nurturing students' intrinsic motivation by considering relatedness, relevance and self-determination in the learning. If the intrinsic motivation is well cultivated, it will have a lasting effect and drive the students to be self-directed learners. Also, in the future research, a longer period of teaching the chunking

method to students is recommended and graphic organizers might be helpful to help them break down ideas that are easier to digest. Moreover, teaching students to list down the distractors and cope with it is also an important step in the implementation of the Pomodoro technique as well as setting a specific goal prior to the Pomodoro technique.

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***Assessing Social Apathy Among Filipino Young Adults:
Construction and Validation of the Social Apathy Test (SOCAP)***

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Abstract

Filipino young adults are often observed to lack social consciousness or interest of their socio-political environment, thus, being regarded as socially apathetic. Social apathy refers to the disorientation of the processes of society. It is a cause of insecurity and powerlessness that lead to the incapacity to build and value social life. To date, there are many tools in the literature used to measure apathy in general, but not taking into account other specific aspects of it such as social apathy. Therefore, our objective is the construction and validation of a tool for assessing the social apathy of Filipino young adults. We carried out a content validation of the originally 40-item Likert scale with a panel of licensed psychologists and psychometrician and proceeded to a pilot testing to 320 respondents aged 17 to 26 years old. The tool was reduced into 38 items within two subscales (Political Apathy and Moral Apathy) and were further analyzed through exploratory factor analysis to test its construct validity, which was found to be statistically significant ($p < 0.001$). Moreover, all six components (Interest, Voter, Bystander, Influence, Moral Indifference and Moral Callousness) were found to have good to excellent reliability. Correlational analysis determined that all the components were found to have a significant relationship with the main construct which is Social Apathy. Social Apathy Test (SOCAP) has overall good psychometric qualities and can be used to devise a statistical data about the levels of social apathy.

Keywords: Social Apathy, Construction, Validation

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Introduction

In the present time when social issues are everywhere, it is quite interesting to observe how people, especially young adults, respond and react to such events. Young adults are often regarded as uninterested in political activities, are less likely to vote than older adults, and are pessimistic when it comes to important societal issues (Milan, 2005; Ojala, 2012). However, there are also several pieces of evidence to show that young people are not apathetic and that they just have a different way of viewing and engaging in social matters (Sloam, J., 2014). With these, the authors would like to come up with an instrument to test the Social Apathy of young adults.

Social apathy pertains to the lack of desire and eagerness to any social forms or events (Newman, 2017). A socially apathetic person may feel that they cannot do anything to make a change because they feel that they are not influential enough, and when things go wrong the person tends to look away from the responsibility or go blind to what is happening to the surroundings, instead, they focus more on themselves or their self-interest (Chang, 2017).

Researches conducted by Yamamoto, Kushin, & Dalisay (2017) and Milan (2005) showed that young adults' personal motivation and the relevance of the social issue to them are factors that intervene in the direction of their apathy. Young adults who are less aware that a politician's decisions affect them directly may not see the relevance of an election to their personal lives.

On a different note, young adults are seen to be active users of social media. In the last decade, the young adult internet population has been consistently growing, starting from 2008, in which 93% of young adults ages 18-29 years old go online. The percentage of adults who use online social networks varies dramatically by age, so has the percentage of social networking site users who maintain a profile on multiple sites. Aside from using social media as a communications hub, it was also found that teens and adults use it for vital information necessary for life management, health, and civic engagement (Lenhart, Purcell, Smith, & Zickuhr, 2010). While 71% of adult internet users reported getting news online, only 35% of online adults were getting political news online. Opposite to the said study, Bode, Zuniga and Skoric (2014) stated that social media use for political information seems to intervene in the process of disaffection whereby cynical citizens may become either more or less apathetic. Consequently, the media are often blamed for the political disengagement of young persons (Capella & Jamieson, 1997), but other literature says that news media use for political purposes is an important source of political participation (Gil de Zuniga, et.al., 2012).

In connection to this, a recent survey reveals that Generation Z or those ages 17 to 24 years old are "politically apathetic" despite having wide access to information (Malasig, 2019). Given that young adults are caught spending more time on social media than any other generation, they have greater opportunities to access sufficient data and updates about social happenings. However, as the literature has presented, it may either decrease or increase ones' willingness to react and respond to these events. Thus, the authors would like to construct an instrument to test the level of social apathy of young adults.

Test Design and Construction

The Social Apathy (SOCAP) Test was originally composed of a 40-item scale that the three authors determined following the definitions of the subscales. Positive syntax was employed when writing the original items. These were designed to be self-rated using the 4-point Likert scale (Strongly agree, Agree, Disagree, and Strongly Disagree) depending on how it best describes the target respondents. After duplicating items were removed, the test was then reviewed for content and clarity of item construction by a panel of three consisting of educational psychologists and a psychometrician. Based on their responses, items were revised accordingly.

After the pilot testing to 320 respondents who completed the test online, items were analyzed and reduced using Factor Analysis to calculate the correlations among the set of components and look for patterns which suggests that the items “go together.”

The items were reduced to 38 items and are grouped based on the variances created. Below is the table of specification for the test items:

Area	Sub Scales	Components	No. of Items	Placement	Percentage
Social Apathy	Political Apathy	Interest Apathy	12	1 - 12	32%
		Voter Apathy	7	13 - 19	18%
	Moral Apathy	Bystander Apathy	5	21 – 24	13%
		Influence Apathy	5	25 – 29	13%
		Moral Indifference	4	30 – 33	11%
		Moral Callousness	5	34 – 38	13%

The table of specifications of the Social Apathy Test (SOCAP Test) shows that there are 38 questions regarding some situations that are happening to society. There are two subscales chosen by the test developers. The subscales are Political Apathy and Moral Apathy, in the first subscale there are two components which is Interest Apathy with twelve (12) questions having a percentage of 32%, and Voter Apathy having seven (7) questions with a percentage of 18%.

On the other hand, the second subscale of the test is Moral Apathy which is composed of four components, which are Bystander Apathy, Influence Apathy, Moral Indifference and Moral Callousness having five (5) questions for each component with a percentage of 13%, except for Moral Indifference which has four (4) questions with a percentage of 11%. The distribution of every question is in order by components.

Validity and Reliability Testing

Validity is an important psychometric characteristic of a test which mainly asks whether the test actually measures what it is intended to be measured. A pilot testing was done to gather sufficient data to be used in the statistical analysis of the test itself.

The authors conducted the initial testing to a total of 320 respondents. Given that age is the only parameter set for this test, it was only limited to young adults whose age is ranging from 17 to 26 years old.

To achieve construct validity, the application of statistical techniques using the Statistical Package for the Social Sciences (SPSS) and JAMOVİ were used to determine whether the test really measures the construct presented.

Exploratory factor analysis was utilized to assess the factor structure essential to the 40- item Social Apathy Test. Results of the sampling adequacy measure of this instrument reported a high KMO of 0.937 and Bartlett's test of sphericity ($\chi^2 = 7213$, degrees of freedom = 780) yielded a statistically significant $p < 0.001$, this indicates that the variables are associated and therefore appropriate for extraction.

Table 1: *Strong-Loading Items after Factor Rotation*

ITEM	FACTOR						
	1	2	3	4	5	6	7
Pa1		.859					
Pa2		.873					
Pa3		.836					
Pa4		.586			.427		
Pa5		.699					
Pa6		.799					
Pa7		.434					
Pa8			.445				
Pa9		.537		.405			
Pa10	.413						
Pa11	.753						
Pa12	.647						
Pa13	.510				.415		
Pa14	.788						
Pa15	.771						
Pa16	.746						
Pa17	.688						
Pa18	.651						
Pa19	.527						
Pa20	.597						
ma1						.628	

ma2			.564
ma3			.694
ma4			.675
ma5			.661
ma6	.401	.592	
ma7		.553	
ma8		.693	
ma9		.712	
ma10		.534	.440
ma11			.696
ma12			.498
ma13			.702
ma14			.640
ma15			-.638
ma16		.667	
ma17		.608	
ma18	.412	.542	
ma19		.746	
ma20	.415	.514	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Table 2 presents the items with a minimum of .40 factor magnitude. The table consisted of 7 components with 40 items, but due to item ma15 not meeting the >0.350 factor loading cut-off, Component 7 was excluded, so there are only 38 which are included in the final inventory. PA8 was removed later on because it was not subsequent to the theme of the item loading. Components 1,2,3,4,5, and 6 are consisted of items which are included in the final 38-item inventory.

The final 38 items after factor analysis of the 40 item Social Apathy (SOCAP) Test are illustrated in the following Table 3. Together with the statements from the test, the table also presents the factor loading, mean, and standard deviation of each item. There was a total of six factors for the final 38-item Social Apathy Test – (1) Interest Apathy, (2) Voter Apathy,

(3) Bystander Apathy, (4) Influence Apathy, (5) Moral Indifference, and (6) Moral Callousness.

Table 2: *Factor Loadings, Eigenvalues, Percentages of Variance, Mean and Standard Deviations of the 38-item Social Apathy Test*

Social Apathy Test	FL	M	SD
Factor 1: Interest Apathy			
Eigenvalues: 13.114; Percentage of Variance: 32.76%			
1. It is important for me to participate in the next/coming elections.	.859	1.23	0.597
10. I am vigilant in the counting process of election.	.413	1.58	0.634
11. I am interested in having conversation with other people when it comes to politics.	.753	1.64	0.684
12. I share reliable political sources to spread knowledge so that people will learn more about the current issues.	.647	1.57	0.620
13. I read and watch news to be aware of the current social and political issues.	.510	1.51	0.560
14. I voice out my opinions in terms of political issues.	.788	1.71	0.698
15. It makes me excited and motivated to talk about politics, law, and governance.	.771	1.91	0.760
16. I participate in any social programs that talk about current affairs.	.746	2.08	0.792
17. I attend some gatherings or seminars that talks about social issues.	.688	2.13	0.786
18. It is easy for me to share my political views to other people.	.651	2.07	0.793
19. I am fully aware of different kinds of political matters that are happening right now in our country.	.527	1.67	0.627
20. I am highly interested to learn about political, governance, and law.	.597	1.62	0.656

The first factor, Interest Apathy, consisted of 12 items, all similarly describe an individual's perspective on electoral processes and their participation on political discourse. As this has the same definition as that of Yakubu (2012), that it can be measured by either having or lacking of concern and interest in both processes, the factor label was therefore retained.

Table 2: (continuation)

Social Apathy Test	FL	M	SD
Factor 2: Voter Apathy			
Eigenvalues: 3.599; Percentage of Variance: 9%			
2. I believe that voting is important for societal change	.873	1.23	0.580
3. I make sure that I vote wisely in the coming election.	.859	1.16	0.499
4. I am interested in the political platforms that will be presented by the candidate during the upcoming election.	.586	1.37	0.615
5. It is my right to vote in every election.	.699	1.13	0.390
6. I believe that when I participate in voting change is possible	.799	1.42	0.676
7. I educate other people about proper voting.	.434	1.59	0.651
9. I encourage other people to choose a proper candidate and vote wisely.	.537	1.41	0.626

The same factor label Voter Apathy was retained for the second iteration. There are seven factor loadings with 11.10% cumulative variance. These items focus on an individual's action and attitude towards voting of participating in the actual election.

Table 2: (continuation)

Social Apathy Test	FL	M	SD
Factor 3: Bystander Apathy			
Eigenvalues: 1.662; Percentage of Variance: 4.15%			
26. I engage in community programs in order to help other people.	.592	1.73	0.661
27. I take risks for others' welfare.	.553	1.95	0.675
28. I always make initiative in helping other people.	.693	1.67	0.631
29. I assert myself in new things for my daily activities.	.712	1.89	0.676
30. I always motivate and encourage other people that they can also reach their goals.	.534	1.48	0.582

A new factor label Bystander Apathy was created for five factor loadings. All items converge a situation in which their helping behavior is affected by the social situation that they observe

from other people, which is parallel to the definition of Hortensius and de Gelder (2018) for the said component.

Table 2: (continuation)

Social Apathy Test	FL	M	SD
Factor 4: Influence Apathy			
Eigenvalues: 1.476; Percentage of Variance: 3.70%			
36. I try to correct people who do wrong doings.	.667	1.82	0.582
37. I try to be a good influence and a role model to other people.	.608	1.60	0.589
38. I make sure to make a change or solution whenever I see something wrong with our society.	.542	1.81	0.605
39. I teach other people what is right and wrong.	.746	1.76	0.643
40. I always share my sentiments in any matters towards other people.	.514	1.96	0.744

Another new factor is Influence Apathy where five items were loaded. Thematically, the items assess an individual's effort, initiative or preference to influence other people and/or create a change in them for the better. Since all items are reversely scored, these items were also written on a positive syntax opposing Dean's (1956) definition of Influence Apathy which means the lack of interest in influencing others.

Table 2: (continuation)

Social Apathy Test	FL	M	SD
Factor 5: Moral Indifference			
Eigenvalues: .812; Percentage of Variance: 2.03%			
31. I care about what is happening to our world.	.696	1.31	0.496
32. I have an interest in listening to the sentiments or ideas of other people.	.498	1.40	0.551
33. I am bothered when things get worse in society.	.702	1.32	0.510
34. I do care if the world is falling apart.	.640	1.33	0.569
Factor 6: Moral Callousness			
Eigenvalues: .627; Percentage of Variance: 1.57%			
21. It is important to me to reach my own goals in life as well as to those people who are close to me.	.628	1.29	0.499
22. I think of future plans for the improvement of the society.	.564	1.51	0.587
23. I think about my decisions in life more than once so it would benefit not only myself but other people as well.	.694	1.38	0.563
24. I always show interest unto what others may feel or say about what I am doing.	.675	1.65	0.679
25. The well-being of others and my own is always important for me.	.661	1.37	0.533

The fifth and sixth factors retained the factor labels as majority of the statements were grouped according to their original component, which is Moral Callousness and Moral Indifference. The five items under Moral Callousness focuses to an individual's concern to the well-being of others, which is the positive syntax of O'Connor's (2014) definition of the construct.

Moral Indifference four-item factor loadings, on the other hand, present statements about a person's perspective towards a wider scope of things such as his/her society or the world, where he/she may choose to see or not see a certain event or circumstance.

The final 38 items show that there were more items concerning Voter's apathy to Social Apathy. Approximately half (50%) of the final items were about Political apathy and the other half (50%) is for Moral Apathy. Table 3 summarizes the items comprising the six factors. The total variance accounted by the six factors was 53.21%. the first factor (Voter Apathy) constitutes 32.79%, second factor (Interest Apathy) makes up 9%, third factor (Bystander Apathy) comprises 4.15%, fourth factor (Influence Apathy) is 3.70%, fifth factor (Moral Indifference) is 2.03% and the last factor (Moral Callousness) is 1.57%.

The second part of the analysis is the reliability testing. The reliability of a test is often defined as the extent to which the scores on the test are free from error. The final 38 items were tested for internal consistency reliability.

All components are found to have a good to excellent reliability. Voter Apathy has the highest reliability (N=320; $\alpha=0.90$) while Moral Indifference has the lowest reliability (N=320; $\alpha=0.76$) among the six components. The reliability of the whole instrument was also tested and found with excellent reliability (N=320; $\alpha=0.947$). This implies that the individual differences in the test scores are attributable to “true” differences in the characteristics under consideration and the extent to which they are attributable to chance errors (Fogarty, ND).

The third stage of analysis in this paper is the Correlation testing between the components. The statistical result is shown at the table below:

Table 3: *Correlation of social apathy, interest apathy, voter apathy, bystander apathy, influence apathy, moral indifference and moral callousness*

Variable	1	2	3	4	5	6	7
1 Social Apathy	1	0.689	0.892	0.782	0.800	0.684	0.755
2 Interest Apathy	0.689	1	0.469	0.390	0.428	0.436	0.507
3 Voter Apathy	0.892	0.469	1		0.652	0.559	0.547
4 Bystander Apathy	0.782	0.390	0.615	1	0.698	0.430	0.577
5 Influence Apathy	0.800	0.428	0.652	0.698	1	0.444	0.529
6 Moral Indifference	0.684	0.436	0.559	0.430	0.444	1	0.544
7 Moral Callousness	0.755	0.507	0.547	0.577	0.529	0.544	1
N	320						

Note: N = sample size, ** $p < 0.001$

The relationship between the components was investigated through correlational analysis. All the components are found to have a significant relationship with the main construct which is Social Apathy. The Voter Apathy was found to be most strongly correlated with Social Apathy ($r=0.892$, $p<0.001$), while the Moral Indifference component is the least correlated ($r=0.684$, $p<0.001$). All component total scores from the 320 respondents held a moderate to high correlations with Social Apathy.

Conclusion

A socio-psychological phenomenon called social apathy illustrates the social self-feeling and social behavior of one person, it shows the emotional color of oneself that characterized the mental life of a person. Moreover, social action and behavior show the emotional state, and self-feeling is the characteristic of human assistance with society (Viaznikova, et al., 2019). It is manifested as a lack of initiative and effort to perform everyday-life activities.

Furthermore, there is a lack of intellectual interest and initiative regarding personal or social issues and indifference or flattening of affect (Marin, 1991).

In this test, it is operationally defined as the disorientation of one person to process the society, which causes insecurity, powerlessness, the unwillingness to participate in social life or even building a life, and having difficulty valuing the system of an individual or the society. It is divided into two subscales namely: Political Apathy and Moral Apathy.

Political apathy is the absence of political activity and participation in public affairs and civic obligations (Agaigbe, 2015). It was generally defined by Dean (1956) as simply as voting or non-voting. It is operationally used here in this test as the passivity towards political involvement, engagement, and attachment. This subscale is distributed into two components.

The first one is the Interest apathy. According to Dean (1956), it is the lack of personal involvement. Meanwhile, the authors refer to it as the absence of personal participation or interest in political matters or concerns. Another is Voter apathy, which is the lack of concern and interest in the process of electoral and voting (Yakubu, 2012). Here, it is defined as the passivity towards public elections.

Another subscale of Social Apathy is Moral Apathy. It is generally defined as the lack of motivation to realize certain goals. It manifests as being apathetic about one set of goals or circumstances while being quite dedicated to others. It tends to be localized and confined but it can also affect other areas of life (O'Connor, 2014). The author defines it as the selective form of social apathy. It manifests in specific situations such as being apathetic to things that are not acceptable for them or do not reflect their standard of behavior or belief. There are four components of Moral Apathy in this test—Bystander Apathy, Influence Apathy, Moral Indifference and Moral Callousness.

Bystander Apathy, which according to Hortensius and de Gelder (2018), it manifests when a social situation influences the decision making of a person in terms of helping other people who are in need of help, as well as it is the decrease of helping behavior of a person. The authors defined it as a decrease helping behavior or being passive of a person when people ask them for help, also it is a person's tendency to avoid other people in terms of helping them especially on social situations.

The second component is Influence Apathy which is the lack of interest in influencing others (Dean, 1956). Operationally, it is the passivity towards influencing others regarding political matters or concerns.

This is followed by the Moral Indifference. It is the potent and devastating combination of the worst forms of moral apathy and moral callousness, which belongs in its own category because unlike the others, it does not admit of degrees (O'Connor, P., 2014). In this test, it refers to the absence of interest or enthusiasm towards a situation. This is apparent when an individual is on the neutral side of things; there is no positive or negative response to an occurring event or circumstance.

The last component is Moral Callousness refers to an individual's insensitivity to the care, concern, needs, or wellbeing of others. It often manifests in a strong sense of selfishness; one puts his/her self-interest ahead of the interests of others (O'Connor, P., 2014). This is being used in this test as the absence of regard for things or situation that does not concern

themselves. It may be observable when an individual is insensitive to the difficulties of others, especially when they are not experiencing that difficulty themselves.

The present test will measure the social apathy of a person differently from all other existing Apathy Test. It has a 40-items scale regarding social apathy, and two subscales, political apathy, and moral apathy. It contains a four-point Likert scale which ranges from Strongly Agree to Strongly Disagree.

The Social Apathy (SOCAP) Test might help in giving reliable observations on how young adults would respond to certain social situations or events. It may also give awareness to individuals that there are factors related to social apathy. Furthermore, this envisions young adults to have a better understanding and in assessing themselves on how they are contributing to their communities in terms of their responses and actions when it comes to societal concerns.

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Shared Leadership Education: The Experiences of Music Teachers in a Music School

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Abstract

In all levels of professional music education – music school, conservatory/art gymnasium, music academy, shared leadership is a new and little researched concept. Most of what is known in music education are that a teacher is the leader of education, who leads the education – prepares a program, marks fingers above notes, puts together dynamic symbols and cords of the piece, teaches posture and sitting while playing with an instrument, analyses the style and structure of a musical work as well as teaches music to the pupil. Amongst all else, consults, assists, listens, and takes care of the general well-being of learning. However in professional music education of today while preparing musicians it is a bit different. The teacher is the main person from whom the pupil learns and is like an assistant, the conveyor of knowledge, supporter and leading person towards the end-goal, which is performed by musician in learning and advanced musician. This publication reviews the concept of shared leadership, its dissemination in the education, the experience of music teachers in shared leadership development. The purpose of this publication is to find out how shared leadership based education predominates in professional music education in the work and experience of music school teachers. The results of the qualitative research, conducted by the authors, revealed that the shared leadership in professional music education is comprised of good relationship between the teacher and the pupil, good and favourable learning environment and the teacher's comprehensive support for the student. The shared leadership education concept is applied in the preparation of professional musicians.

Keywords: Shared Leadership, Professional Music Education, Music School, Music Teacher, Teacher, Pupil

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Introduction

Music education at all times has been valued as one of the most intellectual activities for the development of a child. Professional music education is coherent and long pedagogical work process. This type of education starts in the early childhood and continues in several stages until a mature personality for music is formed. Firstly, everything starts at the music school, when the teacher notices a student who has excellent abilities – musical hearing, rhythm, concentration and will power. If the child, encouraged by a teacher, becomes interested, later on he continues his road in conservatory or art gymnasium. After graduating from conservatory, the student usually picks music academy, in which he continues his career. When the performer can already lay out the musical aspects that are important to him, he becomes a professional and mature personality. There are many important factors in the development of a professional music performer that can lead to great results. One of them is the relationship between the teacher and the student. In educating a professional musician, the teacher's job is with one student. This means, that the relationship between the teacher and the student is very important when working with a single child. Such relationship puts the teacher's authority in the first place as person who leads and raises a professional musician. As can already be seen, the teacher's position in today's education has changed considerably. Taking into account the teaching of the past times, when the teacher was an authoritative personality, whose mere opinion was undisputed, the personalities of the today's teachers are different.

There has been a plethora of conducted research regarding the shared leadership - Gronn (2000), Harris et al. (2003), Harris (2005), Spillane (2005), Bolden et al. (2009), Harris (2008), Georgii-Hemming & Westvall, 2010; Napoles, 2006; Patston & Waters, 2015; Creech & Hallam, 2003; Johansen, 2008; Teachout 2001. Spillane et al. (2004), Hargreaves, & Fink (2008), Pont et al. (2008), Northouse (2009), Harris (2010), Marzan et al. (2011), Lambert (2011). Meanwhile, the concept of shared leadership in educational institutions or education has been studied by only a few Lithuanian researchers - Deiniene (2009), Kazlionkaitė, (2009), Cibulskas & Žydžiūnaitė (2011), Rupšienė & Skarbaliene (2010), Targamadžė (2000), Želvys (2003), Žvirdauskas (2006), Mečkauskienė (2008), Navickaitė (2012), Budreckienė (2014). Researchers found that applying of shared leadership in education it is possible to reach the desired results more effectively. However, there is a lack of studies of shared leadership in music education. This study aims to show the leadership relationship between teacher and student in the professional training of musicians.

Shared leadership in professional music education while preparing musicians

Shared leadership is based on voluntary cooperation and interaction, competencies and a sense of responsibility of all parties. The important part of shared leadership is not the position of individuals or role, but their knowledge and competencies in accordance with a certain theme or task. Shared leadership reflects a culture of shared and common work that is shared by all parties (Adas & Bakir, 2013). Liang et al. (2015) claim, that shared leadership in a way coincides with democratic and participatory leadership. Both of the aforementioned concepts (democratic and participatory) describe the results of shared leadership – any form of a team or shared leadership that, in one way or another, means leading (Liang & Sandmann, 2015). Hulpia et al. (2012) claim that shared leadership is the link between leaders, followers, and situations. Shared leadership involves multiple groups of individuals. “Most of the time, shared leadership idea is related with: 1) sharing; 2) cooperation; 3) democracy; and 4) universal participation. Shared leadership is a phenomenon of multitude of

interactions, constantly changing, an energetic unit of the organization, involving universal participation based on interrelationships within the organization (Dukynaitė, 2015). A shared leadership team can be characterized as a close-knit group that openly expresses opinions to group members on mutual trust, communication, and collaboration (Hulpia and others., 2012). Shared leadership is commonly described as horizontal leadership or group leadership (Kocolowski, 2010).

Usually those who pick music schools, do so because they have already seen a performer and wish to play like him. Hoping that s/he can play like he had heard a performer play in a concert or perform how his classmate did in a class. The teacher is discussing and explaining to the student, that first it is paramount to learn the main technical principles of an instrument and then it is possible to play, what the student wants. In accordance with the requirements of a program, the teacher always coordinates the repertoire, however today a teacher pays more attention to the student and in attempt to interest him, allows him to play at least a single composition of his wish. This way, without obscuring student's wishes, s/he is motivated to play or sing even more. As a result, in shared leadership the so-called cooperation occurs, when the teacher listens to the student, consults with him. Then, accordingly, the student receives a positive response from the teacher and the student's wish to play or make music grows. Hard work at class or home for the student is an encouragement to appear in front of the others – friends, parents, teachers. Teachers and students become like friends and without crossing the line, the students preserve their respect towards the teacher and value her / him. Because the teacher in a leading person. To the student s/he is an authority. Therefore, such shared leadership development promotes student motivation and good learning outcomes. This is even mentioned in several scientific sources (Napoles, 2006; Patston & Waters, 2015; Creech & Hallam, 2003; Johansen, 2008; Teachout 2001), in which it is stated that shared leadership is based on connection and relationship between the teacher and the student is the reason for good results in the musician's career.

Teacher's role in shared leadership

The changed paradigm of learning leads to fundamental changes in the activities of both the teacher and the student. The bright conservatism in traditional learning can no longer satisfy the student. Inevitably the number of teachers, whom one way or another in their activities apply shared leadership principles, which are orientated towards the student's personality, are increasing. The role of the teacher is understood as that of a helper, who must take care of the learner's knowledge creation process. The teacher is no longer the controller, as was the case before, he moved into the position of the provider of knowledge, the organizer, the promoter of the expression of students. The main task of the teacher is to create an environment that pose challenges for the student, and by creatively solving these challenges to promote student's freedom, giving students the opportunity to decide the direction that the lesson should develop towards, encourages students' instinctive motivation (Blagg, 2000).

Teachers-leaders are those who have a dream to change something and are able to achieve it or rekindle their enthusiasm by working with colleagues in accordance with the principles of professional culture (Lambert, 2011). Teachers which share leadership, must always renew their knowledge, must be flexible and creative. The results of each student's achievements depend on it, as well as the quality and success of the school itself (Schratz & Petzold, 2007). The shared leadership is a dynamic cooperation process, happening between the members of the community, who aim for a common goal (Kocolowski, 2010). Community members, in the process of shared leadership, have a common goal and a unified voice, which is

strengthened through social interaction and includes shared responsibility, trust, cooperation and personal competence. The teacher is the leader and has a huge potential, because the true leadership of the teacher is also revealed in the dissemination of good practice, the sharing of ideas, thoughts, methodological gatherings and school management activities (Spillane et al. 2004).

Methodology

Research type

In order to reveal the ideas of shared leadership in the preparation of professional musicians in a music school, a qualitative research design was selected. This type of research aims to test existing theory about shared leadership and its applicability in preparing students in a music school.

Data collection

The selected data gathering method is semi-structured interview. Authors selected this type of data gathering method, because it is flexible and universal (Kallio et al., 2016).

Data analysis

Interpretative phenomenology, a qualitative data analysis method was selected in this research. For the phenomenologist the world is the world stated by consciousness. By conducting data analysis, it is assumed that the “living world” and experiences of each research participant are individual, and that reality is perceived subjectively. This is an understanding of the life experiences of the study participants (Žydzīūnaitė, 2008). Four stages were selected for the analysis of research data, in accordance with Willig (2001) interpretative phenomenology analysis concept:

1. Repeated reading of the text - the researcher noted relevant places, which include various associations, questions, comments, summary statements.
2. Formulation of topics and assignment of labels - the researcher formulated topics that characterize each part of the text, giving them titles that were taken from the participants' quotes during the interview.
3. Preparation of the structure of the analysis - the researcher forms clusters of concepts, giving them labels that reflect the essence of those topics in everyday language terms, taken from the text of the original informant's interview.
4. Compilation of a summary table – The summary table is compiled by using the cluster labels and the topic labels. These labels reflect the researcher's experience and are related to the phenomenon that is being researched. Moreover, the table is filled up with quotations, where the excerpts of specific interviews can be found.

Research sample

Ten music school teachers from different Lithuanian cities participated in this research. The main criterions for the music school teachers were the following:

- no less than five years of pedagogical experience working in a music school;
- higher education;
- the average age of students, taught by the music teachers, is from 7 to 16 years;
- participation in republic and international competitions with students;
- good connection with students' parents;
- continuous improvement in the field of their specialty.

Results

Teacher's help during the education

The music teachers were surprised that teacher's help was a debatable issue, because to their mind, it is a matter of course in today's teaching paradigm and teacher's work. They claimed that the essence of their work and work itself consists of helping the students. Help in education, to both students and parents, is very important from the very first day, because the teacher has a strong connection with the student in individual lessons:

Help is very important, from the first class in every way, for both parents and the child. Because the teacher is like a friend of the family. Every child is individual, but the teacher must try to get to know him from the very first day. All of us try to help. During adolescence, parents in particular ask us to help, because [in their own] family, they have a hard time talking to the child. We have a strong connection with the children. (No. 2)

Assistance in a music school is necessary:

What is a teacher good for if he does not advice or help. To my mind help and advices are necessary. Even in a conservatory you probably cannot leave a student alone and give him freedom. Help is necessary, because without it, it is not clear what will happen and how will the child play. In a music school, to my mind, help is necessary. (No. 3)

Teacher's assistance does not affect the student's personality:

In reality, every teacher greatly impacts the child. But I do not like this. Because I think that that every child is individual and different. Therefore I try to influence [the child] as little as possible, but then again, if it is a classic [composition] there are certain canons or romanticism and you still impact the child. But every child of mine has certain different things. For example, sitting styles, I try not to repeat the program to make it as large and diverse as possible. (No. 4)

Assistance at the beginning of education, but later on, only the performer has to be left on stage:

I will say it like this, at the very beginning, the basis of everything is a teacher. Yes. Absolutely everything. He has to explain all of the material, learn [together], but at the very beginning all of the initiative is from me. When the child finally learns – text, technique, improvisation, colours, fantasies, when this process begins, the teacher must step back a little, and all of this has to transfer over to a child. The final result is this: when the [day of] the concert or competition is coming closer, together with the children we go to the hall. Then, at the hall, I tell the child that he has to forget absolutely everything that I had told him, and he must play the way he lives this music, the way he feels it. When you play on the

stage, nothing that was taught to you by the teacher should be seen. Everyone has to hear the music, the way you play it, thy way you hear it. (No. 5)

Psychological assistance, as an encouragement before performances is of great importance:
I always encourage, praise the children before concerts or competitions. Sometimes the text does not come out as it was supposed to, but I still tell them that they know the text very well and now, when they will step on the stage, they will show what they can the best. It is truly a psychological thing (No. 10).

