A Project entitled

TLS4029 Honours Project II

Skill development for university life in international schools in Hong Kong and Malaysia: A comparative study

Submitted by

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Declaration

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I, *Sinead Teh Yu Lin*   , declare that this research report/ project report represents my own work under the supervision of *Dr KONG Suet Yee, Suria, Senior Lecturer of the Department of Curriculum and Instruction* and that it has not been submitted previously for examination to any tertiary institution.

Signed

Sinead Teh Yu Lin
15/04/2023

Abstract

The primary objective of this study was to compare the perspectives of teachers and students from international schools in Hong Kong and Malaysia in regard to the development of skills needed for university life. To achieve this objective, a mixed-methods approach was adopted, involving semi-structured in-depth interviews with six teachers (3 from each region) and an online questionnaire completed by 25 students (14 from Hong Kong and 11 from Malaysia). Qualitative data was analysed through content analysis, while quantitative data was analysed using the Five Point Likert Scale and statistical analysis. The findings of this study indicated that teachers place greater importance on General Skills, specifically Academic Skills and Life Skills, in relation to university life, whereas students in Hong Kong and Malaysia place more emphasis on Personal Growth and Social Skills, respectively. Furthermore, the study highlights that Hong Kong students expressed a need to develop survival skills, while Malaysian students expressed a need to develop managements skills. The study also identified time as a significant limitation in skill development and proposed 3 strategies to mitigate this limitation. Overall, the study suggest that certain approaches to skill development in international schools may be needed in addressing the skills deficits that students face.

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1. __Introduction__

The future belongs to those who learn more skills and combine them in creative ways. This quote by Robert Greene explains how if you were to put in the effort to learn something new, there is no limit in what you can do with it. Every experience that one goes through helps shape themselves as a person: their character, identity, personality and more. In these experiences, education plays a very important part in one's growth and development. Compared to the past, nowadays there are more access to education, such as local schools, international schools and online resources. More children are being admitted into international schools because of its holistic approach to teaching, which allows children to broaden their horizons in a multinational and multicultural environment and more opportunities for language education (Ng, 2012).

Schools are not only tasked with teaching students content from the curriculum, but also in fostering the student's development: identity, well-being and relationships. (Flook, 2019). Allowing the students to learn by thinking gives them a way to study about the real world, analyse and share opinions about it, while relating to their own experiences. (Brady, 2008). Through their growth and development in school, students would have developed many skills, which will help them in preparation for their future journey. University life is a stepping stone in the preparation for our working life, so skill development is important during our university life.

Malaysia and Hong Kong were both under the British colonialism in the 1900s before gaining their independence in 1957 and the transfer of the colony back to China in 1997 for Malaysia and Hong Kong respectively. Malaysia is a multi-ethnic and multicultural country, where 50% are ethnically Malay and the rest are composed of Chinese and Indians. In comparison, Hong Kong is majorly composed of Chinese, while having a hybrid culture of Eastern traditions and Western ideals.

This study investigates and compares the skill development that students have gone through during their study in international schools in two different regions, namely Hong Kong (HK) and Malaysia, and the learning and teaching strategies that teachers adopt to help students develop their university skills. The skill are categorized into 4 sets: Social Skills (SS), Personal Growth (PG), Generic Skills (GS) and Career Planning (CP). From this skill set, different perceptions from teachers and students can be analysed to evaluate whether the skill

development in secondary international schools are sufficient for the skills needed for university life. The comparison in the skill developments can provide suggestions to help encourage the students' development in future schooling years.

2.   Literature Review

2.1 International Schools in Hong Kong

The Hong Kong Education Bureau (2012) referred to international schools as "schools offering full-time non-local curriculum, which enrols students who do not sit for local examinations." According to statistics from International Schools in Hong Kong (n.d.), in academic year 2021/22 there are a total of 54 international schools in HK. These schools offer a range of non-local curricula: British, French and the IB programme (Research Office, 2018).

In HK, learning and teaching in an international school is not an easy task as there are many different factors that makes it challenging such as language barrier, cultural differences and learning expectations (Dos Santos, 2020). There are numerous literatures mentioned about the perspectives from teachers and students in international schools. Jabal (2011) studied the students sense of being, becoming and belonging through their experiences and engagement during their school years. Jabal (2006) reviewed how international school had exposed HK alumni's to different cultures, the search of one's identity as well as pursuing their academic and social learning. From a teacher's perspective, Dos Santos (2020) explained why teachers chose to continue their lifelong career development in HK, which provides insight to the managerial team in where they can improve in order to retain their staff populations and increase the morale of younger and fresh graduated teachers. Students experience, combined together with teacher's role will be the starting steps to the students' lifelong journey. Therefore, this research will study the teacher's perspective and students' experiences towards skill development.

2.2 International Schools in Malaysia

The Ministry of Education (MOE) defined international school as a private school, offering preschool, all the way up to secondary school education using an international curriculum and English as its medium of instruction (SchoolAdvisor, 2019). In academic year 2021/22, there are a total of 179 international schools in Malaysia (International Schools Database). With Malaysia being a country with a culturally diverse environment, the students are already exposed to different cultures. In order to drive a strong curriculum and a positive school environment, international school leaders practice a school culture in which they share a socio-cultural and academic mission (Hallinger, as cited in Adams, D., & Velarde, J. M., 2021).

Similar to the literatures regarding international schools in HK, there are literatures portraying the teachers' and students' perspective in an international school in Malaysia. Javadi, Bush & Ng (2017) gave an insight on the role of middle leaderships and the difficulties they face in this position. Most international school has a vision and mission that consists of the theme of international mindedness so it is important to promote cultural awareness and the ways to achieve it (Velarde & Ghani, 2019). Straffon (2003) studied the level of intercultural sensitivity students have gained from their experience in an international school, as well as their thoughts and opinions on cultural differences. From the students' perspective, the adjustments and psychological well-being that foreign students face when studying in an international school in a foreign country are areas that are worth noting (Uguak, Elias, Uli, & Suandi, 2006). For factors affecting parent's choice of school, Ingersoll (2010) also provides an insight on what influences parents to choose to admit their children into an international school. Language education, lack of a strong curriculum, learning needs not being met are some of the factors, that Ingersoll has reviewed, that parents choose to admit their children into an international school.

2.3 Skills development

Following an older psychology definition, Knapp, as cited in Newell (2011), refers to skill as an ability that is learnt to bring about a predetermined task outcome with maximum certainty and minimum expense on time and energy. Skills can be separated into different areas, such as 'hard' skills and 'soft' skills. 'Hard' skills are skill such as data analysis, software knowledge and 'soft' skills are skills such as communication, self-management, teamwork, which are more often developed during undergraduate and postgraduate curricula (Walker & Finney, 1999), as it helps prepare the students for their future career.

In such an ever-changing era, teachers are faced with the challenge of preparing their students for an unknown future. The quote "We are currently preparing students for jobs and technologies that don't yet exist… in order to solve problems that we don't even know are problems yet." (Fadel, 2008) explains the problem that current and future teachers will be facing. In today's society, Rotherham & Willingham (2010) reviews that there is an united idea of "21st century skills" that are needed to be taught universally in order to become successful, however, these skills are not new. This means that skills are something that needs to be taught universally, not only a selected few, in order to prepare students for an unknown future. Giving students an opportunity to think and challenge themselves allows students to take charge of their own learning and helps to develop different types of skills (Sulaiman, Muniyan, Madhvan, Hasan, & Rahim, 2017). Therefore, this study will analyse the different ways teachers encourage students to develop their skills and the skills developed from students' experience.

2.3.1   Student's Needs

Transitioning from a secondary school to a university setting is a big jump and many students may not be equipped for the drastic change in environment. Cassidy, Franco & Meo (2018) question why life skills are not taught in high school classes, as high school students expresses a need for life skills but do not have a clear understanding of it and how to develop these skills. In China, with particular reference to HK, it is explained that career education has been neglected if not treated as insignificant under the pressure of getting good results in examinations (Lee, 2017). Although having good results may be the first step towards the students' chosen university or even work life but it is not the only thing that universities or the workforce is looking for. The development of non-academic skills through classroom strategies and extra-curricular activities such as debating and volunteering (Cullinane & Montacute, 2017) is the missing piece that will differentiate yourself as a person to another.

Learning experiences in a universities are very different from secondary schools. For instance, the teaching style, the learning environment, interactions between lecturers and students and lastly, students' learning styles. Unless the student actively seeks interaction with the lecturer, there are minimal to no interactions between the student and lecturer, so it's important to maintain a good interaction with the lecturer (Briggs, Clark, Hart, 2012). As each year in university brings students closer to the start of their career, each respective year focuses on and develop different skills. From numerous sets of literature, skills needed in respective years of study in a university can be collected in Table 1.

Year in university	Skills needed
1	• Academic reading skills (Hermida, 2009) • Independent learning skills (Field, Duffy & Huggins, 2014) • Information literacy skills (Salisbury & Karasmanis, 2011)
2 - 3	• Cognitive skills (Schweibert & Davis, 1995) • Speaking skills (Bueno, 2006) • Information literacy (Walters et al, 2015) • Procedural and interpretive skills (Wu et al, 2016) • Critical thinking skills (Lieberman, Trumble & Smith, 2000)
4 - 5	• Counselling and entrepreneurship skill (Grace & Ihouma, 2013) • Employability skills (Keller, Parker & Chan, 2011; Williams, 1998) • Soft skills (Devadason, Subramaniam & Daniel, 2010)

Table 1: List of skills need in respective years in university according to literature

