Students’ Perception and Challenges towards Virtual Mobility amidst the Covid-19 Pandemic

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ABSTRACT

Virtual mobility (VM) has been defined as a form of mobility that aims to expand the student’s experience and scope out of traditional mobility programs. The mobility programme was created to suit the current situation and changed into a virtual programme beginning in 2020 owing to the pandemic COVID-19. In order to promote mobility experiences throughout the pandemic and post-pandemic, virtual mobility (VM) has been introduced. The VM programme, however, may expose the participants to a variety of perceptions and experiences. This study describes a VM programme in which university students from Malaysia and Japan participated and aimed to give students the chance to experience mobility through online collaboration. To this aim, a qualitative approach, the e-interview method was used. This method is used to explicitly explain and identify the perception of the VM students about the program. The e-interview was distributed to the respondents and they submit their replies through Google form to be analyzed. Based on the perceptions of the respondents who participated in this programme, data were examined using Leximancer. The findings show that the respondent's perception of the VM can be divided into two, positive and negative perceptions. They also describe their experience during their involvement in this VM program. The respondents learn about the differences between their own culture and that of others through dialogue and group problem-solving during the VM programme. They emphasized the importance of the VM programme in assisting students in developing their intercultural competency. The findings also show that the VM is essential for a generation that will need to work in multi-ethnic and diverse teams and workplaces.

Keywords: COVID-19, experience, virtual mobility, students, e-interview

1. INTRODUCTION

Due to widespread educational institution closures in 143 countries (UNESCO, 2020) and dramatically altered working and study habits, traditional mobility (TM) transitions to virtual mobility (VM) (de Haas et al., 2020). From mid-April on, the number of new and active Covid-19 cases began to trend downward, demonstrating the efficacy of movement management and its observance (Tang, 2022). Hence, student mobility is one of the most crucial measures of the globalization of higher education and at the same time, still following the measure given by the government (Beech, 2018). It is most often driven by the reputation of foreign universities,
the quality of studies, the need for different cultural experiences, the financial interests of the universities themselves, recommendations from other students, external communication strategies used by higher education institutions, openness and freedom of academic thought of the institutions, high living and working standards, political reasons, e.g. postcolonial relations between states (Teichler, 2007; Wulz and Rainer, 2015; Roy et. al, 2019).

All higher education was affected by the COVID-19 outbreak, but mobility programs were particularly heavily afflicted by the related restrictions and limitations. Higher education institutions (HEIs) in popular destinations like the United States, the United Kingdom, and Australia have forecasted growth for Malaysia in 2021 (Mok et al., 2020). Aba et al found that intercultural communications are not a natural by-product of advancement in higher education for students (2016). The same technological resources used to create VM programmes were made available to support the mobility programme. In their courses, the universities have chosen to offer a variety of platforms and programmes. According to university experts, one of the most important themes in the process of globalisation and virtual mobility’s was culture and cultural diversity (Salimi, Hervarz & Mohamaddi, 2019). Students engage with classmates from various cultures more regularly than they would in a traditional study abroad programme (Vogt & Wick, 2020). But this mobility initiative has been significantly harmed by the COVID-19 epidemic and its aftermath. The underlying idea behind virtual reality travel, which is now experiencing a boom in popularity, is that people can visit the world from the convenience of their own homes (Osman, 2022).

The same technological resources used to create VM programmes were made available to support the mobility programme. In their courses, the universities have chosen to offer a variety of platforms and programmes. According to university experts, one of the most important themes in the process of globalisation and virtual mobility’s was culture and cultural diversity (Salimi, Hervarz & Mohamaddi, 2019). Students engage with classmates from various cultures more regularly than they would in a traditional study abroad programme, according to a study by Vogt & Wick (2020). But this mobility initiative has been significantly harmed by the COVID-19 epidemic and its aftermath.

**AIMS Program and ATU-NET Program**

Launched in 2010 under the Southeast Asia Ministers of Education Organization (SEAMEO), the AIMS Program has been the bridge in connecting the government, university, and students to achieve an integrated community among the participating members. Starting with Thailand,
Malaysia, and Indonesia as the original members, this program has already included 9 Member Countries and 80 Member universities. Aimed to expose students to diverse cultural environments and nurture their competence (Bacci & Bertaccini, 2021), AIMS has conducted many programs to facilitate this objective and to encounter the obstacles of the pandemic. Highlighting integration to facilitate multilateral cooperation (SEAMEO RIHED’s AIMS Program, 2020) all the participating countries and universities have provided a platform for the students to share their experiences in exchanging cultural encounters to strengthen the provision of the international academic program.