Assistance is the work of two people:

To my mind it is a work of both. It is not only a teacher's work. And if you both work consistently, there is no such thing as perfection in music, where it is the end because you have to be prepared [for] everything. It is not like that because our goal is to prepare a work and to show it to the listener. Therefore, if only a single person will work, he will not learn on his own, he will be an adult, a performer. To my mind it is the work of both (No. 1).

Distributed education

Research participants had various opinions regarding distribution of duties in the education process, but they claimed, that this type of teaching is mandatory in the education of a professional musician:

To my mind, it can be allowed for a child to take part in the process of education. If a student comes and claims that he wishes to learn a certain composition, it is a celebration. And there is nothing better than that... the goal of ours, teachers, is for a person to want by himself to learn a certain composition. So that after he finishes a school he would not stop playing. It is very good when a person comes and claims that he wants to play this [composition]. It means that he finally found what he wants and that is wonderful. Of course, I help. And that does not mean it is some kind of a sin and that he will not learn anything. After all, we all want for children to desire [by themselves] and try to find ways how to make it happen, so that the child would desire [by himself], and when he finally expresses that desire, the question still arises as to whether or not to give him what he wants. It is music, after all. (No. 8)

Student who follows the path of a professional must show the initiative:

*If the child thinks of following the path of a professional, it is very important he would show the initiative. For children that claim that they want to study in music academy, I always tell them that they must show initiative, offer tasks, repertoires. In general, when talking [about] events, etc., I always talk over with the children and never do what they do not want. (No. 2).
 Sharing between a teacher and a student happens even during the selection of repertoire:
 When it comes to musical composition, we always consult, try to play them. We try to check whether the musical composition is beautiful, whether [the student] likes it or not. If [he] does not like it, we try to change something. When it comes to weaker children, I advise them to look over melodies on "Youtube" and search [for a melody] that is beautiful for them. I search as well. And alongside [the composition that they pick], I add some kind of composition from the program. (No. 10).*

Learning environment

The state of the learning environment depends on the student's mood and preparation for the lesson:

The way I see it, a student, prior to coming to a teacher, has already to be determined and ready. In any case, the teacher must be demanding enough. If the child feels that the teacher is relaxed and does not pay enough attention to him, there will be no result. For the teacher, demand is very important, because it is related to the question of respect. The student must be prepared for the lesson, expecting to be required to perform the task, whether he did it correctly or not. (No. 2)

The learning environment has to be the same for students of all aptitudes:

Of course, the environment has to always be pleasant, whether the child is a professional or an amateur. If it is unpleasant or there is fear to come [to a lesson], then of course it can discourage the will to play. I think that a good atmosphere is truly required. (No. 6)

Learning environment does not depend on the skills of a child. The only difference, is that a more skilled student can do more during a lesson:

Whether I am preparing a very skilled or a less skilled child, the learning environment stays the same. It is just, these are people, with whom you can do more during a lesson. With talented children I do a lot during a lesson. And there are children, with whom you do very little. But the environment, mood, attitude towards a human. They cannot differ, everything is the same. It is just that for those who walk towards the path of a professional it is more interesting during the lesson and the work itself is on a different level. (No. 3)

The learning environment in music schools has to be academic, in which tension sometimes prevails:

Of course, this type of atmosphere [has to prevail] among older students, such as seventeen-year-old <...>. Of course, if it is not working out for a child, there is tension during a lesson as well. It happens to everyone. If the child is honest, sensitive and is hard on himself when it is not working out for him, the teacher, of course, calms him down. That is a tension. In a case like this, that is for real. You calm him down, [saying] that it will work out and that is it. There are a lot of children who, when they start learning how to play with their right hand, start worrying that it is not working out for them. Then you have to psychologically start talking with them in an attempt to calm them down. (No. 5)

Learning environment depends on teacher's character and mood:

A lot of it depends on the character of the teacher. I never lead a lesson in a very matter-of-fact way. Sometimes I even wonder how teachers are able to have such intonations, [indicating] that they are the teachers and you are a student. Students come to me as if they were at home. For them, it is pleasant, warm and free. (No. 9)

Good connection between the teacher and the student

Good connection is not only between a teacher and a student, but with the parents of the student as well:

In any case, this is determined not only by the child's relationship with the teacher, but also by the parents. They are an especially important link. At all times it is mandatory to communicate not only with a child, but with the parents as well. If I see that there is a

problem with a child, I always contact with the parents, [in order to find out] what, why and for what reason, because not all of the children open up or talk about themselves. (No. 7)

A good connection is in the responsibility of a student:

If the connection is with the teacher, then it is the responsibility of the student. If there is not connection, that student does not feel the responsibility. He can come and say that he did not play, did not have enough time and will not play. The teacher can shout, but the student will not care. Scolding at home will also pass through his ears. (No. 6)

A good interrelationship is mandatory:

I always try to maintain good connection with everyone. Because otherwise it is impossible to work, since you work one on one. Therefore if you start getting into a fight with a child, this type of process will continue. It is impossible this way. (No. 3)

Good connection is important during the initial stage:

If we maintain a good relationship in the initial stage, it is a good start. They remember that teacher and they greatly idealize that whole musical path and all that. (No. 4)

Supporting the teacher's initiative builds a good interrelationship:

We talk about a lot of things. I tell them how I was when I was a child, how I played [with an instrument] and they tell me everything as well. Sometimes they ask me to keep a secret, we have secrets of our own. And by chatting this way, we come up to the necessary topics and musical things. Somehow, we communicate freely. We communicate warmly. (No. 9)

Conclusion

Teachers claimed that in music education finding a good connection, creating a comfortable learning environment and providing various support to the student in the learning process is the most important. As a result, the education between the teacher and the students takes place on a *sharing basis*.

Firstly, assistance during the learning process. It manifests in several ways: assistance with learning a text, assistance with text's interpretation, assistance with walking onto a scene, assistance to prepare psychologically for playing and instrument, assistance for parents in understanding their own children. In their opinion, the teacher has to help the student, but not do it for him.

Secondly, the creation of a good learning environment, in which the student would feel great. The learning environment depends on the character of the teacher, student's preparation and determination for the lesson.

Moreover, the learning environment has to be equally good for children of various aptitudes. Thirdly, when learning and preparing a musician, a good connection is mandatory. A good connection between a teacher and the student manifests in various ways – from the initiative of a teacher and the responsibility of a student. A good connection has to be with the student's parents as well. This connection has to be friendly, demanding and collegial.

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In-Depth Inquiry on the Reasons of the Students' Academic Failures and Their Coping Mechanism

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Abstract

Using qualitative method of research, this study focused on the reasons of the students' academic failure (specifically those who failed more than 50% of the enrolled subjects) and their coping mechanism. Ten (10) participants under contract of Agreement (COA) were interviewed personally and virtually. Attitudes (laziness), computer gaming addiction, work, people, and personal issues were the primary reasons of academic failures. All seven participants also had different coping mechanisms: namely, diversion, redirection, and inspiration. Among the reasons, external factors were evident while among the coping mechanisms, those that would bring positive results were apparent. The results show that when it comes to academic failures, students are more vulnerable to external factors and that despite their failure, they still would like to go back on track.

Keywords: Academic Failures, Contract of Agreement, Coping Mechanism, Thematic Analysis, Probing

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Introduction

Students who go to higher education have stepped into the University with their minds set on success – to graduate on time. However, at the onset of their university life, some, if not many of them, already face the reality of academic failures. Some of these students who fail in the first semester of their first year in the university may not continue studying but others will just live with their failures and start all over again. Thus, academic failure, which is defined in this study as the inability of the student to get a passing mark of at least 75% as stipulated in the student handbook of the University of Baguio, results to a waste of time, money and may even have familial, social and mental-psychological impact (Najimi, et al., 2013).

The University's role is to mold and prepare students to become successful in the field that they have chosen. The curriculum in every course is set to train the students for the professional world. Ideally, a college student is expected to finish a bachelor's degree within four or five years depending on the chosen program. However, there are students who overstay in the university because of their academic failures referred to by the United Nations Educational, Scientific and Cultural Organization (UNESCO) as the repetition of grade level and low quality of education received by the students (UNESCO, 1996 in Mortimore, 1998). Moreover, Khan et al. (2013) stated that failing academically has turned out to be a major concern in the higher area of learning. Equally alarming is also the fact that this academic failure has several consequences on the students. In fact, Mortimore (1998) named other factors resulting from academic failures like absenteeism, dropping out, low quality of education, and overstaying in the university.

Although the problem on academic failure is alarming, Blizard (2016) emphasized that the reason why students fail and the solutions to it are complicated but not given much understanding. Universities do not really dig deeper as to why these students fail academically and as to how this problem should be properly addressed. In addition, Anto et al. (2015) underlined the complexity of the causes of academic failures. In fact, in 2016, Villagonzalo found evidence that the students' ability to perform academically is significantly correlated with I.Q. However, Anto, et al. (2015), found out that there was no significant correlation between I.Q. and academic failure. This finding shows that academic failures can be caused by other factors. In 2013, Najimi et al. uncovered in their study that curriculum, factors related to educator, learning environment, family factors, and socioeconomic factors play a significant part in the students' academic failures. In addition, Diaz (2019) discovered that difficulty of subjects and tests, high passing score, financial problems, difficulty of understanding teacher's explanation, course not their choice, and noisy boarding house were among the reasons why students experience failure academically. Also, Junio and Liwag (2016) discovered that socio-economic status, students' aptitude, learning facilities and teacher characteristics affect the performance of the students of the Physical Education class in Lyceum of the Philippines University-Laguna.

In the studies of Najimi et al (2013), Diaz (2019), and Junio and Liwag (2016), the researchers used self-made or researcher-made questionnaires; thus, the factors affecting the academic performance of the students were pre-determined. In this study, however, the participants were given the chance to freely talk about the reasons of their academic failures according to what they had experienced. Moreover, in Najimi et al's (2013) study, the participants were exclusively students from the medical sciences department notwithstanding as to whether they failed or not. Similarly, Junio and Liwag (2016) conducted their study to

441 students regardless of the status of their academic performance. In this study, nonetheless, only those students who had been under the Contract of Agreement (COA) were considered. Students under COA are those who incurred failures in half of the number of subjects they enrolled. In Diaz's (2019) study, although the respondents were students who failed in one or more subjects, they were only exclusively students of Bachelor of Elementary Education (BEEd) and Bachelor of Secondary Education (BSEd), and those who failed in only one subject was included.

The student-respondents' reasons of their academic failures were categorized according to Heider's Attribution Theory which refers to how behaviors of others should be understood (Rice, 2016). In addition, Hopper (2018) mentioned that Heider's Theory of Attribution talks about determining as to whether the cause of another person's behavior is internal or external. She further explains that the theory underlines the fact that the behavior of a person can be caused by internal factors (dispositional attribute) like personality, beliefs and the like or by external factors (situational attribute) like situations or circumstances and the like. Causes like I.Q., (Blizard, 2016), and Junio and Liwag's (2016) students' aptitude can be classified under dispositional attribute. On the other hand, curriculum, factors related to educator, learning environment, family factors, socioeconomic factors (Najimi et al. (2013), difficulty of the subjects and tests, high passing score, financial problems, difficulty of understanding teachers' explanation, course not their choice, noisy boarding house (Diaz, 2019), socio-economic status, learning facilities and teacher characteristics (Junio & Liwag, 2016) are categorized under situational attribute. Causes like I.Q., (Blizard, 2016), and Junio and Liwag's (2016) students' aptitude can be classified under dispositional attribute. In addition, curriculum, factors related to educator, learning environment, family factors, socioeconomic factors (Najimi et al. (2013), difficulty of the subjects and tests, high passing score, financial problems, difficulty of understanding teachers' explanation, course not their choice, noisy boarding house (Diaz, 2019), socio-economic status, learning facilities and teacher characteristics (Junio & Liwag, 2016) are categorized under situational attribute.

Failing academically can be a source of stress (Widyastuti et al., 2017). Segal (2020) stressed the fact that when a person experiences stress, his body is alerted to cope either by fighting or running away from it. Thus, coping is a natural tendency for a person under any kind of stress. Cleveland Clinic (2020) reinforced the statement of Segal (2020) saying that coping normally involves adapting to or enduring undesirable experiences while trying to maintain a positive image and balance. Coping is the ability to respond to stressful situation caused by negative experiences (Semel Institute for Neuroscience and Human Behavior, 2021) like failing academically. Thus, in addition to knowing the reasons why the student-respondents failed in 50% percent or more of their enrolled subjects, the ways they coped with were also studied.

Lazarus and Folkman's Macro-analytic State-Oriented Theory, which classifies emotional functions into self-controlling, confrontative coping, seeking social support, distancing, escape-avoidance, accepting responsibility, positive reappraisal and planful problem-solving (Lazarus & Folkman, 1984 in Chowdbury, 2020), was used to classify the coping mechanisms of the student-respondents.

Awareness of the reasons of students' academic failure and of their coping mechanism will help the school management design programs to help students who are experiencing academic failures especially those who are put under COA. The findings will also help the teachers understand these students and enable them to design strategies that can help in the

students' pursuit for academic success. In addition, students struggling against the pressure of academic failures will be guided on how to cope with it.

This study aimed to have an in-depth understanding on why students in the University experience academic failures. Specifically, this study sought:

1. To understand the various reasons of students' academic failures; and
2. To identify their ways of coping with academic failures.

Methodology

This study employed a qualitative design specifically the phenomenological aspects of the data presented in a narrative form.

This study made use of purposeful sampling where ten (10) participants under the Contract of Agreement (COA) Program (a program intended to help students who failed in 50% or more of their enrolled subjects for the semester) of the Center for Counseling and Student Development (CCSD) of the University of Baguio were subjected to face-to-face and virtual interview. The selected number of respondents met the standard of 5 to 25 participants set by Creswell (1998 in Deponio, 2018) and 6 for phenomenological studies recommended by Morse (1994, in Deponio, 2018). Due to the challenges posed by the pandemic such as the difficulty to communicate with the concerned students and to meet them personally, those who did not want to have the face-to-face interview, whether personally or virtually, agreed to answer the questions sent to them through email.

The questions were anchored on why they failed and what they did to overcome the consequences of their failure. Questions were sent to the respondents through email.

Their availability for the interview (whether face-to-face or virtual) was also taken into consideration. Three of the respondents did it face-to-face while the rest did it by answering the interview questions sent to them through email. The researcher from CCSD was in close contact with each of them for clarification and additional questions.

Prior to the interview which took place in the Center for Guidance and Counseling Office (for those who preferred face-to-face) or online (for those who chose virtual), the respondents were asked to voluntarily sign an informed consent whose contents were explained to them prior to their signing. For virtual interview participants, informed consent was sent to them via email or messenger.

The proponents used inductive analysis and creative synthesis as analysis strategy in which important themes were explored and confirmed through analyzing the responses of the participants after categorization. Engagement in the important points of the information to determine important patterns, themes, and interrelationships was done by studying, then substantiating based on analytical principles resulting to creative synthesis. Since the study was qualitative, the validity of data can only be assured through truth value, consistency, and applicability (Noble & Smith, 2015). To assure that data were true, consistent, and applicable, the results were shown to the respondents before the paper was finalized.

To protect the privacy of the respondents, only the researcher who is a staff from CCSD conducted the face-to-face or virtual interview. However, prior to the interview, the concerned participants' willingness to participate was secured. Each was given an informed

consent form. The participant was allowed to withdraw participation in instances in which emotional discomforts were triggered. Only those who were willing were asked to sign the informed consent and were asked for the convenient time they could appear for the face-to-face or virtual interview. Moreover, the participants were informed that their names would not appear in the research as codes would be used to represent the respondents. Furthermore, they were also informed that the results of the study would be presented or published and that results would be shown to them prior to presentation or publication.

Results and Discussions

This section presents results, discussions, analysis, and interpretations of the findings on the reasons of the students' academic failures and their coping mechanism.

Reasons of Academic Failures

Academic failure is nothing new. Although not everyone experiences it, it is a fact that there are students who go through it while they are in the university. The ten (10) participants of this study went through academic failures in 50% or more of their subjects, enough for them to sign a COA. However, each of them had reason/s why he/she failed academically. The reasons were categorized into the following themes: attitude (laziness), computer gaming addiction, work, people, and personal issues.

Attitude

According to McLeod (2018), attitude refers to a person's approval or disapproval, his pessimistic or optimistic assessment of the persons or anything he is exposed to. Attitude can be bad or good. The responses of the participants in this research, however, were categorized under bad attitude as they were on laziness, negligence, and procrastination.

Laziness, according Merriam-Webster dictionary (n.d.), is the unwillingness to do things. In relation to this, three students directly admitted that one of the reasons of their academic failures was laziness.

Student B was happy-go-lucky, saying, *"feeling ko basic lang ang Business Ad."* (I thought Business Ad was just easy.)

Student C admitted that he was "irresponsible and lazy".

Student D acknowledged the fact that he was lazy, saying, *"I become [became] lazy, so I failed to pass the requirements."*

Student E had the same reason with students C and D stating, *"I was lazy to review."*

Moreover, although student F did not directly say that he was lazy, it was clear in his statement, *"I failed my subjects because of not submitting requirements"*, that he also failed because of laziness.

Similarly, student I also admitted that he *"was not passing activities."*

Another negative attitude seen in the responses was being lax defined by Cambridge dictionary (2021) as lacking care, attention, or control or not severe or strong enough. Being lax caused students B, C, and H time, efforts, money in their academics.

Students B admitted that he was lax because he felt the course was easy that he did not need to put antra care and attention to the subjects. He said, *“feeling ko basic lang ang Business Ad” (I thought Business Ad was just easy.)*

Similarly, student C underestimated the difficulty of the subjects saying he was *“too comfortable”* that he did not pay much attention to them. In addition, when he failed, he was still very comfortable saying, *“Kaya yan sa susunod” (I can do it the next time).*

Student H declared, *“I failed my subjects before because I am [was] a happy go lucky person sometimes. I procrastinate.”*

Computer Gaming Addiction

Hoeg (2021) defined computer addiction or computer gaming addiction as excessive use of computer resulting to decrease in productivity. Computer gaming addiction is related to internet addiction which, according to Shaw & Black (2008), is described extreme desires to use the computer leading to damage or trouble. Evidently students A, D and E had become obsessed with computer gaming that resulted to them failing in several of their subjects.

Student A claimed, *“I was addicted to computer gaming since it was a part of my upbringing”*. He further stated, *“It took 56 hours spent in computer games in a week (I spent 56 hours in computer games in a week).* It must be noted that student A was also working while he was studying. However, even his days off would be spent for computer gaming as well.

Student D suffered the same fate as student A as he was also addicted to computer gaming. He said, *“I become [became] addicted to Mobile Legends (online game).”*

Student E’s academic failure was a result of his spending his whole nights on the computer. He revealed, *“I was playing computer the while night.”* His playing computer the whole night led him to be sleepy and inactive during the day.

Work

Students A, F, and I were working students. They claimed that working while studying was difficult as they had to meet the pressures for both situations. Students find it stressful to manage both work and study and the stress may sometimes lead them to leave school without finishing the semester (Tinto, 1975 in Curambao (2015). Students A, F and I did not leave school without finishing their subjects. However, working while studying took a toll on their grades.

Student A explained that his study was affected because of *“ideological issues at work,”* but he did not want to explain further about these ideological issues in his work. However, this is not the only reason why he failed as mentioned earlier, he was also addicted to computer gaming.

Student F said that “*work and pressure*” caused him to fail.

Also, student F said, “*I was working to earn money to pay for my tuitions [tuition].*”

People

Educators and family are found to be factors leading to students’ academic failure in the study of Najimi, et al. (2013). Also, Junio and Liwag (2016) discovered teacher characteristics as also one factor that led students to academic failure. However, data gathered in this study revealed that friends, instructor, family, and other people around them were factors contributing to the respondents’ academic failures.

Student B claimed, “*I failed to comply in my new course because of being irritated to [of] the environment or people around [me] until [I] decided to drop.*”

Student C also said, “*I got demotivated because of people asking about my grades.*” In addition, he said that his “*severe disconnection to [form] family members at home*” also contributed to his not performing well academically.

Student G put the blame of his academic failures on his instructor, saying, “*I usually do not like the instructor specially when I cannot understand what he / she is talking about.*”

Friends, though most of the time, help an individual become productive, they were not academically helpful to student H as he stated, “*In the past, I was distracted by friends.*”

Personal Issues

McKay (2019) attached personal issues to family problems, life-changing situations, emotional difficulties, illness, and even one's sexual orientation that affects one’s ability to perform well. Two of the students mentioned personal issues as factor resulting to their academic failure. However, they did not want to reveal the specific personal issue they had.

Student J explicitly said, “*...my personal problems that I cannot share with anybody*” as the factor affecting his academic performance.

Student E, in addition to his laziness and computer gaming addiction, said that another contributory factor to his academic failure is “*personal issues*”, but he did not expound further.

Grading System

Encyclopedia of Education (2019) defined grading as the teacher’s way to professionally evaluate the learning of the students. It includes gathering and assessing proofs of student’s performance over a specified period. In the University of Baguio, the grading system is cumulative in which the cut-off score is seventy percent (70%) (University of Baguio Student Handbook, 2020). Among the nine (9) respondents, only student C mentioned grading system as one of the factors of his academic failures in addition to laziness and people.

The themes on attitudes, and personal issues are considered internal factors (Dispositional Attributes of Heider’s Attribution Theory). On the other hand, computer gaming addiction,

work, people, and grading system are external factors (Situational Attribute) (Hopper, 2018). It can be significantly noted from the result that academic failure cannot be attributed to the intellectual ability of the students. This supports Anto, et al.'s (2015) claim about the absence of significant correlation between academic failure and I.Q.

Coping Mechanism

Every individual who faces some difficulties in life always has a coping mechanism. Lazarus and Folkman (1984, as cited in Chowdhury, 2021) defined coping as continuous change in mental and behavioral attempts to handle extremely difficult external and internal challenges faced by an individual. The ten participants had their own coping mechanisms, and these are categorized according to the following themes: diversion, redirection, and inspiration.

Diversion

Cambridge Dictionary (2021) defines diversion as something that takes one's attention away from something else. Five of the ten respondents coped with the consequences of their academic failure by diverting their attention away from the issue.

Students A, B, E, G and H coped with their academic failures by diverting their attention from the failures to other things that made them busy and busier. Student A said, "*Sightseeing, occasional liquor drinking and music became my new hobbies,... and ASMR...prayer*".

Student B tried to divert his attention into smoking. He revealed, "*I tried smoking but stops [stopped]*".

Student E, on the other hand, diverted his attention more on the cause of his academic failure – computer addiction. He said, "*I do more computer games.*" However, this time, he added, "*playing chess*" as additional diversion.

Student G, on the other hand, said, "*Yeah, I have lots of hobbies, exploring the computer world, and surfing the internet. I like dancing, painting, building new things*".

Student H tried to cope with by playing games and reading manga. He said, "*The hobby that I do [did] is [was] playing some games on my phone [and] reading manga.*"

Student I coped with the situation, saying, "*I do sketching [sketched] while listening [I listened] to music.*"

Redirection

Holland (2019) calls this coping mechanism as intellectualization, a strategy in which the person experiencing a difficult circumstance may decide to react disregarding the emotional impact of the situation and focus instead on measurable facts. This coping strategy was also used by nine of the participants. Students A, B, C, D, E, F, G, H and I came to the realizationrealized that they needed to finish the course, so they had to redirect their actions into something that would bring them out of their failures. They said,

A: “[I became more conscious to deadlines,” and “*I review[ed] [the] day before classes as preparation.*” These are in addition to his coping with through sightseeing, drinking liquor a little, listening to music, and praying.

B: “*I made plans and goals.*”

C: “*I take an action by memorizing formulas for subjects, admired usage of the library, reviewers where it can help me in practicing solving problems, congregating each other: sharing notes and online chatting, persistence and resilience, and underestimate the subject lesser.*” (I memorized formula, used the library, used reviewers that helped me solved problems, communicated with others online for notes, became persistent and resilient, and underestimated the subject less.)

D: “*I said to myself that it will not happen again, and I will focus more on academic not on online games.*”

E: “*I study [studied] and read a lot about the subject I fail [failed].*”

F: “*I chat [chatted] with the teachers to have completion activity.*”

G: “*I just re enrolled them and try again until I pass.*”

H: “*just let aside my failed subject and learn from my mistakes. I learn from my mistakes and move forward.* (I accepted I failed, learned from my mistakes, and moved forward.)

I: “*Learn from my mistake, falling subject feel like a huge setback, especially when you work hard all the semester. I will study hard and postpone working so I can cope up with the others.*” (I learned from my mistakes. To fail was a huge setback especially that I worked hard that semester.)

Inspiration

According to Wooditch (2017), inspiration is something that motivates a person to achieve what seems unachievable. It can be anything impacting the feeling of a person and triggers him to do what seems cannot be done. Five of the participants coped with through inspiration. Students B, E, G, H, and J coped with by drawing inspirations from other sources. Student B drew his inspiration from his friends and strangers. She said, “*My friends and other strangers pushed me to continue.*”

Student E said, “*Yes, I talked with a lot of people.*”

Student G confirmed that he also got inspiration and motivation from his friends, but most of the time, he wanted to be alone. He said, “*I have many friends whom I can talk to, but most of the time I like to be alone.*”

Student H got his inspiration from his mother and his sister, saying, “*I talk[ed] to my sister and my mother.*”

Student J remorsefully said, “*Since most of my failing remarks are [were]caused by distractions, after having a wakeup call, I immediately compose[d] myself and think*

[thought]of my family for they are [have been] the ones who keep [have kept] me going and help[ed] me fight through all of [those] things.”

The theme on diversion can be classified under the emotional function of Self-control and Escape and Avoidance of Lazarus and Folkman’s theory of coping with (Chowdbury, 2020) since the students tried to control their emotions or to deny the same towards the situation by diverting their attention to other activities. The theme on redirection falls under Strategic Problem-solving emotional function of coping with because the students found ways and implemented solution-focused strategies to survive the situation and used their plans to achieve success. The theme on inspiration belongs to the emotional function of Social Support since the respondents sought strength from people around them to help them cope with the emotional impact of their academic failures.

The result denotes that most of the participants chose coping mechanisms that would bring them out of the difficult situation although there were a few of them who ventured on coping mechanisms that could bring them more harm than good.

Conclusions and Recommendations

Conclusions

This study was conducted to discover the reasons of the college students’ academic failure and their coping mechanisms. Findings showed that the reasons the ten participants placed under COA failed 50% or more of their enrolled subject for the semester were their attitude (laziness), personal issues (Dispositional Attribute), computer gaming addiction, work, people, and grading system (Situational Attribute). Data also showed that the participants resorted to diversion through leisure, meditation and relaxation activities (Self-control and Escape and Avoidance), redirection (Strategic Problem-solving), and inspiration (Social Support) as their coping mechanisms.

Although the findings show that the reasons of the students’ academic failures cannot be generalized, it can be significantly noted that external factors played a greater role compared to the internal factors. Also, it is evident that the participants resorted to one or more coping mechanisms which might have led them to more downfall or helped them rise from their current situation.

Recommendations

Through these findings, the researchers would like to recommend the following:

1. School administrators are encouraged to come up with a remedial program addressing the students’ academic failures taking into considerations the varied reasons presented in this study.
2. Teachers are encouraged to dig deeper into the reasons of the students failing in their classes to help them cope with.
3. Conduct of a qualitative and quantitative study on the same topic which involves a bigger and diverse population should be done.
4. Quantitative-qualitative research of this topic should be conducted to empirically explain the reasons of the students’ failures.

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Model for Effective Peer Mentoring Program in Mongolian University Context

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Abstract

Mentoring is one of the primary programs schools are implementing in teacher development. Educators use mentoring skills and programs to support novice teachers, improve classroom management, and develop their teaching practice and skills. Numerous studies have been conducted to explain the importance and essentials of mentoring programs to the mentees. Researchers suggest that mentor training should enhance mentor teachers' skills, such as building the mentee's trust, improving classroom management, and developing instructional practice, followed by comprehensive program evaluation. The purpose of the article focuses on how peer mentoring can enhance teachers' personal and professional skills to be successful in their roles and find out what constitutes the effectiveness of mentoring processes in academic settings and what improves university teaching and ongoing training for the mentors. Quantitative and qualitative methods were used to collect the data and observe teachers' work experiences and skills. The result is that peer mentoring is accepted as an efficient program in teacher development and benefits those engaged in this program. However, as our research result showed, peer-mentoring programs should be designed, developed, evaluated and renewed constantly. In addition, institutions and educators should define mentors' roles and responsibilities in mentoring programs and evaluate them regularly.

Keywords: Peer-Mentoring Program, Effective Mentoring, Peer Mentoring Evaluation

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Introduction

Teaching is quite challenging and complex work requiring teachers to have high professional skills and knowledge and continuous learning. The workplace is one of the opportunities where teachers can develop their professional skills and learn continually. Therefore, educational institutions consider their teacher development issue and implement various mentoring and teacher development programs to support their staff learning and development. However, not all teacher development programs can be successful and beneficial. Mentoring has long been seen as not only one of the critical approaches to teacher learning and skill development but also one of the essential roles of experienced and successful teachers. Laverick (2016) emphasizes that mentoring is a professional development opportunity and should be included in the educational institute's professional development plan. In this research, we will introduce a peer mentoring program to be one of the effective programs for teacher learning within our university context and suggest ways how universities could implement this program.

Regardless of their experience in teaching, mentor teachers should have various skills to be effective in their mentoring roles, such as guide, supervisor, counselor, encourager, motivator, learner, and colleague. Therefore, teachers who have been working for many years at a university are assigned to be mentor teachers. However, they should be aware that they are involved in the process and understand their roles.

A recent survey shows less experience of having official peer mentoring programs for mentors and mentees regarding their individual needs and goals, followed by well-organized ongoing and end-of-evaluation in Mongolian universities. In this study, we will discuss the effectiveness of the peer-mentoring program and its implementation and propose some valuable ideas to design the program. Our research questions are: How peer mentoring can enhance teachers' personal and professional skills to be successful in their roles, and what constitutes the effectiveness of mentoring processes in academic settings when implementing the program.

Literature review

The theoretical framework of this study includes the context of higher education in Mongolia, and literature on peer mentoring programs in education. It also has vital learning theories related to peer mentoring strategies, not just with mentees but also with the mentors. It concludes with the study objectives that the survey tries to address.

Besides being mentored, teachers also can develop their skills by attending professional training, workshops, conferences, and meetings. By completing the courses and events, teachers can deliver more effective teaching based on their experience in continues learning. However, we do not have much productive teacher supporting programs based on individual teachers' learning goals and creating a more positive and confident learning environment. Teachers tend to be reluctant to share their ideas, share experiences, and ask for help, especially new teachers.