2.4 Concept Map

Looking through numerous literatures on skill development for student's needs in preparation for university, a concept map (Figure 1) of the different skills mentioned in the literatures are separated and categorized into 4 categories, namely Personal Growth, Social Skills, Generic Skills – Life Skills & Academic Skills and lastly, Career Planning.
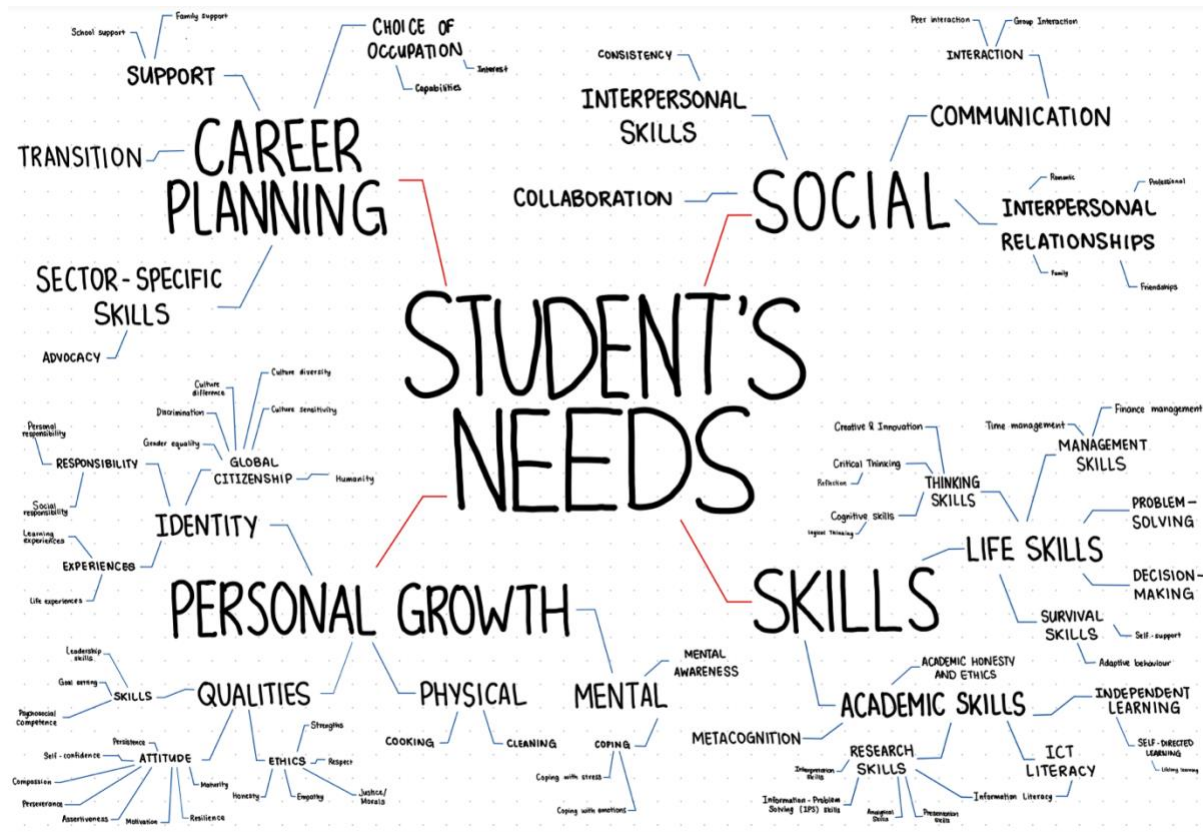

Figure 1: Concept map of skills that student's needs for university life

3. Purpose of Study

3.1 Research Gaps

Reviewing the different types of literature, it can be seen that there are many different literatures regarding the different frameworks of skill development in a certain country. For example, Chu, Reynolds, Tavares, Notari, & Lee (2021) studies the theory of developing 21st century skills through inquiry-based learning for teachers, providing suggestions and guides for implementing this framework into classroom settings. On the other hand, there are limited literatures comparing skill developments in school from different countries, which could provide recommendations and insights schools can use to help strengthen their own frameworks or adopt certain policies that will lead to a better learning and teaching experience for teachers and students.

3.2 Research Questions

To fill the research gap found from literature review, a comparative study for skills development will be conducted. The research aims to investigate the differences and similarities in skill development in international schools between two regions, HK and Malaysia, through teachers and students' perspective. The research questions are as follows:

1. What are the teacher's learning and teaching strategies to help students develop skills for university life?

2. How do the skills that students have gained during their study in an international school help equip them for their university life?

3.3 Research Framework

In order to research and find solutions for the research questions, a research framework (Figure 2) was designed as a guide to implement the steps taken in the duration of this research.
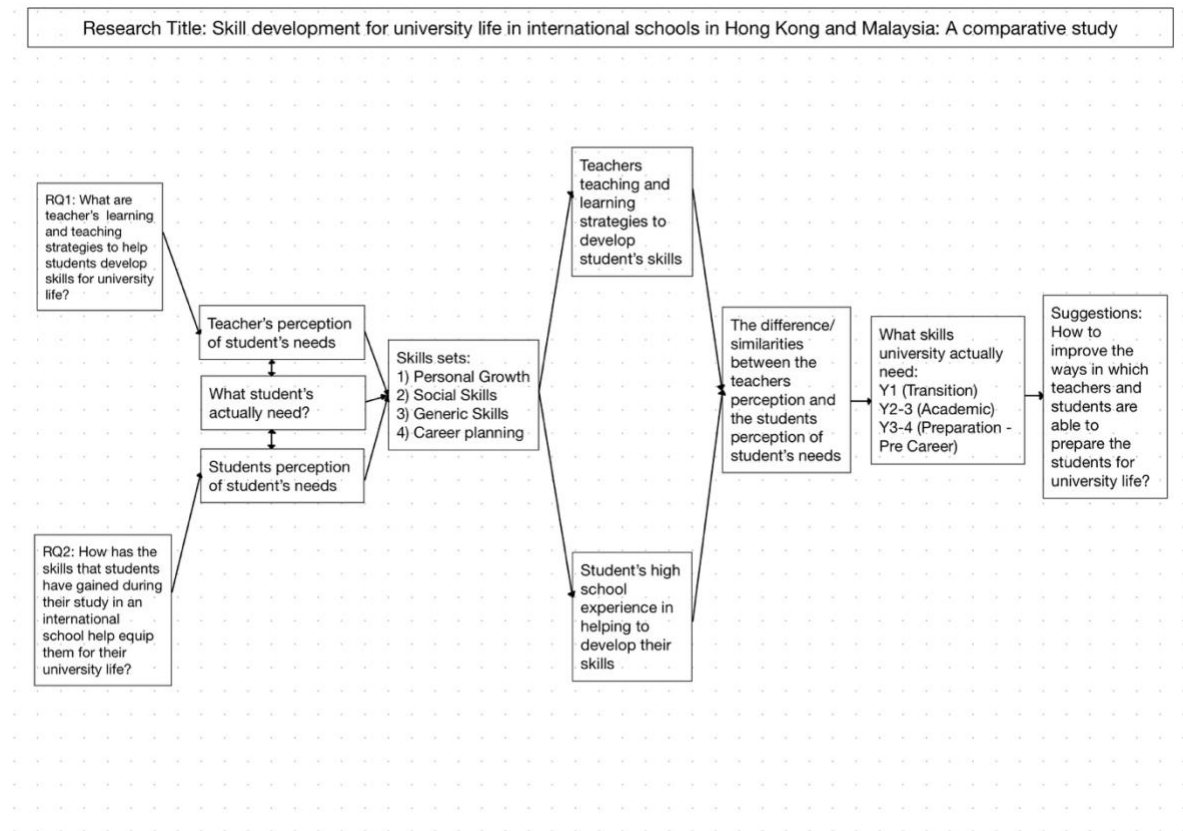

Figure 2: Research Framework

4.   Research Methodology

4.1 Methodology

This research was conducted using mixed methods, which is a combination of both qualitative and quantitative methodologies. Qualitative research does not only serve the purpose of describing but also helps to lead the inquiry towards more significant explanations (Sofaer, 1999). The method of qualitative data collection (Patton, 1987) for this research used is a semi-structured in-depth interview. This would provide a clear insight towards the teacher's perspective on skill development and skill needed for university life. Quantitative research explains the phenomena by collecting numerical data which are analysed using mathematical methods (Creswell, 1994). An online questionnaire was designed for quantitative data collection to provide the insights of skill development and skill needed for university life from the students' perspectives.

4.1.1   Participants

This research focused on teachers and students from 2 international secondary schools in each region (HK and Malaysia). The objective of research question 1 is the teacher's perspective on skill development. Secondary school teachers from various departments who have daily to weekly contact with final year students in an international secondary school was randomly selected as interviewees to participate in an individual interview. In regards to research question 2, the student's perspective of skill development is the main focus. Final year secondary school students in an international school in HK or Malaysia and university students that have graduated from an international school in HK or Malaysia were randomly selected to complete an online questionnaire.

6 interviewees were recruited, 3 from each region, to participate in the semi-structured in-depth interview. For the sake of anonymity, the interviewees are codified from Teacher A to Teacher F (Table 2).

Code	Gender	Identity
Teacher A	F	Hong Kong International School
Teacher B	M	Hong Kong International School
Teacher C	F	Malaysian & Hong Kong International School
Teacher D	F	Hong Kong international School
Teacher E	M	Malaysia International School
Teacher F	M	Malaysia International School

Table 2: Interviewee Information

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30 questionnaires each were distributed to both regions. 14 participants' responses and 11 participants' responses were collected were collected for analysis from HK and Malaysian participants respectively.

4.1.2 *Qualitative research: Semi-structured in-depth interview*

To answer the first research question, semi-structured in-depth interview was adopted and the interview questions were designed to explore the teachers' perspectives in the following 3 areas:

1. The importance of skill development in the school
2. The types of skills that the teacher would like to develop for the students.
3. The types of learning and teaching strategies the teacher adopts.

Secondary school teachers who have daily to weekly contact with final year students from various departments in an international secondary school were recruited as participants for the interview. The purpose of the interview was to investigate the learning and teaching strategies that teachers adopt to help develop the students' skills for university life.

6 interviews were completed and the duration of the online interview was around 30 minutes via Zoom each session. An invitation email was sent to the principal and respective teachers for recruitment of interviewee. Each teacher participated in the interview once.

4.1.3 *Quantitative research: Online questionnaire*

To answer research question 2, an online questionnaire was designed. The purpose was to analyse how the student's experience has help them develop university skills in a school environment, more specifically inside and outside of classroom setting. The objectives of the questionnaire were to investigate the student's perspectives in 3 areas:

1. Their experience inside and out of a classroom setting
2. The importance of developing skills in school for their university life.
3. What skills do they need in preparation for university.

Final year secondary school students and university students were recruited as participants. The questionnaire was separated into 4 different sections: Social Skills, Personal Growth, Generic Skills and Career Planning, each section focused on a certain type of skill set, as decided by the researcher based on literature search. Participants were asked to provide their personal information (age and gender) as well as their educational background (year of study and which region) to obtain basic demographic information of the participant. The participants were welcome to participate in a follow-up interview by providing their email at the end of the questionnaire.

4.2 Data Analysis

The data was collected from the semi-structured in-depth interviews using qualitative content analysis. Content analysis is defined as a group of research techniques that makes "systematic, credible or valid and replicable inferences" from texts and different forms of communications (Drisko & Maschi, 2016, p.7). The aim of qualitative content analysis is to develop carefully specified categories which are "revised and refined in an interactive, feedback-loop process" based on the interpretation of the data collected, focusing on the chosen research questions (Mayring, as cited in Drisko & Maschi, 2016, p.6).

Collecting descriptive data will pose a challenge as it's important to maintain focused on the relevant content while preventing potential biasedness in the research study. The interview was transcribed using English. Condense raw data was categorised into the emerging themes and coded for further interpretation. These themes are to provide understanding of the teacher's perspective regarding students' skill development. The emerging themes in HK and Malaysia was compared to see the similarities and differences between the strategies that they have adopted in their classroom.

The responses from the questionnaire were analysed and interpreted. Some of the quantitative data was derived from the five-point Likert Scale, where the responses are labelled from 'Worst'/'Not as important' or '1' to 'Best'/'Very important' or '5'. The other responses was multiple choice and then statistically analysed and generated as pie charts using Google Sheets.