ATU-NET Program Asia Technological University Network (ATU-Net) is a strategic international alliance of which Universiti Teknologi Malaysia (UTM) is the Chair. It was created on August 9, 2016, as part of the 8th University Presidents Forum at Universiti Teknologi Malaysia (UTM), Johor Bahru, Malaysia, to bring together Asian institutions of higher education that are technology focused. Its goal is to assist member universities in achieving top-tier engineering and technological research and education through strategic worldwide alliances. All Asian higher education institutions with a technology focus are eligible to join the network. Among the current members of this network are Malaysia, Indonesia, Japan, Thailand, Philippines, Pakistan, Bangladesh, and India.

Malaysia AIMS Program, ATU-NET Malaysia, and ATU-NET Japan

For AIMS Malaysia, the exchange program includes the activity of inbound and outbound students from partner countries or universities that have the same niche areas. There are about 10 niche areas namely Hospitality & Tourism, Agriculture, Language & Culture, International Business, Food Science & Technology, Engineering, Economics, Environmental Management & Science, Biodiversity, and Marine Science. To encourage mobility activity, every participating university will send their students to universities abroad that have the same niche areas. About 10 selected public universities in Malaysia participated in this mobility program namely Universiti Kebangsaan Malaysia, Universiti Malaya, Universiti Putra Malaysia, Universiti Sains Malaysia, Universiti Teknologi Malaysia, Universiti Teknologi MARA, Universiti Utara Malaysia, Universiti Malaysia Sabah, Universiti Malaysia Pahang, and Universiti Malaysia Terengganu (UMT). All those universities were selected based on their strong niche areas that matched the AIMS niche areas. For Universiti Malaysia Terengganu (UMT) niche areas namely Hospitality & Tourism, Environmental Management & Science, Biodiversity, and Marine Science. Among
the AIMS Universities that match this niche is Dongguk University, Korea whose niche area is Hospitality & Tourism.

ATU-NET Malaysia consists of seven public universities in Malaysia that become members of ATU-NET. All those universities became members in 2016. UMT officially joined ATU-NET in 2018, since then participated actively in the activities conducted by the network. While in Japan, only one university became a member of this network which is Shibaura Institute of Technology (SIT), Japan. SIT is a Japanese leading engineering institute that has played a core role in ATU-Net since its establishment. Based on the founding philosophy of “Nurturing engineers who learn from society and contribute to society”, SIT now aims to foster scientists and engineers who can contribute to the sustainable growth of the world by exposing our students to culturally diverse environments where they learn to cope with, collaborate with, and have ever-lasting friendships with fellow students from around the world. Therefore, ATU-Net is a very effective vehicle to provide students and faculties with opportunities for expanding their horizons through collaborations with Asian universities. Its hosting events such as the University President Forum and International Staff Week are also beneficial for multilateral network buildings and skill training.

When SIT was appointed as a chair of the Special Interest Group (SIG) mobility committee in January 2021, its initiative created a unique online course named Virtual Asia Exploration (VAX) in response to the high demand for mobility programs due to travel restrictions. Starting in 2021, ATU-NET established the VAX Program under the SIG Mobility and UMT became one of the host universities. Virtual Asia Exploration program or VAX Program is meant for students from all ATU-Net Member Institutions to participate in a virtual mobility program from May 2021. VAX is a two-credit course and will be focusing on two themes which are Engineering & Technology and Culture & History. There will be six hosting institutions conducting the lectures from Malaysia, Japan, Indonesia, Thailand, and The Philippines. The first batch VAX program lecture begins on the 27th of May and ends on the 26th of August 2021. The second batch of VAX program begins on 9th September until 23rd December 2021 and the third batch VAX program begins from 8th September 2022 until 8th December 2022. About fifteen (15) students from UMT participated in batch 1 and batch 2 of the VAX program. Consequently, five (5) SIT students have completed Batch 1 from 27th May to 26th August 2021, and 6 (six) students in Batch 2, respectively.

In this paper, a VM organized through AIMS UMT, and VAX program organized by ATU-Net and participated by UMT and SIT will be described and the main findings discussed. The collaboration was part of the AIMS Exchange Mobility Program under the sponsorship of the
Ministry of Higher Education and the ATU-NET SIG Mobility activity. This collaboration structures opportunities for virtual mobility and encourages interaction as well as active exploration of the host country while providing students with opportunities for reflective learning. This paper will first set out the overview of VM, highlight the objectives, and expand on the method design before discussing the evaluation and outcomes drawing from students’ answers from the e-interview. Finally, it will finish with a conclusion and recommendation.