Researchers have highlighted the importance of peer mentoring programs for professional learning and teacher development. According to Laura et al., there is less work on the benefits to faculty members in mid and late careers, which is a future avenue researcher might explore (Laura, Gloria, & Brad, 2017). Learning, according to a self-regulatory model,

involves an interplay between three learning-process components: cognitive (what to learn), affective (why to learn), and meta-cognitive (how to learn). Support mechanisms for learning and development must address all three components. Both practical and regulative learning activities lead indirectly to learning outcomes due to the influence on processing subject-specific learning material (Abrahamson, Puzzar, Ferro, & Bailey, 2019). What differentiates mentoring relationship from supervisory is that it is voluntary on both the mentor and mentee's side, has a precise time limit, and specifies goals together. In other words, this relationship is collaborative, not top-down (Virginia Commonwealth University, 2019). Vygotsky (1978, as cited in Nguyen, 2017) highlighted that learning is not obtained in isolation but rather through building interaction with others in a socially embedded environment. Implementing peer-mentoring programs allows teachers to learn from peers and develop their skills together. Our Institute of Foreign Languages does have consistent and regular mentoring programs and teacher development activities that improve teachers' skills; we can design and implement a well-organized peer-mentoring program that promotes collaborative learning and skill development. Effective mentoring requires mentors to be in multiple roles, such as a teacher, a guide, role models, a sponsor, a counselor, a motivator, and a colleague (Jonson, 2008; Smith, 2015). Pitton (2016) noted that all individuals involved in the mentoring process should know and understand their roles. Having a clear picture of their roles in mentor-mentee relationships would help mentors be more responsible and effective (Pitton, 2016). It has been viewed as the responsibility of senior faculty to mentor new faculty members (Laura et al., 2017). Peer-group mentoring is an activity that consists of a group of teachers who share and reflect on their experiences, discuss issues and challenges in their work, engage and motivate each other as well as learn together (Heikkinen et al., 2012). Mentoring programs are not just confined to higher education; within professional practice, mentoring schemes are used to provide staff with support and assistance and encourage professional development within a workforce (Abrahamson et al., 2019).

Literature also indicates that effective mentoring in school settings can improve mentee teachers' teaching practice and teacher retention (Smith, 2011; Sowell, 2017). Influential mentors show respect to their mentees and create a positive environment where they can feel more comfortable expressing themselves or discussing their issues (Virginia Commonwealth University, 2019). Hudson (2010) considers that to be successful in mentoring, mentors need to continuously enhance not only their practice in mentoring and teaching but also develop their mentees' teaching practices. Hudson (2010) determines five effective mentoring models based on mentors' reports who reflected on their practice. According to him, the five models of potential mentors are (1) personal attributes, which include encouraging the mentee's reflection on practices by supporting continuously, communicating freely, and listening actively, (2) system requirement, which involves mentor's goal, policies and curriculum for meeting education system (3) pedagogical knowledge for effective teaching, (4) modeling and (5) oral and written feedback on mentee's teaching and learning environment. Observation and feedback (Giebelhaus & Bowman, 2002), a clear understanding of mentor and mentee roles and expectations (Anderson, 2012; Smith, 2011) are also critical features that influence the effectiveness of mentoring processes. An essential skill associated with mentorship benefits is the ability of the mentor to develop confidence in their communication with a mentee and assume a leadership role within the mentor/mentee relationship (Abrahamson et al., 2019). Building a positive relationship with the mentee is one of the essential skills for the mentors. In addition to this, some researchers consider that excellent teaching skills are not enough for potential mentors.

Many researchers agreed that skills to build trust in their mentor-mentee relationship is one of the most crucial skills (Pitton, 2016; Hicks, Glasgow, & McNary, 2005; Jonson, 2008; Johnson, 2016; Langdon, 2017; Sowell, 2017). Jonson (2008) emphasizes that trust in relationships with beginning teachers makes a mentor's relationship different from other helpers and lets the mentee know that their communications will be kept confidential.

This peer mentoring program will address the issues and consider crucial aspects of peer mentoring for teachers' successful learning.

Methodology

Purpose of the research

This study aims to determine the needs of an effective mentoring program and identify the characteristics that make it successful through a questionnaire, followed by developing a model for a mentorship program in the university setting. The questionnaire for the survey on 'Review of Teacher Model in the Workplace' consists of nineteen questions, including age, work, mentor experience, position, skills, relationships, challenges, opinions, goals, objectives, benefits, etc. This study explored teachers' skills that they desire to improve by working collaboratively. As a result of the survey, we aim to develop an action plan to implement a new mentorship program in a university setting depending on educators' needs. Due to a pandemic, the survey was conducted on Google form in May 2021.

Data collection

There are eighty-eight universities in Mongolia, and 6,102 teachers who work at the tertiary level, according to the National Statistics Office of Mongolia (NSO, 2021)¹. Thirty random educators and scholars from different eight universities were involved in the questionnaire, for example, the National University of Mongolia, Mongolian University of Science and Technology, Mongolian National University of Education, Mongolian National Defence University, University of Finance and Economics, Ulaanbaatar University, Mongolian National University of Medical Sciences, University of Labour and Social Relations on May 2021. In the framework of this research, we used quantitative and qualitative methods to collect the data. Data were analyzed and categorized regarding the teachers' age ranges, work experiences, and skills.

Data analysis

Review and evaluation of professional learning in our context show that mentoring processes for young teachers were mainly informal and did not sufficiently address the mentee's learning goals and make them feel more self-reliant in their profession.

Table 1 illustrates the number of participants who participated in the survey.

¹ The information was adopted from the official website of NSO issued on 15 January, 2022 (www.nso.mn)

Table 1: Number of participants and universities

№	Universities	Participants
1	National University of Mongolia	5
2	Mongolian University of Science and Technology	4
3	Mongolian National University of Education	2
4	Mongolian National Defence University	3
5	University of Finance and Economics	8
6	Ulaanbaatar University	2
7	Mongolian National Universities of Medical Sciences	3
8	University of Labour and Social Relations	3
9	Overall	30

A review of the experience of teacher development practice in our institution suggests that both mentors and mentees should have carefully designed learning goals and expected outcomes. Moreover, even though teachers have to experience mentoring novice teachers, they also need to promote more collaborative learning (*see Appendix 1, Table 2*). It is also clear that we need to design a straightforward mentoring program. From the table above, it's clear that mentors and mentees do not collaborate well enough to foster their knowledge and skills. Even though there are some skilled mentors in our institute, they don't set clear goals, meet their expectations, and have specific learning outcomes because there is no peer-mentoring program. To promote an effective mentoring program model, there will be questions such as:

1. What effective mentoring is.
2. What are teachers' needs.
3. Why mentoring programs, especially peer mentoring, should be implemented in our institutional context.

Last few years, the number of new teachers has increased in our institution. This increased number of new teachers requires us to implement peer mentoring programs that allow the teachers to learn from each other and promote collaborative learning. It will help us to solve issues of lacking a sufficient number of experienced mentors, matters of an unequal balance of professional and novice teachers, and prepare future mentor teachers. The following are why peer mentoring programs should be implemented in our institutional context.

Even though teachers in our institute participate in training, workshops, and conferences, those training sessions cannot cover individual learning needs. Having a learning goal and participating in peer mentoring programs enable teachers to learn constantly based on their plan for learning.

Discussion

As a part of higher education institutions, our Institute of Foreign Languages at the University of Finance and Economics of Mongolia has long seen teachers' professional learning and development as its primary issue. Teachers who are new or less experienced in teaching have opportunities to develop their skills and learning by guiding or working with senior teachers who are more experienced and willing to share their experiences.

Peer mentoring programs allow us to make changes in our traditional mentoring program. Mentoring relationships in the institute are mainly hierarchical and more instructional regarding classroom management, material development, and feedback on classroom observation. Peer mentoring programs will be more developmental and support teacher learning based on their learning needs. Peer mentoring differs from traditional mentoring as equality replaces hierarchy in the mentoring process (Nguyen, 2017; Collier, 2017). The program should be focused on both the institution's and the teacher's own goals. Achieving personal growth and improving departmental performance can go together closely. Besides developing teachers' skills, peer mentoring also promotes collegial relationships among teachers. Professional friendship with peers and colleagues is one of the essentials in schools to create professional friends and share attitudes, beliefs, and knowledge (Whitton, Barker, Humphries, Nosworthy & Sinclair, 2016). Furthermore, paying attention to teamwork and team cohesion is a practical approach to making teamwork innovative and remain up to date, developing professional knowledge and skills, and collective building responsibility among teachers (Poell & Woerkom, 2011).

From above, we define that effective mentoring is not only for improving teachers' teaching skills and practices but also for giving mentors and mentee teachers opportunities to communicate, collaborate, and enhance their skills together, which influences university achievement.

Studying in developed countries such as Canada, Australia, America, Russia, and China is one of the advantages teachers benefit from in their professional learning. However, information sharing with other teachers about their experiences is insufficient. Well-established collegial relationships within the workplace will improve teachers' desire to share information and support each other (Abrahamson et al., 2019). Pounder (1999, as cited in van Woerkom, 2011) assured that teachers who work in a collaborative environment are more likely to be committed to their job, interact with their colleagues, and have broader knowledge. These advantages of peer mentoring programs motivate educational institutes to organize peer-mentoring programs as part of their teacher development programs and support learning.

To make a good peer mentoring program, researchers suggest the following model and elements: the purpose of the peer mentoring program, target audience, implementation plan, and evaluation. We also support this model. The explanation of the aspects of the model is mentioned below.

a. Purpose of the peer mentoring program

The peer mentoring program aims to initiate and improve peer mentoring to support teacher learning and create an environment where teachers can learn collaboratively, share their ideas,

engage other teachers to participate in professional discussions, and meet individual teacher learning goals.

b. Target audience

The target is those who are not only new in the teaching profession but also those who are willing to develop their professional skills and learning through effective peer mentoring programs. Teachers are engaged in a peer mentoring program that will start from the beginning of the academic year and be implemented for 3-6 months.

c. Implementation plan

Before implementing the peer-group mentoring program, the group members will agree on the following principles. According to Heikkinen et al., principles of peer-group mentoring, the group needs only to address issues relevant to teaching, and issues discussed in the group must be confidential. Each group member will address a professional matter that suits their personality. Members will also identify the topic of an issue that will be addressed during the next meeting. If a conflict arises, it will be handled by the team before the session ends. Finally, group members must respect each other and create a positive atmosphere (Heikkinen et al., 2012).

d. Evaluation

Evaluation of the mentoring program is an essential part for the participants to determine whether the purpose of the mentoring program is being met and identify further development. According to Anderson, Silet, and Fleming (2011), the primary purposes of evaluation of mentoring programs are (1) to support learning, (2) to lead to success, and (3) to guide further development activities. These three elements cannot be separated and exist without one of them. Both program and evaluation must be precise enough for the mentees and mentors. When designing the program, both novice teachers and mentors need to see what goals they will set, how they will succeed, and what they will do further to cultivate themselves.

We will evaluate the peer mentoring program in three stages; early, formative and summative assessment. We think that a survey or questionnaire can work during the early stage of the review to identify early needs at the beginning of the program. Then, both mentee and mentor can see whether they have developed their skills or reached their goals mutually during the short or long-term program by completing the formative evaluation.

Formative evaluation will be completed by both participant teachers and the program coordinator. It will help identify if the program is on track and meets both schedule and mentors' goals.

In our study, 30 teachers from various universities were asked to determine their needs and evaluate current peer mentoring experiences. We have invited five teachers from our department to implement and benefit from our developed model based on the questionnaire. The participants, who have over five years of teaching experience, participated in our program to achieve their goals to develop their research, digital, and other soft skills which are essential in their academic careers. The teachers actively participated in our peer mentoring procedure, ongoing study for three months, and evaluated our program.

Appendix 2 (*Table 3*) shows the formative evaluation tool for peer-mentoring. The evaluation should be conducted in the middle of the program to improve its effectiveness. In our case, we worked on a three-month peer-mentoring program from September to December 2021 and completed the formative evaluation in October.

Appendix 3 (*Table 4*) illustrates summative evaluation, and it should be conducted at the end of the program. The mentor/supervisor should assess data to identify the program's effectiveness and further improvement.

Depending on the early stage of the evaluation process, we consider that an action plan can be developed as follows. Before peer mentoring programs begin, participant teachers are required to attend peer mentoring training, which allows teachers to be familiar with the peer-mentoring process and gain mentoring skills. All individuals involved in mentoring programs should have a clear understanding of their roles and responsibilities (Pitton, 2016). The purpose of the session is to offer support and develop teachers' skills as a mentor and a mentee and let them become familiar with the peer-mentoring process (see *Appendix 4, Table 5*). Peer matching is one of the essential elements of peer mentoring. Nguyen (2017) suggested that peer mentoring programs should emphasize peer matching as most of the issues in peer mentoring can arise from mismatching and reduce the program's effectiveness. In order to prevent issues among peers, the following aspects will be taken regarding personality, working styles and perspectives, the difference in age, teaching experience, and the difference in purpose and interest.

The next stage of the peer mentoring program is the procedure which requires both a mentee and mentor to have a clear picture of what they desire to foster and in what ways or how they can achieve it. As shown in *Appendix 5 (Table 6)*, processes and purposes are given. In other words, teachers must participate in mentoring sessions to become familiar with their purposes, ideas, and interests, set cooperative learning plans, and specify outcomes to have a common goal based on their learning needs.

In teaching, mentors are heroes who never stop learning, reflecting, investigating, and developing in their field (Hicks, Glasgow & McNary, 2005), though, like novice teachers, beginning mentors also need ongoing support from a program coordinator and mentor training (Jonson, 2008). Building a trusting relationship, receiving ongoing training, and developing their instructional practice are crucial in mentor training (Sowell, 2017; Langdon, 2017; Hudson, 2010). Targeting mentor teachers' professional development can enhance their skills and engage them to contribute to education reform by developing their mentoring skills (Hudson, 2010; Henning, Gut, & Beam, 2015). Hudson's study also suggested that to make the mentoring process more effective, educational reform should emphasize educating mentors to be proactive and effective in mentoring practices and ready to address issues (Hudson, 2010). Moreover, the literature also confirms that even though experienced teachers commonly become mentor teachers (Langdon, 2017; Smith, 2015), they can have limited experience mentoring adults, which causes them to feel unqualified (Langdon, 2017). Smith (2015) argues that even though mentoring is a profession within the teaching profession, the purpose, roles, and methods of mentoring and teaching are distinctively different. Experience is not sufficient for the mentors. Therefore, formal education for mentor qualifications needs to be considered (Smith, 2015). Sowell (2017) highlights that lack of mentor training in current practices would make mentors deliver outdated and ineffective practices.

Findings

The findings reveal that the participants were successful and satisfied to be involved in this peer mentoring program. Even though there were some challenges, such as not having face-to-face meetings, mentors had online meetings. Mahsa (2017) suggests that personalities and opinions may clash during mentoring. What contributes to this problem is the lack of open negotiations of ideas and expectations. Mentor teachers can create more positive mentoring experiences for teachers by initiating open discussions in the early stages of mentoring to learn about their mentee's wants and needs and make explicit their views and expectations. It is recommended that mentors invest enough time with their mentees not only to ascertain their academic and professional needs but also to develop a collegial relationship with them, characterized by constant care and undivided attention to inspire and motivate them to remain true to their aims along the way (Mahsa, 2017). Based on the questionnaire and survey, we found out that our peer mentoring program was successful because we considered peer matching, a trusting relationship between mentees and mentors, their purposes, interests, and made an action plan regarding our participants' digital research soft skills. Below is the result of our program:

It was a successful and valuable program for me as a mentee.

I identified my needs and weaknesses and defined my goals very carefully during my first meeting with mentors in person.

My mentor and I developed the action plan at the beginning of the program to determine what to focus on further.

I learned some new things, specifically how to conduct online teaching, and developed my research skills.

I was confident to communicate with my mentor when I had issues.

The program participants answered as follows, indicating that the participants benefited from the program.

Implementation of the program worked well. It was according to the plan.

Peer matching was good, so I was confident to make contact and communicating with my mentor.

My interest and purpose matched. So, I could easily understand my mentor.

Following the action plan was easy for me because I developed a plan with my mentor.

As shown below, the teacher participants learned some critical lessons from the program and what they would do differently next time.

I learned that building a close and trusting relationship with my mentor is essential during the peer mentoring program.

Next time, I would like to see my mentor every week as specified in the action plan in person.

Next time, I will be more initiative and active in participating in the program.

I acquired some leadership skills from my mentor.

I understood what mentoring relationship should be.

Mentees faced some challenges throughout the program due to the pandemic, as specified in the feedback.

There was a lack of chance to meet my mentor in person because of the covid19. All of the meetings were held online.

I didn't have enough time to see my mentor regularly because of my busy schedule.

I had classes from the morning until evening. I think this affected my efficiency in improving my research skills. I needed more support and understanding from my administrators and managing directors.

Regarding the peer mentoring program results, the teacher participants defined the program outcomes as follows.

I wish there were many social and official events between mentee and mentor to develop our network.

In general, mentoring programs should be carefully designed to encourage further and cultivate the participants' needs and skills.

To develop participants' research skills, both mentee and mentor need to specify specific research interests and collaborate in joint research.

In the middle of the process, formative evaluation helped me track my progress and proceed in my action.

From the above, we assume that training is a must work and can be a part of a continuous development program. Although teachers at universities are busy teaching and doing some research work, administrators and human resources should support the pieces of training, workshops, and seminars which means they need to be flexible, supportive, and responsible for monitoring, assessing, and evaluating the outcomes. Due to this, we see that there will be great opportunities to mentor each other. Evaluation of mentoring programs allows the participants to ensure if the purpose of the mentoring processes is being met and to determine what aspects need to be considered for further development. Jonson (2008) affirms that all techniques for gathering information, such as structured interviews, surveys, and observations, can be used to evaluate the effectiveness of mentoring programs. The primary purposes of mentoring program evaluation are (1) providing learning opportunities, (2) helping mentors to be more successful, and (3) guiding further training activities (Anderson, Silet & Fleming, 2011).

As mentioned before, building a positive relationship with the mentee is one of the essential skills for the mentors. Our study shows that both mentee and mentor have a strong, good, trustful, and close relationship, which promotes activity, initiative, and collaboration. In addition to this, it is necessary to organize more social and official events to encourage networking and reduce tension between them. Our research result also identified that it is vital to clearly describe the further processes, roles, and actions based on the mentees' demands. It is clear that if teachers are involved in the program, both must have a timetable for devoting their time to a meeting to foster mentees' professional and personal skills. The study also reveals that teachers are busy with their work and private life and have no time to meet their mentors, although they are involved in the program. Also, mentor teachers should be more open and negotiable with mentees to design the collaborative program, match mentees' schedules, and develop a reliable, positive collegial relationship. We found out that if one of them has a busy schedule in their workplace, it is not efficient and collaborative work through the program. Both must dedicate some specific time to perform given tasks besides their work to make it effective. In addition, human resources and managing directors need to support the peer mentoring program to have good results for mentees' development.

Recommendation and further research

This study was conducted only in the framework of our university. More research should be conducted on the program we designed as a model to improve mentoring skills. Further, benefits for the mentor should be investigated and determined through the peer mentoring program. It is also recommended to study what types of approaches should be used to enhance mentors' skills. Furthermore, efficient peer mentor training sessions should be explored in order to strengthen mentors' abilities. Finally, the program should be

implemented in more universities, if possible, it could be executed in the educational sector. Also, the program could be designed for staff development.

Conclusion

In conclusion, the peer mentoring program is essential when considering teacher development and school achievement. However, not all mentoring programs can be successful if universities and institutions cannot design comprehensive and standardized models followed by regular monitoring and evaluation at the end of the program and during the implementation process. Even though most mentors in the education field are experienced, experience alone is not enough in mentoring. Besides good teaching skills and experience, a successful peer mentoring program requires good relationships, explicit purposes, pictures, and specified roles and responsibilities throughout the program. In order to make the peer mentoring process more effective, mentors' skills need to be enhanced continuously by involving in continuous professional development, mentoring, and leadership programs. Therefore, we can conclude that the peer mentoring program will be beneficial for teacher development and promote a positive environment in a university and institute.

Appendix 1

Table 2: Review of the teacher development model in Mongolian universities

No	Questions	Options	Percentage
1	What is your age?	18-25	0
		26-35	20
		36-45	66.7
		45-60	13.3
2	Are you a lecturer or a staff member?	Lecturer	10
		Staff	90
3	How long have you been working at this university?	1-5	16.7
		6-10	6.7
		11-15	43.3
		More than 15 years	33.3
4	Do you have any experience of having a mentor or being a mentee?	Yes	40
		No	36.7
		There weren't any chances	23.3
5	If you answered YES to the above question, how long would the mentoring relationship last?	Less than 3 months	20
		More than 3 months	16.7
		Others	63.3
6	It is important to pay attention to the matching of mentor and mentee carefully.	Strongly agree	16.7
		Agree somehow	63.3
		Disagree	6.7
		Do not know	13.3
7	Do you agree that a carefully designed and organized peer mentoring program can help both mentor and mentee teachers to develop their professional and other soft skills?	Strongly agree	30
		Agree somehow	60
		Disagree	6
		Do not know	4
8	To identify participants' soft skills when they work in a team, we asked the following question: what skills do you think you have when you work in a team?	Others	3.3
		Technical skills	50
		Collaborating with others in any situations/ conditions	40
		Self-confidence	30
		Attitude towards learning and working	63.3
		Critical/analytical skills	53.3
		Professional skills	36.7
		Career development	53.3
		Social skills	36.7
		Communication skills	70

9	The skills I feel that I can develop through peer mentoring program is/are:	Get used to the right way of life	16.7
		Technical skills	33.3
		Collaborating with others in any situations/ conditions	40
		Self-confidence	26.7
		Attitude towards learning and working	16.7
		Critical/ analytical skills	36.7
		Professional skills	26.7
		Career development	53.3
		Social skills	16.7
		Teamwork	30
		Communication skills	43.3
10	Please, specify the skills you need to develop for your personal development.	New technology	23.1
		Rhetoric skills	19.8
		Critical thinking	3.3
		Nothing	6.6
		Listening	3.3
		Writing a research work in a foreign language	3.3
		The right way of life	3.3
		Analysis of resources	3.3
		Professional	6.6
		Social	3.3
		Communication in a diverse culture	3.3
		Doing research	3.3
		Emotional Intelligence	3.3
		Learning continuously	3.3
		Time management	3.3
New teaching methods	3.3		
Dedicating time to yourself	3.3		
11	Which of the following skills should both mentors/mentees have?	Social skills	73.3
		Language skills	50
		Dedication towards his/her profession	50
		Use of new technology	50
		Career advice	56.7
		Well organized	60
		Time management skills	63.3
		Get used to the right way of life	33.3
		Others	3.3
12	If you face any challenges at your workplace, how would	Communicate with others	40
		Get some advice from others	30

	you deal with them?	Work in teams	23.3
		Have a mentor	6.7
13	It is necessary to set goals before starting the mentoring relationship.	Strongly agree	33.3
		Agree	63.3
		Disagree	0.4
14	Your mentoring relationship should meet your objectives, needs, and expectations.	Strongly agree	30
		Agree	60
		Disagree	10
15	It is important to have a mentorship program at our university.	Strongly agree	33.3
		Agree	66.7
		Disagree	0
16	If so, in your opinion, how can a peer mentoring program be effective? You can select more than one answer.	Provide mentoring training	53.3
		Build a mentoring support system	30
		Help employees build a good mentoring relationship	33.3
		Assess mentoring program regularly	40
		Clarify program outline	43.3
		Set clear goals	43.3
		Others	3.3
17	How do mentors and mentees benefit from a mentoring relationship?	Develop skills	10
		Work efficiently	20
		Share experiences	16.7
		Career development	16.7
		Learn from each other	10
		Improve organizational culture	23.3
		Networking	3.3
18	How does the organization benefit from the peer mentoring program?	Achieve organizational vision	16.7
		Staff development	16.7
		Increase work efficiency	23.3
		Understand each other well	6.6
		Create positive environment	16.7
		Staff work satisfaction	10
		Creative and analytical solution	10

Appendix 2

Table 3: Formative Evaluation Tool for Peer-Mentoring

№	Questions	Rate your answers
1	Underline whether you are a mentor or mentee.	
2	How would you rate the program?	1 2 3 4 5
3	Do you think you matched with your mentor or mentee?	1 2 3 4 5
4	Do you agree that a peer-mentoring program is carefully designed and organized?	1 2 3 4 5
5	Do you agree that this program helped both of you to develop your professional and other soft skills?	1 2 3 4 5
6	My mentor/mentee is accessible.	1 2 3 4 5
7	My mentor/mentee is an active listener.	1 2 3 4 5
8	As a peer, we provide a useful comment on our work.	1 2 3 4 5
9	As a peer, we demonstrate mutual professional skills.	1 2 3 4 5
10	As a peer, we motivate each other to improve our work experience.	1 2 3 4 5
11	Both of us are helpful in providing direction and guidance on professional issues.	1 2 3 4 5
12	Both of us acknowledge our contribution appropriately.	1 2 3 4 5
13	My mentor/mentee takes a sincere interest in my goal/ plan.	1 2 3 4 5
14	As a peer, we facilitate building our professional network.	1 2 3 4 5
15	We provide essential advice on our scholarly/ research work.	1 2 3 4 5
16	Both of us are supportive of each other.	1 2 3 4 5
17	Overall, I am satisfied with my mentor/mentee.	1 2 3 4 5

Explanation of the ratings: 5-Excellent, 4- Good, 3 - Average, 2 – Bad, 1- Poor

Appendix 3

Table 4: Peer Mentoring Program Evaluation Form

№	Evaluation criteria	Scale				
		1	2	3	4	5
1	The peer mentoring program had clear goals and addressed the intended outcome	1	2	3	4	5
2	The peer mentoring program promoted collegial relationship	1	2	3	4	5
3	The peer mentoring program improved participants' mentoring skills	1	2	3	4	5
4	The peer mentor meetings were supportive and encouraged participants to make decisions	1	2	3	4	5
5	The peer mentoring program addressed participants' issues and concerns	1	2	3	4	5
6	The peer mentoring program created a positive atmosphere that support teacher learning	1	2	3	4	5
7	The program contributed to the development of teacher individual needs	1	2	3	4	5
8	The program met the purpose of the institutional teacher development plan	1	2	3	4	5
9	The program included all necessary materials and equipment	1	2	3	4	5
10	The program included all participants in professional learning activities	1	2	3	4	5

For the statements above, please select a number. 5 is excellent, 4 is good, 3 is average, 2 is bad, 1 is poor.

Appendix 4

Table 5: Peer Mentor Training Sessions

Sessions	Purpose
Orientation	<input type="checkbox"/> Engage participants in peer mentoring program <input type="checkbox"/> Introduce overview of the program
Familiarizing peer-mentoring	<input type="checkbox"/> Understand peer-mentoring <ul style="list-style-type: none"> ● Benefits ● Functions ● Key principles
Peer observation and feedback	<input type="checkbox"/> Introduce participants the nature of peer observation and feedback <input type="checkbox"/> Introduce benefits <input type="checkbox"/> Orient the participants about how to use observation sheet
Mentoring skills	<input type="checkbox"/> Introduce required mentoring skills and quality <input type="checkbox"/> Help teachers understand peer mentoring attributes
Peer matching	➤ Match mentors and mentees with their interests and learning goals
Conclusion	<input type="checkbox"/> Introduce requirements, task and responsibilities <input type="checkbox"/> Motivate participants to address key issues <input type="checkbox"/> Engage them to develop action plan

Appendix 5

Table 6: Peer Group Mentoring Program Procedure

Process	Purpose
Invite teachers initial mentoring session	<input type="checkbox"/> To make both mentors and mentees to be familiar with their purposes, interest and idea <input type="checkbox"/> Let the participants understand each other's attitudes and perspectives
Facilitate a dialogue and exchange ideas and experiences in a confidential environment	<input type="checkbox"/> To engage mentee teachers in dialogue with the mentors and peers to reflect and discuss teaching issues and contents that will be addressed throughout the program
Set cooperative learning plan and specify outcomes	<input type="checkbox"/> Both mentors and mentees will have a common goal based on their learning needs
Classroom observation and peer feedback	<input type="checkbox"/> Through observation, mentees will receive effective feedback on their performance and identify their area of development <input type="checkbox"/> Make a plan for further learning based on feedback
Implement cooperative activities based on learning needs	<input type="checkbox"/> Build team cohesion through collaborative work <input type="checkbox"/> Develop skills <input type="checkbox"/> Promote experience sharing
Evaluation	<input type="checkbox"/> Both mentors and mentees will receive valuable feedback <input type="checkbox"/> Identify learning needs <input type="checkbox"/> Identify if they meet their learning goal

Appendix 7

The questionnaire items:

1. Was the Peer mentoring program successful? Please provide details.
2. What worked well with the peer mentoring program? implementation?
3. What were the key lessons learned? What would you do differently next time?
4. What were the major challenges/problems?
5. What changes happened as a result of your Peer mentoring program? and why? What have been the outcomes of these changes?

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***What It Means to be a Great Teacher?
The Life Experience of University Students in Thailand***

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Abstract

Educational research on teacher-student relationships recognizes their impact on students. However, it typically emphasizes on physical outcomes, such as students' learning achievement, with less attention to psychological ones, such as students' feelings. While everyone acknowledges the significance of the professional teacher, little acknowledgment of caring and loving teacher as an issue exists in the meaning of a great teacher. Employing a qualitative-interpretative analysis with university students in Thailand, this research paper presents the student narratives and stories which describe the meaning of a great teacher in practice and argues for recognition of what it means to be a great teacher from the perspective of Thai culture. Furthermore, the student's narratives describe what they relational experience from teaching, caring, loving, and being in a relationship with their teacher and how this meaningful relationship affects and alters their own lives.

Keywords: Great Teacher, Education, University Student, Thailand

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Introduction

Teachers have a greater impact on student achievement than any other resource. In the previous study, research on teacher impacts (Oppen, 2019) has consistently found that a good teacher can make all the difference in student outcomes, even when other resources are lacking or unavailable. Historically, educational theory and research suggest that teachers who are learners make a difference for student learning (Dewey, 1916). This notion dates to early philosophy of education that describes the shared relationship with the construction of knowledge.

This social constructivist view of learning and the teacher's role has not readily been the definitive meaning of effective teaching or the interpretation of teacher as learner. Recent educational reform efforts to identify high quality teachers have led to the measurement of learning characteristics, including degrees, course work, test scores, and years of experience. Much research exists describing the relationships among university degrees, content area course work, professional exam scores, years of experience, and their relationship to student achievement. While these studies are valuable in providing insight into personal teacher characteristics that have a moderate influence on student learning, they provide little in the way of informing areas for development of practice. In sum, studies of the impact of teacher professional learning on student achievement tend to approach teacher professional learning employing a fixed trait approach. Educational research on teacher-student relationships recognizes their impact on students. However, it typically emphasizes on physical outcomes, such as students' learning achievement, with less attention to psychological ones, such as students' feelings. While everyone acknowledges the significance of the professional teacher, little acknowledgment of caring and loving teacher as an issue exists in the meaning of a great teacher.

Previous studies on teacher's image have shown that student's perspectives toward teachers play a critical role in education and function in various ways (Botha, 2009; Jitpranee, 2017). It helps teachers to develop their roles that contribute to the improvement of students' learning skills and any other outcomes (Bas & Bal-Gezegin, 2015; Ishiki, 2011). Bas and Bal-Gezegin (2015) noted that understanding students' perspectives enables teachers to indicate students' attitudes toward learning and learning success. This means that teachers can access the mental images of their students' perceptions and reflections of the effectiveness of being a great teacher for their students.

Employing a qualitative-interpretative analysis with university students in Thailand, this research paper presents the student narratives and stories which describe the meaning of a great teacher in practice and argues for recognition of what it means to be a great teacher from the perspective of Thai culture. Furthermore, the student's narratives describe what they relational experience from teaching, caring, loving, and being in a relationship with their teacher and how this meaningful relationship affects and alters their own lives.

Literature Review

Regulation of the Teachers Council of Thailand on Professional Standards and Ethics

Standards of Professional Knowledge and Experience

1. Standards of Knowledge with the knowledge in the areas of language and technology for teachers, curriculum development, learning management, psychology for teachers, educational measurement and evaluation, classroom management, educational research, educational innovation and information technology and teachership.
2. Standards of Professional Experience, by passing the criteria of training on professional practice during study and practical training in educational institutions on specific subjects.

