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Graduate Work Readiness: An Insight into Entrepreneurship Education, Skills and Intention

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Abstract

The issue of graduate unemployment has received a long-standing debate on whether the education program offered by the university, particularly entrepreneurship courses, can promote graduate work readiness in the gig economy. This paper investigates whether university programs can engage students' entrepreneurial intention by effectively improving their capability skills and knowledge to prepare them for work readiness (GWR) in the relevant field. This study reveals that entrepreneurship education provided by the university could impede the student's entrepreneurial intention if the courses offered cannot accommodate changes in the business and economic environment. Nevertheless, this study argued that developing and preparing students with entrepreneurial skills, ability, and knowledge cannot be the sole responsibility of the universities as students, too, must play a significant role in enhancing their GWR skills, competency, and knowledge, which are expected to be able to accommodate them for any forms of future employment. This study provides fresh evidence on the student's perception towards entrepreneurship courses offered by their university by investigating the cognitive measurements of intentions of the students. This study also provides some insights on improving entrepreneurship courses which are important for the young generations in preparing them for work readiness in the gig market.

Keywords: Entrepreneurship Intention, Entrepreneurship Education, Entrepreneurial Skills, Work Readiness

Introduction

The burgeoning number of self-employed university graduates has been increasing since 2017. According to the World Bank (2021), there was an increasing self-employment

rate between 2017 and 2018, at 26 percent and 27.6 percent. The rate continuously remained at an average of 27.4 percent in 2019. This positive trend of statistics indicates that a self-employed career is one of the options that can alleviate the rate of unemployment, which contributes to the increase of entrepreneurial activity among university graduates.

In 2020, the flexibility of the gig economy has been focused on the business sector as an initiative to improve the unemployment rate due to the Covid-19 pandemic setting. The Malaysian government mainly encourages graduates to utilize this mechanism to protect their source of income. Along with various lockdown measures introduced in the country, graduates are expected to face employment difficulties and challenges. A statistical report by the Department of Statistics of Malaysia stated that the graduates' unemployment rate in 2020 is 4.4 percent and slightly decreased to 4.1 percent in 2021. Further, the statistics show that the number of unemployed graduates reduced by 2.5 (-5.0 thousand) to 197.4 thousand persons as opposed to 202.4 thousand unemployed graduates in 2020. The inclining rate of this statistic signifies a vital mark in Malaysia's economy to create employment opportunities (see Table 1).

Table 1
Employment status of graduates in Malaysia between 2020 and 2021

Year	Number of graduates ('000)	Employed ('000)	Unemployed ('000)
2020	5,356.4	4,353.1	202.4
2021	5,607.8	4,569.1	197.4

Source: Press release, graduate's statistics 2021 (Prime Minister Department, Department of Statistics)

The report also indicates that, on average, 841.3 thousand graduates were self-employed (i.e., outside the labor force category). This figure is substantial as it shows that only 15 percent of the graduates are self-employed. These figures are also crucial as they indicate that only a small number of fresh graduates have chosen to be entrepreneurs.

The call for self-employed started when the Malaysian government encouraged the application of TVET in the university curriculum, as it became one of the significant shifts in Malaysia Education Blueprint 2015-2025 (Higher Education) or also known as MEB (HE) (Ministry of Higher Education Malaysia, 2015). The blueprint stated ten agendas that drive excellence in the higher education system. One of the agendas (i.e., number 4) of MEB (HE) focuses on the quality of graduates for entrepreneurial skills and knowledge through TVET. The ministry initiative is to increase the capacity building of the future workforce for the graduates to endeavor as it is in line with the economic setting in Malaysia (Mohamad et al., 2015; Mustafa et al., 2013).

Malaysia is now on the path to achieving its goal as a high-income, inclusive, and innovative developed nation (World Bank, 2018). In the context of society's living growth, the Malaysian government looks forward to achieving society's sustainability, improving living standards, and producing employment, which aligns with Sustainable Development Goal 8. However, university students' issues and challenges in entrepreneurship skills and knowledge require serious attention. Despite the increase in entrepreneurship curriculum activities embedded in university courses, these activities are often implemented beyond the students' expectations. In other words, students need to balance entrepreneurial activities with their academic curriculum style.

Further, the need for guidelines for entrepreneurial elements and teaching experts within universities also can be a factor that hinders the implementation of entrepreneurial activities effectively. Ultimately, this circumstance could lead to low work readiness since the graduates obtained lack of required skills and competencies as expected by the market (Mohd Salleh et al., 2019; Nungsari et al., 2023; Uddin et al., 2022). Graduates tend to lose interest in business ventures or becoming entrepreneurs. Given the unprecedented Covid-19 outbreak, the statistics show a dramatically increasing employability, which can result in poor countries' economic growth and income per capita.

Another concern highlighted by Sim et al (2023) is that the engagement between academics and university students still needs to improve (Nungsari et al., 2023; Sim et al., 2023; Suffian et al., 2018). In empowering entrepreneurship as part of graduate employability, graduates often regard entrepreneurship as a second choice for the career pathway. Previous studies highlighted that interest, skills, and opportunities contribute to this scenario (Almahry et al., 2018; Boucher et al., 2023; Nungsari et al., 2023). Sim et al (2023) found that educators play a crucial role as change agents in both theoretical and practical levels for implementing entrepreneurship education in schools. Besides the enterprising subjects influencing students' interest in entrepreneurship, teachers with entrepreneurial experience could significantly encourage students' entrepreneurial intentions (Uddin et al., 2022). These signify the importance of the growth in entrepreneurship education as it meets the increasing range of contemporary socio-economic and political demands. Studies also found that entrepreneurship courses are often offered in higher-education non-business schools. The entrepreneurship course is perceived as a valuable option for non-business graduates to venture into (Boucher et al., 2023). While it blends and converges all disciplines (Ahmed et al., 2021), graduates entrepreneurial interest as a career option is also determined by their attitude, including entrepreneurial skills acquired from experience (Boucher et al., 2023).