2. OVERVIEW OF VIRTUAL MOBILITY

The potential for virtual mobility (VM) to further internationalisation, innovation, and inclusiveness in higher education is significant. (Buchem et. al, 2018; Konstantinidis et.al, 2021). Thanks to virtual mobility efforts, students who lack physical mobility options can take part in online learning (Juškevičienė, 2022). Additionally, over the past two or three decades, some colleges have started to increase their international cooperation and activities to become more competitive on a domestic as well as an international level and to enter the new era of Covid-19, in which the potential future of as well as themes of creativity, motivation, cultural agendas, slow research, online teaching, and virtual and corporeal mobility are acknowledged and examined (Altbach & Knight, 2007; Heyang & Martin, 2021). While the benefit of the VM over physical mobility can be listed as sustainability, replicability, digital skill development, and environmental friendliness (Ganassin & Satar, 2021). Students were also proven to be able to overcome preconceived notions and develop their confidence as English communicators by utilising VM's effectiveness (O'Dowd, 2021). Therefore, one of the most significant and successful variables in aiding the process of virtual mobility is the university's cultural competence (Opp & Gosetti, 2014; Raby & Valeau, 2021). The most recent COVID-19 pandemic has had an impact on the traditional educational system, and a considerable shift to app-based learning has been made to ensure learning continuity (Karim et al., 2021).

The mobility program's other goal is for international students to become more adept at interacting with people from diverse cultures in addition to eradicating the inaccurate perceptions and prejudices propagated by the media (Baiutti, 2021). Students can gain intercultural experiences throughout their academic year through the mobility programme. The objectives of mobility programmes to internationalise both exchange and home-country students were less successfully attained as the pandemic era drew near (Koris, Mato-Daz, & Hernández-Nanclares, 2021). Despite being usually useful, the physical education curriculum has severe problems, such as financial and social exclusivity, which discourages many
children from participating (Dait and Hafiz, 2019; Deverell et al., 2020). While facilitating immersion experiences that develop the intercultural competencies of pre-service teachers, virtual reality (VM) can be used as a way to ensure global citizenship in higher education and meet university criteria to generate graduates for the global marketplace (Henderson, 2020). Most Southeast Asian students, especially those from Indonesia, Thailand, and Malaysia, have a strong desire to learn about different cultures, develop their ability to solve global issues, and apply what they learn to other students in a multicultural atmosphere (Rahmawati et. al, 2021). Therefore, during the pandemic Covid-19, the students at this region could benefited from the VM conducted by the universities around the world.

VM is a new option for students and is more accessible, especially to underprivileged students (López-Duarte et al., 2022). VM enables unconventional college students living in remote areas to have a global and multicultural experience (Zorina et al, 2019). VM not only taught them to appreciate the student’s background roots, but the program also brought them a new type of scholarship because of their knowledge and technology illiteracy (Francisco, 2022). As a result of the traditional or physical exchange program, students are more internationally oriented goals, understand the cultural variety, engaged in intercultural experiences, increase academic performance, prepare them to be global citizens, and give them a major overview of the many lifestyles, cultures, and work ethics (Jiménez-Castañeda et al., 2018, Daniel 2018, Rahim, 2021). Students who returned to their home country reported online communication with other students to be more beneficial to their online learning experience and had a better academic transition than those who stayed in the host nation (Wilczewski, Gorbaniuk & Giuri, 2021). During traditional or physical mobility programs, the ability to adapt and culture shock is a major worry. Yakin and Totu (2018) have classified culture shock into three aspects which are language, socio-cultural and practical aspects. Virtual mobility programs have offered a solution to minimize the effect of culture shock and at the same time still produce the expected positive result (Pacheco, 2020). Hence, Dahdouh-Guebas and Vandebroek (2021) have stated that VM can reduce culture shock effects as it offers academic flexibility, mobility preparedness, and cultural immersion in host communities.

However, VM may have encountered some issues such as platform selection, lack of visibility for social media account logins, and unintuitive platform flow, and links. Other issues were related to the creation and formatting of the learning materials themselves, such as the fact that not all of the materials are written in English or translated, and the tasks and activities were not displayed correctly (Andone et al., 2020). Problems from aspects of teaching and learning, online access, career-related affairs, everyday routines, and social interactions are
among the obstacles or problems that the students might face as a result of the implications of VM (Yakin et al., 2021). Due to the short duration of the program, many questions the effectiveness of VM programs including the benefits of the program to their intercultural experience (López-Duarte et al., 2021a). Although there were several challenges during the VM program, it is not obvious how the students’ intercultural experiences were explored. But, five research hypotheses derived from Kim’s (2001, 2005, 2015) Integrative Theory of Cross-Cultural Adaptation that predicted favorable relationships between and among ethnic proximity, host communication proficiency, host interpersonal communication, and psychological health can be used as a guide to the efficiency of the mobility program towards the mobility students. This study highlighted the perception of the students towards the VM as well as the challenges of the VM during the COVID-19 pandemic. The improvement of VM education and training is one of the positive effects of the COVID-19 pandemic which also enables virtual intercultural exchange and cultural immersion, both of which need to be strengthened after the epidemic.