4.3 Measures for privacy protection

The data collected from the online interview and the online questionnaire was stored on an encrypted device and will be deleted after the completion of this research. The people with access to these data are the researcher and the project supervisor of this project.

The participating teachers was informed beforehand that the interview will be voice recorded and transcribed. A consent form was sent together with the invitation email and was collected before the interview. Student participant consent was obtained at the beginning of the questionnaire and they had the right to withdraw from the research without any consequence.

Anytime during the research, the participants had the right to withdraw from the research without an consequences. All collected data was saved on an encrypted device and will be destroyed after the completion of the research.

5.   Findings and Discussion

5.1 Findings – Qualitative research (Teacher's perception)

5.1.1   Student's needs

Time-management skills and resilience was an occurring theme that was mentioned by the interviewees. This shows that interviewees from both regions stresses on the importance of developing these skills in preparation for university, where it is less structured and students would have more independence in regards to academics and their lives. All interviewees from both countries mentioned how skill development are not as ideal as they would like due to the limited amount of time they have while teaching the curriculum.

Interviewees were asked to rank the 4 skill sets: Personal Growth (PG), Social Skills (SS), Generic Skills (GS) & Career Planning (CP) in terms of importance for students in regards to preparation for university (Table 3). All of the interviewees agreed that these 4 skills sets were equally as important for university and has placed GS high on the ranking, followed closely by PG and SS and lastly, CP, although one of the interviewee from Malaysia states that the importance of the skill differs according to the situation.

Region	Code	Ranking of the 4 Skills Sets			
		1 (Least important	2	3	4 (Most important)
Hong Kong	**Teacher A**	Personal Growth & Career Planning		Social Skills	Generic Skills
	Teacher B	Career Planning	Social Skills	Generic Skills	Personal Growth
	Teacher D	Social Skills	Personal Growth & Career Planning		Generic Skills
Malaysia	**Teacher C**	Career Planning	Social Skills & Generic Skills		Personal Growth
	Teacher E	Personal Growth	Social Skills	Generic Skills	Career Planning
	Teacher F	Career Planning	Personal Growth	Generic Skills	Social Skills

Table 3: Interviewee's ranking of the 4 skills sets in terms of importance for university life

"I would say again, it differs at different times of their career as they continue,"

-Teacher E (Malaysia)

Personal Growth

Opinions between regions varied when discussing about PG in international schools. Teacher B shares his opinions about the awareness of their personal and social would allow students to grow and develop themselves. Teacher E shares a strategy of being involved in school activities can help empower a person to grow.

> *"... if they're not comfortable in their own skin and things like that, it can really impact their ability to take on board and grow, as a person."*
>
> *-Teacher B (HK)*

> *"... the result is that they then start getting involved in other activities as well because they feel empowered to do that. So just being able to find those different opportunities for them to be involved and to find things that they can do."*
>
> *-Teacher E (Malaysia)*

Social skills

A shared opinion by Teacher D and F is that SS have started to dwindle since the COVID-19 pandemic. Teacher F mentioned the struggles the students faced upon coming back to school, while Teacher D mentioned how the last two years of secondary school are very intense and individual in terms of curriculum content and preparation for university applications.

> *"...since coming out of COVID, ... a lot of younger students, they lack developing some of the social skills that they need and we've actually had to put more strategies in place... we've felt some students have struggled coming back into the classroom after so much time..."*   *-Teacher F (Malaysia)*

> *"... especially in the last three years, I feel like kids haven't had much of a social life or anybody...always online... there's a lot more emphasis on individual work in the last two years of secondary school..."*   *-Teacher D (HK)*

Generic Skills

In terms of Academic Skills (AS), all interviewees talked about the emphasis of developing the students' research skills and academic writing. The interviewees unanimously agreed that research and academic writing are crucial for students in university life, where students would have to write academic writings and create research projects.

> *"I think good writing skills and good communication is very important… employer needs to know what you are bringing in extra to the firm or company… write a good email or write a good report…"*   *-Teacher A (*HK*)*

> *"… trying to do is to develop an academic discourse that students would have as they approach university… a good basis for them to then be able to deliver a research paper. And the process of developing the academic research and identifying what it is they want to deliver would then be very useful for them."*
>   *-Teacher   E (Malaysia)*

Similarly, another recurring theme highly emphasised by the interviewees is academic honesty and ethics. Teacher A spoke of the importance of academic honesty in today's society, while Teacher D spoke of ways that their school ensures that students are made aware of the consequences of plagiarism.

> *"…I think it is very important students understand and value original work and strive to create their own work rather than you know copying from the internet…"*
>   *-Teacher A (*HK*)*

> *"…they didn't paraphrase it properly or they had taken a piece of work from somebody without citing properly, then we will actually speak with them very seriously, we'll get them to speak with their teacher, we'll get them to speak with the MYP co-ordinator."*   *-Teacher D (*HK*)*

However, Teacher E sheds some light onto the issue where secondary students may not prioritise the importance of proper referencing, albeit being aware of it, because their chosen subjects may not be subjected to that standard of academic rigor.

"… until they need to actually present it as a project…, they don't see it as vital yet. … not all students present in the same level where they are sort of publishing it as it were, that's only when they find the value of that. … those subjects demand that they do their research and have a paper developed on that, they then do pay attention to that. Other subjects that don't require… "   *-Teacher E (Malaysia)*

For Life Skills (LS), all interviewees agreed on the importance of developing of time-management skills. When asked about another important LS needed for university, opinions from both regions varied as they focus on different life skills (Table 4). Subsequently, Teacher D mentioned how effective time-management can help to improve mental wellness for students.

Another life skill mentioned	
Hong Kong	**Malaysia**
• Resilience • Empathy • Street-smarts	• Finance • Home Economics

Table 4: Another life skill mentioned by interviewees in terms of life skills needed for university

"… you need to be able to obviously to prioritise work right? But we also teach them how to incorporate like for example things like their hobbies, their rest time… giving a higher emphasis on their importance and students' mental health… the importance of break."   *-Teacher D (HK)*

Career Planning

Different, unique CP systems, starting from Year 10, were mentioned while discussing the strategies that international schools adopted in regards to students' career planning (Table 5). 5 out of 6 interviewees explains how their CP system consists of consultations between the university counsellors, where prospective choices of university and interests in subjects are discussed. Teacher C pointed out that there are a number of career-oriented students who may choose a career that may offer a higher salary. Such a subject choice for university might bring struggles as it may not align with the student's interest.

Career Planning Strategies in School	
Hong Kong	**Malaysia**
• Consultation with university counsellors • Career Fair (Flexi) • University Talks (Flexi)	• Consultation with university counsellors • University Fairs • Career Talks

Table 5: Career Planning Systems in the schools

There is a united agreement from the interviewees in the discussion of when to start skill development. Primary school would be ideal as it is the prime period for building up the foundation for various skills through age-appropriate strategies.

"… learning what I perceive to be the roots of core academic skills…"

-Teacher B (HK)

"Particularly the earlier primary, the very younger years. I think it's the first 5 years isn't it, that's crucial for the student's development…"

-Teacher F (Malaysia)

5.1.2 *Students' ranking of student's needs*

In regards to the ranking for students' perception on students' needs for university life (Table 6), the average ranking is similar to the teacher's perception with SS and GS interchangeable, followed by PG and lastly, CP.

Region	Code	Ranking of the 4 Skills Sets			
		1 (Least important	**2**	**3**	**4 (Most important)**
Hong Kong	**Teacher A**	Career Planning	Generic Skills	Personal Growth	Social Skills
	Teacher B	Generic Skills	Personal Growth	Social Skills	Career Planning
	Teacher D	Social Skills	Personal Growth & Career Planning		Generic Skills
Malaysia	**Teacher C**	Personal Growth, Social Skills & Generic Skills			Career Planning
	Teacher E	Career Planning	Personal Growth	Social Skills	Generic Skills
	Teacher F	Career Planning	Personal Growth & Social Skills		Generic Skills

Table 6: Teacher's perception on student's ranking of the 4 skill sets for preparation of university life

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5 out of 6 interviewees agree that SS and GS are importance skills for academics and socialization in university. For instance, interacting with friends and professors as well as writing academic papers. Teacher D shares her thoughts on how final year students have not thought ahead of getting into university.

"... I think that they haven't really thought that far about university. They are more concerned about getting into university."   *-Teacher D (HK)*

5.1.3   *Learning and teaching strategies*

Teachers from both regions are asked about the learning and teaching strategies adopted to help their students develop skills in preparation for their university life. These learning and teaching strategies mentioned are tabulated with a brief description of the strategy (Table 7a & 7b).

Learning and Teaching strategy	Skill developed
One-on-one consultations: to talk to the students about their problems and give some advice on how to cope	Personal Growth
Class discussions: learn to present their perspectives to others and to link concepts from the text to a real world context	Academic Skills & Social Skills
Investigations and group projects: conduct investigations to solve a problem and to learn how to work collaboratively	Collaboration & Communication Skills and Research Skills

Table 7a: Learning and teaching strategies that HK teachers use

Learning and Teaching strategy	Skill developed
Note-taking: encourages and advice students to copy their own notes instead of relying on the teacher	Academic Skills
Assigned Groupings: group students that don't like each other together to learn how to cooperate and respect opinions regardless of the differences	Social Skills
'Mindfulness': small breaks during the lesson to help students relax and not be so overwhelmed	Mental Wellness
Academic essays: learn how to plan and structure the information, trying to meet university standards	Academic Skills
Group seating: work with students from different backgrounds or different abilities Class debates: to analysis information on the debate topic and to present it in class	Research Skills and Social Skills

Table 7b: Learning and teaching strategies that Malaysia teachers use

5.1.4   Limitation on skill development

One major limitation on skill development in schools agreed is that developing skills is time-consuming. The interviewees share the same opinion of wanting to help their students develop more skills but are limited due to time and resources. Teacher C, who has teaching experiences in both Malaysia and HK, explains how there is a lack of home economics in international schools. Home economics develops basic survival skills like cooking but also with simple budgeting, planning and management. Teacher B also supports this with the situation in HK, where it is very common to have a helper in the household.

> *"...Hong Kong has helpers in nearly every family household and they do a lot of work... didn't really learn any of those things (life skills) when it comes to being independent in a household situation, there's no skills there and I think if students are being sent to university that's really important."*   -Teacher B (HK)

5.2   Findings – Quantitative research (Students' perception of students' needs)

Firstly, students in both regions were asked to rank the four skill sets (PG, SS, GS & CP) in terms of importance for their university life (Figure 3a & 3b). There was a slight difference in the ranking with PG and SS as the top results for HK and Malaysian students respectively.