Standards of Performance

Those who practice the Profession of Teachers shall perform their duties in accordance with the Standards of Performance as follows:

1. Regularly practice academic activities relating to development of the Profession of Teachers
2. Make decisions to practice various activities taking into account consequences on learners
3. Be committed to developing learners to reach their full potentiality
4. Develop teaching plans for effective implementation
5. Regularly develop instructional media to be effective
6. Organize instructional activities focusing on permanent results for learners
7. Systematically report on results of learners' quality development
8. Conduct themselves as a good role model for learners
9. Constructive cooperate with others in educational institutions
10. Constructively cooperate with others in community
11. Seek and use information for development
12. Create opportunities for learners to learn under all circumstances

For the Professional Ethics, educational professional practitioners shall have love, faith, integrity and responsibility for the profession and act as a good member of professional organizations. For the Client Centered Ethics, educational professional practitioners shall care for and be merciful, pay attention to, assist and encourage their students and clients on an equal treatment basis, in accordance with their roles and duties. Educational professional practitioners also shall encourage their students and clients to achieve learning, skills, good and proper conduct, in accordance with their roles and duties, to the full capability and generosity. Furthermore, the educational professional practitioners shall not act in any manner which in against the physical, intellectual, mental, emotional and social development of their students and clients and shall provide services honestly and equally without asking for, accepting or acquiring any interests which would be considered abuses of their authority (Wisalaporn, 2005).

Characteristics of a Great Teacher

Orlando (2013) proposed the nine characteristics of a great teacher.

1. A great teacher respects students. In a great teacher's classroom, each person's ideas and opinions are valued. Students feel safe to express their feelings and learn to respect and listen to others. This teacher creates a welcoming learning environment for all students.

2. A great teacher creates a sense of community and belonging in the classroom. The mutual respect in this teacher's classroom provides a supportive, collaborative environment. In this small community, there are rules to follow and jobs to be done and each student is aware that he or she is an important, integral part of the group. A great teacher lets students know that they can depend not only on her, but also on the entire class.
3. A great teacher is warm, accessible, enthusiastic and caring. This person is approachable, not only to students, but to everyone on campus. This is the teacher to whom students know they can go with any problems or concerns or even to share a funny story. Great teachers possess good listening skills and take time out of their way-too-busy schedules for anyone who needs them. If this teacher is having a bad day, no one ever knows—the teacher leaves personal baggage outside the school doors.
4. A great teacher sets high expectations for all students. This teacher realizes that the expectations she has for her students greatly affect their achievement; she knows that students generally give to teachers as much or as little as is expected of them.
5. A great teacher has his own love of learning and inspires students with his passion for education and for the course material. He constantly renews himself as a professional on his quest to provide students with the highest quality of education possible. This teacher has no fear of learning new teaching strategies or incorporating new technologies into lessons, and always seems to be the one who is willing to share what he's learned with colleagues.
6. A great teacher is a skilled leader. Different from administrative leaders, effective teachers focus on shared decision-making and teamwork, as well as on community building. This great teacher conveys this sense of leadership to students by providing opportunities for each of them to assume leadership roles.
7. A great teacher can “shift-gears” and is flexible when a lesson isn't working. This teacher assesses his teaching throughout the lessons and finds new ways to present material to make sure that every student understands the key concepts.
8. A great teacher collaborates with colleagues on an ongoing basis. Rather than thinking of herself as weak because she asks for suggestions or help, this teacher views collaboration as a way to learn from a fellow professional. A great teacher uses constructive criticism and advice as an opportunity to grow as an educator.
9. A great teacher maintains professionalism in all areas—from personal appearance to organizational skills and preparedness for each day. Her communication skills are exemplary, whether she is speaking with an administrator, one of her students or a colleague. The respect that the great teacher receives because of her professional manner is obvious to those around her.

Avram (2013) also make a propose of several qualities a great teacher should possess.

1. A balanced personality. A teacher must be able to interact with any student, with extroverts and introverts, with hard working and lazy students, motivated and non - motivated students. He must keep his balance and calmness in any situation, no matter what happens.
2. The sense of justice. In the eyes of a teacher all the students have the same rights. A teacher must not create personal differences between his / her students. A great teacher must have an equidistant attitude in the educational process between himself / herself and the students.

3. General knowledge. Students can always ask any sort of question. Of course, the teacher is not a living encyclopedia and he cannot immediately provide any information for his students. But, ideally speaking, a teacher must know a bit of everything.
4. Devotion. In order to surpass all the bad moments in the classroom, a great teacher must love his / her job and the students. Even if the students are rude or not so motivated, a great teacher knows his / her objectives and what he can do for the students.
5. Good manager. A great teacher may organize easily activities in and outside the school with his students or with other teachers, without being afraid of failure.
6. A strong but not too strong emotional attachment to the students. First of all, a teacher is a normal person, like any other people. He eats, drinks like all the other people and students have to know that a teacher is not a half man-half God creature, but rather a normal person, well educated and trained in his field.

Teachers' and students' relationship experiences in class have profound consequences for their performance and well-being (Mega, Ronconi, & De Beni, 2014). It has been proposed that teachers' interpersonal behavior in the interaction with their students is an important antecedent of teacher roles. Donker, et.al (2021) study behavior of 80 teachers from three perspectives (observers, students, and teachers) in terms of Agency (i.e., social influence) and Communion (i.e., friendliness). The three perspectives overlapped more strongly for teacher agency than for communion. Especially for students, teacher communion was a stronger predictor of affections than agency. Teachers' interpersonal behavior in class, thus is important for both teacher and student lives.

Methodology

A core investigation of this research study was "What it means to be a great teacher?" The explanation itself is a challenge, given individual's varied life meanings and experiences, along with its knowledge exposure practices. Given this individuality, this study employed a qualitative-interpretative approach, where the central mode of data gathering was fifty-seven individual online interviews. The questions were designed to allow participants to share their unique meanings and relationship with their teacher and reflect on how their educational-life experiences affects and alters their own lives.

This research had the target participants— natives of Thailand who are either currently students at Bangkok University or alumni. The researcher's Facebook page, thus was selected as a media platform to access these participants. The participants comprised of 31 females, 19 males and 7 LGBT Thai residents ages ranged from 21 to over 50 years. Fifty-three participants identified themselves as undergraduate and graduate students and four participants were called themselves as alumni who already abstained their educational degree from Bangkok University.

In order to enhance the trustworthiness or credibility of the study, the researcher draw on Lofland and Lofland's model (2006) to "test" the reliability and validity of the qualitative results. This is especially important in this study as many scholars understand Thai people as "face saving", arguing Thai people tend to take others' interest to heart (Redmond, 1998). Applying Lofland and Lofland's criteria, the qualitative data is reliable. First, because the style of reporting is direct, responses are passionate, and diverse. The participants were speaking from first-hand accounts from their personal experiences. This resulted in genuine

responses. Second, internal consistency- the participants' accounts do not contradict themselves.

Open and axial coding techniques (Strauss & Corbin, 1990) were adopted for data analysis. The open coding technique was used to analyze the data of students' descriptions of the meaning of great teachers at the first stage. It was used to dissect the ideas found in the students' texts into pieces, identify and group them into themes based on their similarities and differences. Later, axial coding technique was used to analyze and put the data found in the first stage into categories according to their relationship, label them, and report them for results.

Results and Discussion

The meanings used to describe a great teacher can be divided into six themes. The findings for students' descriptions were largely based on their individual perceptions and feeling for their teachers as these descriptions were related to their learning experiences with Thai teachers at school and university, both inside and outside the classroom.

The findings illustrated that there were six meanings used in describing a great teacher. Data in Table 1 shows that the most frequent meaning used to describe a great teacher were the second parent (24.6%), a life coach (22.8%), a big sister/brother (17.5%), a knowledge provider (15.8%), a role model (14.0%) and a justice (5.3%), respectively. They were found to consist of five types of viewpoints. Students' descriptions of a great teacher were analyzed and associated to five types of viewpoints, including emotion, guardian, motivation, academic and power dynamics. Emotion refers to teacher's awareness to students' needs. Guardian refers to the teacher's monitoring and suggestions provided for students. Motivation refers to the teacher's encouragement of their students to accomplish the goals. Academic refers to the teacher's knowledge, ways of teaching, directions and goals. Power dynamics refers to whether a classroom is democratic, inclusive, or participatory.

Table 1. The meanings of a great teacher

No.	Meaning	Description	Example Quotes	N	%
1.	The Second Parent	loves, cares and has all devotion for their children well-being	Teachers who see us as their child in their family Be like another dad and mom Teachers who treat us the same as our parents Teachers who love us like their child Being more than just a teacher, but like our parent Take care of us like our dad and mom (continued)	14	24.6

			Teacher who is everything for students. A person who gives advice, listens, teaches, and no matter how bad things are done, teacher is ready to forgive. like the second mother		
2.	Life Coach	-helps and gives useful knowledge to people -offers choices and gives directions -tells necessary procedures	Teachers attentively listen students and help to solve the problem Always help to solve any problems, not only learning lessons Teach us how to live Listen to our own reasons Gives us knowledge and experiences. Tell us new things and being supportive Have a good vision Teachers who give us life experience even good or bad and pass it on us as a life lesson Not only not blame us when we do wrong, but offers choices for solutions Support us to have a better live	13	22.8
3.	Big Sister/Brother	-helps in trouble -sincerely cares and understanding -is friendly, kind, and appreciative	Play attention to student's feeling more than learning performance. Realize on individuals' value and be able to explain difficult things into something easily to understand Friendly and understanding Understand us and always helpful Believe in us (continued)	10	17.5

			Understand us and get through the problem together		
4.	Knowledge Provider	-has knowledge and gives new information -pay attention in teaching	Teachers teach and give information and knowledge to students Attentively teach us and have compassionate Pay attention in teaching such as preparing teaching material well so that students can get as much knowledge as possible and students can ask without being angry to repeat the answer.	9	15.8
5.	Role Model	-looks as a good example who is worthy of imitation -represents an inspirational ideal -inspires others to imitate his or her good behavior	Show us how to do it more than just tell us Being a good example Being a model of good person who love and give Have a good heart, very kind Give us knowledge and virtue	8	14.0
6.	Justice	-concerns for justice, peace and genuine respect for people -fair treatment	No bias and no discrimination for students who have different classes or appearances Not choose to love or hate someone	3	5.3

As illustrated in Table 1, Thai students' meaning for a great teacher consisted of six viewpoints as indicated by their different point of views of their teachers based on their individual perceptions, learning experiences, and cultures. One of the interesting meanings related to Thai culture was that a great teacher was like "the second parent". This meaning appeared in the old Thai saying mentioned by a Thai teacher: "my students are my sons/daughters". It reflects Thai students' culturally-unique way of thinking that exhibits their belief for a great teacher by describing them like a parent who always love, help, support and take care of them.

Concerning Thai teachers' instructional practices, students reflected that a great teacher is knowledgeable, competent, well-planned, helpful, and motivated teachers. They could also predict students' learning difficulties and needs and provided effective solutions, strategies,

and feedback on their learning. Furthermore, a great teacher is able to make the class fun, enjoyable, and motivating. It is also indicated that a great teacher should be emphatic and sensitive to students' learning needs and feelings. They always provide advice and offer solutions for students' problems and disappointment. They should be a role model and inspire students to be a better person.

The results of this research study revealed the perspective of a great teacher of Thai university students in accordance with the Professional Ethics and behavior model under the Professional Ethics (Wisalaporn, 2005) with various respects. These include a great teacher care for and be merciful, pay attention to students' needs. A great teacher conducts oneself as a good role model for students and provide services honestly and equally without asking for. The results also in accordance with the characteristics of a great teacher proposed by Orlando (2013) in the characteristics of respecting, caring and inspiring students. In accordance with the qualities of a great teacher proposed by Avram (2013) in the sense of justice and devotion. However, the results of this study provide the greater knowledge that a great teacher needs to draw a very thin border between the personal life and professional life. A great teacher needs to play the role of a big sister/brother in front of their students. At the same time, a great teacher cares for the students not just as a teacher, but also as a second parent. The students expect their students to be their second parent who love, care, and think they are the teacher's family member.

Conclusion and Suggestion

Being a great teacher is not impossible. Through the results of this study, the creation of a meaningful practical description of what it means to be a great teacher is evident. A great teacher needs to care about the needs of his / her students and listen carefully to their voices. A great teacher lives forever not just in the students' minds, but also in their hearts.

The research study concludes that this way of collecting perspective from Thai students towards the meaning of a great teacher should be considered as a valuable way for getting deeper insights into students' concerns and should be used along with the more common practice of teacher related feedback from students. Moreover, the study identified the major six attributes of a great teacher. The attributes included being the second parent, a life coach, a knowledge provider, a big sister/brother, a role model and a justice. Therefore, this research adds new knowledge for Thai teachers to consider when doing their duty for students at their schools or universities. With this in mind, Thai teachers and administrators should be concerned about and listen empathically to students' needs for better understanding, and then use that understanding to develop more appropriate and likeable classroom activities in order to improve the qualities of life learning and teaching in the Thai student curriculum.

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***Canada's 2I's: Reconciling International Student Migration
and Indigenous Peoples***

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The Asian Conference on Education & International Development 2022
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Abstract

Reconciliation rests at the nexus of relationships between immigrants and Indigenous peoples of Canada. Setting out this literature review was focused on providing an environmental landscape on what has been researched on the reconciliation between international students, Canadian higher education, and Indigenous peoples. However, as this comprehensive literature review will demonstrate there is considerable extant literature regarding related topics, new immigrant transitioning, socio-cultural and historical contexts, contestations, and decolonizing initiatives within universities and communities, which while related and offer opportunities of engagement, do not delph deep into Canadian higher education's role (as an economic immigration pathway) in the reconciliation of international students (as potential new immigrants and settlers) and Indigenous Peoples' Whilst this literature review explores key concepts and contestations its' overall purpose has been to reveal gaps, and crevices, which demonstrate the need for research into Canadian higher education's ethical and fraught role into reconciling international students and their relations with Indigenous peoples. This literature review is followed by research recommendations focused on addressing the gaps identified and formed around two key questions: 1. how do international students' perceptions about Indigenous peoples change and 2. how might this contribute to reconciliation, if at all?

Keywords: Internationalization, Indigenization, Racism

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Eye to Eye: Indigenous and International Relations

Higher Education's Role in Settler-Hood

The purpose of this study was to produce a scoped literature review of the Canadian higher education and overall landscape on how international students (new future immigrants) form their opinions, thoughts, and beliefs and understanding about Indigenous Peoples of Canada. This topic begins in Foucauldian “genealogical” style as it unpacks the “history of the present” of Canadian higher education and its’ reliance on international student tuition revenue and its’ balance of Indigenous decolonization (Foucault, 1991, p. 53-54). Canadian higher education has found itself as the primary economic federal migration pathway for international students seeking eligibility to meet permanent residency requirements in Canada. As such Calder et al. (2016) asserts that Canadian higher education has increasingly higher “stakes in the success of [international] students”. Additionally, Canadian higher education is in an ethically fraught position as while it has been charged with the decolonization of higher education in support of Indigenous students (TRC, 2015), it is being funded to do this primarily through internationalization recruitment, retention, and attrition of international students. According to Statistics Canada (2020a), “Over a ten year-period international students’ education in formal programs [have] more than tripled while Canadian student enrolments increased at a slower pace...[this] represents 57.2% of total growth in... [post-secondary] program enrolments” (p. 1). More than federal IRCC pressure, post-secondary has become increasingly, “reliant[t]...on [international student] tuition as a revenue source [which] has grown over the past decade to an estimated 40% of all tuition fee [revenues] and [now] accounted for almost \$4 billion in annual revenues for Canadian universities in 2018/2019” (Statistics Canada, 2020b, p.1).

The economic investments by international students in Ontario alone are evidenced by “international students [directly contribute[ing]] \$7.8 billion to the Ontario economy in 2016” (Ministry of Advanced Education and Skills Development, 2019, p. 5). The Immigration, Refugees, and Citizenship Canada (IRCC, 2020) Annual Report to Parliament on Immigration indicated that in 2020 alone, over “5,774, 342 travel documents [were] issued to visitors, workers, and students, [including an additional] 404,369 temporary work permits, [of which] 74,586 individuals transitioned from temporary foreign worker and international mobility programs, [and] 341,180 permanent residents [were]admitted to Canada. [As such] permanent and non-permanent immigration [now]account[s] for 80% of Canada’ s population growth” (p. 1). These figures align with the Statistics Canada (2020a) report that reported, “international students account for all the growth in postsecondary enrolments in 2018/2019”, [and in the] 2018/2019 academic year, over 2.1 million students were enrolled in Canadian public universities and colleges, up 1.8% from the previous year” (p. 1).

The Ontario Ministry of Advanced Education and Skills Development (OMAESD, 2018) indicated that “Long-term international students directly contributed \$7.8 billion to the Ontario economy in 2016, supporting thousands of jobs across the province. Institutional revenues alone from international postsecondary students totaled \$1.8 billion in 2015-2016” (p. 5). Further OMAESD (2018) indicated that “Education is an important Canadian export. Education-related services are among the country’s top 10-service exports, accounting for \$5.8 billion in 2015” (*ibid*, p. 3)”. Further, “The ministry estimates that by 2022, If current trends continue, international enrolments will account for roughly 20 percent of all postsecondary enrolments in the province” (*ibid*, p. 5).

Although OMAESD (2018) indicated they hoped to “enhance Ontario’s settlement services” in coordination with the Ministry of Citizenship and Immigration with the hope of “expanding the International Student Connect program pilot across more campuses and municipalities, connecting international students to settlement organizations” (p. 5), this has not happened as of 2021, and current immigrant settlement services include international student support in the form of funded workshops on resumes, tax assistance, which has left higher education institutions across Canada in a tenuous position to provide settlement services which extend beyond their institutional mandates of supporting international students academically and personally in their successful credential completion.

The focus of IRCC’s immigration pathway via Canadian higher education for international student transition to permanent residency places increasing pressure on Canadian higher education to prepare international students as the next generation of Canadian settlers. As such higher education is the primary conduit and incubator for emerging immigrant settlerhood issues between international students and Indigenous Peoples. As Jodi Byrd (2011) asserts, “settlers, arrivants [immigrants], and natives” [are] not separate but “bleed[ing] into one another...[and] the task is to discern how the noise of competing claims, recognitions and remediations function to naturalize possession at the site of post-racial inclusion, transformative multiculturalism, and cruel optimism” (p. 40). This is described by Tuck & Yang (2012) as “colonial equivocation” (p. 7), which according to Chatterjee (2018a), is the “minimizing or collapsing [of] the Indigenous and immigrant experience” (p 6).

As Chatterjee (2018b) asserts citing Byrd, it is this “cacophony...a critical term diagnosing the persistence of racialization, subjugation, and hierarchized subject positionalities within and among those targeted and oppressed by the processes of imperialism and colonialism, war, and genocide, [where] alliances [forge] across historical and cultural experiences in opposition to the competition upon which colonialism relies”. Chatterjee (2018b) claims it is this, “‘cacophony’ of the competing projects of diasporic immigrants and Indigenous peoples that allow the settler state to continue its business as usual” (p. 6). Despite higher education being ‘ground zero’ for Byrd’s (2011) “cacophony” of international student settlement and Indigenous Peoples reconciliation, there has been no research conducted on these relationships (specifically) and on how TRC’s (2015) *Calls to Action* for educational decolonization are working to reconcile these potential new immigrants with Indigenous Peoples work on sovereignty. Historical context is provided followed by themes in the extant literature which provide an environmental landscape on key discussions and work yet to be done for higher education to play an important role in guiding international students (as future settlers) and Indigenous Peoples in reconciliation.

Historical Context of Immigration and Indigenous Peoples

Bohaker and Iacovetta (2009) provide a historical and political account of how Indigenous peoples, policies, and civic education have been not only run out of the same government offices as immigration but used to assimilate and integrate Indigenous peoples akin to new immigrants to Canada. Bohaker and Iacovetta (2009) argue that since the beginning of immigration policy, the government has sought to treat both Indigenous Peoples and immigrants the same (outsiders that must be assimilated and integrated). Both Bohaker and Iacovetta (2009) assert that the combination of the post-world war and the passing of the 1947 Citizenship Act followed by governing the Department of Citizenship and Immigration (DCI), and Indian Affairs by one central ministry "from 1950 until 1966" was done as a strategic move as "ministry officials aimed to create a "one size fits all category of societal

citizenship". DCI's activities were heavily modelled after the citizenship campaigns being developed for immigrants within the DCI's Canadian Citizenship branch" (p. 427).

Defining a Canadian National Unity

These campaigns assert Bohaker and Iocovetta (2009) focused "ministry officials and their network of public and private groups, and agencies [in the creation of] a one-size-fits-all category of societal Canadian citizenship" (p. 427). As Bohaker and Iocovetta (2009) note, when Canadian prime minister Louis St. Laurent was asked in 1950 why he housed Indian Affairs with Citizenship and Immigration he said, "to make Canadian citizens of those who come here as immigrants, and to make Canadian citizens of as many as possible of the descendants of the original inhabitants of this country" (p. 429). DCI went on "to develop integration programs for both newcomers and Aboriginals until 1966, when Indian Affairs moved to a new ministry" (Bohaker & Iocovetta, 2009, p. 429).

As Bohaker and Iocovetta (2009) point out, the Canadian government's work to create a "national unity" that enveloped settlers, new immigrants, and Indigenous peoples was "'to make Aboriginals immigrants too' through repetitive assimilation tactics however, even present day the concept of "national unity provided by 'Canadian citizenship'[which] is 'contested ground' for Indigenous peoples vying for sovereignty" (p. 427). Moreover, Bohaker and Iocovetta (2009) assert the best way for a "dominant group" to clean up its' political image is to create an image (as Canada has done) of being an innovative multicultural "peacebuilding nation to the world, which includes a purge (whitewashing) of past systemic racism and colonization of Indigenous Peoples" (p. 427). Whereas Wallis et al. (2010) claim that recognition of both groups as distinct and separate is an important step towards finding paths to reconciliation, as both "exist in Canada's history and present an unacknowledged continuity that defines its dominant and structural social, economic, political and cultural orders" (p. 1).

Themes

Terra Nullis

In discussing Canadian colonization, settlers, and Indigenous peoples, both Buchan (2005) and Wallis et al., (2010) discuss the foundational use of the European indoctrination term 'Terra Nullis', and according to Buchan (2005), Europeans used this legal term to claim that Canadian "land was occupied but unowned' and "therefore vacant" (p. 1). Windschuttle in Buchan (2005) makes the case that British settlers "brought the gift of civilization and new techniques for living, however their claim to define who is 'civilized' and why some are 'uncivilized' or 'savages' should be questioned" (p.3). Buchan (2005) asserts that "ideas of civilization helped to shape colonial attitudes towards Indigenous peoples" and "these stereotypes are still at play in modern contexts" (p. 4). This idea is furthered by Wallis et al. (2010) who argue that additional "structural hierarchies of racial inequality...attempt to erase its Indigenous reality" (p. 1), and the use of 'Terra Nullis' by original settlers to Canada has encouraged the present day concepts of "globalization, where there is a constant ebb and flow of newcomers that are colonizers or victims of colonization, which makes 'colonization' and 'racialization' the foundation to begin the conversation between newcomers and Indigenous Peoples" (p. 3). Both Wallis et al. (2010) stress that 'coalition building' between racialized newcomers and Indigenous Peoples is a strategy to counter political rhetoric used as a 'divide and conquer' attempt to keep these groups alienated" (p. 5).

Reconciliation Where to Begin?

How does Canada reconcile new immigrants and Indigenous Peoples in a respectful relationship? As Akhmetova (2019) points out in her research into newcomers and immigrant settlement services in Manitoba that most “newcomers” or “immigrants” to Canada are unaware of how to approach their relationship with Indigenous Peoples, as “they could [not] articulate their understanding of reconciliation...[and]it seemed that was a general lack of understanding or agreement among non-Indigenous peoples that they [even]...shared [a]responsibility to reconcile" and all participants in Akhmetova’s research agreed that they need more education on Indigenous Peoples and reconciliation (p. 44).

Akhmetova's (2019) research determined three rationales provided by newcomers regarding their responsibility or non-responsibility for reconciliation with Indigenous peoples. The first was that newcomers did not feel responsible or supportive of original settler decisions regarding residential schools and felt since they were not direct hereditary descendants of these people, they were innocent. Secondly, some immigrants felt because their home countries are also impacted by colonization, they could not envision themselves as both the "colonizer" and the "colonized" therefore they were also innocent. Thirdly, new immigrants have other pressing priorities when they arrive from shelter and employment, which leaves little time to consider Indigenous Peoples and the "injustices of their past", so survival also made them innocent (p. 64).

New Settler Separation from Original Settler Colonial Identity?

Information shared on or by Indigenous Peoples to newcomers either from settlement or other government or non-government agencies informs and provides new immigrants knowledge and representation on the dominant’s group view of Indigenous Peoples. Also, information shared sets expectations of what the relationship should or should not be between newcomer immigrants and Indigenous peoples. This information (or non-information) sets the tone of “appropriation of Indigenous land and exploitation of Indigenous labour”, and these are, “foundation in settler nation formation” sustainability (Chatterjee, 2018, p. 5).

As Fanon (1963) describes this passing of Colonizer perspective on Indigenous Peoples to newcomers could be paramount to a “kind of perverted logic”, as he asserts that “colonialism is not satisfied merely with holding a people in its grip and emptying the native’s brain of all form and content...it turns to the past of the oppressed people, and distorts, disfigures, and destroys it. This work of devaluing pre-colonial history takes on a dialectical significance today” (p. 210).

New Settler Intent & Complicity

The relationship between new immigrants and Indigenous Peoples is not just based on historical or current information provided or not provided to newcomers at the time of settlement. As Jaffri (2012) indicates migrant intent is a concept needing examination, as perceived migrant "complicity" towards Indigenous Peoples in the recolonization of Canada needs to be considered as the "thinking in terms of complicity shifts attention away from the self and onto strategies and relations that reproduce social and institutional hierarchies" (p. 55). Many migrants are unaware of Canada's political and historical past with Indigenous Peoples despite that they may also be benefitting from the stolen land following arrival (Jaffri, 2012; Dua & Lawrence, 2005). In contrast as Jaffri (2012) points out, this “shift in

thinking places greater emphasis on migrant accountability for beliefs and actions instead of migrant culpability on their thoughts, beliefs, and actions of Indigenous Peoples” (p. 55). However, as Akhmetova (2019) and Lawrence and Dua (2005) note, newcomers may not see themselves as complicit as there is a distinction noted between settler and white privilege. Akhmetova (2019) notes new immigrant "settler privilege...gives an opportunity to associate with the benefits of living on stolen lands," but that this benefit comes with their recognition that they may also experience racialization and discrimination (Akhmetova, 2019, p. 54). Nevertheless, Akhmetova (2019) notes when “complicity” pertaining to settler colonialism occurs, it is through no fault of their own, as new immigrants can be "vulnerable to adopting inaccurate information about Indigenous peoples" due to the lack of "Indigenous education and orientation [they receive following] arrival to Canada" (p. 67) (this will be flushed out later in this examination).

Newcomer Accountability for Ongoing Settler Colonialism

Although Lawrence and Dua (2005) argue, that racialized people through their “citizenship and voting rights contribute to the government's policy and processes on reconciliation and decolonization, with and for Indigenous Peoples”, they do not fully acknowledge the marginalized position that many of these people may be in that contribute to their inability to have a voice from financial and health insecurities, language deficits, and not understanding government policy, process, and history (p 162). Albeit Lawrence and Dua (2005) give some consideration of racialized peoples need to assimilate and integrate, their cultural and lived experience in other countries, including increased pressure to assimilate and fit in with the dominant group (not to be accused of taking some of the original settlers pie), and how this all plays into a perceived “complacency”, they challenge the idea that “only white and European settlers can be guilty or solely responsible for colonization when racialized peoples are also benefitting from what has been stolen from Indigenous Peoples” (p. 132).

Despite Lawrence and Dua’s (2005) assertion that immigrants "at particular historical moments...may have been complicit with ongoing land theft and colonial domination of Aboriginal peoples" (p. 132), they go on to build their argument that other pre-existing factors (government policy and processes including the Indian Act of 1876), have had more impact on the current relationship between Indigenous Peoples and new immigrants (p. 3).

Overall, Lawrence and Dua (2005) assert that immigrant complicity exists due to immigrants' refusal to recognize that reconciliation is not just a white settler issue, and newcomers must ask themselves, "if people of colour are settlers, then are they settlers in the same way that the French and British were originally the settlers in Canada? And what does be a settler mean?" (p. 4). In contrast to this argument Akhmetova (2019) (an immigrant herself) makes the case that because new immigrants do not reap the same ‘privilege’ as previous or white settlers that they should not be "considered settlers" (p. 60). Although, Akhmetova (2019) distinguishes a perceived difference between "white and settler privilege" there needs to be a stronger base for her argument to be able to make a compelling claim that newcomers do not receive sufficient bells and whistles to be labelled as settler, as both groups (new and old) are settlers, and both groups have varied degrees of “privilege” bestowed to them despite the process or procedures in place for landing, and both are occupying stolen land (p. 54).

New “Settler Mindset”

Akhmetova (2019) explains immigrants adopt a "settler mindset" after arrival regarding Indigenous peoples which seems to mirror past “settler mindset”. “Newcomers are afraid to disrupt the status quo and... risk [being]labeled as troublemakers... [as they] begin a new life in a safer country. [Immigrants find] it easier and safer to blend in and to adopt the colonial rhetoric and attitudes rather than to resist them" (p. 62). As McCalla and Satzewich (2002) note the ongoing capitalist colonization of Canada is fueled by ‘constructing immigrants and ‘Indians’ as racialized others” (p. 25). Ling Chung (2009) notes that reconciliation between newcomers and Indigenous peoples must be done from a "non-pluralist framework" beginning with acknowledgement that the lands newcomers arrive on are "stolen" and that they are participating in an ongoing "colonial project" (p. 54). Regardless Ling Chung (2009), Lawrence and Dua (2005), and Chatterjee (2018), all posit the role of newcomers in Canada without the gravitas needed in examining this from the lens of Indigenous peoples and the notion of Indigenous sovereignty.

Impacts of the Ongoing Colonial Project Furthered by Globalization & Immigration

As Alfred points out in Lawrence and Dua (2005), it is difficult to move forward to constructing a new relationship between Indigenous Peoples, settlers, and new immigrants, when the “government continues to divest responsibility for the effects of colonialism on Aboriginal peoples, while holding onto their land base and resources, redefining without reforming, and further entrenching in law and practice the real basis of its power” (p. 125). Regardless of “anti-racism theory and practice” Lawrence and Dua (2005) assert that new immigrants and settlers must be made of aware of “the deeper, older stories and knowledge connected to the landscape around us” to be able “to acknowledge that we all share the same land base and yet [we need] to[collectively] question the differential terms on which it is occupied...to become aware of the colonial project that is taking place around us” (p. 126). Chatterjee (2019) argues about the dangers of implicating "immigrant settlement" into the dynamic discussion of "Indigenous decolonial justice" and the advancement of the "Settler colonial project" because in doing so, Chatterjee (2019) warns that we are losing focus of the "capitalist colonial project" underplay to further remove Indigenous peoples from their land and stack with new and improved immigrant reinforcements (p. 644).

Instead, Chatterjee (2019) urges that an amnesty is applied to new immigrants of "no border politics," which is an 'anti-racist' method to approach both the "recruitment/resettlement (of immigrants) and dispossession (of Indigenous peoples) on the land (p. 644). Chatterjee (2019) concludes that it is important to "move past the settler-Indigenous binary" and to consider how "labor-capital-nation-nexus factors into this dialogue” (p. 655).