3. MATERIALS AND METHOD

AIMS Profile of respondents

For AIMS UMT VM, a total of 13 students of Bachelor of Tourism Management with Honours from various two ethnic groups and study programs joined the AIMS VM program from early 2021 until the end of 2021 and participated in this study. The students consist of 11 Malays and 2 Indians from different semesters in 2020-2021 who joined this AIMS Virtual Mobility for a semester at Dongguk University, Korea. The participants were all female, ages around 21 to 23 years old. Around 100% of students stayed in quarantine or self-isolation when completing the e-interview or online interview thus this will limit their intercultural experiences. They were all considered outbound students regardless of the VM that they join. In this paper, the perception of the inbound students, the Dongguk University students will not be discussed. The AIMS UMT VM respondents were separated into two different semesters and in two different seasons. The First Phase starts from 2\textsuperscript{nd} March until 30\textsuperscript{th} June 2021, which is in the Fall season. While the Second Phase is from 30\textsuperscript{th} August until 17\textsuperscript{th} December 2021, which is during the Spring season. The AIMS program under Dongguk University Gyeongju Campus (DUGC), South Korea has been made especially for AIMS students with the subjects and courses offered only to AIMS students. They also include a basic Korean Language course as
part of the curriculum for their inbound students to understand the basic Korean language whilst studying there. The students study through virtual mediums and have classes and activities online as this is VM. At the time of the program, they cannot travel to Korea due to the pandemic situation. The students take classes and participate in activities online. They only ever interacted online or virtually with their professor, lecturers, and classmates. They had to complete online final exams at the end of the semester. At the program's conclusion, there will be a credit transfer, and this will be noted on their academic transcript.

**V Ax Program Profile of respondents**

Ten (10) UMT students joined the ATU-NET MOBILITY SIG: VIRTUAL ASIA EXPLORATION (V Ax) Batch 1 from 27th May to 26th August 2021. But nine (9) UMT students participated in the e-interview (online), which comprises Malay, Chinese, Indian and Sikh ethnicity and the majority of participants were female. Consequently, five (5) SIT students have completed Batch 1 from 27th May to 26th August 2021. Only two (2) SIT students participated in this study. This batch was the respondents for this study and mostly from the College of Systems Engineering and Science from Shibaura Institute of Technology, Japan. Around 100% of students stayed in quarantine or self-isolation when completing the online interview. At the end of the program, the student will earn credit hours for this program and will be awarded a certificate of completion. In this paper, only VaX Batch 1 is selected as a respondent of this study.

Overall, twenty-three (23) respondents of the outbound students and two (2) inbound students completed an online interview through the Google form provided. They were selected due to their participation in VM during the pandemic COVID-19 period. They were briefed on the instruction and if they have any questions related to the e-interview question, they can email the researcher. The email address and the details of the researcher were provided in this Google form. In this paper, the perception of both inbound and outbound students was described.

**Research Design**

Thematic analysis was used to examine the interview data (Braun and Clarke, 2006; Krippendorff, 2004). Leximancer, a computer-generated form of text coding where coding is automated by statistical processing, was used to analyse the interview transcripts. Since
precision is the most powerful type of reliability, using Leximancer as an analysis tool increases the data's reliability (Weber, 1990). Furthermore, it adds validity. Validity is the general applicability of the findings and judgments drawn from the study's inferences. There is a worry with qualitative analysis in general that the researcher may tend to conclude since they select the coding concepts. Researchers may potentially be biased, and their conclusions may contain inaccuracies. The purpose of Leximancer for this study was to provide objective results from which to make conclusions or, at the very least, to be utilised as a comparison (benchmark) of the researcher's findings. The transcripts of each interviewee's responses were collected and put through Leximancer. Concept maps and a theme synopsis were created. This method divides ideas into themes and displays the most prevalent theme first (with 100% relevance and the largest circle on the map), followed by the remaining themes with proportionality (representative) concerning each other. The spacing between themes on the final concept map illustrates this; as a result, some concepts are placed right next to others.

**Procedure**

The researcher conducted an e-interview or online interview due to the COVID-19 restriction during the study. This study time frame is from 18th May 2022 until 31st May 2022, this time frame was chosen after all the respondents finish their VM program and to give them ample time to settle down before the e-interview starts. First, the students were informed about the aims and procedures of the study, and participation was voluntary. They could decide to withdraw from the study at any time. The qualitative inquiry followed the interview guide approach using pre-set questions and guiding prompts (Cohen et al., 2018; Galletta, 2013). The e-interviews were conducted online and ranged from 10 to 15 minutes only. They answered the question by writing their answers and the researcher will follow up if necessary. The qualitative method served the purposes of the current study and yielded valuable results, allowed insights into the perceptions of the participants, and findings cannot be generalized to other students on other mobility programs during the pandemic.