Figure 3a: HK student's ranking on the 4 skill sets in terms of importance for university life
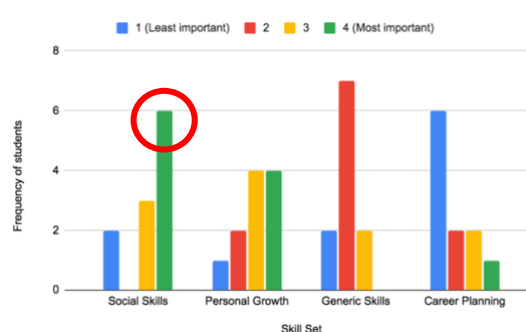
Figure 3b: Malaysian student's ranking on the 4 skill sets in terms of importance for university life

With a difference in top ranking, there would be a difference in regards to the reason for the respective top ranking as shown in Figure 4a & 4b. The top reason was in preparation for their career upon graduation (35.7%) and there are many opportunities for socializing in university (36.4%) for HK and Malaysia respectively. Another reason for HK is to have an idea of yourself as a person when meeting and working with others (28.6%), whereas for Malaysia, in preparation for their career upon graduation and to have an idea of yourself as a person when meeting and working with others was a shared reason (27.3%).
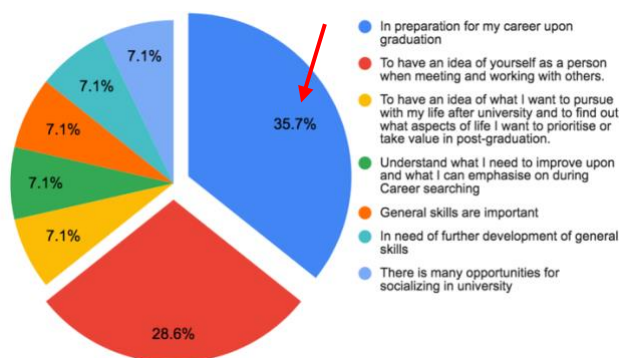
Figure 4a: Reasons for HK student's top ranking on the 4 skill sets
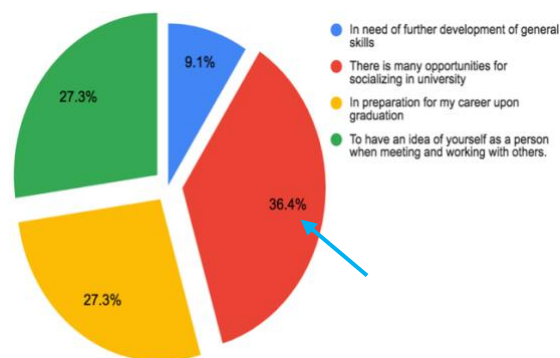
Figure 4b: Reasons for Malaysia student's top ranking on the 4 skill sets

Personal Growth

From Figure 5a & 5b, mental health is regarded as a very important component of personal growth in both regions, followed closely by personal identity and personal qualities and lastly, physical health.
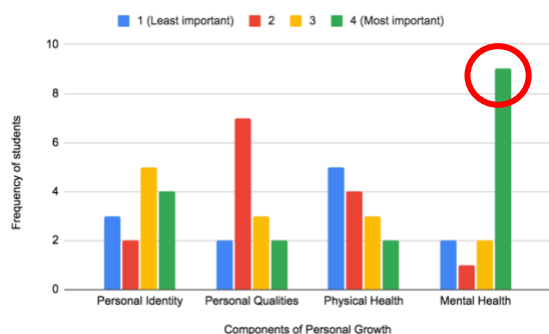
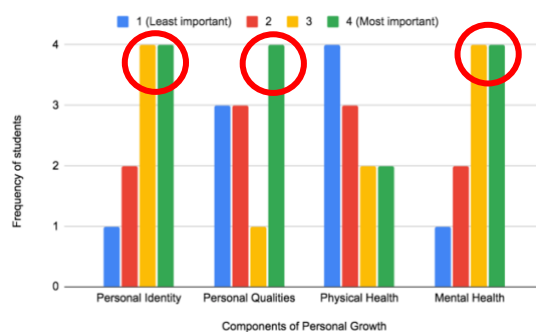Figure 5a: HK student's ranking of the importance of the components of personal growth for university life

Figure 5b: Malaysian student's ranking of the importance of the components of personal growth for university life

In regards to mental health, students from both regions are asked about their strategies to cope with negative emotions and stress (Figure 6a & 6b). The top strategy used from both regions are to minimize exposure to things that increases negative feelings. Another strategy used in both regions is to engage in healthy coping skills. There are some exceptions, such as labelling/writing down the emotion and reframing unhelpful thoughts, which are used by Malaysian students. Observing the 2 figures below, it can be seen that one certain strategy, namely getting professional help, was not chosen at all. The reason for this might be due to the fact that mental health is still not seen as a big issue in Asian societies even though it is slowly becoming more aware in Asian societies.
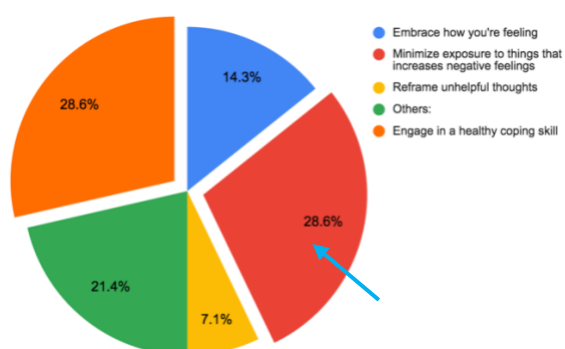
Figure 6a: Strategies that HK students uses to cope with negative emotions and stress
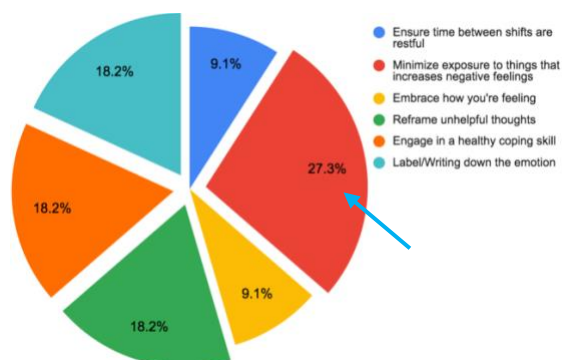
Figure 6b: Strategies that Malaysian students uses to cope with negative emotions and stress

Social Skills

Students were asked to rate their SS from the best to worst (Figure 7a & 7b). The results from both regions were similar with collaboration skills as their best social skill and interpersonal skills as their worst social skill.
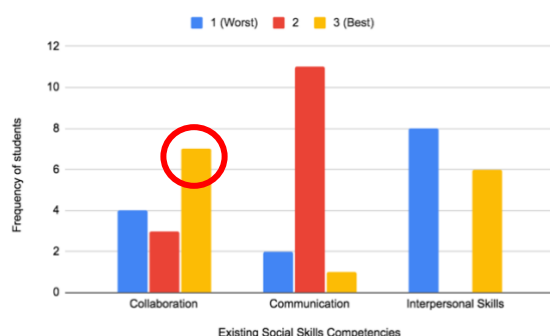
Figure 7a: HK student's rankings on their existing social skills competencies
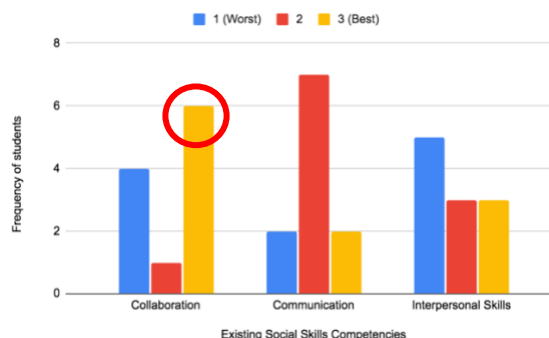
Figure 7b: Malaysian student's rankings on their existing social skills competencies

Figure 8 shows that schools provides students with various opportunities, especially pair/group work (discussions and tasks) for students to develop their collaborative skills. Many of the activities participated in are under academic settings such as pair/group work, which holds 100% weightage. Students also participate in numerous non-academic setting activities, such as extra-curricular activities and the student board.
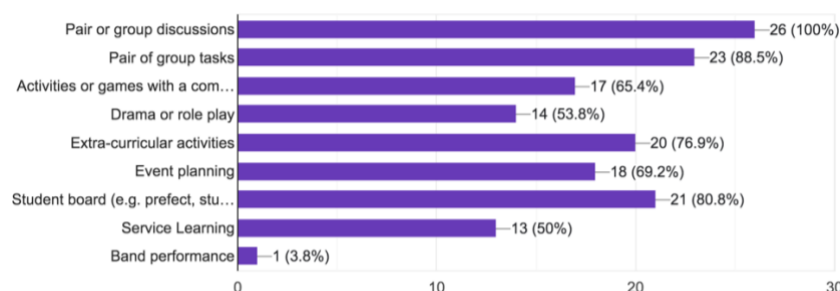
Figure 8: Activities that the school provides that requires collaboration

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Around 92.3% of the students preferred having pair or group interaction due to being able to learn from others , while a small percentage prefers having interaction with teachers (7.7%) (Figure 9). With having a small percentage of students that prefer having interaction with teachers, this may lead to students in university choosing not to interacting with their professors, especially when there are difficulties with their learning.
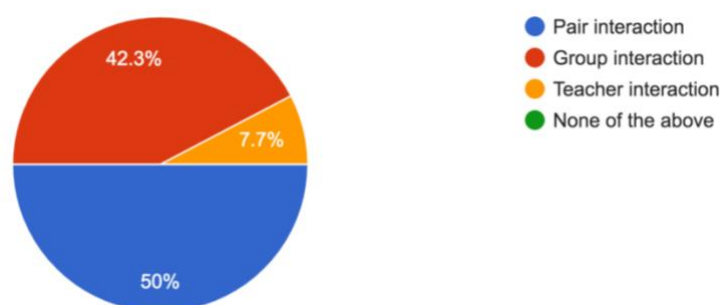
Figure 9: Type of interaction that the students prefer

Half of the HK participants prefer that particular interaction because it gives them a chance to learn from each other (Figure 10a), whereas Malaysian students prefer it because it gives them a chance to learn from each other and providing more opportunities to practice communication (Figure 10b).
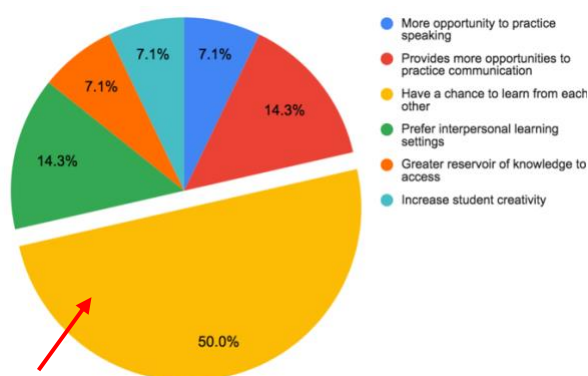
Figure 10a: Reasons why HK students prefer that particular interaction
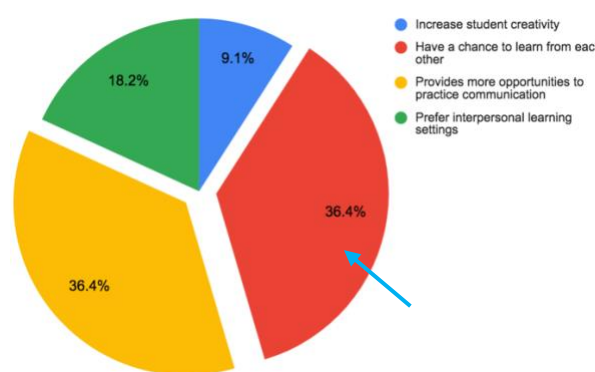
Figure 10b: Reasons why Malaysian students prefer that particular interaction