Municipalities Sites of Contestation

Clearly municipalities emerge as key sites of contestation and where misunderstandings between newcomer migrants and Indigenous Peoples most often occur. As such it is important to historically understand “municipal colonialism,” Stanger-Ross (2008) outlines this concept by examining the historical steps taken by the City of Vancouver (taken by many other cities in Canada) as a way of, “dispossessing” Indigenous peoples of their urban Indigenous reserve land as Indigenous peoples in the urban downtown core was considered undesirable for empire building (p. 541). As Stranger-Ross (2008) reflects historical titans of industry “saw the Indian reserves as a particular challenge for urban development”, and in

Vancouver, B.C., this was reflected in the local newspaper editors publishing, “the city is suffering, as it has suffered these forty years or more, from a useless, undeveloped, untaxable piece of waste land [the reserves] impinging on the populous area”. “An Indian Reserve in the middle of a big city is an anachronism...a city is no place for the primitive wards of the government” (P. 542). As Stanger-Ross (2008) points out the municipality was building its argument as to why Indigenous people were “savage” which further “validated the appropriation of Aboriginal land” located in urban centres (p. 542).

Indigenous and International Municipal and Provincial Economics

Whereas municipalities and provinces view new immigrants as economic benefits and they create plans to attract and retain this population, Indigenous Peoples in municipalities are viewed as liabilities. Collins et al. (2017) report which compares Newfoundland and Labrador's education on both international and Indigenous provides an example of the perception of growing immigration settlement for economic vibrance. International students are presented as advantageous, "immigration allows Canada's population to grow and thrive...the province recognizes the importance of encouraging immigrant families to stay and contribute to the cultural diversity and economic prosperity of the province" (*ibid*, p. 89-90). Immigrant settlement is aspired to as something to work and retain in the region. Whereas Indigenous students' education is positioned as "important for both Indigenous people and non-Indigenous people", followed with a small list of Indigenous schools and whether they were open or how they were funded (*ibid*, p. 81).

As Ong in Godlewska et al., 2017 asserts, “FNMI people are largely absent in discussions of the economy. With today’s emphasis on economic success, this silence is significant (p. 446-447). In the development of municipal newcomer settlement toolkits particular attention must be paid into the framing of the narrative of Indigenous peoples and their economic value to the larger society. The idea that newcomers and even international students should be prioritized as they pose significant opportunity to municipalities, provinces, and higher education institutions as “economic migrants” is pervasive (Gates-Gasse in Cox, 2014, p. 49). Moreover, Busbridge (2018) lists off several immigrant civic education integration projects funded by the government, of which “none provide newcomers with Indigenous people knowledge or programs to forge connection and reconciliation with these groups” (p. 52-53). Busbridge (2018) concludes her overview and evaluation of integration services provided to newcomers entering Canada by noting, "not surprisingly, the Parliamentary Standing Committee on Citizenship and Immigration concluded in a recent report that 'that there is a need for a better coordination strategy vis-à-vis the various federal and provincial departments involved in the delivery of settlement services" for economic gain (p. 68).

Higher Education’s Role in International Student Settlement Services

As Cox (2014) points out the increased impetus of Canadian higher education to be an economic migration pathway for international students calls for increased, “higher education, policy, and programming in providing settlement service provisions to international students through a neoliberal lens” (p. 5). Cox (2014) argues that Canada's Immigration Strategy seeks to exponentially expand international student migration pathways to fill immigration quotas, and does not take into consideration how this growth and how these decisions impact and support the exclusion of international students. Cox (2014) builds her argument through her analysis of IRCC policies related to immigration, international student targets, and government strategies to build her case that "social inclusion of international students in

Canada," is not considered essential (p. 5). Further Roach cited in Cox (2014) argues that international students who are excluded from settlement agency supports have increased barriers (p. 34).

As Albiom in Cox (2014) attests, Canadian higher education service supports for international students are not standardized across Canada, which leaves ongoing gaps contributing to their exclusion (p. 34). Whilst Cox (2014) touches on the importance for international students to be supported to build both "social capital" and "bridged social capital" connections with the local communities, Cox's (*ibid*) argument falls short as it does not include any reference to another important part of international student inclusion in Canadian society, which is the need for higher education institutions across Canada to provide localized and standardized education on Indigenous Peoples (p. 43). Cox's (*ibid*) review of student programming and services at UBC, U of Calgary, Ryerson University, and Memorial make no mention of Indigenous reconciliation programming provided or undertaken on Indigenous Peoples for international student benefit (p. 52-54).

Despite international students being noted peripherally as one of the "temporary" migrant populations in the research their situation about settlement and Indigenous reconciliation is not explored. Instead, the central arguments focus more on the states of "temporariness" prolonged to create "permanent temporariness" and the responsibility of the federal and provincial governments to review policy, processes, and outcomes in relation. (Busbridge, 2018).

Newcomer Integration Settlement Programs & Tool Kits

Some of the literature and research focused on newcomer immigrant settler services and whether these services were teaching or disseminating information on Indigenous Peoples. There has been no research done on the standardization, quality, or accuracy of information provided to newcomers from third party government settlement associations on Indigenous Peoples and reconciliation (to date) other than a few studies which determined that little or nothing was being done in direct programming due to funding and lack of Indigenous knowledge and expertise by the settlement agency. Further, Yoshida's (2014) examination explores how newcomer settlement agencies use the toolkits and information they disseminate such as "newcomer guidebooks" as citizenship "settler making tools", which serve the primary purpose of reinforcing the dominant colonized power structures (p. 8). Yoshida (2014) goes on to assert that "the guidebooks rewrite the current Canadian-Indigenous relationship to have been reconciled, which is illustrated in some of their text" (p. 12) which provides, "inaccurate and misleading information to newcomers on the state of Indigenous reconciliation and the government state" (p. 61). Yoshida (2014) fears these guides "also position 'multiculturalism' as central to the nations citizenship and identity thereby eliminating the Indigenous identity" (p. 90). In conclusion, Yoshida (2014) decides "newcomer integration and transitioning material provided by newcomer settlement agencies works as citizenship rhetoric, to ensure that new immigrants position Indigenous peoples as separate and not part of the Canadian collective identity which serves to exclude Indigenous participation" (p. 23).

Gaps/Limitations/Implications

This literature review revealed significant gaps on efforts and initiatives to encourage reconciliation between international students and Indigenous Peoples within higher education or by other stakeholders. This literature points to further investigation needed, which is

critical and important, as Canadian higher education has been charged with implementing TRC's (2015) *Call to Actions* in reconciling Indigenous Peoples and the Canadian state. As the literature has demonstrated there has been a metered focus on domestic student reconciliation and knowledge building through Indigenization of the curriculum and some efforts to 'recognize Indigenous ways of knowing and being' but there has been no specific focus in Canadian higher education on international student reconciliation and relationship building with Indigenous Peoples. International students, whose primary goal is to resettle Canada using higher education as a migration pathway, continue to have little knowledge or interaction with Indigenous Peoples during their education. This places higher education at the nexus of reconciliation for both Indigenous Peoples and international students (new settlers) and acknowledges the pivotal role that Canadian Higher education may play in setting foundational beliefs and values contingent for respectful relationships between Indigenous Peoples and international students- the future generations of Canada.

Higher education's duality in reconciling Indigenous Peoples and the resettlement of Canada through the provision of credentials to international students is a privileged, and an ethically fraught position. Included in these dynamics of this tenuousness is that international departments within higher education are not mandated to provide Indigenous education nor have they been expected to play a part in reconciliation between these groups.

Conclusion

This literature review ends with unanswered questions and implications for my future research later this year including limitations on knowledge known today about international students (future settlers of Canada) and their understanding of Indigenous Peoples. Questions such as how do international students' perceptions about Indigenous Peoples change after participating in an Indigenous activity or constructed engagement? How can Canadian higher education contribute to meaningful reconciliation between international students and Indigenous Peoples? What opportunities are available to international students to learn about and interact with Indigenous Peoples? Do international students arrive with racist ideologies about Indigenous Peoples or are these formed through their interaction with other settlers, media, interactions in their school, workplace, or social lives? How do international students form ideas, opinions, and beliefs about Indigenous Peoples pre-and-post arrival to Canada? What is Canadian higher education's responsibility in educating potential new immigrants, as part of their commitment to assuming an economic migration pathway for the federal government? Does Canadian higher education have a role and responsibility in international student and Indigenous Peoples reconciliation? Difficult questions indeed.

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ODD Self-Efficacy Test
Academic Self-Efficacy Among College Students

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Abstract

It has long been considered that persons with a high level of self-efficacy can tackle even the most difficult tasks. As a result, the harder the activity, the more self-confidence and self-control they have, and the more successful they will be. The ODD Self-Efficacy Test is a 100-item survey designed to test college students' self-efficacy. With a 4-point Likert scale, this test has three subscales: time management, efficiency/productivity, and disposition. These subscales are concerned with how students respond to difficult academic settings, such as school pressures and the stresses of all study-related activities. Furthermore, this was pilot tested among 360 college students from chosen universities in Camarines Sur and Albay, and content validated by three psychology professionals. The test's factor structure was analyzed using confirmatory factor analysis, resulting in a questionnaire that was reduced from a 100-item to a 48-item questionnaire with nine components. When the final 48 items were tested for internal consistency using Cronbach's Alpha, it was established that components' Time Management, Efficiency, Drive, Consistency, Productivity, and Confidence had adequate to good reliability. While Optimism, Disposition, and Prudence, on the other hand, may have limited applicability, but they are not reasons to discard the test based solely on its size or reliability coefficient. Disposition has the lowest reliability ($N = 3; =.483$), whereas Time Management has the highest reliability ($N = 12; =.83$). This means that individual differences in test scores are due to "real" differences in the attributes under examination, with chance errors accounting for the remainder.

Keywords: Self-Efficacy, Academics, College Students, Time Management, Efficiency, Drive, Consistency, Productivity, Confidence, Optimism, Disposition, Prudence

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Introduction

The ODD Self-Efficacy Test is a 48-item survey designed to measure the level of self-efficacy among college students in Camarines Sur and Albay. The name of this test is derived from the authors' initials: Odet, Dorothy, and Debbie. According to Bandura & Freeman (1999), *Self-efficacy* refers to the person's particular set of beliefs that determine how well one can execute a plan of actions in prospective situations. It pertains to one's capabilities to organize and execute these courses of actions required to manage such perspective situations. Moreover, self-efficacy refers to the beliefs about one's capabilities to learn or perform behaviors at designated levels (Bandura, 1986). It refers then to a person's belief in his/her ability to succeed in a particular situation.

In this 21st century, learning has been the strongest pillar of an individual achieving their desired goals. It is now apparent that everything is running on a modernized term, making a millennial do various things and ways to cope with the present. One of these coping strategies can be seen in a student's academic life. As the changes can be apparent, self-efficacy is readied to aid the students to be more encouraged, thus taking up new challenges in life through constant learning. It does not merely mean to be a motivational concept, but it supports an individual, like students, in achieving goals and their desired targets with the best if not the superior performance.

The objectives of this test are to:

1. Determine whether the college students (17 and above) in Camarines Sur and Albay have a generally good self-efficacy in life or not.
2. Help the schools know and monitor the student's efficaciousness and productivity amidst the college work demands.
3. Assist the schools' officials to resolve issues or find ways to help those students with a low level of self-efficacy in general, and that they may become what society wants them to be, responsible and motivated individuals.

Below is the table of specification. Included are the items measuring self-efficacy.

Area	Components	Item Placement w/ Reversed Scores	No. of Items	Percent of the Items
Self-Efficacy	Time Management	1 - 9	9	19%
	Efficiency	10 - 16	7	15%
	Drive	17 - 22	6	13%
	Consistency	*23 - *31	9	19%
	Productivity	32 - 35	4	8%
	Optimism	*36 - *38	3	6%
	Confidence	39 - 41	3	6%
	Disposition	*42 - *44	3	6%
	Prudence	45 - 48	4	8%

Table 1. Table of Specification

The table of specifications of the ODD Self-Efficacy Test shows that there are 48 questions regarding some situations that are being encountered by college students. The test developers choose nine subscales which are Time Management, Efficiency, Drive, Consistency, Productivity, Optimism, Confidence, Disposition, and Prudence.

Validation

The ODD Self-Efficacy test was initially composed of a 100-item scale that the authors determined following the definition of subscales. These were designed to be self-rated using the 4-point Likert scale (I Strongly Agree that this is me, I Agree that this is me, I Disagree that this is me, and I Strongly Disagree that this is me) depending on how it best describes the respondents. The test was then reviewed for content validity of item construction by a panel of three consisting of two Psychologists and a Psychometrician. Based on their content validity, items were revised accordingly.

The authors conducted a pilot testing on 360 respondents who are college students from selected Colleges/Universities in Camarines Sur and Albay. These respondents completed the test online through google forms. The profile of the respondents is summarized using descriptive statistics. Results showed that there was a total of 63.1% Female, 30.8% Male, and 6.1% LGBTQ+, whose ages range are notable for 17 to 20 years old with 53.3%. Furthermore, these respondents were divided from colleges and universities from the provinces of Albay (33.6%) and Camarines Sur (66.4%), with Universidad de Sta. Isabel as the university with the greatest number of respondents for the pilot testing, with 31.7% of 360 respondents.

To achieve the construct validity of the ODD Self-Efficacy Test, Confirmatory Factor analysis was utilized to assess the factor structure essential to the 100-item ODD Self-efficacy test. Results of the sampling adequacy measure of this instrument reported a high KMO of 0.887, and Barlett's test sphericity ($\chi^2 = 7906$, degrees of freedom = 1653) yielded a statistically significant $p = 0.000$, which suggests that variables are associated and therefore appropriate for extraction.

ITEM	Components								
	1	2	3	4	5	6	7	8	9
1	0.408								
2						0.480			
8									0.426
11						0.618			
12				0.432					
13					0.614				
14					0.580				
15						0.654			
16			0.427						
17			0.748						
18			0.795						
19			0.651						
20				0.544					
22				0.567					
23					0.520				
25									
32			0.478						
33				0.480					
34									0.540

37					0.469
41	0.520				
42	0.638				
43	0.676				
44	0.708				
46				0.407	
47		0.449			
51					0.487
52					
55				0.570	
57			0.678		
58			0.732		
59	0.456			0.435	
62	0.484				
63					
67		0.550			
69			0.545		
70	0.579				
72	0.504				
76		0.525			
78				0.488	
80		0.733			
83				0.700	
85		0.676			
86					0.660
88			0.427		0.426
89			0.521		
90	0.524				
92	0.647				
95	0.669				

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 19 iterations

Table 2. Confirmatory Factor Analysis

Using Confirmatory Principal Component Factor analysis with Varimax Extraction and Kaiser Normalization Rotation was conducted. 52-items reduced the initial 100-item questionnaire to become a 48-item questionnaire with nine factors/components.

The table presents the items with a minimum .40 factor magnitude. Initially, the table consisted of 19 components. However, some items did not meet the > 0.350-factor loading cut-off, and after deleting components with only one to two items, components were reduced to 9 components with 48 items. Also, item 90 in component 8 was later on removed because it was not after the theme of the item loading. Components 1 to 9 consist of items that are included in the final 48-item inventory.

The final 48 items after the factor analysis of the 100 items ODD Self-Efficacy Test is illustrated below. Together with the statements from the test, the table also presents the factor loadings, Percentage of Variance, Mean and Standard Deviations of each item. There was a total of 9 subscales of the final 48-item ODD Self-Efficacy test.

Factor Loadings, Eigenvalues, Percentages of Variance, Mean and Standard Deviations of the 48-item Self-Efficacy Test

Self- Efficacy				
Component 1 Time Management				
Eigenvalues: 12.15; Percentage of Variance: 19.2%				
	FL	M	SD	
1 I can allot enough time in a day to study	0.408	2.84	.709	
2 I can prioritize and work on my requirements even without deadlines	0.520	2.95	.774	
3 I see to it that I can study every week.	0.638	2.81	.725	
4 I see to it that I read my notes every now and then.	0.676	2.61	.720	
5 I make sure to use my time productively.	0.708	2.93	.691	
6 I can still be productive even on weekends, holidays or vacations.	0.456	2.79	.848	
7 I can manage my time wisely.	0.484	2.74	.756	
8 I am certain that I will not waste my time doing unproductive stuff.	0.579	2.57	.735	
9 I am able to use my vacant time to study or work on my requirements.	0.504	2.77	.726	

Table 3. Time Management

The first component, Time Management, is consisted of items 1 to 9. Statements from all of the items indicate how an individual organize his/her time between various activities concerning productivity, accomplishment of necessary tasks, and the ability to multitask.

Self- Efficacy				
Component 2 Efficiency				
Eigenvalues: 4.75; Percentage of Variance: 9.37%				
	FL	M	SD	
10 I believe that my skills will enable me to accomplish many things.	0.449	3.19	.626	
11 I can remain calm when facing difficulties because I can rely on my coping abilities.	0.550	3.04	.713	
12 When I plan, I want to go over the smallest details	0.525	3.17	.648	
13 During challenging and critical situations, I can usually think of a solution.	0.733	2.98	.646	
14 I can plan ahead about the things I should work on.	0.524	3.07	.672	
15 I find it easy to make alternative plans if my previous plan failed.	0.647	2.93	.656	
16 When confronted with a problem, I can immediately think of a solution.	0.669	2.89	.679	

Table 4. Efficiency

The second component, Efficiency, is composed of items 10 to 16. These items state the ability of an individual to do tasks well, with minimum quantity of wasted time, effort, finances, and materials. These items concerned are distractions and unpreparedness.

Self- Efficacy Component 3 Drive				
	FL	M	SD	
Eigenvalues: 2.56; Percentage of Variance: 9%				
17	0.427	3.38	.744	Regardless of school demands and problems, I foresee that I will graduate on time.
18	0.748	3.29	.655	I can finish a task alone before the set deadline.
19	0.795	3.25	.646	I find means to finish a task/project before the deadline.
20	0.651	3.04	.673	I can balance academic and social life.
21	0.478	2.85	.752	I am confident that I can attend to every academic priority.
22	0.676	3.09	.756	I am able to submit requirements on time.

Table 5. Drive

The third component, Drive is composed of items 17 to 22. These items state the need of an individual to satisfy or complete a school task or assignment regardless of demands and problems that arise. These items concerned is success-oriented.

Self- Efficacy Component 4 Consistency				
	FL	M	SD	
Eigenvalues: 2.27; Percentage of Variance: 20.5%				
23	0.432	1.99	.872	When I sleep late working with my requirements, I become lazy the next day to accomplish other school-related tasks.
24	0.544	1.93	.779	I cannot focus on a test at hand when I have problems.
25	0.567	2.01	.777	I am having difficulty managing my time allotment for school-related tasks.
26	0.480	2.18	.902	I cram most of the time.
27	0.678	2.02	.881	I find it difficult to feel motivated to work on my requirements when people don't support me.
28	0.732	2.24	.854	I am not capable of doing my assignments along with my chores at home.
29	0.545	2.08	.826	I am easily discouraged by changes in plans, deadlines, etc.
30	0.427	1.92	.702	When faced with a dilemma, I find it tough to decide.
31	0.521	2.21	.849	I lose track of my social life because of academic demands.

Table 6. Consistency

The fourth component, Consistency is composed of items 23 to 31. These items refer to how the students keep positive attitudes and habits despite facing a lot of demands and other concerns in life. These items concerned about how consistent an individual in accomplishing things even if there are changes in plans or deadlines, and can do decision-making in a conflicting situation.

Self- Efficacy Component 5 Productivity				
	FL	M	SD	
Eigenvalues: 1.65; Percentage of Variance: 5.50%				
32	0.614	2.69	.794	When working on my academic responsibilities, I can ignore distractions.
33	0.580	2.66	.748	I am able to be productive most of the time.
34	0.520	2.75	.706	I can do school-related things enthusiastically.
35	0.435	2.79	.848	I can still be productive even on weekends, holidays or vacations.

Table 7. Productivity

The fifth component, Productivity is composed of items 32 to 35. These items refer on the ability of individuals to produce results, while also being responsible and enthusiastic in situations where there are distractions.

Self- Efficacy			
Component 6 Optimism			
	FL	M	SD
Eigenvalues: 1.47; Percentage of Variance: 2.85%			
36 I procrastinate a lot.	0.480	1.96	.798
37 I over think about minor things.	0.618	1.79	.844
38 I find it difficult to work when I feel lazy.	0.654	1.57	.676

Table 8. Optimism

The sixth component, Optimism is composed of items 36 to 38. These items state how an individual can do tasks while viewing things from the general perspective, being attentive even to minute details despite the struggles and challenges in situations. These items concerned how an individual can recover quickly from setbacks and disappointments from certain situations.

Self- Efficacy			
Component 7 Confidence			
	FL	M	SD
Eigenvalues: 1.4; Percentage of Variance: 3.42%			
39 I am confident that I can pass most of my exams.	0.570	2.98	.739
40 Compared to other people, I can perform outstandingly	0.488	2.56	.784
41 I am confident that I can excel in my exams this semester.	0.700	3.02	.775

Table 9. Confidence

The seventh component, Confidence is composed of items 39 to 41. These items refer to an individual's sense of self-belief that he/she is capable of doing an outstanding performance. These concerns how they tend not to give up quickly because they believe that they are capable of achieving something.

Self- Efficacy			
Component 8 Disposition			
	FL	M	SD
Eigenvalues: 1.21; Percentage of Variance: 2.87%			
42 It is impossible for me to work on my requirements with distractions.	0.407	2.13	.810
43 I feel guilty when I know that I can get higher scores.	0.660	1.99	.892
44 When faced with a dilemma, I find it tough to decide.	0.426	1.92	.702

Table 10. Disposition

The eighth component, Disposition is composed of items 42 to 44. These items state the individual's readiness or tendency to act in a certain way, even if there are distractions to make decisions, even in challenging situations.

Self- Efficacy				
Component 9 Prudence				
Eigenvalues: 1.18; Percentage of Variance: 3.40%				
	FL	M	SD	
45 I am able to recite or answer my teacher whenever I am asked.	0.426	3.00	.706	
46 I am inherently able to find solutions to my problems.	0.540	2.98	.622	
47 I can make alternative plan, if Plan A fails.	0.469	3.18	.680	
48 I can always get back on my feet whenever I encounter problems.	0.487	3.08	.678	

Table 11. Prudence

And with the last component, Prudence is composed of items 45 to 48. These items refer to the concerns of an individual for the consequences of his/her actions and decisions. The items concerned is about having practical reasoning.

Reliability

The second part of the analysis is the reliability testing. The Reliability of a test is often defined as the extent to which the scores on the test are free from error. The final 48-items were tested for internal consistency using Cronbach's Alpha. It was found that, Time Management (N = 12; $\alpha = .833$), Efficiency (N = 7; $\alpha = .783$), Drive (N = 6; $\alpha = .801$), Consistency (N = 9; $\alpha = .785$), Productivity (N = 4; $\alpha = .750$), and Confidence (N = 3; $\alpha = .727$) are the components with adequate to good reliability. On the other hand, Components' Optimism (N = 3; $\alpha = .550$), Disposition (N = 3; $\alpha = .483$), and Prudence (N = 4; $\alpha = .624$) may have limited applicability, but they are not the basis for solely rejecting the test based on their size or reliability coefficient (these components were reversed scored). Component 1, Time Management has the highest reliability (N = 9; $\alpha = .83$), while Component 8, Disposition has the lowest reliability (N = 3; $\alpha = .483$). This implies that the individual differences in the test scores are attributable to "true" differences in characteristics under consideration and the extent to which they are attributable to chance errors. Furthermore, a low value for alpha may mean that there are not enough items in the component.

Correlation

The third stage of analysis in this test construct is the Correlation testing between the components. The statistical result is shown below:

Variable	1	2	3	4	5	6	7	8	9
1 Time Management	1	0.470	0.506	0.169	0.726	0.212	0.562	-0.053	0.481
2 Efficiency	0.470	1	0.464	0.029	0.447	0.041	0.544	-0.133	0.591
3 Drive	0.506	0.464	1	0.211	0.485	0.064	0.502	-0.057	0.435
4 Consistency	0.169	0.029	0.211	1	0.232	0.543	0.161	0.560	0.027
5 Productivity	0.726	0.447	0.485	0.232	1	0.198	0.512	-0.029	0.433
6 Optimism	0.212	0.041	0.064	0.543	0.198	1	0.159	0.364	0.029
7 Confidence	0.562	0.544	0.502	0.161	0.512	0.159	1	-0.015	0.468
8 Disposition	-0.053	-0.133	-0.057	0.560	-0.029	0.364	-0.015	1	-0.093
9 Prudence	0.481	0.591	0.435	0.027	0.433	0.029	0.468	-0.093	1
N	360								

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Table 12. Correlation Matrix

The relationship between the components was explored through correlation analysis. Components 1 Time Management, 2 Efficiency ($r=0.470$, $p<0.001$), 3 Drive ($r=0.506$, $p<0.001$), 4 Consistency ($r=0.562$, $p<0.001$), 5 Productivity ($r=0.726$, $p<0.001$), 6 Optimism ($r=0.212$, $p<0.001$), 7 Confidence ($r=0.470$, $p<0.001$), and 9 Prudence ($r=0.481$, $p<0.001$) are found to have a significant relationship with the central construct, Self-Efficacy, while Component 8, Disposition ($r=-0.053$, $p=0.316$), was found to be a negative/inverse correlation. Component 5, Productivity, was found to be most strongly correlated with Self-Efficacy ($r=0.726$, $p<0.001$), while Component 8, Disposition, was the least correlated ($r=-0.053$, $p=0.316$). All total component scores ($r=0.785$, $p=<0.001$) from the 360 respondents held moderate to high correlations with Self-Efficacy.

Scoring

This test will utilize a 4-Point Likert Scale that will measure college students' self-efficacy in selected schools in Camarines Sur and Albay. This will be designed and administered in Google Forms, which will be sent in virtual means to the target participants of the test.

The items found in each subscale will be respectively rated, while others in negative statements will be scored in reverse. Each item is given a weighted score from one (1) to four (4). Hence, the ODD Self-Efficacy Test will be scored using the 4 - Point Likert Scale where: 4 = I Strongly Agree that this is me; 3 = I Agree that this is me; 2 = I Disagree that this is me, and 1 = I Strongly Disagree that this is me.

In specific, four as "I strongly agree that this is me" having a value of 4 points means that the individual can fully and completely relate to the statement or situation given; 3 as "I agree that this is me" has a value of 3 points, where the individual can relate to the statement provided; 2 as "I disagree that this is me" means that the individual does not agree with the statement; that he/she cannot relate with the given situation, it has a value of 2 points; while, one as "I strongly disagree that this is me," with a value of 1 point means that the individual cannot at all relate to the given situation.

In reverse scoring, it is the same as the scoring of the regular items/constructs, and the only difference is that they are stated in reverse and are presented in negative statements.

To gain the self-efficacy level of the students, the average of all the weighted scores will be determined. One hundred forty-seven (147) points will be the maximum scores, while ninety-three (93) points become the minimum.

The Mean of the participant's rating will be interpreted according to the following interpretation: 3-4 – High Self-Efficacy; 1-2 – Low Self-Efficacy.

The scoring will be done using SPSS and JAMOVI. This is a scientific platform that makes computation easier using the latest development in statistical measurements.

INTERPRETATION

To identify the scores to be interpreted, means scores of the students are determined by adding the numerical value of their respective answers. The lower mean score is commensurate with the lower level of self-efficacy of the students.

MAIN CONSTRUCT

Self-Efficacy

High (121 to 147): A person with a high self-efficacy level is capable of overcoming school-related tasks and challenges where they are able to address them with efficiency. They are able to think positively in spite of the difficulties encountered.

Low (93 to 120): A person with low self-efficacy level tends to be of lesser or no confidence at all in overcoming the school-related challenges, having difficulty in addressing the situation at hand. There is a reflection of weaker commitment to accomplish a task, difficulty in making decisions or failure to get back after setbacks. There is a lack of determination to accomplish tasks and assignments.

SUBSCALE

Self-Efficacy through Time Management

High (121 to 147): A person with a high self-efficacy level can overcome school-related tasks and challenges where they can address them with efficiency. They can think positively despite the difficulties encountered.

Low (93 to 120): A person with a low self-efficacy level tends to be of lesser or no confidence at all in overcoming the school-related challenges, having difficulty in addressing the situation at hand. There is a reflection of weaker commitment to accomplish a task, difficulty making decisions, or failure to get back after setbacks. There is a lack of determination to accomplish tasks and assignments.

Self-Efficacy through Efficiency

High (31.6 to 28): The person can accomplish many tasks in a given period. Despite limitations and interruption, the person can be productive and finish his tasks on time and adequately.

Low (7 to 31.5): The person finishes little or no work at all.

Self-Efficacy through Drive

High (16 to 24): The individual has a more profound interest in the activities they participate in. They can satisfy themselves by completing school tasks regardless of unexpected situations that arise. The individual can finish their task on or before its due date while also maintaining a good balance of work and life priorities.

Low (6 to 15): The person quickly loses the spirit in personal abilities to do well in their school-related tasks.

Self-Efficacy through Consistency

High (28 to 36): The person tends to form a more substantial commitment to their interests and school-related activities.

Low (9 to 27): The person tends to avoid dealing with challenging tasks; he/she tends to postpone tasks and homework, which results in procrastination. Have low levels of commitment to things/situations.

Self-Efficacy through Productivity

High (11 to 16): The person can produce great results with his/her school responsibilities and be enthusiastic in situations where there are distractions, or even can work during holidays, weekends or vacation.

Low (4 to 10): The person tends to fail in living up to the academic expectations; low on accomplishment results. There is the consequent unwillingness of the individual to exert effort.

Self-Efficacy through Optimism

High (7.6 to 12): The individual can recover quickly from academic setbacks and disappointments. They can accept that some things are out of their control, but they can still focus on the things that matter - the person views challenging situations or problems as something/tasks to be mastered.

Low (3 to 7.5): The person tends to focus on personal failings and adverse outcomes.

Self-Efficacy through Confidence

High (7.6 to 12): The individual has a great sense of self-belief that he/she can do an outstanding performance in school, such as passing an examination.

Low (3 to 7.5): The individual doubts his / her capacity and skills to achieve his / her desired academic/personal goals. He/she believes that complex tasks and situations are beyond his / her capability.

Self-Efficacy through Disposition

High (7.6 to 12): The person can have a positive frame of mind and adjust to changes in school-related tasks and assignments, is organized, makes appropriate decisions to achieve what is set to process, and is encouraged to do so.

Low (3 to 7.5): The person tends to be disorganized, disoriented, and tends to make ineffective decisions, especially when confronted with challenging and complex decision-making related to school tasks and assignments.

Self-Efficacy through Prudence

High (11 to 16): The individual forms practical reasoning that help him/her resist the impulse to satisfy short-term pleasures at the expense of long-term goals.

Low (4 to 10): The person tends to be narrow-sighted, lacks concern for the consequences of one's action and decisions.

Conclusion

To summarize, people with a high level of self-efficacy have long been seen to be capable of completing even the most difficult tasks. As a result, the more difficult the activity, the more self-assurance and self-control the individual has, and the more effective they are.

The researchers hope this test will be used in future studies, and that it will help empower students' academic self-efficacy by assisting in determining how successfully one can carry out a strategy in a situation, as well as identifying an individual's ability to plan and carry out steps necessary to deal with their situations. Furthermore, to assist others in becoming more aware of the obstacles that students experience, allowing them to be understood and encouraged rather than being driven to make judgements in order to achieve their desired goals and targets with the greatest, if not the best, performance.