The qualitative data from twenty-four (24) respondents that participated in the AIMS program and ATUNET program through an e-interview or online interview was sent out to the participants using the Google form. Participation was voluntary, and no remuneration was provided. The participants were asked to complete an anonymous e-interview or online interview question concerning their perception of the VM program during the COVID-19 pandemic. They are free to respond in Malay or Japanese if they feel it will help them better
explain their perception than in the English-language version of the prepared e-interview or online interview questions. The English language skills of all UMT and SIT participants were sufficient to understand the question in the e-interview or online interview. All 22 of the sample's respondents responded in English. The e-interview or online interview question was delivered to them within a week to finish it. If more information is required from them, the researcher will occasionally get in touch with them through e-mail considering the COVID-19 situation at the time of the study. The instrument has two sections—literally, the demographic section and the interview question and was created based on the literature review.

4. RESULTS AND DISCUSSION

In total, 13 UMT students of various ethnicities enrolled in the AIMS VM program over two semesters in 2021, and every participant answered the e-interview. Eleven female Malay students and two Indian female students made up the only two ethnic groupings represented. They all studied for the Bachelor of Tourism Management with Honours and came from the same faculty, the Faculty of Business, Economics, and Social Development. Each student either takes part in the AIMS Spring Semester or the AIMS Fall Semester. In this study, only the outbound student's perceptions were taken into consideration. The perception of the inbound students, namely the students from Dongguk University who take part in this exchange program, shall not be discussed.

A total of 12 (twelve) UMT students from various ethnic groups and study programs join the VAx Batch 1 program (27th May to 26th August 2021). They were from various ethnic groups, and various faculties such as the Faculty of Business, Economics and Social Development and from Faculty of Ocean Engineering Technology & Informatics. However, only nine (9) students participated in this study. For SIT respondents, out of five (5) SIT students that completed Batch 1 (27th May to 26th August 2021), only two (2) respondents responded to the e-interview. The rest of the respondents were assumed not to agree to participate. In total, about 24 participants participated in this VM during this period As for VAx Program the inbound and outbound student's perceptions were taken into consideration. They were asked about the benefits and drawbacks of the program as well as their perception of the VM. The respondents' use of English syntax, sentence structure, and word choice was not the focus of this study. This study focuses solely on issues linked to their perception and the challenges of the VM program.
5. THE PERCEPTION AND THE CHALLENGES OF THE VM EXPERIENCE

ATU-NET Virtual Mobility program

Figure 1: Leximancer concept map for respondents’ perceptions about the benefits and challenges of the VaX Program Batch 1 (27th May to 26th August 2021), conducted during Pandemic COVID-19

Figure 1 illustrates the Leximancer concept map for respondents’ perceptions about the benefits and challenges of the VaX Program Batch 1 (27th May to 26th August 2021)
conducted during Pandemic COVID-19. The map consists of 81 concepts (shown as small grey nodes) grouped into six themes (indicated by the larger coloured circles). Themes are mapped by colour. Hot colours (red, orange) denote the most relevant themes, and cool colours (blue, green) denote the least relevant. The six themes and their verbatim hits (in parentheses) were “culture” (53 hits), “program” (48 hits), “technology” (21 hits), “online” (18 hits), “enjoy” (7 hits) and “struggle” (4 hits).

The main theme denoted with the colour red is CULTURE which has 53 verbatim hits with thirty-three concepts visible on the map. The visibility of the concept seems to suggest that the program reflected meaningfully on how they responded to the student's acceptance and embracing of the different cultures. For example, the respondents mentioned how they felt closer to each other even though they are from other countries with different backgrounds, thus making memories.

“Being around people with different culture and background make me know more about this world compared with before this that I only know about self-country's culture and history. This experience makes me dare to make new friends with other country students and I can see how other people learn and I will push myself to be a better person", Respondent XX

“Learning with people from different cultures and background could broaden my knowledge about this world, and I feel like I still do not know much about it", Respondent XX

The theme of "program" is mentioned repeatedly by the respondents as a way of responding to students' advantages and disadvantages of the program. They viewed the program offered to the students through an online platform as being paramount to meeting diverse needs in the classroom. The program, for example, was conducted during the pandemic Covid-19 lockdown. Therefore, most of the time the program was conducted virtually, and students can only meet their group mates online. Moreover, some of the classes were conducted by different lecturers with accents. Making them hardly understand the English language used.

“The disadvantage of this program is this program is conducted during covid-19 pandemic this because us could not meet with our groupmates, we only can chat on social media”, Respondent XX.