Generic Skills

Students were asked to rank their existing LS competencies, followed by ranking the same LS in terms of importance for university. Looking at Figure 11 and 12, there is a vast difference in opinions between the two regions.
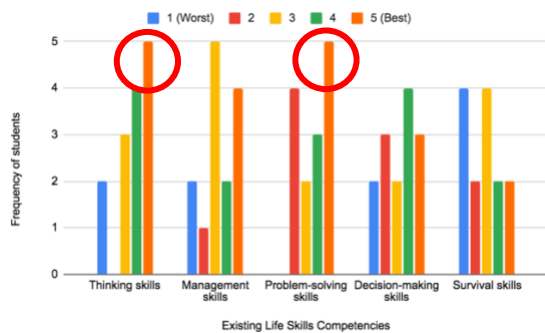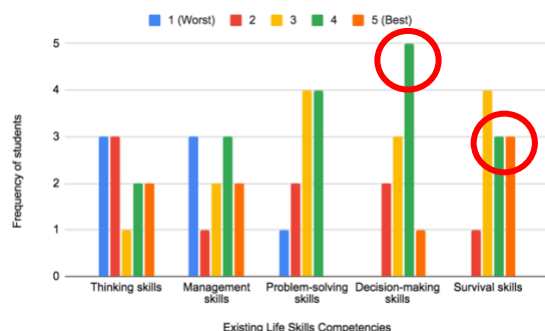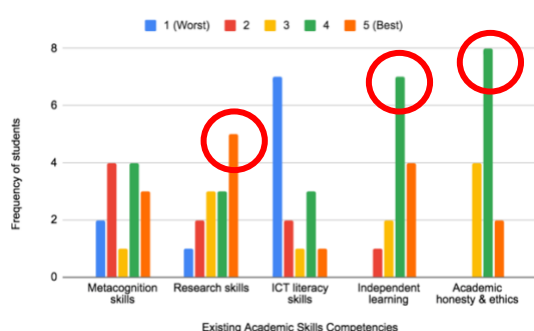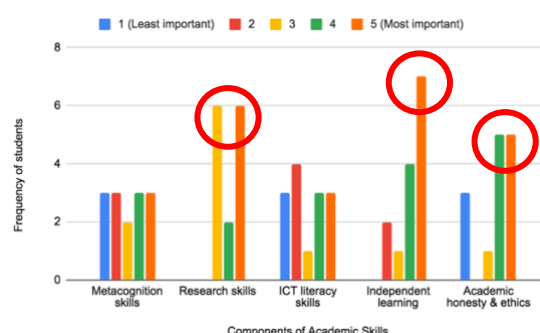
Figure 11a: HK students' ranking of existing life skills competencies
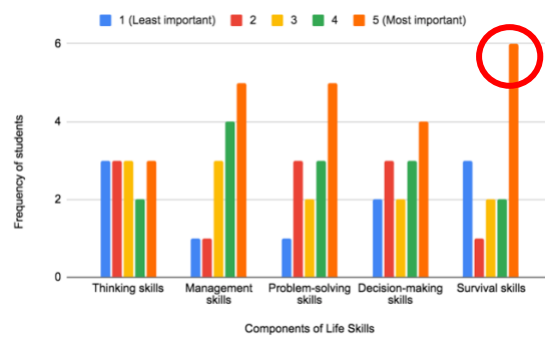
Figure 11b: HK students' ranking of life skills in terms of importance for university life

According to Figure 11a, HK students ranked their thinking skills and problem-solving skills high as the best, whilst their survival skills were ranked lowest. On the other hand, in Figure 11b, survival skills was ranked as the most important in regards to university life. This means that HK students believe they are lacking the essential survival skills that they need and are aware that it is important. Looking into more detail (Figure 12), HK students would like to develop self-support skills and the ability to learn quickly.
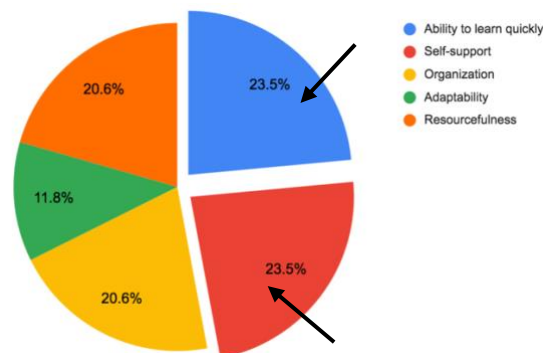
Figure 12: Survival skill that HK students would like to develop

Figure 13a: Malaysian students' ranking on existing life skills competencies
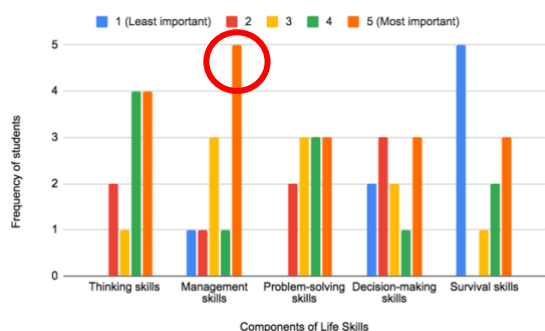
Figure 13b: Malaysian students' ranking of life skills in terms of importance for university life

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Consequently, in Figure 13a, Malaysian students ranked their survival skills and decision-making skills to one of their best, with thinking and management skills being their worst. However, Malaysian students also regard management skills to be most important in terms of university life (Figure 13b). With this, it is deduced that the students' worst life skill competency is regarded to be the most important life skill needed for university in both regions. In terms of management skills, developing time management skills is the most important, followed by learning how to budget (Figure 14).
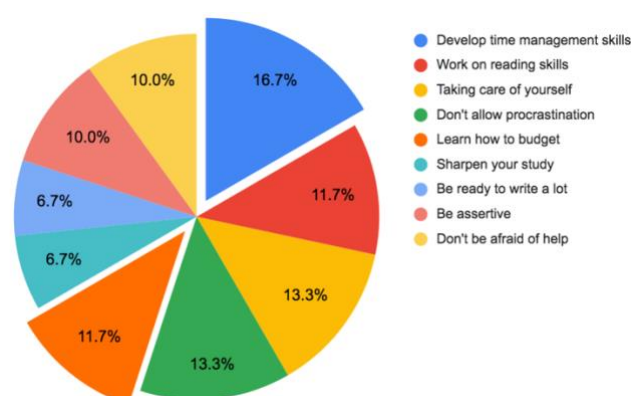
Figure 14: Tips that Malaysian students use to help prepare for university

Similarly, HK students were asked to rank their existing AS competencies as well as their importance for university. In contrast with LS, the opinions regarding the importance of AS are fairly similar.

Figure 15a: HK students' ranking of existing academic skills competencies

Figure 15b: HK students' ranking of academic skills in terms of importance for university life

Comparing Figure 15a and 15b, HK students are fairly confident in their academic honesty & ethics and independent learning skills. The same academic skills are deemed most important when asked about the importance of these academic skills in terms of university. This reflects how well HK schools are developing academic skills.
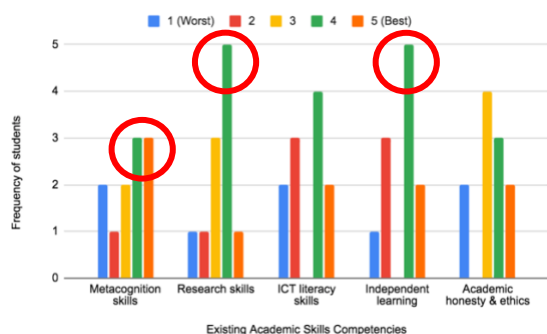
Figure 16a: Malaysian students' ranking of existing academic skills competencies.
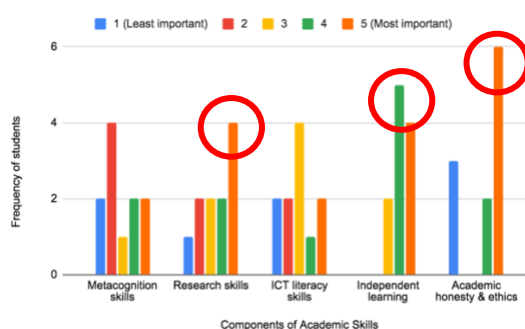

Figure 16b: Malaysian students' ranking of academic skills in terms of importance for university life

Malaysian students have confidence in their research skills, metacognition skills and independent learning (Figure 16a). Regarding the importance of these academic skills in terms of university, Malaysian students had the same opinion with the HK students (Figure 16b). Comparing both figures, it can be deduced that Malaysian might not have focused heavily on academic honesty & ethics. The opinions regarding the importance of academic skills supports the teachers' statements on the importance of academic honesty and ethics and independent learning with the need for development of research skills.

Career Planning

There is a discord between final-year secondary students and university students, who studied in an international school on the ranking of career planning, where final-year secondary students ranked it the most important whilst university students ranked it the least important in terms of preparation for university (Table 8).

No.	Year of Study:	5a. Rank the importance of 4 categories in relation to your preparation for university life [Career Planning]
1	Secondary School Final Year	4 (Very important)
2	Secondary School Final Year	4 (Very important)
3	Secondary School Final Year	3
4	Secondary School Final Year	3
5	Secondary School Final Year	1 (Not as important)
6	Secondary School Final Year	4 (Very important)
7	Secondary School Final Year	1 (Not as important)
8	Secondary School Final Year	4 (Very important)
9	University Year 2	1 (Not as important)
10	University Year 4	1 (Not as important)
11	University Year 4	1 (Not as important)
12	University Year 2	1 (Not as important)
13	University Year 2	3
14	University Year 2	2
15	University Year 3	3
16	University Year 4	1 (Not as important)
17	Secondary School Final Year	4 (Very important)
18	Secondary School Final Year	1 (Not as important)
19	Secondary School Final Year	1 (Not as important)
20	University Year 4	4 (Very important)
21	University Year 3	1 (Not as important)
22	Secondary School Final Year	2
23	University Year 4	2
24	Secondary School Final Year	3
25	Secondary School Final Year	1 (Not as important)

Table 8: Students' ranking of career planning in terms of preparation for university life.