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*The Exploration of Primary School Teachers' Self-Expectation
Under the 5+2 Education Model—Take Nan'an City as An Example*

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Abstract

China is implementing a series of "Further Reduce the Burden of Homework and After-School Tutoring on Students in Compulsory Education" ("Double Reduction") policy, the aim of the double reduction policy is to ensure the quality of students' learning and to require schools to improve after-school services to reduce the burden on families. This research mainly uses the method of questionnaire surveys to explore the 5+2 education model of primary school teachers (N=156) in Nan'an City, Quanzhou City, Eastern Fujian Province (5+2 education model, that is, after-school service is carried out 5 days a week, and the time of after-school service is not less than 2 hours a day). The results show that the work and rest adjustment of primary school teachers can affect their self-expectation under the 5+2 education model, which affects their coordination with policies. Through the survey results, this paper puts forward targeted solutions in order to improve teachers' cooperation with the new policy, guide teachers to focus on education and improve teaching quality.

Keywords: 5+2 Education Model, After-School Service, Primary School Teachers, Time Anxiety, Self-Expectation

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Introduction

Since September, with the implementation of the "Double Reduction" policy in China, various places have been effectively reducing the burden of homework and off-campus training for students in the compulsory education phase in a variety of ways, the 5+2 education model is one of the most typical measures. 5+2 education model, that is, the school every week 5 days to carry out after-school services, after-school services not less than 2 hours a day. After-school services may seem like new initiatives, but they have long been popular in many countries. For example, in the Switzerland, after-school services provide after-school counseling for school students, interest development for students, and cultural adaptation services for immigrants (Christina Felfe, Michael Lechner, and Petra Thiemann,2016). The UK provides policy support for after-school program (Klumpner S.K., and Woolley M.E.,2021), and the Dutch scholars also discuss the emphasis of after-school services (Ruben Fukkink, and Marianne Boogaard.,2020). In China, especially in primary school, effective after-school service can reduce the educational pressure of parents and the study pressure of students. But at the same time, after-school service also brings some teachers time trouble (Mérida-López S., Extremera N., Rey L.,2017). The arrival of 5+2 education mode makes the work and rest of primary school teachers change, and the total working hours generally increase.

Therefore, this article will discuss: under the 5+2 education model, primary school teachers on their own current behavior and future development direction of the perception and expectations, and when the working hours and self-expectations do not match the extent of teachers' compliance with the policy (Christine M. Rubie-Davies, Elizabeth R. Peterson, and Chris G. Sibley et al.,2015). Based on this, this study investigates the overall situation of primary school teachers' after-school services in Nan' an city, finds out the status quo of teachers' work under the participation 5+2 education model, and explores the relationship between the working hours of primary school teachers and their self-expectations, to provide feasible suggestions for teachers to develop after-school service more actively (Ostad S.A., Ghanizadeh A., and Ghanizadeh M.,2019).

Current situation and investigation

The implementation of the 5+2 education model reflects the public opinion and is recognized by parents and the society, while the after-school service of the school focuses on reducing the burden and the effectiveness, and teachers become the main force (Milton A.C., Stewart E., and Ospina-Pinillos L.,2021). How to better implement the after-school service, the key lies in teachers (Dehghayedi M., and Bagheri M.S.,2019). In the autumn semester of 2021, Nan' an city will fully launch the after-school service plan for primary and secondary school students. Schools will provide after-school services five days a week, at least two hours a day. Although the plan is mainly voluntary for teachers in principle, it is found in the actual investigation that almost all teachers must participate in after-school service, which means that teachers need to invest more working hours than before after-school service. Based on Rosenthal effect, the author proposes a hypothesis: the 5+2 educational model influence teachers' self-expectation, to some extent, and then adversely affect their work (Hu B.Y., Li Y., and Wang C. et al.,2021)? In view of this problem, the author takes Nan 'an city as an example to carry out research.

Following the principle of random sampling, a total of 156 questionnaires are distributed to primary school teachers in Nan' an city. The questionnaire is divided into two parts: the first

part is a general survey, the main subjects of the length of teaching and working hours and so on; the second part is a psychological state survey, the main subjects of work expectations and self-perception (Day C., Elliot B., Kington A.,2005). The questionnaire uses Excel for data entry and SPSS26.0 for data processing. The analysis method mainly uses variance analysis and correlation analysis.

Analysis and discussion

First, by cross-analyzing the teachers' daily working hours and their willingness to improve themselves (Matsepe D., Maluleke M., Cross M.,2019), we find that most teachers' willingness to improve themselves is stronger when their working hours are shorter, whereas, if the teachers' working hours are longer, teachers' willingness to improve themselves will be weakened.

Table 1 is made by researchers shows the cross analysis of teachers' willingness to self-promote:

X\Y	Strengthen	Weaken	None	Count
3-5 hours	2(100%)	0(0.00%)	0(0.00%)	2
5-8 hours	16(41.03%)	15(38.46%)	8(20.51%)	39
8-10 hours	17(23.61%)	34(47.22%)	21(29.17%)	72
Over 10 hours	12(27.91%)	21(48.84%)	10(23.26%)	43

Table 1: Teachers' willingness to self-promote

But the study also finds that a small number of teachers work more than 8 hours and are more willing to self-promote (Kordaki M.,2013). A cross-analysis of the working hours, willingness to self-promote and willingness to participate in after-school services is conducted for this group, the results show that they are more inclined to not participate in after-school services.

Table 2 is made by researchers shows the cross analysis of some teachers' subjective willingness to participate in after-school services:

X\Y	Will	Unwill	None	Count
8-10hours/ Strengthen	2(11.76%)	11(64.71%)	4(23.53%)	17
Over 10 hours / Strengthen	4(33.33%)	6(50%)	2(16.67%)	12

Table 2: Some teachers' subjective willingness

Secondly, by cross-analyzing the working hours and working efficiency of teachers, we find that the number of groups whose working hours are 8-10 hours is the largest, moreover, 62.5% of the teachers in this group thought that their work efficiency declines after the implementation of 5+2 education model. Chi-square test is conducted on teachers' work efficiency and expected teaching effect ($p = 0.000 < 0.05$). The results show that teachers' work efficiency will greatly affect teachers' expected teaching effect, when teachers' work efficiency rises, they feel good about their expected teaching effect. If their work efficiency

decreases, they think their teaching effect is not as good as before the policy is implemented (Regi.er B. J.,2021).

Table 3 is made by researchers shows the cross analysis of teachers' expected teaching effect:

X\Y	Better	Not as good as before the policy	None	Count
Increased	5(35.71%)	3(21.43%)	6(42.86%)	14
Decreased	3(3.33%)	68(75.56%)	19(21.11%)	90
None	3(5.77%)	15(28.85%)	34(65.38%)	52

Table 3: Teachers' expected teaching effect

Finally, we conduct a Chi-square test on teachers' expected teaching effect and their willingness to participate in after-class service ($p=0.000<0.05$) (R.J.de Jong, J.van Tartwijk, and N. Verloop et al.,2012). The results show that there are significant differences between different teachers' teaching effect and their willingness to participate in after-class service, therefore, we cross-analyze these two variables and find that when teachers' expected teaching effect is decreased, teachers' subjective willingness to participate in after-school service is also decreased, on the contrary, when teachers expect their own teaching effect to be better, they are more inclined to participate in after-school service.

Table 4 shows the influence of teachers expected teaching effect on their participation in after-school service:

X\Y	Will	Unwill	None	Count
Better	6(54.55%)	4(36.36%)	1(9.09%)	11
Not as good as before the policy	5(5.81%)	66(76.74%)	15(17.44%)	86
None	8(13.56%)	27(45.76%)	24(40.68%)	59

Table 4: Teachers' willingness to participation in after-school service

Through the analysis of variance between different psychological factors and the willingness to participate in after-school service (Junker Robin, Donker Monika H., and Mainhard Tim,2021). The results showed that there were significant differences in psychological factors and subjective willingness of different teachers to participate in after-school service at the significance level of $\alpha=0.05$. Therefore, regression analysis of the data bases on Pearson product-moment Correlation Coefficient data showed that, $R^2=0.144$, teachers' Work efficiency($p=0.008$), Self-improvement($p=0.000$), Expected teaching effect($p=0.000$), Perceived ease of learning($p=0.001$) and teachers' subjective willingness to participate in after-school service were significantly correlated, the higher the teachers' efficiency, the stronger their willingness to improve themselves, the better the expected teaching effect, and the stronger the students' willingness to participate in after-school service (Vidal E.M., Galvão W.N.M., Vieira S.L., Chaves J.B.,2019).

Table 5 shows when dependent variable is "subjective willingness to participate in after-school service", predictive variables (constant) are teaching effect, self-improvement, work efficiency, ease degree, the anova of teachers' participation in after-school service:

Item	SS	v	MS	F	P
SSR	8.112	4	2.028	6.372	.000 ^b
SSE	48.061	151	0.318		
Total	56.173	155			

Table 5: Anova of teachers' participation in after-school service

Figure 1 shows the fitting degree of the distribution of different psychological factors and teachers' subjective willingness to participate in after-school service:

Figure1: Normal P-P Plot of Regression Standardized Residual

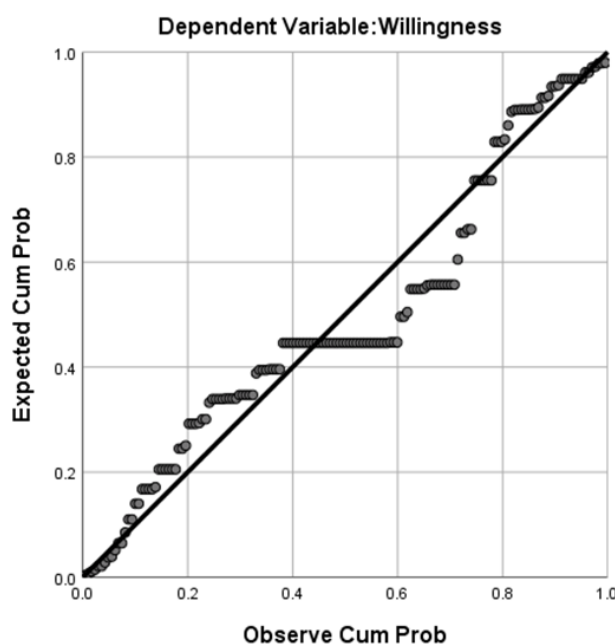
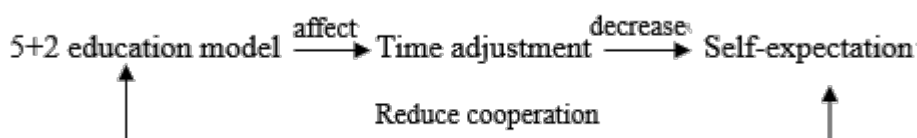


Figure 1: Teachers' subjective willingness to participate

Based on the above analysis, we find that under the current 5+2 education model, the increase of teachers' working hours will affect the teachers' expectation of their own work efficiency, teaching effect and self-improvement willingness, as well as to the student study easy degree forecast, then affects to the individual participation after-school service subjective willingness.



Conclusions and recommendations

Through the investigation and analysis, we can draw the following conclusion of the investigation of primary school teachers' self-expectation under the 5+2 education model:1. Excessive working hours will reduce teachers' work efficiency, reduce the expected teaching

effect, reduce the willingness to self-improvement; 2. Some teachers will enhance their willingness to self-improvement because of the increase of working hours; 3. The weakening of teachers' self-expectation will reduce the degree of cooperation with the policy.

There are some suggestions on self-expectation of primary school teachers under the 5+2 education model:

1. The school optimizes the pattern and the reasonable arrangement time. Under the background of the double reduction policy, the 5+2 education model can reduce students' burden, parents' burden, and teachers' burden. In the after-school service work, because the working time is prolonged, the teacher easy to produce the negative mood, thus affects the teaching quality. Therefore, in schools where this model is implemented, the total working hours of teachers can be reduced through a shift system, and when teachers are involved in after-school services, other jobs such as administrative chores and extra-curricular training can be reduced, with different teachers alternating among themselves, individual teachers enhance their own work efficiency, in order to achieve the overall balanced development of teachers. Schools lacking teachers should provide appropriate human resources, hire auxiliary staff, retired teachers, or introduce excellent teachers, share the teachers' time pressure, and arrange the time of after-school service reasonably. We can also explore a 'Home-school co-operation' style to encourage good parents with free time to participate in after-school services on a voluntary, to further enhance the harmony between school education and child discipline.

2. Set expectations and keep a positive attitude. The most important part of the 5+2 education model is teachers themselves. Teachers should first correct their own mentality, establish the important concept of caring for students and lifelong learning, and devote themselves to after-school service with a positive attitude. In teaching activities, teachers should learn to know themselves correctly, accept themselves psychologically, be kind to themselves physically, set appropriate goals based on their own expectations, seek professional identity in their daily work, and strive to improve their own quality and professional accomplishment. Psychology research shows that, the higher the knowledge level of teachers, the more can stand on higher levels to see society with insight into life, they will also grasp the law of development of things, the more accurate, and therefore less prone to psychological barriers, even if meet the poor psychological state, they will also take corresponding measures in time, consciously adjust. Therefore, when teachers' working hours exceed the limit they can bear, they should learn to take a timely rest, adjust their mentality, and constantly tap their potential, to deal with pressure better and reduce bad emotions.

3. Deepening educational reform and earnestly safeguard teachers' rights and interests. The 5+2 education model is related to the livelihood and well-being of each family, and local policies should better ensure the implementation of after-school services. From the material point of view, the local government can give teachers preferential treatment in terms of salary or other welfare for their labor services, to promote teachers' cooperation with the policy. From the spiritual aspect, we can combine after-school service modes of different schools to select excellent teachers and examples, give full play to the exemplary role of excellent teachers, and promote the development of education with better after-school service modes and spiritual radiation. In addition, the local authorities still can make a special training for class service, sourcing, planning better service after class curriculum, school-based courses can be combined with local characteristics, specific training of teachers. It can also use the existing professional teachers to carry out the service after class, arrange a variety of courses

for students, to safeguard the rights and interests of teachers and students, improve teachers' participation in after-school service policies.

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***Interest and Awareness of Japanese University Students
Regarding Computer Programming***

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Abstract

Although developing computer programming skills is essential, students' levels of readiness to learn programming are different. This study thus investigates the interest and awareness that Japanese university students possess regarding computer programming. A questionnaire study using a five-point Likert scale was conducted for 90 students from three classes: one in science and two in humanities. The findings suggest three main points. (1) Regarding the requirement of programming skills in students' future careers, the average scores for all three classes were four or higher, and no statistical differences were found among the three classes. These findings suggest that both humanities and science students believe that programming skills are extremely valuable for their future careers. (2) Regarding interest in computer programming, the average scores for the three classes ranged from 2.9 to 3.4, and no statistical differences were found among the three classes. Further, statistical differences were observed among the three classes for students' responses to programming interest and to the requirement for programming skills in their future careers. These results suggest that all students were fully aware of the importance of programming skills; however, their interest in programming was low in all classes. (3) To raise students' interest in programming, it is important to design syllabi or prepare teaching materials that closely correlate to students' future careers and that foster their logical thinking. Additionally, the curriculum flow should be designed so that students learn information literacy before they learn computer programming.

Keywords: Programming Education, Programming Skills for Future Career Plans, Student Interest in Computer Programming, Information Technology Literacy

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Introduction

Developing computer programming skills is demanded globally. In response to this demand, Japan's Ministry of Education, Culture, Sports, Science, and Technology (MEXT, 2018) is promoting computer programming education nationwide.

Despite these efforts, learners are known to have different experiences in programming, and their interests and awareness of programming learning are known to differ depending on the individual learners. To promote programming education, relevant stakeholders should first understand the current situation of individual learners' interest, awareness, necessity, and experience, then plan and implement programming education based on that understanding.

This study investigates the interest and awareness that Japanese university students possess regarding computer programming to ultimately explore their current situation and identify countermeasures to the problems that emerged in the investigation. The researchers conducted a questionnaire study with 90 Japanese university students to answer the following research questions:

1. Do students perceive that they need computer programming skills for their future careers? Are there any differences in how needs are perceived according to faculty?
2. Are students interested in computer programming? Are there any differences according to faculty?
3. Is students' interest in computer programming related to their logical thinking attitudes, software experiences, or perceived requirement of programming skills for their future careers? Are there any differences according to faculty?

In the following sections, this paper first examines related studies, then provides the methods used for the present study, delivers the results, and discusses the findings. Finally, the researchers present their conclusions and recommendations for further studies.

Literature Review

Following the global demand for programming education, MEXT decided to strongly promote computer programming education, which has commenced in Japan's elementary schools in 2020 (MEXT, 2020). Further, the subject of "Information" will be introduced into the Common Test for University Admissions in 2025 (The National Center for University Entrance Examinations, 2021).

As a part of the promotion policy of programming education (MEXT, 2018), computer programming education is currently being promoted from the elementary school level (MEXT, 2019) to the university level. Various efforts have been demonstrated regarding how programming education is considered a type of general information education at the university level. For example, Ishiguro, Sasaki, and Sassa (2017) discussed how "Introduction to programming" was a liberal arts subject in common education. Another study investigated first-grade students' experiences in their college computer literacy classes regarding the subject of Assembly Language Programming (Kuno et al., 2018).

However, according to the survey by Fuse and Okabe (2016), less than 20% of their students received programming education by the time they entered university. Fewer programming classes than expected are currently observed in high schools (Fuse, 2018). Students exhibit different levels of experiences and interests in, and awareness of, programming; so designing

programming classes that are catered for beginners is required—even in the general education level at universities (Fuse, 2018).

Considering university students' current situation, the curriculum, arguably, should account for students' backgrounds and awareness of computer programming. Our previous study (Kashiwagi, Kang, & Ohtsuki, 2021) thus explored the relationships between Japanese university students' interest in computer programming, their logical thinking, and their IT literacy. Our previous study also suggested that students' fields of study and future career plans must be considered when designing and implementing computer education. Therefore, we further attempted to investigate the relationships that existed between students' interest in computer programming and their future career plans.

Methods

Participants

This study's participants comprised 90 first-year students from three classes at a university in Japan—35 students from the Faculty of Engineering, 26 from the Faculty of Global Human Sciences, and 29 from the Faculty of Letters (see Table 1). These classes are the classes assigned when taking liberal arts and science subjects.

Class	Grade	Faculty	Number of Students
A	First year	Engineering	35
B	First year	Global Human Sciences	26
C	First year	Letters	29

Table 1: Number and Faculty of Participants

Data Collection and Analysis

A questionnaire was distributed to the participants to gather their subjective responses to items relating to their requirement of programming skills for future careers, their interest in computer programming, their logical thinking, and their experiences of software use (see Table 2 for the questionnaire items). The participants' responses were scored on a five-point Likert scale, in which 1 point correlated to "Strongly Disagree," 2 points to "Moderately Disagree," 3 points to "Neutral," 4 points to "Moderately Agree," and 5 points to "Strongly Agree."

Items Relating to Students' Requirement of Programming Skills for Future Careers, Interest in Computer Programming, Logical Thinking, and IT Literacy

- Q1. I need programming skills for my future career.
- Q2. I am interested in computer programming.
- Q3. I am good at thinking about things in order.
- Q4. I am good at thinking about things logically.
- Q5. I often use software applications (e.g., Microsoft Word, Excel, and PowerPoint).

Table 2: Questionnaire Items

In this study’s analysis, a Kruskal-Wallis test was used to investigate any statistical differences found among the difficulty ratings of the three classes. Further, a Wilcoxon signed-rank test and correlational analysis were also used to investigate how the items related to one another and whether any statistical differences were found between the difficulty ratings of the questionnaire items.

Results and Discussion

This study analyzed the questionnaire results to answer the research questions regarding students’ requirements of programming skills for their future careers, their interest in computer programming, and the relationship between their interest in programming and other items. This section describes the overall questionnaire results and any data trends observed. The questionnaire response results are listed in Figures 1–5, as well as the percentages of participants who selected answers for each respective item. Figure 1 correlates to item Q1, which concerns students’ requirement of programming skills for their future careers; Figure 2 correlates to item Q2, which concerns students’ interest in computer programming; Figures 3 and 4 correlate to items Q3 and Q4 respectively, which concern students’ logical thinking; and Figure 5 correlates to item Q5, which concerns students’ computer software experiences.

First, this study examined how the participants indicated their agreement with Q1 (i.e., their requirement of programming skills for their future careers). According to the results for item Q1 (see Figure 1), 88.5% of the participants in class A (Engineering) indicated their agreement—that is, they replied positively to “I need programming skills for my future career.” In class B (Global Human Sciences), 88.45% of participants indicated their agreement with Q1. In both classes, almost 90% overall indicated a positive agreement with Q1. Additionally, 76% of participants in class C (Letters) indicated their agreement with Q1. Regarding students’ requirement of programming skills for their future careers, 80% to 90% of the participants in all classes indicated positive responses.

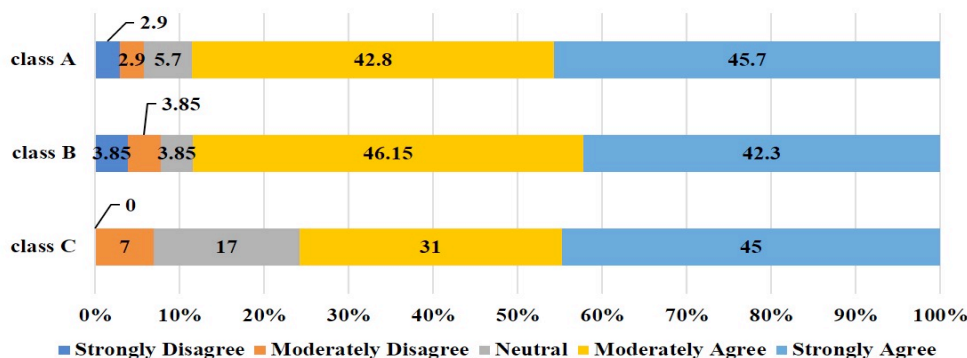


Figure 1: Percentage of participants’ responses to item Q1.

Second, this study analyzed how the participants indicated their agreement with item Q2 (i.e., their interest in computer programming). According to the Q2 results (see Figure 2), 52% of the participants in class A (Engineering) indicated their agreement with item Q2—that is, they responded positively to “I am interested in computer programming.” Similarly, class C (Letters) demonstrated that 48% of the participants indicated their agreement with item Q2. Additionally, 34.6% of participants in class B (Global Human Sciences) indicated their agreement. Regarding students’ interest in computer programming, it was observed that slightly more participants in the Engineering and Letters classes than those in Global Human Sciences responded positively to the item. It can also be noted that fewer positive responses were given to Q2 when compared to Q1.

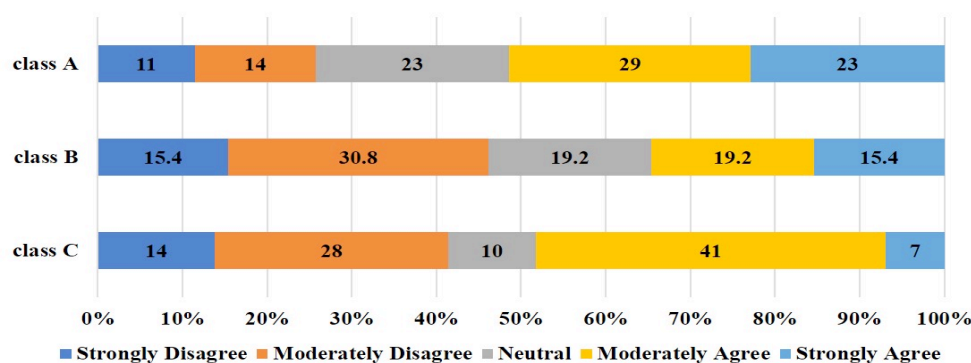


Figure 2: Percentage of participants’ responses to item Q2.

Third, this study investigated how the participants indicated their agreement with items Q3 and Q4 (i.e., their logical thinking attitudes). According to the Q3 results (see Figure 3), 40% of the participants in class A (Engineering) indicated their agreement—they responded positively to “I am good at thinking about things in order.” Similarly, class C (Letters) demonstrated that 41% of participants indicated their agreement with item Q3. Notably, fewer participants (23%) in class B (Global Human Sciences) indicated that they agreed with item Q3.

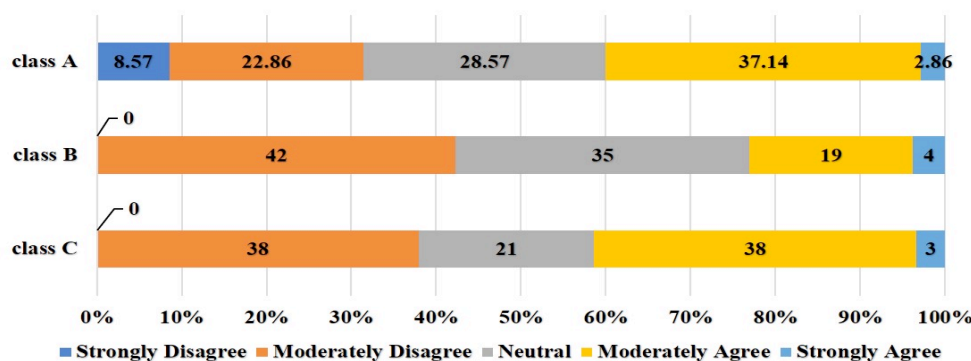


Figure 3: Percentage of participants’ responses to item Q3.

According to the Q4 results (see Figure 4), 66% of the participants in class A (Engineering) indicated their agreement—that is, they responded positively to “I am good at thinking about things logically.” Slightly fewer participants (48.4%) in class C (Letters) agreed with Q4, and even fewer participants (35%) in class B (Global Human Sciences) indicated their agreement with Q4. Notably, no participants selected the option of “Strongly Agree” for this item. Regarding student logical thinking attitudes, it can be noted that overall fewer participants in class B (Global Human Sciences) indicated positive responses for items Q3 and Q4.

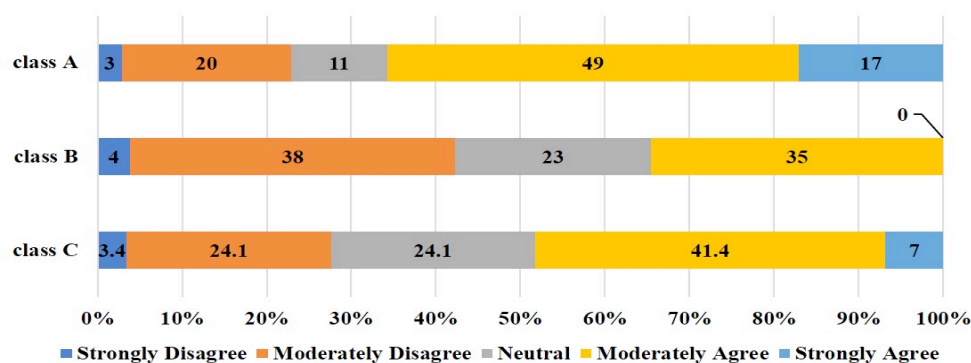


Figure 4: Percentage of participants' responses to item Q4.

Finally, this study analyzed how the student participants indicated their agreement with Q5 (i.e., their computer software experiences). According to the Q5 results (see Figure 5), 48% of participants in class C (Letters) agreed with the item—they responded positively to “I often use software applications, such as Microsoft Word, Excel, and PowerPoint.” Notably, fewer participants (20%) in class A (Engineering) indicated their agreement, while even fewer participants (27%) in class B (Global Human Sciences) agreed with item Q5. Regarding computer software experiences, the results suggest that participants' responses did not depend on whether they were in the science or humanities classes.

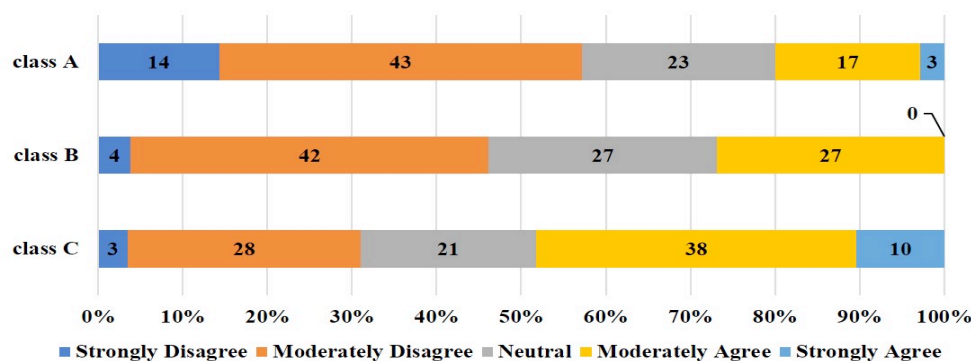


Figure 5: Percentage of participants' responses to item Q5.

Research question 1: Do students perceive that they need computer programming skills for their future careers? Are there any differences in how needs are perceived according to faculty?

To address the first research question, this section analyzes how the participants demonstrated their agreement with Q1 (i.e., their requirement of programming skills for their future careers). The Kruskal-Wallis test was conducted on the Q1 data to determine whether the three classes differed from one another in a statistically significant manner at the 0.05 level.

The average scores of their responses were calculated using a five-point Likert scale for each respective class to investigate overall student perceptions. The average scores were 4.3 for class A (Engineering), 4.2 for class B (Global Human Sciences), and 4.1 for class C (Letters). Regarding the percentages of participants who agreed with Q1, 88.5% of class A (Engineering), 88.45% of class B (Global Human Sciences), and 76% of class C (Letters) indicated that they agreed. Given these high percentages, it can be surmised that many

students across all classes perceived that they require computer programming skills for their future careers.

The Kruskal-Wallis test was then used on the Q1 data to analyze whether the participant responses from the three classes were statistically different. However, the results revealed no significant differences among the three classes ($p = 0.8752$).

These results ultimately suggest that the student participants from all classes strongly perceived that they needed computer programming skills for their future careers.

Research question 2: Are students interested in computer programming? Are there any differences according to faculty?

To address the second research question, this section analyzes how the participants demonstrated their agreement with item Q2 (i.e., their interest in computer programming). The average scores for the three classes were 3.4 for class A (Engineering), 2.9 for class B (Global Human Sciences), and 3.0 for class C (Letters). From the percentage results indicating agreement with item Q2, it was observed that approximately 50% of students from the Engineering and Letters classes agreed with the item, while only 34.6% from the Global Human Sciences class agreed.

Using the Kruskal-Wallis test on the Q2 data, the researchers then analyzed whether the participant responses from the three classes were statistically different. However, the results revealed no significant differences among the three classes ($p = 0.2986$). Given this final result, the students exhibit a low interest in computer programming—which is notable, considering they strongly perceived that they needed computer programming skills in their future careers.

Further, a Wilcoxon signed-rank test was conducted on the Q1 and Q2 data at the 0.05 level to analyze whether any statistical differences were present in the responses regarding students' interest in computer programming and those regarding the perceived requirement of programming skills for each respective class. The results revealed significant differences between the Q1 and Q2 data for all three classes (Engineering, $p = 0.0007$; Global Human Sciences, $p = 0.0007$; Letters, $p = 0.0004$).

These results reveal that students are fully aware of the importance of programming skills, regardless of whether they study science or humanities. However, it should be noted that their interest in computer programming was low for all three classes. Given this finding, it is necessary to consider a curriculum for computer programming that effectively interests students.

Research question 3: Is students' interest in computer programming related to their logical thinking attitudes, software experiences, or perceived requirement of programming skills for their future careers? Are there any differences according to faculty?

From the results obtained for the second research question, this study needed to investigate what facilitates programming learning. To explore the elements that raise students' interest, this study investigated how students' interest in computer programming was related to their logical thinking attitudes, computer software experiences, or their perceived requirement of programming skills for their future careers.