“The challenge of this program is that sometimes I do not understand some professional vocabulary that the lecturer say, because the lecturers who give lectures are all from different countries, and they may speak English with accents or the lecturer are explaining some fields that I have not been familiar with, so I will not understand those words…..”, Respondent XX
In terms of advantages, a few respondents stated that there are still advantages of the program. The program is very convenient as teaching videos are made available for all students, therefore, no students will be a dropout.

“One of the advantages of the program is that all lectures are being recorded so I can watch back the lectures. One of the disadvantages of the program is the timing of the program as the program clashes with my class but luckily all lectures are being recorded so I can play back the part I missed out”, Respondent XX.

“The advantage of this program is I can join two classes at one time, while the disadvantage of this program is it crash on my schedule, even though I can join two classes at once, this problem cannot be avoided if my class has a presentation on the day”, Respondent XX

Student learning about “CULTURE” as a theme is also clearly overlapping with other concepts that sit within the major theme of "TECHNOLOGY" which has 21 verbatim hits and "PROGRAM" with 48 verbatim hits. These themes are considered major as they have the most comprehensive number of linking concepts that explain the respondents’ emphasis in their reflections on the ATU-NET Students Virtual Intercultural Experience program.

“It was really a pleasant memory for me by joining this event. Not only I can see different view on certain topics by other universities, but also, we create bonds that is lovely despite in the pandemic,” Respondent xx.

“I also learned about the technology that is used in each country. This program teaches new knowledge and gave me a memorable experience,” Respondent xx.

“We get to learn about the cultures and technologies of different countries in Asia from respective lecturers,” Respondent xx.

“I get to make friends from different country and most importantly able to learn the culture & history of different country as well as their technology,” Respondent xx.

The fourth theme is ONLINE, which has a verbatim hit of 18 overlapping with the smaller number of verbatim that is the theme ENJOY with 7 hits. The overlapping concentrated around the concept of study that connects with concepts of platform and enjoyment. The program reflections focus on the challenges and difficulties that happened when the program was conducted online. Most of the respondents stated that they are having difficulty with an internet connection, especially those who live in rural settings. The respondents discuss how they work hard at engaging their peers in their communication.

“The most challenging part of this program is communication, due to the pandemic Covid-19, we are using online platform like WhatsApp and Zoom to communicate with other countries’
friends. Some of them might very shy, therefore it is hard for me to spice up the meeting," Respondent XX.

However, in reflecting on the program approaches (ONLINE), the respondents also noted the enjoyment (ENJOY) that they made while studying with new friends from different countries.

“It is an eye-opening experience as I get to communicate with them and ask them questions directly as it's my first-time having friends from different country. It has made me to be more understanding towards people and knowing everyone is just the same despite living in different country,” respondent XX.

“The greatest impression is that VAx is a great program that get to gather many students from different background, different country to study engineering basics knowledge and the cultures of specific countries together. The organiser must have put a lot if efforts and time in making this program success, especially some countries have different time zone, and every lecturer and student has different class timetable,” Respondent XX.

The final and small theme is STRUGGLE, a theme that shows how the respondents reflected meaningfully on the ATU-NET Student's Virtual Intercultural Experience. They understood that the program brings a lot of benefits and opportunities to them. The concepts of struggle and appreciation are more towards their emotional sentiments that reflect how everyone in the world is struggling to study and make ends meet during the time of Covid-19. Thus, making them appreciate life and the people around them even more.

“My struggle was nothing to compared with others and it taught be to always be nice and considerate with others especially during the hard times. Respect each other," respondent xx. “Through this experience, we need to respect other people’s cultures, even if they are different from ours. We need to appreciate and learn from other people’s cultures,” Respondent XX.

Figure 2 overleaf shows the concept map of ATU-NET Students’ Perception during Pandemic COVID-19 with SIT, Japan. Based on the semantic analysis, shows that there are 5 main themes that emerged from the data set. The five themes are CULTURE with 12 verbatim hits, DISCUSSION (11 verbatim hits), DISADVANTAGE (8 verbatim hits), TIME (3 verbatim hits) and COMMUNICATION with 1 verbatim hit.

The theme CULTURE shows that respondents were introduced to different people with different cultures and backgrounds, thus creating an exciting experience for them. However, the excitement of learning about cultures was hindered by communication problems, Hence, the overlapped theme CULTURE with the theme COMMUNICATION.
Figure 2: The concept map of ATU-NET Students’ Perceptions during Pandemic COVID-19 with Shibaura Institute of Technology (SIT), Japan.

“The main point of this program was that I was stimulated by people from overseas and learned about ways of thinking and values that I do not have. As I have not had much interaction with people from Southeast Asia, it was very good for me to learn about the culture and people's way of thinking in this region,” respondent XX.

“Different countries of origin have different ways of thinking, and this program allowed us to clearly see the differences. I think it was a great benefit for me to be able to listen to real voices rather than just learning about them from the Internet,” respondent XX.