Secondary students have expectations when transitioning to university and were asked what their expectations were. Both regions have a shared expectation of having more independence even though it was not the top expectation for Malaysia. Another expectation was a lot of research and more in-depth knowledge for HK and Malaysia respectively, when transition to university. From Figure 14, several top tips used in preparation for university would include time-management, learning to take care of one self, avoid procrastination and learning how to budget and this coincides with the teachers' comment on needing to develop these life and independent for university.
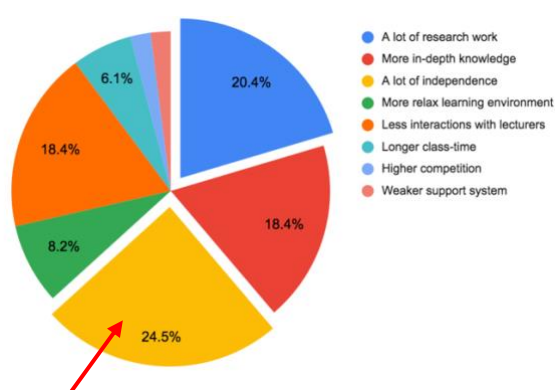
Figure 17a: HK students' expectation for university
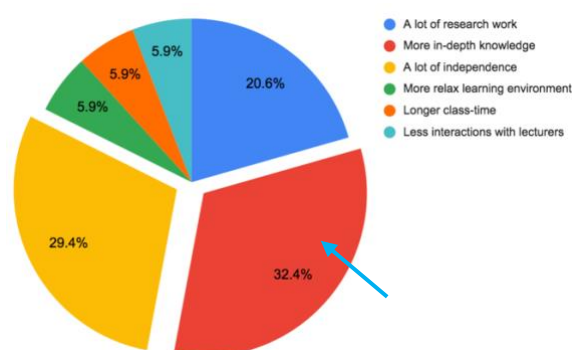
Figure 17b: Malaysian students' expectation for university

5.3 Discussion

Both teachers and students have placed significant emphasis on the need of developing time-management in preparation for university life and their future, as it is a universally important skill that is essential in their lives. Comparing the rankings and the skills mentioned between the teachers' and the students, there are some mutual understanding and disagreements regarding certain university skills. For instance, GS being the highest ranking for teachers' perception of student needs and PG and SS being the highest ranking for students' perception for HK and Malaysian students respectively. Granted the students are fully aware of the importance of academic skills as well, they would prefer to be able to develop their personal and social identity or social skills for university.

Looking at Section 5.1.3, it can be seen that most strategies that teachers adopt in their classrooms focuses on develop certain academic skills. Time-management skills is the skill that majority of the interviewees would like to develop, however, there is not much learning and teaching strategies that they adopt to develop this other than through homework and assignments.

Personal Growth

In HK, empowerment was developed through encouragement and pursuing new things and this would help grow in academics, sports and social work. However, this empowerment is left to the 'Learning Advisors' of the school. Encouragement is also used to remind the students that the learning process is very important and this encourages them to try their best and may take some pressure of the students, whom are worrying about the results.

In Malaysia, adding challenges in the class to push the students to learn how to overcome difficulties. Small consultations with students are also used to give opportunities for reflection on their roles and actions when doing group projects. Organization and empowerment are also develop through partaking in school activities, where students would learn skills through the tasks required.

Comparing the two regions, HK teachers would adopt strategies that would develop students' personal growth skills through internal methods, for example, understanding the importance of learning process is important, whereas, in Malaysia partaking in activities are used instead. One strategy similar in both regions is 'Mindfulness', which helps promote mental health wellness because in Asian society, mental health is not perceived as a huge issue, possibly due to cultural factors and tradition. This could lead to students, a proportion being boys, having difficulties opening up to other people.

Social Skills

In HK, group projects and social works are used to help develop social skills. These group work are also incorporated into their assessments, which is assessed twice per term. Exhibition-like events are also used so students can see other works and learn how to give feedback.

In Malaysia, assigned groups are used to develop social skills and teaches students to respect and cooperate with other students regardless of their differences. Another similar strategy was used but instead subject-related groups are the focus as it allows students to work with groupmates that have different strengths. After the COVID-19 pandemic, more group or collaborative work are adopted to move students away from electronics and give them a break from writing.

It can be seen that similar strategies are adopted in both regions. with their own uniqueness, in regards to the teaching style. The importance of social skills are acknowledged and is developed from numerous opportunities for pair or group work available in school. The similarity may be because social skills is a universally important skill that is useful throughout one's life. Thus, teachers would work hard to develop social skill in school.

Generic Skills

In HK, there is a lack of strategies to develop life skills. "Discover Time" is used to develop organization skills but time for this is limited. A diary is also used to develop management skills and organization as it allows students to keep manage time and plan their work in a time-efficient manner. Lack of strategies to develop independent skills and social responsibility was mentioned.

In Malaysia, changes in teaching style sometimes would help students develop problem-solving skills as they would need to think how to solve the problem. Joining the sixth form union and partaking in school events, such as Global Perspectives Debates (GPD) and CASE activities are also encouraged to help develop life skills.

HK has a lack of learning and teaching strategies to develop life skills compared to Malaysia. This may be due to HK culture, where there is heavy pressure on grades and could lead to strong emphasis on the content learnt in schools. On the other hand, Malaysia teachers are also part of school activities like GPD and CASE, in which students can partake in to develop management and organization skills

In comparison to life skills, there is numerous learning and teaching strategies to develop academic skills in HK. For instance, assessments, where different domains containing are assessed and scaffolding, which is used to teach source selection for younger students.

In Malaysia, strategies take place inside and outside the classroom. Inside, note-taking and in-class debates are used to develop independent learning and research skills. Note-taking allows students to take charge of their own learning and in-class debates allows students to analyse different perspectives to plan their argument. School activities like TED-style talks and Model United Nations (MUN) are strategies that are used outside the classroom. These activities further develop academic skills through research, organization, academic writing and presentation.

Noticeably, there are enough learning and teaching strategies developing academic skills because, similar to social skills, academic skills is a universally important skill, especially for university so many strategies are put in place to develop it. Another focal point agreed is the importance of academic honesty and ethics and schools have started placing heavy emphasis on the awareness and its importance in recent years so students can understand and value the originality of someone's work.

Career Planning

Each school has their unique systems in place and university counsellors are involved in these systems. In HK, teachers don't play such a heavy role in career planning, however, consultations with students, where teachers provide information about their alma mater or their personal experience if they had a career change are used if needed. On the other hand, in Malaysia, where the university counsellors are based in another state, teachers would have to have close communication with both university counsellors and students in case consultations with the students regarding students' enquiries or references for university applications are needed. University portals are also used to keep track of students' experiences and skill competencies, which are accessible to the teachers if in need as reference to write references for the student. Comparing both regions, HK teachers mainly leave career planning to the counsellors whereas Malaysia teachers need to work together and be well informed on students' career planning progress.

5.3.2 *Research Question 2: How does the skills that students have gained during their study in an international school help equip them for their university life?*

Personal Growth

Taking care of one's mental health in university is important because students may be overwhelmed by the teaching content and assignments that need to be completed. With respect to Figure 3a & 3b, students are aware of its importance for university life. However, Malaysian students also find personal identity and personal qualities equally important for university. When developing PG skills, students are equipped with necessary strategies that can be used in university, especially for coping with negative emotions and stress (Figure 6a & 6b). Noticeably, students from both regions have similar strategies for coping with negative emotions and stress with some exceptions, such as labelling/writing down the emotion and reframing unhelpful thoughts.

Social Skills

The importance of SS are acknowledged by students from both regions and are illustrated through the ranking on their collaboration and communication skills (Figure 7a & 7b). These skills are developed from activities available in schools, mostly from pair or group work (Figure 8). The lack of interpersonal skills might be because of COVID and this has limited significant amount of social activities that are needed for students, especially younger ones, to make connections and form networks. Majority of the students have stated a preference for pair/group interactions (Figure 9) with a common reason of allowing students to learn from others (Figure 10a & 10b). Malaysian students also sees it as an opportunity to practice communication with different people, which is needed for university, as students may study in a class where they don't know anyone. However, only 14.3% of HK students choose this reason. There is also a small percentage of students that prefer teacher interactions and this may lead to students having minimal interactions with professors even if there are difficulties in their learning, supporting the suggestion from Briggs, Clark & Hart (2012).

Generic Skills

From Figure 11a & 11b, a gap is seen between HK students' LS competencies and its importance for university. Compared to Malaysia, there is a larger amount of HK students that want to improve survival skills, namely the ability to learn quickly and self-support skills (Figure 12). Admittedly, majority of HK students have helpers in their household, which means that students may not have done housework before since it is done for them. This supports

Teacher B, who explains that students might lack the independent skills needed to live alone. It was also mentioned that HK students are not necessarily street-wise compared to other countries, where it's less safe. In contrast, a gap between Malaysian students' LS competencies and its importance for university is seen, in which improvement of management skills desired (Figure 13a & 13b). Time-management is the main management skill that would like to be developed (Figure 14). More development on survival skills and management skills are encouraged for HK and Malaysian students respectively.

In HK, the students' best AS competencies are the AS deemed important for university (Figure 15a & 15b). The lack of gap shows that AS are developed heavily in schools. However, in Malaysia, a slight gap can be seen, academic honesty and ethics are deemed important but students may not necessarily be confident enough (Figure 16a & 16b). This could mean that Malaysian schools may not have focused heavily on academic honesty and ethics. Further development is encouraged because of easy access to information in today's society and the importance of awareness of plagiarism. AS is also a universally needed skill and its development is beneficial for university life.

Career Planning

The ranking of final-year secondary students on career planning (Table 8) supports the teacher's perception, where career-oriented students uses their prospective career as the leading decision for their university subject choice. However, the ranking is completely opposite for university students as they may understand that there may be changes career choices in the future. In preparation to transitioning to university, students from both regions share the same expectation, namely lot of independence. Another expectation is that there is a lot of research and more in-depth knowledge for HK and Malaysian students respectively.

5.3.3   University Needs

The perception of students' needs for university preparation are cross-checked with literatures referencing university skills needed during the different stages (Year 1, Year 2-3 & Year 4-5). Considering Year 1, students would have to adapt to the workload, environment, teaching and learning styles and socialize. Thus, skills that are needed in Year 1 of university are adaptability skills and social skills. Adaptability skills may be lacking in some students because majority of school activities are tailored to secondary school students and this limits students from developing sufficient adaptability skills.

For Year 2-3 students, subject-specific skills and knowledge are more abundant in lectures in preparation for their prospective careers. This supports the Malaysian students expectation, where university students are taught more in-depth knowledge. Further reading is consistently encourage in university and this supports Teacher B's want for students to have an aspiration and a positive initiative towards learning.

Lastly, for Year 4-5 students, research skills and employability skills are more focused as they are completing their final-year project and preparing for job applications. Throughout university, students are generally required to write academic writings, some courses having a higher number, and are always developing their critical thinking skills. This is because university content are more in-depth and focuses more on the reasoning of the answer rather than the answer. Ultimately, international schools from both regions are developing students' university skill well, however, there are always room for improvement to help students develop and become an important member of their community.