To analyze the data related to the third research question, this study calculated Spearman's rank-order correlation coefficients between items Q2 and Q1, Q2 and Q3, Q2 and Q4, and Q2 and Q5 from the questionnaire (see Table 3).

	Class	Q1	Q2	Q3	Q4	Q5
Q1	A	—				
	B	—				
	C	—				
Q2	A	0.39*	—			
	B	0.14	—			
	C	0.35	—			
Q3	A	-0.35*	-0.13	—		
	B	-0.20	-0.06	—		
	C	0.07	0.21	—		
Q4	A	-0.08	-0.03	0.44*	—	
	B	-0.14	0.15	0.37	—	
	C	0.16	0.42*	0.55*	—	
Q5	A	0.12	0.02	0.08	0.04	—
	B	0.18	0.42*	-0.16	-0.17	—
	C	0.28	0.15	0.03	0.06	—

*Correlation represents statistical significance at the 0.05 level ($p < .05$).

Table 3: Correlations Among Questionnaire Items.

The results of the correlation coefficients between Q1 and Q2 in the three classes as outlined in Table 3 demonstrated that a significantly weak positive relationship exists between students' interest in computer programming and their perceived requirement of programming skills for their future careers only in class A ($r_{Q1Q2} = 0.39$). However, the correlation coefficients between Q1 and Q2 were not statistically significant for both class B ($r_{Q1Q2} = 0.14$) and class C ($r_{Q1Q2} = 0.35$).

Regarding the perceived requirement of programming skills for future careers, a weak relationship was observed between students' interest in computer programming and their perceived requirement for programming skills only in class A (Engineering). This might be partly because of the students' major fields. The results and analysis ultimately suggest that the students' perceived requirement of programming skills for their future careers might slightly influence their interest in computer programming.

Further, this study also calculated the correlation coefficients between items Q2 and Q3, and Q2 and Q4 to examine how students' interest in computer programming related to their logical thinking attitudes.

The results of the correlation coefficients between Q2 and Q3 in the three classes as illustrated in Table 3 (class A, $r_{Q2Q3} = -0.13$; class B, $r_{Q2Q3} = -0.06$; class C, $r_{Q2Q3} = 0.21$) demonstrate that no significant relationship exists between students' interest in computer

programming and their logical thinking attitudes. Further, the results of the correlation coefficients between Q2 and Q4 reveal that a significantly weak positive relationship exists between students' interest in computer programming and their logical thinking attitudes only in class C ($r_{Q2Q4} = 0.42$). However, the correlation coefficients between Q2 and Q4 were not statistically significant for both class A ($r_{Q2Q4} = -0.03$) and class B ($r_{Q2Q4} = 0.15$).

These findings pertaining to students' logical thinking attitudes reveal that only in the Letters class was a weak relationship found between students' interest in computer programming and their logical thinking attitudes. This suggests that students' logical thinking attitudes might only slightly influence their interest in computer programming.

Finally, this study also calculated the correlation coefficients between Q2 and Q5 to investigate how students' interest in computer programming related to their computer software experiences.

The correlation coefficient results between Q2 and Q5 revealed a significantly weak positive relationship between students' interest in computer programming and their computer software experiences only in class B ($r_{Q2Q5} = 0.42$). However, the correlation coefficients between Q2 and Q5 were not statistically significant for both class A ($r_{Q2Q5} = 0.02$) and class C ($r_{Q2Q5} = 0.15$). Overall, regarding computer software experiences, a weak relationship between students' interest in computer programming and their computer software experiences was observed only in the Global Human Sciences class.

These results also suggest that students' computer software experiences might slightly influence their interest in computer programming.

Findings

Although this study can be further improved, its results reveal critical findings regarding the interest and awareness that Japanese university students possess regarding computer programming. This study's questionnaire results revealed that students were fully aware of how vital programming skills were for their future careers, regardless of whether they studied science or humanities. However, their interest level for programming was low in all classes. Considering a computer programming curriculum that deliberately interests students is thus necessary. This study's results suggest that students' interest in programming should be increased by designing syllabi and preparing teaching materials that directly relate to students' future careers and that foster their logical thinking attitudes—with the ultimate intention of promoting their readiness for, and awareness of, computer programming. Additionally, designing a curriculum flow in which students learn general information literacy before they learn computer programming will most likely reduce their psychological resistance to programming and instead encourage them to become more interested.

Limitations and Recommendations

The present study was a preliminary investigation into the interest and awareness that Japanese university students possess regarding computer programming. Considering the results obtained, more detailed relationships between students' fields of study and future career plans must be considered. Additionally, a survey must be taken after conducting actual programming classes. Finally, further studies should gather and analyze objective data to evaluate students' computer programming abilities, along with their subjective responses.

Conclusions

To develop students' computer programming skills, this study investigated the interest and awareness that Japanese university students possess regarding computer programming. A questionnaire using a five-point Likert scale was conducted for 90 students, with the results suggesting three main findings. (1) Regarding the perceived requirement of programming skills for students' future careers, the average scores that participants gave from all three classes were four or five out of five, with no statistical differences found among the three classes. It was suggested that students from both the humanities and science classes believed that programming skills were extremely valuable for their future careers. (2) Regarding student interest in computer programming, the average scores given for the three classes ranged from 2.9 to 3.4, with no statistical differences found among the three classes. However, statistical differences were found between the participants' responses for each class regarding their interest in programming and their perceived requirement of programming skills for their future careers. Overall, these results suggest that both humanities and science students were fully aware of how critical programming skills were for their future careers, even though their interest levels in programming were low in all classes. (3) This study also determined that to raise students' interest in programming, syllabi should be designed and teaching materials should be prepared that deliberately foster their logical thinking and relate to their future careers. Finally, this study recommends that designing a curriculum flow in which students learn general information literacy before they learn computer programming will encourage all students to become more familiar with programming.

As a continuation of this study, the researchers recommend that future research more thoroughly examine the relationships between students' interest in computer programming and their perceived requirement of programming skills for their future career plans, with a specific emphasis on students' fields of study.

Acknowledgements

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A Study of Electroencephalography (EEG) and Lego Wedo 2.0 on the Attention of First Grade Special Needs Students

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Abstract

The purpose of the study was to assess the Attention of first-grade special needs students by using EEG and Lego Wedo 2.0. The research subjects are 3 special needs students of the first-grade resource class in an elementary school. There were ASD student, learning disability student, and ADHD student. The researcher used the EEG system to uniformly collect the data of Attention when these 3 students were classified LEGO Wedo 2.0. The research results are shown as the followings: 1. These 3 students classified LEGO Wedo 2.0 have Attention eSense index of 67, it is slightly higher than the normal level. According to their high score group of Attention, they have no significant difference. 2. These 3 students classified LEGO Wedo 2.0 have Mediation eSense index of 67, it is slightly higher than the normal level. According to their high score group of Mediation, ADHD student with a high level of Mediation ability accounted for up to 2 to 3 times that of students with ASD and learning disabilities. 3. Students of different obstacle types have different Flow experience (high Attention and Mediation). ASD student have most times of Flow experience during the Intervention Period, student with learning disabilities have most times of Flow experience during the Maintenance Period, ADHD student have most times of Flow experience during the Baseline Period.

Keywords: Electroencephalogram (EEG), Autism Spectrum Disorder (ASD), Learning Disabilities, Attention Deficit Hyperactivity Disorder (ADHD)

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Introduction

In recent years, with the increasing maturity of human medical technology and signal analysis technology, a large amount of research has been devoted to the operation of the brain and mind, and brainwave technology has been widely used in medicine in other fields, among which, the application of electroencephalogram (EEG) is an example. If teachers can more accurately and objectively understand students' learning motivations and analyze their learning behaviors through the assistance of technology, they can timely provide teaching methods or teaching content that can promote learning efficiency, and improve students' Attention and learning effectiveness. As many as 98.61% (43,038) of students with special needs in Taiwan's primary education scene are educated in general schools. Among them, learning disabilities were the most at 38.19%, followed by intellectual disabilities at 20.19%, autism at 17.23%, and emotional behavioral disorders at the fourth. Therefore, in the classrooms of ordinary classes in primary schools, most students with physical and mental disabilities have learning difficulties, which often lead to the inability to concentrate, inability to concentrate, and low learning achievement, because the difficulties in literacy and reading ability affect the low learning motivation and lack of self-confidence ; According to the information processing model proposed by Atkinson & Shiffrin (1968), grabbing the Attention of students is the first level of all knowledge learning. Only when the Attention is focused can the follow-up information registration and coding organization and learning be carried out. Most students with special needs have poor performance in Attention, which is the key to learning effectiveness, and teachers need to understand students' learning status. In addition, the technology of EEG signal collection, measurement, and analysis has become more and more advanced. Mature. Therefore, this study also used EEG to collect the Attention and Mediation data of the three subjects with special needs when operating Wedo 2.0 Lego bricks for classified activities and further comprehensively analyzed the Flow experience with the brainwave data of students' Attention and Mediation. The results of the study are expected to serve as a reference for future curriculum design and editing teaching materials.

Exploring Attention with EEG

In 1929, the German psychiatrist Hans Berger detected the same electrical activity as animals on the human skull, which became the first published brain wave record in human history and was named electroencephalogram (EEG). Different frequencies can be divided into four categories: alpha (α), beta (β), theta (θ), and delta (δ). Different brainwave frequencies represent human beings with or without consciousness and various mental states. In recent years, many studies have found that the level of Attention is highly correlated with changes in the characteristics of brain wave patterns. Brain waves are like a trigger. The increase in brain wave data helps to maintain Attention (Asada et al, 1999). The better the Attention, the better the performance. (Good, & Brophy, 1995). Bransford (1979) mentioned that there is a very close correlation between Attention and learning effectiveness, Frederick (1977) found that high-achieving students spent 75% of the time in class focusing on learning, while low-achieving students only 51%. Attention also has a strong impact on students' learning journey, as one of the key pieces of Attention in students' poor learning outcomes is a lack of Attention. (Clark et al., 2006; Rush et al., 2010). Students with special needs, such as ASD, Learning disabilities, and ADHD, suffer from inattention due to developmental disabilities, affecting their overall learning outcomes.

NeuroSky MindWave Mobile was used for EEG in this study. In a previous study, Rebolledo-Mendez et al., (2009) found a positive correlation between Attention values measured by NeuroSky MindWave Mobile and self-reported reflective Attention. Chen & Huang's (2014) study found that NeuroSky MindWave Mobile was used to measure students' online reading Attention. Bos et al. (2019) also collected brainwave data through NeuroSky MindWave to understand the changes in students' Attention when using Augmented Reality (AR) in teaching activities. The results of the above studies show that NeuroSky MindWave Mobile is effective and reliable in identifying students' Attention in learning activities.

State of Flow

Csikszentmihalyi (1975) proposed the concept of "Flow" based on Maslow's peak experience. This refers to the "best experience" that people experience when they are in full Attention, called "Flow" or "Flow experience". Entering a state of high Attention in a relaxed and stress-free situation like this is the perfect time for learning, helping learners to enhance and maintain student motivation and improve learning outcomes (Schweinle et al., 2008; Tavares & Freire, 2016). At present, most of the studies on Flow experience have some limitations, because most of the Flow experience is to use self-report, reflection, reflection, and other feedback questionnaires to evaluate the Flow experience of the subjects after the activity. However, the Flow may appear suddenly without the subject's awareness, so such measurement may hide and limit key information in the Flow experience (Pearce et al., 2005). Wang & Hsu's (2014) brainwave experimental research data analysis results show that Flow experience is positively correlated with learners' Attention. The NeuroSky MindWave used in this study can capture up to 512 original brainwave signals per second, through further digital signal processing such as acquisition, amplification, conversion, filtering, and analysis of the original brain wave signal by Nielsen software, the alpha and beta wave can be presented through the eSense™ algorithm to display the subject's Attention and Mediation status in numbers from 1 to 100. Therefore, in this study, a state of "Flow" was defined if the EEG showed a state of simultaneous high Attention and high Mediation.

Method

This study conducted an experiment with multiple baseline across-subjects and multiple-probe designs of a single-subject research approach. The selection part of the subjects is purposeful sampling, three special needs students in the first grade of a primary school in Taoyuan City, Taiwan, and all held a hospital-issued diagnosis certificate. The categories of disorders are ASD, Learning disabilities, and ADHD. Participating subjects wore an EEG and operated WeDo 2.0 Lego blocks at the same time. The researchers will use the brain wave system to collect the data on the Attention and meditation of the three students when they operate the WeDo 2.0 Lego bricks for the classification activities. The classification activities will be designed from easy to difficult three missions:

Mission 1: Students classify the corresponding LEGO bricks by referring to the tips of the picture cards and stickers.

Mission 2: Remove the picture card prompts, students only refer to the sticker prompts to carry out the corresponding LEGO blocks Classification.

Mission 3: Ask students to classify according to their personal reasoning ability and working memory ability.

The observation can be divided into three phases Baseline Period, Intervention Period, and Maintenance Period. In the Baseline Period of the 1st week to 3rd week, the researchers did

not intervene at all and allowed the subjects to complete missions 1 to 3 by themselves. Then, during the Intervention Period in the 4th week to 6th week, the researchers guided and accompanied the subjects to complete missions 1 to 3 during the Intervention Period. Finally, in the Maintenance Period in the 7th week to 9th week, the researchers did not intervene at all and let the subjects complete missions 1 to 3 by themselves. The time limit for each classification Mission is 10 minutes, and the correct rate of classification within the limited time is calculated.

In the follow-up, the collected data will be analyzed in the form of graphs to present the students' Attention and Meditation state when operating the WeDo 2.0 Lego blocks, supplemented by qualitative semi-structured interview records to conduct the "Flow" analysis.

Conclusion

Based on the results of this study, this study draws the following conclusions.

1. The building block classification correct rate (show in Figure 1)

Subject A's disorder category is ASD, in addition to naming each building block, and independently developed a set of classification rules. During the classification process, subject A laughed from time to time, deliberately imitated baby crying, rocked the chair to make noise, rubbed the floor with his feet to make noise, suddenly sang, yawned, scratched and other inattentive behaviors. During the Intervention Period of the researcher, the process of questioning and answering between subject A and the researcher helps to complete the behavior of thinking and its corresponding classification through verbal Mediation, thereby improving the correct rate of building blocks. The overall building block classification accuracy rate was improved by 33.93%.

Subject B's disorder category is Learning disabilities, with no obvious emotional ups and downs, a dull expression, and a slow and rigid way of grasping individual blocks with one hand and placing them one by one during the classification process. During the classification process, subject B often looked out of the window, looked at the table, looked at the floor, touched the table legs, touched the sofa chair, yawned, scratched his head, opened his mouth, closed his mouth, and played with his lips. During the Intervention Period of the researcher, subject B reduced various distracting behaviors. Through the classification suggestions provided by the researcher, subject B could have a specific target basis for classification, which improved the correct rate of building blocks. The overall building block classification accuracy rate was improved by 76.43%.

Subject C's disorder is classified as ADHD. Before the experiment starts, he often cannot restrain his urge to want to play Lego and urge to start the classification quickly. Subject C's screaming or excited behavior during the classification process showed that he was very interested in Lego bricks, During the Intervention Period of the researcher, subject C's classification suggestion for the researcher did not conform to the rules in his mind, and he just wanted to follow his own classification method, but in the end he could combine the classification rules developed by himself with the researcher's suggestions. Therefore, subject C once achieved 100% classification accuracy in the process. The overall building block classification accuracy rate was improved by 88.21%.

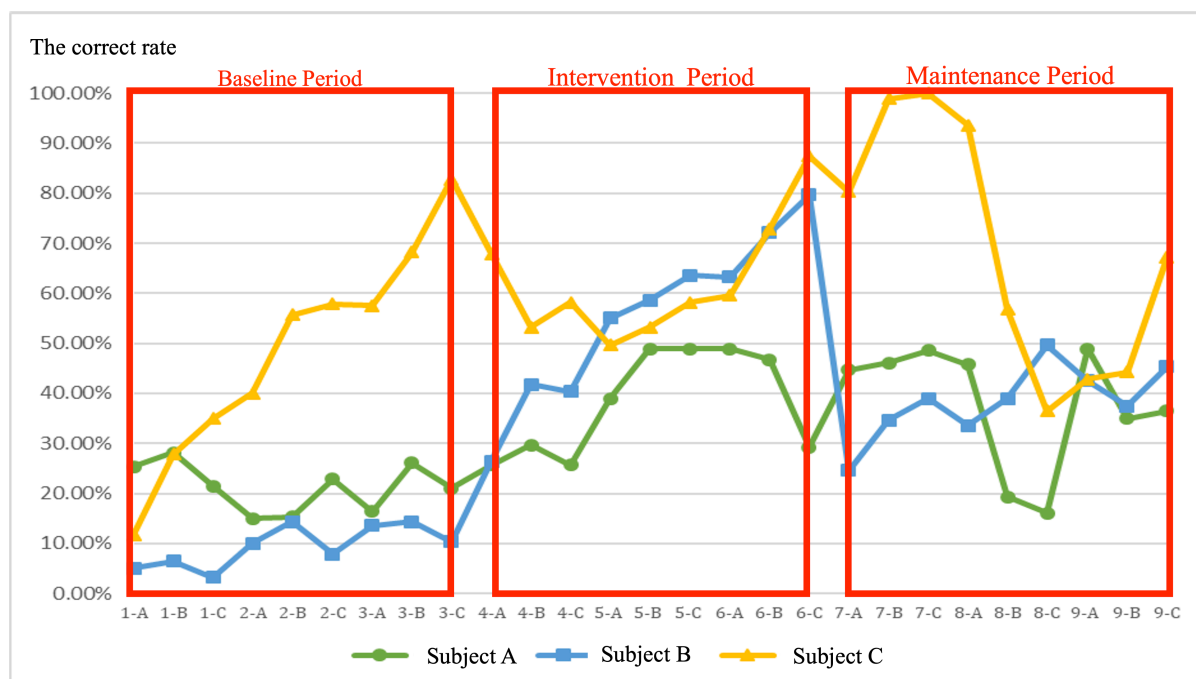


Figure 1: The building block classification correct rate

2. EEG data analysis

Since the data for Attention and Mediation are from 1 to 100, the top 30% (greater than 67) scores are used as high-performance scores in this study. And record the number of high-performance scores obtained in the Baseline Period, Intervention Period, and Maintenance Period, respectively as well as the number of times that both Attention and Mediation obtained high-performance scores at the same time, it means that the subject is both focused and relaxed. When the brain is in a state of extreme Attention, efficiency and creativity can be improved, but at the same time, the body and mind are stable and relaxed. This is the "Flow", or "Flow experience" proposed by Mihaly Csikszentmihalyi (1975). The statistical results are shown in Table 1.

Subject A's disorder category is ASD because children with ASD often have limited, fixed characteristics, and repeat strange movements or sounds, the presence of these characteristics can distract Attention and prevent them from using their self-developed classification rules. Therefore, during the Intervention Period, the researchers reminded subject A of the specific target when he was distracted, so that he could continue to maintain a clear target, and gave ambiguous feedback when the correct classification was completed. Subject A can instantly understand the correct classification of building blocks, and even though researchers intervene, he still controls his learning. Subject A perceives that the accuracy rate of his classification has improved, and he can feel the control of classification activities and exude a sense of achievement. Subject A had the most frequent Flow state during the Intervention Period and was also the best building block classification score, which can verify that the Flow state can get good learning performance.

Subject B's disability category is learning disability because children with learning disabilities have abnormalities in basic abilities such as concentration, memory, perception, movement, and reasoning. Therefore, subject B was unable to independently establish rules for building block classification during the Baseline Period. However, during the Intervention Period, with the classification recommendations of the researchers, clear and specific

guidelines were provided to help Subject B strengthen the order in memory and avoid the more difficulty to follow consecutive multiple instructions. Since Subject B has a clear goal based on the learned principles, distracted behaviors are reduced during the Maintenance Period, the movements are also smoother and more focused, the mood is more pleasant and relaxed, and finally produces the most times Flow state.

Subject C's disability category is ADHD, children with ADHD usually have obvious emotional ups and downs, dare to challenge unknown learning Missions in various fields, are full of curiosity, and are keen to explore. When subject C classified the building blocks, once the classification rules were summarized or the building blocks were classified correctly, the mood was happy, so subject C entered the Flow state most times during the Baseline Period when they were able to develop their own building block classification rules. However, during the Intervention Period, subject C hoped to follow the classification method that he had developed independently and did not want to follow the researcher's classification suggestion to affect his independent thinking, resulting in the lowest classification scores and Flow state times. Subject C's Flow rate increased slightly during the Maintenance Period, and not only reached the highest personal block correct rate, but also completed the classification of 280 blocks within the time limit, and the block correct rate reached 100%. Such a pleasant feeling continues to increase Subject C's learning motivation, making him feel satisfied and constantly want to continue to invest and continue to challenge. The researchers observed that Subject C was under the condition of Mission 3 without any cue cards and stickers. , to achieve a 100% correct rate of building blocks. Subject C showed three very focused states of action-awareness merging, Attention on the Mission, loss of self-consciousness, and even forgetting the tickling sensation of mosquito bites. Therefore, in terms of the overall number of times entering the Flow state, the overall proportion of subject C Centering the Flow experience is 2 to 3 times higher than that of subjects A and B.

Table1. The statistical results of EEG

Subject	Attention		Mediation		Flow state			Total	%
	High score times	%	High score times	%	Baseline Period	Intervention Period	Maintenance Period		
A	1,763	10.56 %	2,245	13.45 %	68	94	81	243	1.46 %
B	2,013	12.09 %	3,013	18.09 %	49	56	96	201	1.21 %
C	2,441	14.66 %	3,607	21.67 %	305	130	174	609	3.66 %

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*Language Immersion in the USA: Characteristics, Challenges, and
Recommendations Related to Teacher Education*

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Abstract

Language immersion is a unique form of education as it combines content-based academic instruction, inter-cultural communication, and second language education. During language immersion education, students learn various subjects through the second language medium, thus are highly exposed to the second language and cultural environment. Compared with conventional second language education, language immersion has been proven to effectively improve students' language proficiency, academic performance, and cognitive development. As a result, the number of K-12 language immersion programs in the United States (U.S.) has been growing rapidly since the 21st century. However, language immersion programs in the U.S. are facing many challenges caused by the lack of specialized teacher education programs designed for language immersion teachers. This study focuses on investigating these challenges in the fields of teaching language and content, maintaining a target language environment, and developing cross-cultural communication skills. Such challenges during both pre-service teacher preparation and in-service teacher professional development are reviewed and discussed. The results lead to various recommendations for improving the effectiveness of language immersion teacher education, whose key aspects include curriculum and instruction, field practicum experience, and inter-school collaboration.

Keywords: Language Immersion Education, Bilingual Education, Immersion Teacher Preparation, Immersion Teacher Training

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Introduction

Many people believe that acquiring more than one language is an educational and social goal in many countries throughout the world and history (Kinberg, 2001). The proficiency in foreign languages and a deeper knowledge of other countries and cultures help people participate in this new global economy and confront the twenty-first-century challenges (Committee for Economic Development, 2006). To improve foreign language skills and the cultural awareness of the students in the United States of America (USA), research institutions, government agencies, educational organizations, and religious groups requested educational programs that enable students to learn languages other than English (Jackson & Malone, 2009; Pufahl & Rhodes, 2011). The United States Department of Education provided grants to promote foreign language proficiencies by developing the corresponding language programs (Jackson & Malone, 2009; Pufahl & Rhodes, 2011).

Different from traditional foreign language learning programs, language immersion programs use the target language as the medium to teach content knowledge, while students learn their majority subject matter through their second, foreign, heritage, or indigenous language (Johnson & Swain, 1997; Lyster, 2007). Immersion programs also conducted content-based language instructions and taught the school curriculum in the foreign language, so the students would learn both the subject matter and the target language at the same time (Johnson & Swain, 1997). The major goals for immersion programs were developing students' high levels of language proficiencies and academic performances in both native and target languages (Lindholm & Aclan, 1991).

Since the 1970s, immersion education has been proved as a successful tool for early language learning (Genesee, 1978). The first foreign language immersion program was founded in 1965 in Quebec, Canada (Genesee, 1985). Scholars like Genesee (1994), Johnson and Swain (1997) have stated that the initial immersion program aimed to equip English-speaking Canadian children with French proficiency, as French was spoken by the majority of Quebec's population. Later a group of parents promoted this bilingual education, which enabled English-speaking children to receive their entire instructions in French at the beginning of kindergarten and learn their first-language literacy skills starting in Grade 2 (Johnson & Swain, 1997). This model improved the target language proficiencies of the immersion students successfully; thus, immersion programs started to be progressively recognized.

From the experience of the first immersion program and other similar programs in Europe and Asia, foreign language immersion programs became popular in the 1990s in the U.S. (Johnson & Swain, 1997). The concept was extended to younger students, K-12, or even Pre-School-12 programs. In the 1990s and early 2000s, both the federal government and the U.S private sectors began to financially support the development of new programs that used these teaching methods (Reyhner, 2003). In 2011, 448 foreign language immersion programs were registered in the U.S. (Center for Applied Linguistics, 2011).

Literature Review

Language immersion programs have grown rapidly in the U.S. According to The American Councils' Research Center, the United States have more than 3600 dual language immersion programs in 44 states in 2021, among which about 80% percent are Spanish programs (Roberts, 2021). The top states that provide the greatest number of Dual language immersion

programs were California, Texas, New York, Utah, and North Carolina (Roberts, 2021). Note that this data contains only public schools, thus there are also a certain amount of private and charter immersion programs in the U.S. as well.

The common immersion programs are one-way foreign language immersion and two-way bilingual immersion. The one-way (foreign language/full/total) immersion programs enroll the students with zero or minimum immersion language proficiency and aim to achieve students' academically bi/multilingualism and bi/multi-literacy proficiencies (Tedick et al., 2011). To achieve these goals, one-way immersion programs provide lower grades (K-2) students with 100% of the target language instruction time; students are taught in the target language for any given school day (De Courcy, 2002). In detail, teachers acted as monolingual speakers and tend to respond to students in their target language (Campbell, 1984).

Two-way immersion (TWI) programs are also known as bilingual immersion and two-way bilingual programs (Christian et al., 1997). In the TWI programs, half of the class is composed of language-majority (English-dominant) speakers, while the other half comprises language minority (target language dominant) speakers (Met & Livaccari, 2012; Stewart & Livaccari, 2010). TWI aims to help students achieve high levels of proficiency in both native and target languages, high academic performance, as well as cross-cultural understanding by providing the students with content area and language arts instructions in both languages (Christian, 1996; Christian et al., 1997). In the TWI programs, the two languages are used equally for instructions and students learn their new language through natural social interactions.

The Effectiveness of Language Immersion Programs

As indicated before, the language immersion programs aimed to develop students' high levels of proficiency in both native and target languages, academic performance, as well as cross-cultural understandings. This section reviews whether these goals could be achieved, as well as their limitations.

First, research has demonstrated that language majority of students in language immersion programs developed native-like comprehension and fluency levels as well as increased second language proficiency, and in the meantime increased second language proficiency while maintaining and developing their native language (Choi et al., 2018; Fortune, 2012; C. B. Howe, 2012; Met & Livaccari, 2012). Day and Shapson (1996a) found that this was achieved by developing immersion education's curriculum, which was designed to maintain language-majority students' native language academic achievement but using the second language as a medium to conduct instruction. In this case, compared with other forms of foreign language programs, language immersion was identified as the most effective approach for the students to achieve higher language proficiencies and gain more complex-functional second language skills (Fortune & Tedick, 2003; Genesee, 1987, 1994; Met & Lorenz, 1997; Stewart & Livaccari, 2010).

Note that here, language skills included listening, speaking, reading, and writing (Swain, 1998). Within these skill areas, immersion students' listening was the most competent skill, which achieved near-native proficiency. Their reading comprehension was almost equivalent to that of native speakers (MacFarlane & Wesche, 1995; Pawley, 1985). Although the above researchers believed immersion students became proficient in the target language, other

studies also argued that immersion students did not achieve full proficiency in some language skill areas. As Cohen (1996), Cummins (2000), and Pawley (1985) indicated previously, immersion students developed near-native listening and reading skills. However, the same studies also pointed out the gaps in their foreign language speaking and writing skills. Specifically, immersion students' speaking was the weakest in the four skills. Although immersion students gained their language fluency and could communicate in the target language effectively, their usage of the target language contained lexical errors, thus resulting in a lack of grammatical accuracy (Day & Shapson, 1989; Kinberg, 2001; Lyster, 1987). Beyond grammatical accuracy, immersion students' target language lexicon and sentence structure were both reduced and less complex (Cohen, 1996; Fortune, 2012; Pawley, 1985). Moreover, immersion students tended to think and use the words/language structures in their native language by using the line-to-line translations (Cohen, 1996).

Secondly, a substantial amount of research has pointed out the increase in immersion students' academic learning slope and their higher achievement scores compared to the students in regular school programs (Day & Shapson, 1996b; Lindholm-Leary & Howard, 2008). For example, Lindholm-Leary (2011) stated that TWI students' academic performances were at/above grade level, and were also comparable/well-superior to their peers in non-TWI programs. Language minority students could also achieve similar or better scholastic achievement than the language majority students (Day & Shapson, 1996b). However, students' abilities to transfer the subject content from language to language were dependent on their subject matter language proficiencies (Lindholm & Aclan, 1991). Cohen (1996) provided an example of this situation, some of the immersion students pondered in their native language to solve math word problems written in their target language. In this case, students needed satisfactory reading skills in their target language to complete the translation of the tasks (Cohen, 1996). In all, the immersion students must develop full academic language proficiencies in both languages to accomplish the academic achievement that was mentioned previously, as the students' academic achievements were also limited by their subject-matter language proficiencies (Lindholm & Aclan, 1991).

Thirdly, immersion programs aimed to develop students' high levels of psychosocial and intercultural competencies (Lindholm & Aclan, 1991; Met & Livaccari, 2012). Specifically, immersion students developed their social competency and interactional skills in the process of learning the second language (Cekaite, 2017). In the meantime, they also acquired cross-cultural competencies and global perspectives in the immersion setting (Day & Shapson, 1996b; C. Howe, 2012). The same research believed language immersion programs also produced some cognitive benefits beyond fostering students' psychosocial and intercultural competencies. For example, immersion students acquired better cognitive skills in areas of mental flexibility, divergent thinking, inhibitory control, and problem-solving than those obtained by the monolingual students (Bamford & Mizokawa, 1990; Bialystok, 2001; Lazaruk, 2007; Nicolay & Poncelet, 2013; Stewart & Livaccari, 2010; Zhou & Li, 2015). Therefore, immersion programs could shape substantial cognitive foundations for immersion students (C. Howe, 2012).

Challenges of Language Immersion Programs and Teachers

One of the most challenging issues faced by language immersion programs was staffing (Fortune, 2012; Hickey & de Mejía, 2014). It has been repeatedly stated in previous literature that due to the inadequate immersion teacher preparation programs, finding the teacher candidates who were well-prepared for immersion teaching became a difficult task (Met &

Lorenz, 1997; Veilleux & Bournot-Trites, 2005). Therefore, according to these studies, immersion schools were short of language, specialist, and substitute teachers that met the qualifications for immersion teaching. Note that the pre-requisites for qualified early immersion teachers were elementary education background and native/near-native bilingual proficiency in the target language (Bernhardt & Schrier, 1992; Met & Lorenz, 1997). Due to the shortage of immersion teacher candidates who met the academic qualifications and had additional preparations, the immersion programs modified their hiring criteria and gave the priority to hiring teachers with strong language skills instead (Dolson, 1985; Veilleux & Bournot-Trites, 2005; Walker & Tedick, 2000). Admittedly, this compromise caused the struggle of unqualified teachers in immersion teaching even though it temporarily relieved the recruiting crisis.