The theme DISCUSSION with 11 verbatim hits shows that the respondents have positive feedback regarding the discussion activity conducted during the program. However, the respondents would really appreciate it if the discussion session was conducted for a longer time, especially when the time difference is a barrier. Thus, overlapping with the theme TIME.
“One advantage was that I could have discussions with a variety of students from Asia regardless of location. However, I would have liked a little more time for discussion,” respondent XX.

“Online, they are held at the same time, so there is inevitably a time difference. This means that when one side is at a comfortable time, the other side is at an inconvenient time. However, I think the advantage is that because it is online, it is easy to have a conversation with someone from a foreign country, so the hurdle is low,” respondent XX.

The theme DISADVANTAGE with 8 verbatim hits shows the disadvantages of the program to the respondents. Communication is the main problem in this program. It seems that most of the respondents are having difficulty interacting with each other.

“The bad thing was that communication was not good. I wish the environment had been a little more conducive to talking to each other,” respondent XX.

“It was very good to be able to take the course from any location. On the other hand, However, I thought it was a disadvantage that it was difficult for students to interact with each other,” respondent XX.

This turned out to be an effective learning opportunity for all participants since they became able to study together with various students throughout Asia regardless of traveling costs and locational differences. This environment is especially advantageous for Japanese students since they usually have quite limited chances to team up with other Asians as long as they stay inside Japan, where the population is racially homogeneous.

AIMS Virtual Mobility program

Figure 3 illustrates the Leximancer concept map for respondents’ perceptions about the benefits and challenges of the AIMS Mobility: Students Intercultural Experience during Pandemic COVID-19 conducted during Pandemic COVID-19. The map consists of the 62 concepts (shown as small grey nodes) grouped into six themes (indicated by the larger coloured circles). Themes are mapped by colour. Hot colours (red, orange) denote the most relevant themes, and cool colours (blue, green) denote the least relevant. The five themes and their verbatim hits (in parentheses) were “learn” (74 hits), “class” (56 hits), “lectures” (33 hits), “enjoy” (5 hits) and “hospitality” (3 hits).
Figure 3: Leximancer concept map for respondents' perceptions about the benefits and challenges of the AIMS Mobility Program conducted during the pandemic COVID-19.

The main theme denoted with the colour red is LEARN which has 74 verbatim hits with thirty-four concepts visible on the map. The visibility of the concept seems to suggest that the program reflected meaningfully on how they responded to the students' perceptions of the program. The theme LEARN as can be seen in Figure 2, shows the overlapping themes with HOSPITALITY, CLASS, LECTURES and ENJOY, denoting that the students had learned a new culture and making new friends are the most enjoyable experiences in the program. A
flexible schedule of class and recorded lectures are also among the positive reactions when asked about the advantages of the program.

“In addition, learning with people who have different cultures and background is amazing because I can get new knowledge and new experiences. The differences in culture and background make me realize how unique and amazing people in South Korea are,” respondent XX.

“Advantages of the program are the schedule is flexible and it didn't cost me much. As for the disadvantages, I couldn't tell if I was a part of an exchange program,” respondent XX.

The theme CLASS was repeatedly mentioned in the data text, showing the importance of classes in the program. Respondents are very satisfied with the experience of having an “exchange” program with a Korean university despite it being conducted online. The respondents feel as if they are in Korea.

“There was one time, I was having an internet problem, the lecturer was very understanding of my problem and told me not to worry and to take my time to solve it. During classes, the lecturers always share about the weather in Gyeongju, which makes me feel like I am at Gyeongju,” respondent XX.

However, there are a few disadvantages of the online program. The challenges include internet connection, different time zones, and the duration of the class being too long.

“The benefit that I get from joining this program is gaining new experience and knowledge when studying at a foreign university. The challenge is when I have a bad internet connection. It brings a lot of problems when it happens because I can’t hear any of the lectures at that time,” respondent XX.

“Benefit that I got from this program is the class timetable. The class timing is great and flexible. What makes it so challenging is the duration of the class. Too long for a fully online program and sometimes it became too tiring,” respondent XX.

“The disadvantage is that sometimes we got confused with the different time zone,” respondent XX.

Even though there are minor challenges with the classes, it does not downgrade the overall experience of the program. Therefore, theme LECTURES with 33 verbatim hits shows that respondents are very satisfied with the learning contents.

“The greatest impression on me is when the lectures share lots of tourism-related knowledge and also shared other regional cultures. I felt that I need to study more to make sure I'm a knowledgeable person. Because whenever we get into the culture and tourism development
class, the lecture will keep motivating us to read more articles, tourism related news, so that in future will help us to share our knowledge with the tourist,” respondent XX.