6. <u>Suggestions and Conclusion</u>

6.1 Suggestions

After analysing the teacher's learning and teaching strategies and the student's perception of their needs for university, the following suggestions may provide ways to improve skill development for university life.

<u>Suspending the curriculum for a short period of time to focus on skill development</u>

This suggestion was mentioned by an interviewee and could be adopted by schools from both regions. This strategy would require schools to suspend the curriculum for a number of days over a school term to work on skills that students need. Suspending the curriculum for a short period of time to focus on students' skill development would reduce the time-consuming issue. It also allows students, especially final-year students, to take a break from the intense load of curriculum, develop skills and enrich themselves outside the classroom. The activities could somewhat related to a certain topic in the curriculum.

Earlier start for career planning

This suggestion is mainly focused on Malaysian schools. Malaysia has a different education system compared to HK, where students graduate in Year 11 (Form 5) and then are required to choose the education system that they would further on study in. As most career planning starts off towards the end of Year 10, Malaysian students might not have enough time to develop skills for their prospective career choice, compared to HK students, where they graduate in Year 13 and have ample time for planning. A suggestion for Malaysian schools is to start career planning towards the end of Year 9 instead as it allows students to start thinking about career choices and to an extent their subject choices for Year 10. It also gives more time for students to develop and enrich themselves in skills needed for their career choice.

Home economics

Schools from both regions can adopt this strategy, however, it is mainly focused for HK schools to solve the issue of lack of survival skills for students. Home Economics does not only develop cooking skills but also budgeting, time-management and also simple activities like grocery shopping, cleaning and washing dishes. Adopting Home Economics for lower secondary schools would help students to learn the foundation for independent living, which is a big part of the university experience.

6.2 Conclusion

Skill development is an essential part of human growth and it is developed through life experiences, in home environments, in school environments and in work environments. Teachers in international secondary schools have done a good job developing core skills that students would use throughout the rest of their life. Furthermore, the experiences that Hong Kong students and Malaysian students go through in their secondary years have helped develop different sets of skills that would be necessary for their preparation for university life. However, there is a lack of development in certain skills in international schools that students would need for university life. To solve this, more opportunities to develop their survival skills and management skills are needed for HK and Malaysian students respectively. In conclusion, certain strategies should adopted to provide more opportunities for students to foster and develop skills for university and life, especially survival skills and management skills in terms of HK and Malaysian students respectively.

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Appendix 1 – Interview questions

The individual interview was conducted online via Zoom for the duration of around 30 minutes. The interview focused on the theme of skill development for university life in an international school environment in the teacher's perspective.

Interview Questions

Domain	Interview Question
Introduction to skills for university life	(1) What skills do you think students need in preparation for university life? (a) Can you rank these 4 skill sets (Social Skills, Personal Growth, Generic Skills, Career Planning) in terms of importance? (b) Why did you place *** as the most important?
Social Skills	(2) Social Skills (a) What kind of social skills do you think that students will need during university life? (b) Why do you think these social skills are needed during university life? (c) Do you think that these social skills are developed in school? How? (d) Do you think it is important for students to take the initiative to look for their university professors if they have any difficulties?
Personal Growth	(3) Personal Growth (a) What kind of personal growth skills do you think that students will need during university life? (b) Do you think it is important to develop students' personal growth in school? Why?
Generic Skills	(4) Skills - Life Skills (a) What kind of life skills do you think that students will need during university life? (b) Do you think that these life skills are developed in school? How?

	(5) Skills – Academic Skills (a) What kind of academic skills do you think that students will need during university life? (b) Do you think that these academic skills are developed in school? How? (c) Can you rank these 5 categories (Academic Honesty and Ethics, Metacognition Skills, Research Skills, ICT Literacy Skills, Independent Learning Skills) in terms of importance for university life? (d) How important is academic honesty and ethics in your school? How does your school help students to develop academic honesty and ethics?
Career Planning	(6) Career Planning (a) What kind of career planning do you think students will need during university life?
Differences in perception	(7) How do you think this ranking may differ from the student's perception of student's need?
Preparation for university life	(8) Do you think it is important to develop these skills when the students are still in secondary school? Why?
Development of skills in a classroom setting	(9) How do you encourage and develop student's university skill in a classroom setting? Or What type of learning and teaching strategies do you adopt during your lessons?
Other skills	(10) Are there any other skills that you think is important and would like to develop for students? What is it and why?

Appendix 2 – Questionnaire questions

The questionnaire was conducted online via Google Form for the duration of around 15 minutes.

The questionnaire focused on the student's perspective of skill development for university life.

Section A: General

1) Age:
   ○16–17 years old   ○18–19 years old   ○20–21 years old   ○22–23 years old   ○> 23 years old

2) Gender:
   ○Male   ○Female   ○Others
   If others, please specify: _____

3) Location of Studies in Secondary School
   ○ Hong Kong   ○ Malaysia

4) Year of Study:
   ○ Secondary School Final Year   ○ University Year 1   ○ University Year 2   ○ University Year 3   ○ University Year 4

5) Rank the importance of 4 categories in relation to your preparation for university life?

	1 (Not as important)	2	3	4 (Very important)
Social Skills	○	○	○	○
Personal Growth	○	○	○	○
Generic Skills	○	○	○	○
Career Planning	○	○	○	○

6) Why did you choose it as the top ranking?
   ○ There is many opportunities for socializing in university
   ○ To have an idea of yourself as a person when meeting and working with others
   ○ In need of further development of general skills
   ○ In preparation for my career upon graduation
   ○ Others
   If others, please specify: _____

Section B: Social

1) How do you rate your social skills?

	1 (Worst)	2	3 (Best)
Collaboration	○	○	○
Communication	○	○	○
Interpersonal Skills	○	○	○

2) In your experience, what type of activity(ies) does your school provide that requires collaboration? (Can choose more than one)
   ○ Pair or group discussions   ○ Pair or group tasks
   ○ Activities or games with a competitive element   ○ Drama or role play
   ○ Extra-curricular activities   ○ Event planning
   ○ Student board (e.g. prefect, student council or class monitor)   ○ Service learning
   ○ Others
   If others, please specify: _____

3) How often in a week do you participate in activities that require collaboration?
   ○ 1 – 2 times a week   ○ 3 – 4 times a week
   ○ 5 – 6 times a week   ○ Everyday

4) What type of collaboration have you been involved in? (Can choose more than one)
   ○ Teacher and student collaboration (Academic setting)   ○ Teacher and student collaboration (Non-academic setting)
   ○ Student and student collaboration (Academic setting)   ○ Student and student collaboration (Non-academic setting)
   ○ Student and other people (external)

5) How often in a week do you …

	1 – 2 times a week	3 – 4 times a week	5 – 6 times a week	Everyday
(a) Participate in activities that require pair interactions	○	○	○	○
(b) Participate in activities that require group interactions	○	○	○	○
(c) Interact with your teacher regarding academic/non-academic topis	○	○	○	○

6) (a) Which type of interaction do you prefer?

○ Pair interaction ○ Group interaction ○ Teacher interaction ○ None of the above

(b) Why?

○ Have a chance to learn from each other ○ Prefer interpersonal learning settings
○ Increase student creativity ○ Provides more opportunities to practice communication
○ More opportunity to practice speaking. ○ I don't like interactions
○ Others:
If others, please specify_____

7) How would you like to maintain a good interpersonal relationship with your friends or lecturers?

○ Seeking and offering help ○ Be open
○ Actively communicating with them ○ Active listening
○ Show respect ○ Be empathetic
○ Others:
    If others, please specify: _____

Section C: Personal Growth

1) How do you rank the 4 components in terms of importance for university life?

	1 (Not as important)	2	3	4 (Very important)
(a) Personal Identity	○	○	○	○
(b) Personal Qualities	○	○	○	○
(c) Physical Health	○	○	○	○
(d) Mental Health	○	○	○	○

2) How did you become aware on:

	Through a friend/friends	Social Media	Internet	Workshops	School	Service Learning	Others:
(a) Culture diversity, difference, sensitivity	○	○	○	○	○	○	○
(b) Gender equality	○	○	○	○	○	○	○
(c) Discrimination	○	○	○	○	○	○	○
(d) LGBTQ	○	○	○	○	○	○	○

If others, please specify: _____

3) How does the school spread awareness on culture diversity, differences and sensitivity?

	School celebrations	School Workshops	Talks (Guests/Students)	Classroom teaching	Research	Service Learning	Others:
(a) Culture diversity, difference, sensitivity	○	○	○	○	○	○	○
(b) Gender equality	○	○	○	○	○	○	○
(c) Discrimination	○	○	○	○	○	○	○
(d) LGBTQ	○	○	○	○	○	○	○

If others, please specify: _____

4) How would you rank the 3 components in order of importance for university life?

	1 (Not as important)	2	3 (Very important)
(a) Personal Skills	○	○	○
(b) Personal Attitudes	○	○	○
(c) Personal Ethics	○	○	○

5)

	(a) What type of personal skills do you think you have?	(b) What personal skills would you like to develop if you don't have them?
Communication	○	○
Interpersonal	○	○
Leadership	○	○
Problem-solving	○	○
Time management	○	○
Flexibility/Adaptability	○	○
Critical Thinking	○	○
Organization	○	○
Creativity	○	○
Collaboration	○	○
Attention to detail	○	○
Dependability/Responsibility	○	○
Self-motivated	○	○
Work ethic	○	○
Professionalism	○	○

6)

	(a) What type of ethical qualities do you think you possess?	(b) What ethical qualities would you like to develop if you don't have them?
Honesty	○	○
Integrity	○	○
Impartiality	○	○
Fairness	○	○
Loyalty	○	○
Dedication	○	○
Responsibility	○	○
Accountability	○	○

7) How aware are you on…

	Unaware	Partially Unaware	Neutral	Partially Aware	Aware
(a) Mental health awareness	○	○	○	○	○
(b) Coping with negative emotions	○	○	○	○	○
(c) Coping with stress	○	○	○	○	○

8) How has the school helped you develop personal growth in or outside a classroom setting? (Can choose more than one)

○ Group/Research Projects
○ Role-playing
○ Pair work
○ Extra-curricular activities
○ School events (e.g. Wellness Week)
○ Mentor-mentee program (e.g. bridging programs)
○ Workshops or Talks (Guests/Students)
○ Others:

○ Group meditation
○ Open-door policies
○ Classroom teaching/discussion/sharing
○ Student board
○ Volunteering/Local community intervention
○ Wellbeing program
○ Service Learning

If others, please specify: _____

9) What methods do you use to help deal with mental health such as coping with negative emotions and stress?
   ○ Label/Writing down the emotion
   ○ Embrace how you're feeling
   ○ Get professional help
   ○ Minimize exposure to things that increases negative feelings
   ○ Engage in a healthy coping skill
   ○ Reframe unhelpful thoughts
   ○ Ensure time between shifts are restful
   ○ Others:
   If others, please specify: _____

10) What kind of life experiences have you experienced as a student? (Can choose more than one)
   ○ Organising social events
   ○ Working with others/playing a team sport
   ○ Having a part-time job
   ○ Dealing with a difficult superior
   ○ Service Learning
   ○ Being a member of a book club
   ○ Being a debater
   ○ Drama/music performance
   ○ Writing experience of all kinds (e.g. essays, poetry, competition)
   ○ Others:
   If others, please specify:_____

11) How has your life experience helped develop you as a person/student? (Can choose more than one)
   ○ It helps me reflect on myself
   ○ It teaches me to work with other people
   ○ It teaches me to change my line of thinking
   ○ It teaches me to analyze
   ○ Others:
   ○ It helps me be less afraid of opening up to people
   ○ It helps me improve quality of life
   ○ It teaches me independence
   ○ It teaches me to become more knowledgeable on the subject
   If others, please specify:_____

12) How has your mental health awareness, such as coping with negative emotions or stress, help develop yourself as a person/student? (Can choose more than one)
   ○ It helps me improve quality of line
   ○ It teaches me to be aware of the different emotions that I feel
   ○ It teaches me to avoid letting negative emotions affect me
   ○ It helps me increase my self-esteem and self-confidence
   ○ Others:
   ○ It teaches me to change my line of thinking
   ○ It teaches me to cope with difficult situations
   ○ It helps me turn to different means to deal with my emotions
   ○ It encourages self-expression
   If others, please specify:_____

Section D: Skills
1) How would you rate your life skills?