The language immersion programs in the U.S. had two sources of immersion staff: foreign language teachers trained for secondary schools and native speakers educated abroad (Met & Lorenz, 1997). The foreign language teachers were equipped with target language proficiencies, skills, and cross-grades teaching/curricula knowledge. In the meantime, they understood the students' challenges while learning a new language. However, the foreign language teachers lacked content-related pedagogy preparations to teach subject-matter content (Liao et al., 2017). The teachers hired abroad were native speakers, who brought authentic cultural communications, global perspectives, and various pedagogy practices to the school, as they had experienced different pedagogical training abroad (Met & Lorenz, 1997; Romig, 2009). However, Zhou and Li (2015) claimed that the foreign teachers' distinct pedagogical philosophies and expectations also introduced cultural conflicts in the community.

To better understand language immersion teachers' challenges, researchers believed it was crucial to understand the role of language immersion teachers in their teaching duties. Foreign language immersion teachers supported the notion of building rich target language learning environments in addition to the pedagogy (Day & Shapson, 1996a). As the target language was not accessible to most immersion students beyond the classrooms, immersion teachers should create a target language learning environment and include social tasks/tests to promote the usage of social/academic language by the students (Met & Lorenz, 1998). In this process, the teachers acted in monolingual roles and rarely spoke the students' first language to them in the immersion setting (Dolson, 1985). Immersion teachers were also identified as content and language teachers who were accountable to balance language and content instructions (Cammarata & Tedick, 2012). Specifically, immersion teachers served as constant target language models by integrating language with content. Thus, they can teach in a second language and design their content-based lessons to engage students in utilizing the content to achieve the second language development progress (Potowski, 2004; Stein & Schools, 1999). Note that language instructions included teaching language knowledge and skills, which pre-requested the bilingual immersion teachers to be equipped with native or native-like fluency in the target language to ensure the natural flow in the classroom (Bernhardt & Schrier, 1992; Dolson, 1985; Johnson & Swain, 1997; Swain, 1998). As the students could naturally acquire the target language while being extensively exposed to the content learning, immersion education could emphasize developing students' language and literacy skills systematically during the process of teaching content through the target language (Walker & Tedick, 2000). In this case, immersion teachers needed to design thematic classes and use contextual clues, body language, and manipulatives to achieve the new language acquisition progress (Met & Lorenz, 1998). In addition, they also needed to be equipped with the grammar knowledge to notice students' grammatical errors and provide

feedback (Veilleux & Bournot-Trites, 2005). On the other hand, content instruction consisted of teaching academic content such as mathematics and social studies (Swain, 1998). Therefore, immersion teachers needed to be accountable for the content knowledge or serve as content experts, since they also needed to use the comprehensible input and negotiation of meaning extensively to convey ideas for subject matters (Lyster, 1998).

During the process of balancing content and language, immersion teachers encountered different challenges. The first challenge came from the second language acquisition process. According to the teachers in the two-way immersion programs, immersion students confronted linguistic challenges and frustrations when they failed to understand the target language during the acquisition process (R Howard & I Loeb, 1998). Thus, immersion teachers believed it was essential but challenging to match students' language levels with their cognitive development levels, along with the alignment of curriculum and materials (Walker & Tedick, 2000). The second challenge, according to Freeman-Nepay (2017), was that immersion teachers were accountable to develop students' literacy skills and proficiency levels in the target language. In the meantime, immersion teachers were also obligated to ensure students' success in standardized tests administrated in English within the same period compared to other non-immersion programs (Freeman-Nepay, 2017). To achieve the goals that were mentioned before, immersion teachers struggled with their teaching tasks and demanded more instructional time, planning periods, as well as resources that were well integrated with the content and language. However, it was hard for the immersion teachers to get available support for those struggles (Cammarata & Tedick, 2012; Freeman-Nepay, 2017; Walker & Tedick, 2000). Due to the misunderstandings caused by culture gaps, language immersion teachers identified that working with parents and American partners was another challenge beyond teaching (Wiggins et al., 2007; Zhou & Li, 2015). For instance, the TWI teachers reported their challenges in collaborating with parents, and at the same time, helping the parents understand the progress of achieving the second language proficiencies and academic goals (Howard & Loeb, 1998). The Chinese immersion teachers in the TWI program revealed their disadvantages when communicating with their American partners due to the cultural differences (Zhou & Li, 2015). Immersion teachers also addressed their pressure of external challenges and the feeling of isolation, especially those in the middle or high school immersion programs (Cammarata & Tedick, 2012).

Discussions

After exploring immersion teachers' characteristics and challenges, researchers further revealed the preparation and professional development needs of immersion teachers; these were expected to be addressed in the current immersion teacher preparation and training programs. Erben (2004) claimed that immersion teacher education should consist of (1) the initial preparation programs that provide pre-service teachers professional education, and (2) the professional development programs where in-service teachers can gain competencies in additional areas. Thus, based on the results, it is proposed that the above-mentioned challenges could be addressed from two perspectives, which are teacher preparation and in-service teacher training and professional development targeted specifically to immersion language education.

Pre-Service Teacher Preparation Programs

The growing amount of immersion programs and the demand for "highly qualified" immersion teachers led to the increased need for pre-service immersion teaching programs;

thus, some states required universities to provide this type of preparation for future immersion teachers (Cody, 2009; Freeman et al., 2014; Salomone, 1992). However, even though universities started to develop different immersion preparation programs, the inadequacy of these programs still represented a challenge for the field of immersion education (Chen, 2022; Fortune, 2012; Fortune & Tedick, 2008). Note that, according to Cammarata and Tedick (2012), the elementary or secondary subject-matter education programs failed to prepare immersion teachers with critical/meaningful integration of language and content instructions in immersion education. For example, some teachers who were proficient in the target language with elementary teaching licenses started their immersion work with limited immersion pedagogy knowledge, thus making them unqualified (Cody, 2009; Lenker & Rhodes, 2007).

Immersion teacher education programs should provide coherent and distinct instructions to prepare immersion teachers and should not be identified as the extension of foreign language/general teacher education programs (e.g., adding some isolated and mandatory courses) (Day & Shapson, 1993, 1996a; Erben, 2004). For instance, the pre-service immersion teacher training could offer (1) the background and history knowledge of immersion schools, (2) the philosophy and concept of immersion teaching, and (3) the pedagogy and techniques of teaching immersion classes (Collinson, 1989; Erben, 2004; Koshiyama, 1995). Beyond the basic knowledge about immersion education, researchers proposed several key components for the immersion teacher education based on the established immersion education programs in Canada and the prototype immersion teacher training models in the U.S. (Bernhardt & Schrier, 1992; Day & Shapson, 1996b; Erben, 2001; Erben, 2004; Koshiyama, 1995; Lapkin et al., 1990; Majhanovich & Fish, 1988). To summarize, university-level immersion teacher preparation programs could help immersion teachers develop their knowledge in the following three dimensions, 1) Design curriculums to help teacher candidates understand the curriculum and instruction in the immersion setting, 2) Help teacher candidates understand and accommodate the immersion school environments, 3) Offering teacher candidates more field practicum experience in the language immersion settings.

In-service Teacher Training and Professional Developments

Due to the various requirements for immersion teachers and the lack of effective academic pre-service programs, immersion teachers highly demanded the in-service professional development as a form of immersion teacher education (Cody, 2009; De Courcy, 1997; Hickey & de Mejía, 2014; Met & Lorenz, 1997). As immersion teachers received most of their training after they started teaching in the immersion programs, the effective in-service training and mentoring also provided immersion teachers with ongoing support (Hickey, 1997, 2007; Hickey & de Mejía, 2014; Met & Lorenz, 1998).

There was a survey that explored the professional development needs of immersion teachers in Canada, which revealed that 57% of the respondents had considerable demands on the training of teaching L2 language arts. In the meantime, the training in immersion pedagogy was also identified as a requirement for professional development (Cody, 2009; Day & Shapson, 1996a; Erben, 2004). In this case, R Howard and I Loeb (1998) reported that immersion programs could provide more curriculum assistance for these new teachers who taught in the minority. For example, the immersion teachers needed observations, discussions, demonstrations, and coaches for the content-based instructions (Crandall & Tucker, 1990; Koshiyama, 1995). Fortune (2012) noted that the native and non-native immersion teachers

demanded continuous immersion language supports beyond curriculum and pedagogy training.

Hickey and de Mejía (2014) reported that immersion programs could also involve experienced and effective practitioners to share their expertise and provide high-quality and systematic ongoing training to the immersion teachers. For example, to build “well-prepared teaching professionals”, qualified in-service teachers could provide contracted coaching services for the pre-service teachers on both classroom instructions and communication to parents (Bissell & Chang, 2012; Chesley & Jordan, 2012). Cammarata and Tedick (2012) claimed that immersion programs could also support teachers by involving expert curriculum staff, such as the curriculum coordinators and instructional coaches, to develop curricular frameworks and mentorship programs. Therefore, it could be concluded that both the immersion teachers and the immersion programs could benefit from improved practice in communication, discussion, and evaluation during peer coaching and team meetings, which agreed with the previous literature (Met & Lorenz, 1998).

In a summary, the shortage of immersion teacher preparation and development programs for qualified and effective teachers in immersion methodology would be a significant challenge for language immersion education in the future (Hickey & de Mejía, 2014).

Conclusions

This review explored the current studies on immersion education, especially those conducted on the characteristic of language immersion education. Language immersion programs encountered difficulties in recruiting qualified teachers who were trained and certified specifically for immersion teaching. To address these challenges, empirical evidence was used to review the key elements in the pre-service and in-service immersion teacher’s preparation programs, according to the current immersion teachers’ challenges and needs. It was found that most of the existing studies of immersion teachers focused on their challenges, which explained some of the limitations that they faced during their immersion teaching assignments. Limited studies explored immersion teachers’ perspectives of their teacher preparation and training programs. This lack of literature suggested that it was necessary to investigate the language immersion teachers’ preparedness for their immersion teaching. Such investigation could provide a better understanding of language immersion teachers and help the universities and school administrations understand how to best help language immersion teachers’ development in the future. Considering the limited amount of research that has been published on the topic of immersion teachers’ preparation and training programs, further research is needed to explore the immersion teachers’ perspectives on their teacher preparation and training programs. This will adequately provide further data on the challenges of immersion teaching and will also encourage more discussions and support for immersion teachers’ preparation and training programs.

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Understanding the Lived Experiences Towards Online Learning During the Pandemic

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Abstract

Since the COVID-19 outbreak has come leading the face-to-face classes to be suspended, online learning has started to become a learning modality for students to pursue their education. The study aims to understand the lived experiences of students and teachers from private and public schools in Metro Manila. Students were able to adjust their schedules, study lessons at their own pace, and perform tasks online with the help of the internet. Aside from it, they no longer needed to come to school to take assessments and submit requirements to the teacher in a face-to-face setting. However, the common challenge they had encountered consisted of internet connection problems. With the help of online learning, students were able to be more independent, flexible focused, and organized. They were also able to spend more time with their families and at home since online learning could be done anywhere if they have gadgets needed. Moreover, they were able to learn more technological skills via various online platforms and applications. After the pandemic, hybrid learning can be implemented instead of purely online learning to mold the perspectives of students in learning modalities.

Keywords: Online Learning, Internet Connection, New Normal, COVID-19 Pandemic

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Introduction

This study deals with the lived experiences of learners residing in online learning. Online learning is done through the Internet and its materials such as social media, blogs, and educational platforms. Because of the outbreak of COVID-19, students can no longer be able to report to schools to have classes, which leads the schools to shift from face-to-face to online mode of delivery. Besides, people were suggested to follow the protocols regarding social distancing as said by Uscer-Pines, et. al. (2018). Schools were also advised to be closed to prevent the spread of COVID-19, and because of that, online classes were given more opportunities to be implemented (Basilaia & Kvavdze, 2020). It was assured that students would continue learning lessons along with their teachers despite the suspension of face-to-face classes. However, they would be into online classes in terms of schooling (Zhang, Wang, Y., Yang & Wang, C., 2020). Dhawan (2020) had seen that online classes had served as the new norms in education due to the outbreak of COVID-19 (Dhawan, 2020). This also served as an alternative to traditional learning, which used to be done in classrooms physically (Toquerio, 2020).

This study aims to identify the lived experiences in online learning. The researcher also aims to investigate how learners manage their schooling life in online learning. Further, it purports to answer these questions:

- i.) What are the benefits encountered in online learning during the pandemic?
- ii.) What are the challenges encountered in online learning during the pandemic?
- iii.) What are the learning opportunities encountered in online learning during the pandemic?

Benefits of Online Learning Together With its Learning Opportunities

Online learning has enabled the students to interact with the teachers during synchronous and asynchronous sessions at their respective places and time. They had also implied that online learning could promote convenience for the learners in terms of setting and time. Learners could learn their lessons at their own pace and would not need to go to school at a fixed schedule because of online learning. They had also added that they could also access online learning anywhere (Dong, Cao & Li, 2020). There were instances when learners who were not allowed to finish their studies on time due to their various problems such as finances and family could be able to finish their schooling. They also emphasized that age and learning capacity were disregarded in terms of being able to enroll in online schooling (Simamora, 2020). Students and teachers had found out that there were no restrictions in terms of schedule and could still use the online learning materials regardless of the duration of time consumed. Moreover, students and teachers no longer need to encounter external issues (i.e. traffic) commonly experienced in face-to-face settings (Gilbert, 2015).

Aside from these, online learning could help the students to enhance their motivation and self-confidence toward learning. It was mentioned that students and teachers could even use learning materials they are in the online modality of learning. They had specified that the learning materials could be found on the Internet and considered digital platforms such as videos and music files as one of the materials in online learning. It was also observed that students could learn through various strategies, like chatting, watching videos, and reading online with the help of digital learning materials, which are parts of the information and communication technology (Bailey & Lee, 2020).

In terms of communicating with people, many learners and teachers had started to use various online platforms, like Zoom, Skype, and Google Meet, during meetings, conferences, and discussions. Besides, they no longer needed to submit requirements and documents physically because they could access collaboration platforms such as Microsoft Teams and Google Drive. Instead of placing papers at the desk, they could upload files to the respective drives. Students can also receive feedback through online messages and chats from their teachers (Byrnes, et. al. 2020).

Self-regulation and motivation were key concepts in attaining achievements in online learning. The self-regulating skills of students focused on independence towards learning lessons, completing tasks, and providing self-feedback. Besides, these also enabled the students on relying on themselves in studying lessons. She also added that intrinsic motivation was needed to develop the self-regulating skills of the students since self-regulation could not be alone in helping the students in achieving the goals needed in online learning. Hence, she mentioned that self-regulation and motivation, which could be done intrinsically, were both needed by students and teachers in online learning. This modality could enable the students to develop their self-regulation and motivation (Matuga, 2009)

Problems Encountered in Online Learning

In terms of technological barriers, difficulties in logging in to learning sites and learning platforms and downloading files needed for the tasks were one of the common issues students had encountered when accessing online platforms (Dhawan, 2020). Aside from these, some students had suffered an insufficient number of gadgets needed for online learning, internet accessibility issues, and a lack of technological literacy skills during online learning. According to one of the respondents in their findings, mobile data, a substitute for the internet, was being used in online learning because they had found out the internet was costly. There were complaints that the internet connection was weak in some of the areas where students are residing and there were episodes that the online platform, they were using crashed (Baticulon, et. al., 2020).

Aside from technological barriers, students also faced domestic problems regarding online learning. Some students were required by their parents to perform various household chores such as cleaning the house, assisting them in cooking dishes, and taking care of the younger members of their family. From the responses of the participants of the study done, these had occupied their schedules with online learning (Henaku, 2020). Working in non-conducive areas was also considered by the learners and teachers as one of the problems in online learning. Apart from it, budgeting was also emphasized as an issue because the usage of mobile data or the internet could affect their budget. One of the respondents had mentioned that they had to sacrifice their budget so they could be able to subscribe to an internet service provider for the sake of their needs in online learning (Baticulon, et. al., 2020). Since some students had budget issues, they were unable to buy any gadgets which can be used in online learning and pay internet fees. The findings regarding financial issues in the study done by Strong internet connection was needed for the usage of online resources such as video lectures and electronic books, however, to attain that, people had to spend their budget (Abuhammad, 2020).

Some students had experienced difficulties in understanding online lectures due to their duration and immense coverage of lessons. Since the duration of studying the lessons was long, some students had expressed that they had no time anymore in spending time with their

families and friends. Aside from having difficulties in studying lessons online, they also had issues adapting their learning styles to this modality. They had also mentioned that within this kind of modality, they no longer had social interactions with the teachers and peers, where they thought that they could collaborate (Khalil, et. al., 2020). Waiting for the messages from the teachers through chatting platforms (i.e. Facebook Messenger) and electronic mailing platforms (i.e. Gmail) could consume more time for the learners and they were only allowed to communicate with their teachers through these platforms during the learning periods. They also discussed that self-learning was hard to achieve and some students had faced mental health issues, particularly stress, and physical health issues, particularly headaches and eye strains. Aside from these issues, they even emphasized unpreparedness towards shift as one of the major concerns in online learning. They also found out that there were various gaps between teachers and students in terms of communication. They had seen to it that there were inconsistencies in giving feedback and assessments to the students (Abuhammad, 2020; Baticulon, et. al., 2020).

Methods

The researcher used a phenomenological existential research design to understand each of the lived experiences encountered by selected teachers and learners in the online learning during the pandemic. The participants contained students and teachers who had already experienced online learning during the COVID-19 outbreak. The number of participants in this study was 10 students and 4 teachers. The participants who came from the major cities in Metro Manila were chosen through the purposive-convenience sampling technique. The number of participants was limited due to accessibility issues. The data gathering was done through an online interview via Messenger instead of having a face-to-face interview for convenience purposes.

The tool to be used for the study consisted of questionnaires tackling the lived experiences of 21st-century learners in online learning and Facebook Messenger. The questions focused on benefits, challenges, and learning opportunities. The researcher asked permission from each participant if they could be able to answer interview questions by sending a message using Facebook Messenger. Each participant would be provided an interview questionnaire before answering each question during the interview process.

During the interview phase, each student was asked to share his/her experience in online learning. He/she was encouraged to tell the benefits and challenges of online learning and give suggestions on how to improve this system of learning. The researcher allowed the students to express their thoughts freely on their answers. The researcher encoded the answers of the participants who had answered his questions through private messaging. He also listened to the experiences of each student in online learning and understood how he/she had felt in online learning. He used thematic analysis in interpreting the answers of the participants about their lived experiences in online learning and deriving themes from each of them.

Findings

Benefits Experienced in Online Learning

According to the responses done by the 10 student participants and 4 teacher participants, the benefits of online learning consisted of the four derived themes:

The benefit of Online Learning	Participant(s)
Technological Skills and Exposure	SP2, SP4, SP9, TP1, TP2, TP4
Convenience	SP3, SP6, SP8, TP4
Time Management	SP4, SP5, SP7, SP8, SP10, TP2, TP3
Interpersonal Skills	SP1, SP3, SP4, SP7, TP3, TP4

Table 1. Benefits Experienced in Online Learning

Based on this table, three of the students and three of the teachers had cited technological skills and exposure as the benefit experienced in this modality. Here are some of their responses:

“The benefit that I had experienced in online learning was that I become more techie when it comes to doing any academic programs online.” (SP2)

“One of the benefits that I have experienced in online teaching is the ease of checking assessments due to the automation of quizzes in our school’s LMS, Canvas. Another is the more efficient updating of the Gradebook through the Canvas feature.” (TP2)

These participants had mentioned that they were able to learn more skills in technology, experience various online platforms, and become more techie. They had seen to it that they were more exposed to online learning platforms and technology due to the rise of this modality.

Three students and one teacher had indicated convenience as a benefit of online learning. One of the respondents had said:

“I can say it’s low cost in terms of not spending money on transportation and the food, unlike face to face we are required to spend money for those two.”

Based on their responses, the participants had indicated that they no longer need to ride various transportations for them to attend classes since their modality became online. Besides they also mentioned that they could be able to save more money since they did not need to buy food and pay for transportation. One of them had indicated that safety is their priority.

Five of the student participants and two teacher participants had indicated time management as a benefit of online learning. Here are some of their responses:

“The flexibility of schedule, for example, you have this assignment that is due this time well you can now make it whenever you’re free, you can make your schoolwork based on the time you’re comfortable with or most convenient for you same with same-paced learning, you can study whenever or wherever you want.”

Based on their responses, the teachers and students were able to manage their time in terms of their activities. The students had indicated that online learning is self-paced, which made them finish their tasks and study lessons at their own pace, as also said by the teacher participants.

Four students and two teachers indicated interpersonal skills as a benefit of online learning. One of the respondents had said:

“The benefits I experienced in online learning are, first I was able to maximize my time where I do not need to give additional time for travel, second is I can be able to look at my children and monitor them because I am in the house, and last is I have improvements in terms of technical issues.”

They had said that this modality had enabled them to spend more time with their family, which developed their love for family. Aside from this, they were able to improve their technological literacy and their time management skills. One of the respondents had indicated that this modality could be able to enhance one's professional growth, which could develop interpersonal skills. Based on personal development, this also enabled them to develop their responsibility skills.

Challenges Encountered in Online Learning

According to the responses done by the 10 student participants and 4 teacher participants, the benefits of online learning consisted of the four derived themes:

Challenge of Online Learning	Participant(s)
Health Issues	SP1, SP4, SP8
Learning Environment Issues	SP2, SP5, SP7, SP8, SP10, TP1, TP2, TP3
Technological Issues	SP3, SP4, SP5, SP6, SP8, SP9, TP1, TP2, TP4

Table 2. Challenges Encountered in Online Learning

Based on this table, two students had encountered health issues as their challenges in online learning. Student Participants 1 and 4 had cited that mental health served as their challenge but they coped with it through taking care of themselves, while Student Participant 2 had encountered stress, exhaustion, and mental breakdowns but she coped it through spending quality time with friends and watching movies.

Five students and three teachers had indicated learning environment issues as their challenges encountered. Their issues about it consist of the following: noisy environments, adaptability issues, and difficulties in performing tasks as students and handling students as teachers. Here are some of their responses:

“For the noisy environment, I try to study or to attend class in the place where there is still noise also but very minimal or if I can't do that, I closed all the windows and doors just to minimize the voice, we can't pleas our neighbors to lower their voices or music.” (SP8)

“It is harder to focus during class since the setting is our home. There is a higher possibility of cramming since people feel lazier when they are at home.” (SP10)

“Also, the attitude of the students, most of them are lazy and can not follow the schedule for the activities and performance task, as a teacher, I still give them a chance to submit their works, nonetheless, I do not have grades to give for them” (TP1)

“I am challenged by the students' attendance count during synchronous classes. The students' lack of resources and time, especially in their not so comfortable environment at home.” (TP3)

Based on the responses, students had encountered difficult tasks and experienced noisy environments which prohibited them from focusing on their studies. Aside from it, they also had a hard time adjusting to the new environment of learning since they would be staying at home attending online classes. While for teachers, teachers had hard times checking the attendance of the students and imposing deadlines for the requirements, however, they had coped by considering them.

Six students and three teachers had indicated internet connection as their main challenge encountered. It was implied that internet connection was a common challenge for the students. One of them had mentioned:

“The challenges that I’ve faced during online class are mostly about internet connections, sometimes I cannot attend the class because of how slow the internet is.”

For students, they had to purchase mobile data to access the Internet since some could not afford Wi-Fi. Since teachers were able to afford to have Wi-Fi, they had chosen to communicate with them via platforms that could consume less mobile data.

Learning Opportunities in Online Learning

According to the responses done by the 10 student participants and 4 teacher participants, the benefits of online learning consisted of the four derived themes:

Learning Opportunities in Online Learning	Participant(s)
Personality Development	SP1, SP3, SP5, SP7
Technological Literacy	SP2, SP4, SP8, SP9, TP2
Flexibility	SP4, SP6, SP10, TP1, TP3, TP4

Table 3. Learning Opportunities in Online Learning

Based on the table below, four students had indicated personality development as their learning opportunity received in online learning. Here are some of their responses:

“Online Learning provides self-learning. Doing things on my own without physical interaction with my classmates creates a realization to me that the only person that helps me improve is myself.”

“Based on my experience, online learning provides unknown skills to students. It will help them to know what their hidden skills and talents are. As for me, it developed my multitasking skills, and it helps me to be patient and think outside the box.” (SP5)

They had mentioned that online learning had enabled them to become independent and self-reliant in terms of tasks and decision-making. Aside from it, it also allowed them to explore their abilities and talents and developed their multitasking skills. They had also realized that it also helped them to have critical thinking skills.

Four students and one teacher emphasized technological literacy as the learning opportunity they had gained in this modality. Here are some of their responses:

“Interactive quizzes and games (like Kahoot!) and watching videos” (SP8)

“Online learning equips the students to be skilled and updated with the present technological changes and trends.” (TP2)

They had experiences taking quizzes and tests online instead of answering each question in a test through paper and pen means. This modality had also enabled them to study lessons using various digital materials such as videos and e-books. They had believed that this modality had enabled them to be aware of the issues and developments of every technology, especially the Internet. With this modality, they were able to be more equipped in terms of technological skills.

From the responses done by three teachers and three students citing flexibility as a learning opportunity achieved in online learning during the pandemic, here are some of the responses:

“Because of the pandemic, it is has shown that learning can continue through distance education.” (SP4)

“It provides more time for those who have trouble in fixing their schedule.” (SP10)

“It opens the mindset of everyone that education can be done anytime at any possible ways.” (TP1)

They had believed that online learning would continue even if the pandemic were done since people were keen on the new normal together with its changes. With online learning, they also had understood that any learner regardless of age and background can continue their education. In terms of dealing with schedules, they also emphasized that teachers and students could adjust more since online learning allows them to work at their own pace. Aside from it, this modality had opened their horizons in learning.

Discussion

Online learning had become a trend in the educational systems in all countries, including the Philippines. Due to the suspension of the face-to-face classes, the Department of Education had decided to implement online modalities for the students to be able to continue their education despite the outbreak of COVID-19. However, students found it difficult since the way of interacting with their teachers and classmates is completely different from face-to-face. Despite the current issues, there are many benefits to online learning. Students and teachers were able to make use of the internet along with its apps such as Google and Zoom. In terms of technical skills, it was evident that the participants were able to increase their technological literacy such as editing photos and videos, and even, get more used to using various gadgets, particularly computers and tablets. In online learning, all students are required to have gadgets for them to be able to attend classes, which had provided them more exposure to these gadgets and since requirements are digital in online learning, they had allowed themselves to explore their technological skills. In terms of flexibility, the participants were able to adjust their schedules and study lessons using gadgets anywhere and anytime. With online learning, the participants were also able to have more resources like recorded videos, e-books, and online modules provided when studying lessons. These resources mentioned serve as materials for them to use when studying lessons and doing tasks assigned by their teachers. Besides, they felt less pressured since they could be able to submit their assignments and other requirements without needing to come to school and face their teachers. In terms of convenience, participants had felt a sigh of relief because they did not require transportation for them to attend classes since all classes are online. In terms of personal development, the participants made many realizations about themselves. They had decided to prioritize safety since health is their topmost concern. Another thing they had also realized is family is important to spend with.

However, there are numerous inevitable challenges that participants had experienced. In the Philippines, internet connection is one of the top concerns people usually face. This does apply to both public and private school students. Since internet connection requires payment, many of the participants had chosen an affordable internet connection, where they could still have internet connection problems such as weak signal and power interruption. This implied that budget is their enemy in terms of dealing with internet connection in online classes. Another issue was some of them had difficulties in attending online classes due to internet connection problems, which had added to their frustrations with online learning. To cope

with this problem, the participants had decided to adjust to the flow of the internet connection. Some of them had even bought more loads for them to have more mobile data, which also served as their alternate medium for their online classes. It is not a surprise that the participants had expressed frustrations towards tasks due to the difficulty of the lessons being covered since they were extremely new to this modality. They also had felt pressured toward different subjects since they were not used to the online approaches done by their teachers. With the home environmental problems, some of the participants had experienced cramping in doing tasks and reviewing their lessons for their online assessments and felt distracted when attending online classes. This implied that they needed a conducive and quiet learning environment for them to develop their flow in dealing with online learning. Since staying at home for the entire period could lessen their physical activities, participants had felt lazier, which could lead them to cram in tasks and feel unmotivated in classes. To respond to these challenges, the participants had decided to refrain from using social media during online classes and spend leisure time with themselves and friends. They had seen the importance of mental health, which is very important for every person. They had chosen to reinforce themselves by watching movies through Netflix, spending time with friends, and playing games to maintain their sanity. When it comes to online tasks, the teachers provided opportunities for the students to ask questions when they do not understand the instructions for their tasks to do according to the responses of the participants.

Participants might have encountered many challenges in the days of online learning; however, they had received many learning opportunities. First, they were able to develop independence since, in online learning, they had to be self-reliant since they were provided many learning materials for them to be able to cope with the lessons. had implied based on their responses that they learned to improve themselves by enabling themselves to explore new ideas and things and not relying too much on other people when it comes to tasks. This is usually seen when they are given the internet to use. Aside from these, the participants had started to appreciate this modality because they had found out that online learning is for everyone, including people who are not able to go to school due to various commitments such as work and family. Aside from it, it was also indicated students can access online learning wherever they are, which means that online learning is not a hindrance for them to going to different places and enjoying life. With online learning, the participants had agreed that they can also focus on their talents and home-grown skills while studying. They enjoyed being challenged since this modality had allowed them to expand their perspectives about learning and life. They also felt more motivated because they can organize and design their schedule, which can help them balance their activities and to get rid of stress. Online learning enabled the participants to emphasize quality time and mental health, which are the important terms to consider in learning.

Conclusion and Recommendation

This study focuses on the benefits, challenges, and learning opportunities of online learning during the pandemic. Online learning has pros and cons like face-to-face learning. Many participants preferred face-to-face because they were used to that modality until the online learning arrived in public and private schools. Online learning has provided many opportunities for everyone to learn and grow, however like life, it is inevitable for them to encounter various challenges and difficulties. Since the participants are based in the Philippines, it is normal for them to encounter problems with the internet and a shift in education. Since the Philippines is a third-world country, it is inevitable for people to experience poverty, which can be a hindrance to online learning. Without financial resources,

it will be difficult for learners to cope with online learning since the internet requires payment. However, despite the current issues Filipino learners are facing, they have learned a lot of technical skills and have experienced a lot in using technologies when it comes to classes. Based on the responses of the participants, the participants have gained a lot of positive experiences and learning opportunities in online learning. With online learning, they can be able to learn and study lessons anywhere and anytime and perform tasks using their gadgets of choice. Apart from it, they do not need to buy books for them to be able to have learning resources because there are already many resources such as electronic books and websites, which are provided for them. They also have earned many positive traits from this modality. Unlike in face-to-face modalities, they do not have to meet their teachers for them to submit their requirements, but instead, they can just send their requirements via online platforms. It is seen that online learning is self-directed learning because it has enabled them to be independent in learning and more resourceful in using sources for the lessons they are studying. Aside from it, they can also spend time with their families and enjoy leisure time since they are staying at home while having classes.

This study promotes the benefits and opportunities provided by online learning. With online learning, people can have more knowledge of technology and develop flexibility in terms of teaching and learning strategies. The researcher has realized that learning is not only done inside the classroom but it can also be done anywhere and anytime. With the help of the internet, people can gain more information about the topic they want to learn and experience more convenience when it comes to communication. It is recommended that online learning should remain if face-to-face classes return through being integrated into schools, whether public or private. It is suggested that hybrid learning, a combination of face-to-face and online modalities, must be implemented once the pandemic is done.

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