“This program does give me a positive impact because I am usually scared to voice my opinion, but after joining the program with the support from the lecturers, I can now voice my opinion. As for the culture, there is a lot of new knowledge I’ve learnt about Korea because lecturers always share it with us, and I also can learn the Korean Language officially and from a native speaker. I am very happy. I am quite worried about the first day of class, however, all the worries went away when I experienced the class/program on my own. I am very glad to be part of this program at Dongguk University,” respondent XX.

The theme ENJOY overlaps with the themes LEARN and LECTURES under the concepts of “culture” in theme LECTURES and “Korea” in theme LEARN that connecting with both concepts of “enjoy” and “network” in theme ENJOY. This illustrates that the respondents have positive feedback about the program but at the same time face difficulty when the internet connection is not good.

“It’s changing my perspectives about all the negative impressions I’m going to have if I joined this program at first. But this program is great and enjoyable!” respondent XX.

“We get to know their traditional food and yes it’s an opportunity for us to learn the Korean language with Korean lecturers. The toughest challenge that I faced is the network problem,” respondent XX.

Lastly, the theme HOSPITALITY with 3 verbatim hits is referring to the lecturers of the program. It shows that the respondents are very happy with the way they were treated during the classes.

“I am very happy. I am quite worried about the first-day class; however, all the worries went away when I experienced the class/program on my own,” respondent XX.

“The best thing is I can get new Korean friends there! And, the lecturers are so sporting and kind. I am so happy to know them,” respondent XX.

6. CONCLUSION AND RECOMMENDATION

The respondents found it extremely challenging to take part in any kind of mobility programme abroad due of their pandemic experience. Because there are no visa requirements, travel restrictions, or financial worries, VM creates new opportunities and minimises inconvenience. The results indicate that the respondents do have both favourable and negative opinions of the VM. They talked about their difficulties with the programme as well. Some of the
interviewees go on to say that they don't have many intercultural encounters, including cultural shock, physical touch, adaption, and conventions. Their international experiences are restricted to story-sharing, internet communication, and discrepancies in conceptions, views, and definitions. Physical intercultural experiences are needed to enhance their intercultural experience and awareness. It is suggested that in the future VM, the students will be invited to the host country or host university to truly experience the culture, norms, and adaptation for a short period.

Promoting intercultural learning in the context of VM is essential since the intercultural experience is made even more difficult in the setting of VM, when contact with the host culture may only be confined to the synchronous remote class sessions. It is recommended that the VM students receive pre- and post-orientations, much like when they join the physical mobility. The purpose of this orientation could be to introduce the host culture to the participating students. It is known that this was used in various university VM programs in Malaysia. As agreed upon by Koris, Mato-Daz, and Hernández-Nanclares (2021), this is a crucial procedure for fostering intercultural learning.

Since this program is also relatively new in Malaysia, it would be interesting to repeat this evaluation every year to see if the results remain the same, improve, or deteriorate. It is recommended that future VM could develop the inventory for VM collaboration as introduced by O’Reilly (2021) to serve as a guideline and discussion tool. This checklist serves as a roadmap for anyone who wants to launch the VM program in the future. The checklist was listed along with some of the important choices that needed to be made for this project, including finance, the use of digital technologies for collaboration, and reflection and evaluation of the collaboration. Liu and Shirley (2021), propose to incorporate a Collaborative Online International Learning (COIL) pedagogical approach and virtual reality (VR) technologies into the curriculum reform process, especially for the VM program. Informal integration strategies (such as learning guides, online peer-mentoring systems, virtual conversation groups, and online intercultural events) could be adapted to the virtual context following the recommendation of Leask (2009) and Catalano and Barriga (2021). To support students in higher education in a VM, this should be designed in the VM with the appropriate handbook.

This study is not without limitations that, nevertheless, warrant avenues for future research. First, the researchers have limited opportunities to reach out to students with similar research instruments during the COVID-19 pandemic when students are systematically invited by the university to participate in e-interview or online surveys to monitor how they perform in VM programs. To overcome this limitation, universities could develop research policies
promoting collaboration between researchers and the transfer of knowledge across research projects drawing on data collected from students. Second, due to the limited space in the e-interview, this research did not measure other intercultural experiences that could explain their cultural immersion in students' experiences. Finally, future qualitative studies could better contextualize research into students' VM perceptions and challenges from the host and home country, thereby exposing country-specific factors determining their perceptions and challenges. At this moment, COVID-19 has brought influence on nations and the world. To further defeat this virus and future viruses, the world would need a VM program to ensure the benefit of students mobility continues. Therefore, educational institutions must equip their faculties with the necessary tools and facilities to be global. Future VM should transform the person and enhance their ability to be global residents. In conclusion, VM creates the potential for transformative learning, and as such, can be an important driver in the strategic aim to achieve Mobility for All.

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