	1 (Worst)	2	3	4	5 (Best)
(a) Thinking skills	○	○	○	○	○
(b) Management skills	○	○	○	○	○
(c) Problem-solving skills	○	○	○	○	○
(d) Decision-making skills	○	○	○	○	○
(e) Survival skills	○	○	○	○	○

2) How would you rank these 5 components in terms of importance in preparation for university life?

	1 (Not as important)	2	3	4	5 (Very important)
(a) Thinking skills	○	○	○	○	○
(b) Management skills	○	○	○	○	○
(c) Problem-solving skills	○	○	○	○	○
(d) Decision-making skills	○	○	○	○	○
(e) Survival skills	○	○	○	○	○

3) What thinking skills would you like to improve/develop if you don't have it (can choose more than one)
   ○ Creative & Innovation skills
   ○ Cognitive skills
   ○ Critical Thinking skills

4) What problem-solving skills would you like to improve/develop if you don't have it? (can choose more than one)
   ○ Finding problems
   ○ Generating solutions
   ○ Evaluating success
   ○ Identifying causes
   ○ Implementing solutions

5) What decision-making skills would you like to improve/develop if you don't have it? (can choose more than one)
   ○ Problem-solving skills   ○ Leadership skills
   ○ Logical reasoning   ○ Emotional intelligence

6) What survival skills would you like to improve/develop if you don't have it? (can choose more than one)
   ○ Self-support   ○ Adaptability
   ○ Resourcefulness   ○ Organization
   ○ Ability to learn quickly

7) How has school helped to develop your life skills in or outside a classroom setting? (can choose more than one)
   ○ Group Projects   ○ Role-playing
   ○ Pair work   ○ Classroom teaching
   ○ Research Projects   ○ Classroom discussion/sharing
   ○ Extra-curricular activities   ○ Student board (e.g. prefect or student council)
   ○ Volunteering   ○ Mentor-mentee program (e.g. bridging programs)
   ○ Workshops   ○ Talks (Guests/Students)
   ○ Service Learning   ○ Others:
   If others, please specify: _____

8) How would you rank your academic skills?

	1 (Worst)	2	3	4	5 (Best)
(a) Metacognition skills	○	○	○	○	○
(b) Research skills	○	○	○	○	○
(c) ICT literacy skills	○	○	○	○	○
(d) Independent learning	○	○	○	○	○
(e) Academic honesty and ethics	○	○	○	○	○

9) How would you rank these 5 components in terms of importance for university life?

	1 (Not as important)	2	3	4	5 (Very important)
(a) Metacognition skills	○	○	○	○	○
(b) Research skills	○	○	○	○	○
(c) ICT literacy skills	○	○	○	○	○
(d) Independent learning	○	○	○	○	○
(e) Academic honesty and ethics	○	○	○	○	○

10) What metacognition skills would you like to improve/develop if you don't have it? (can choose more than one)
   ○ Awareness   ○ Planning
   ○ Problem-solving   ○ Comprehension
   ○ Self-correcting   ○ Evaluation & Self-assessing

11) What research skills would you like to improve/develop if you don't have it?
   ○ Interpretation skills   ○ Information-Problem Solving (IPS) skills
   ○ Analytical skills   ○ Presentation skills
   ○ Information literacy

12) What ICT literacy skills would you like to improve/develop if you don't have it?
   ○ Information literacy (digital)   ○ Digital content creation
   ○ Digital safety

13) What independent learning skills would you like to improve/develop if you don't have it?
   ○ Independence   ○ Memory
   ○ Attention   ○ Motivation to learn
   ○ Persistence

14) What academic honesty and ethics would you like to improve/develop if you don't have it?
   ○ Academic honesty   ○ Academic integrity
   ○ Academic responsibility   ○ Awareness on academic misconduct
   ○ Assessment Security   ○ Respect

15) How has school helped to develop your academic skills in or outside a classroom setting? (can choose more than one)
   ○ Group Projects   ○ Role-playing
   ○ Pair work   ○ Classroom teaching
   ○ Research Projects   ○ Classroom discussion/sharing
   ○ Extra-curricular activities   ○ Student board (e.g. prefect or student council)
   ○ Volunteering   ○ Mentor-mentee program (e.g. bridging programs)
   ○ Workshops   ○ Talks (Guests/Students)
   ○ Service Learning   ○ Others:
   If others, please specify: _____

Section E: Career Planning

1) How would you rank these 4 components in terms of importance in preparation for university life?

	1 (Not as important)	2	3	4 (Very important)
Sector-specific skills	○	○	○	○
Transition	○	○	○	○
Support	○	○	○	○
Choice of occupation	○	○	○	○

2) How would you rate your sector-specific skills (skills needed in that profession)?

	1 (Worst)	2	3	4	5 (Best)
(a) Administrative skills	○	○	○	○	○
(b) Numeracy skills	○	○	○	○	○
(c) Technological skills	○	○	○	○	○
(d) Subject knowledge	○	○	○	○	○
(e) Advocacy (expression of own views/opinions)	○	○	○	○	○

3) How would you rank these 5 components in terms of importance?

	1 (Not as important)	2	3	4	5 (Very important)
(a) Administrative skills (e.g. Microsoft Office)	○	○	○	○	○
(b) Numeracy skills	○	○	○	○	○
(c) Technological skills	○	○	○	○	○
(d) Subject knowledge	○	○	○	○	○
(e) Advocacy (expression of own views/opinions)	○	○	○	○	○

4) How has school helped to develop your sector-specific skills (skills needed in that profession) in or outside a classroom setting?
- ○ Group Projects
- ○ Pair work
- ○ Research Projects
- ○ Extra-curricular activities
- ○ Volunteering
- ○ Workshops
- ○ Service Learning
- ○ Role-playing
- ○ Classroom teaching
- ○ Classroom discussion/sharing
- ○ Student board (e.g. prefect or student council)
- ○ Mentor-mentee program (e.g. bridging programs)
- ○ Talks (Guests/Students)
- ○ Others:

  If others, please specify: _____

5) What are your expectations when transitioning to university? (can choose more than one)
- ○ Less interactions with professors
- ○ More in-depth knowledge
- ○ Longer class-time
- ○ Others:
- ○ A lot of research work
- ○ More relax learning environment
- ○ A lot of independence

  If others, please specify: _____

6) What tips would you use to help prepare you for transitioning to university?
- ○ Sharpen your study
- ○ Work on reading skills
- ○ Taking care of yourself
- ○ Don't allow procrastination
- ○ Don't be afraid of help
- ○ Develop time management skills
- ○ Be ready to write a lot
- ○ Be assertive
- ○ Learn how to budget

7) What type of support have you gained in career planning?
- ○ Family support
- ○ Both
- ○ School support

8) How has your family or school supported your decision in your career?
- ○ Inspiring to make career choices
- ○ Explore options
- ○ Financial support
- ○ Emotional support
- ○ Experience sharing

- ○ Help to build self-knowledge
- ○ Creating career plans
- ○ Connection support
- ○ Motivation
- ○ Others:

If others, please specify: _____

9) Why does (a) and (b) play a part in your choice of occupation?

	(a) Interest	(b) Capabilities
Job satisfaction	○	○
Strategic career decision	○	○
Career success	○	○
Motivation	○	○
Personal Identity	○	○

10) What type of career interest do you have?
- ○ Conventional: dealing with organization and structure (e.g. administrative assistant)
- ○ Investigative: dealing with problem-solving complex issues and abstract ideas (e.g. statistician or research analyst)
- ○ Social: dealing with communication and working alongside others (e.g. teaching or nursing)
- ○ Artistic: dealing with creativity and lack of rules and structure (e.g. photographer or videographer)
- ○ Realistic: dealing with work outside and hand-on duties (e.g. carpenter)
- ○ Enterprising: dealing with confidence and decisiveness (e.g. lawyer)

11) What factors of capabilities would you take into account in your choice of occupation?
- ○ Skills
- ○ Work Attitudes
- ○ Opportunities

- ○ Values
- ○ Training and education
- ○ Personality

Section F
1) If you are interested in participating in a follow-up interview, please leave your email address below.

Email: _____

Appendix 3 – Sample of the interview transcription

6 interviews were transcribed and categorised into the emerging themes and coded for analysis. The categorized themes were to provide understanding of the teacher's perception in regards to skill development for university life. Below is a sample of the interview with Teacher A regarding academic skills and social skills.

Selected translated transcriptions (Used in Section 5.1.1)	Coding examples and remarks for interpretation
'I think it is very important students <u>understand and value original work</u> and <u>strive to create their own work</u> rather than copying from the internet and just plagiarising it and making it their own work and we do see that quite a bit in our school in small numbers but across the grades, we have seen that coming.'	AH&E: importance
'I think particularly, a lot of younger students, they <u>lack developing some of the social skills</u> that they need and we've actually had to put <u>more strategies in place, so more group work, more collaborative work</u> with students as well, really to get them away from their computer screens, to get them away from their phones and even to get them away from the writing at times, to be able to do something, working as part of a team. We've felt some students have <u>struggled coming back into the classroom after so much time</u>.'	SS: current issue LTS: to help develop social skills SS: consequence of lack of social skills.
Preassigned coding schemes: Academic honesty & ethics (AH&E) Social Skills (SS) Learning and teaching strategies (LTS)	

Appendix 4 – List of Abbreviations

The list of abbreviations used in this research is tabulated below.

Abbreviations	Name
AS	Academic skills
CASE	Creativity, Action, Service, Enrichment
CP	Career Planning
GPD	Global Perspectives Debates
GS	Generic Skills
HK	Hong Kong
LS	Life Skills
MUN	Model United Nations
PG	Personal Growth
SS	Social Skills