This research is grounded in entrepreneurial skills and knowledge, specifically on implementing entrepreneurship education in higher learning institutions' academic syllabuses. This descriptive study goes beyond uncritical assumptions on the success of the academic syllabuses in shaping the graduates' entrepreneurial skills and knowledge. Therefore, this paper aims to identify and understand the graduates' perceptions of entrepreneurship skills and the knowledge they obtained from the courses. This study's findings will contribute significantly to supporting the implementation of entrepreneurship programs and providing information to policymakers in formulating practical guidelines and action plans to produce more entrepreneurs among graduates.

Literature Review

Entrepreneurship as an Opportunity in gig-economy

Entrepreneurship is a concept that covers various dimensions. According to Carpenter and Wilson (2022), entrepreneurship is crucial because of its potential to provide job opportunities in the market. In other words, entrepreneurship encompasses an individual's ability, skills, and knowledge to respond to job creation for their wealth (see also Ahmed et al., 2021; Smith et al., 2020). The entrepreneur concept positively impacts economic quality and growth (Al Issa, 2022; Doran et al., 2018). In a study by Bosma and Kelly (2019), entrepreneurship can be classified into four categories: solo entrepreneurship, family-based entrepreneurship, employee entrepreneurial activity (EEA), and gig economy (sharing) entrepreneurship. In the same vein, Iyortsuun et al (2021) suggest that the context of

entrepreneurship shares the common nature of being 'self-employed' with 'risks taking' and 'taking responsibility' in their projects.

Employment in the gig economy often relates to short turn-around between the offer and performance of work. Despite the great variety in type and location, Gig employment has shared characteristics such as work using platforms, short-term employment, one-off jobs, and remunerated based on quantity rates (MacDonald & Giazitzoglu, 2019; Valencia-Arias et al., 2022). Gig employment is facilitated through efficient digital platform ecosystems underpinned by matching technology with varied levels of matching technology to control task allocation and performance. The gig economy has expanded across high-and-lows wage economies, reshaping industries as diverse as geography and transportation. The gig economy's growth can also be known as a neo-liberalization of work, with work increasingly governed by the market rather than social regulation (Barratt et al., 2020; MacDonald & Giazitzoglu, 2019; Valencia-Arias et al., 2022). In this paper, it is contended that the development of the gig-employment platform enables the relaxation of personal liquidity constraints through a flexible channel of income generation to supplement employment fallbacks. Further, gig economy workers may be captured as self-employed or entrepreneurs, i.e., individuals who have taken a form of work required for possible growth (see Barrios et al., 2020; Nungsari et al., 2023).

Factors Influences Entrepreneurship Interest

Previous studies identify factors that can influence the intention of a graduate to choose entrepreneurship as a career. Besides personality traits, an entrepreneur can be shaped by various factors that can be trained and learned (Sim et al., 2023). This includes social engagement in business, and encouragement from family members, peers (Ahmed et al., 2021), entrepreneurial values (Al-Lawati et al., 2022), education factor (Sim et al., 2023; Uddin et al., 2022), and community and surroundings (Al-Lawati et al., 2022) factors in motivating an individual to choose to become an entrepreneur. For instance, a study by Nungsari et al. (2023) discovered that entrepreneurship education, higher education level, and industrial and managerial experience are also positively associated with psychological factors. Students are anticipated to have the desire to involve with entrepreneurship as a career when those variables integrate and be able to shape the attitudes towards the entrepreneurial intention. The authors emphasize that entrepreneurship education with an appropriate approach is required to provide the necessary knowledge about entrepreneurship. Another study by Iyortsuun et al (2021) found a positive relationship between students' entrepreneurship intention with relational support, personal attitude, and behavioral control. The study shows that psychological factors such as personal attitude, behavioral control, and family support are crucial to instill the students' intention to become entrepreneurs. In this context, one can argue that the decision into entrepreneurship is often the result of the integration between attitudes, perceptions, and intentions of an individual that they cultivate from within a social circle, cultural and political context (Bosma & Kelly, 2019; Boucher et al., 2023; Farooq, 2018).

Higher learning institutions (HLIs) are also seen as a critical element in empowering students in terms of improving their characteristics and providing the advantage of developing entrepreneurship knowledge and skills (Sim et al., 2023; Soomro et al., 2020; Wibowo et al., 2019). Within this context, the transition from the entrepreneurial intentions of the young graduates to becoming young entrepreneurs is often assumed through education support. Literature in this area suggests that the (Sim et al., 2023)higher learning

institution's entrepreneurship education must be designed to enhance student's personal skills, industry knowledge, and continuous interest in entrepreneurial activities (Li & Wu, 2019; Sim et al., 2023). Curriculum design, infrastructure, and training provided by the institution are expected to cater to the learning of students with entrepreneurial acumen (Sim et al., 2023).

To sustain the current market demand, many HLIs have redesigned their curriculum to embed flexible and cross-disciplinary learning in developing multi-skilled graduates (Rădulescu et al., 2020; Selvaratnam, 2021; Valencia-Arias et al., 2022). Similarly, redesigning the education curriculum is also to encounter the transition of advanced technology and innovation in employment in the backdrop of the current global situation (Boeker et al., 2021; Boucher et al., 2023). Numerous authors have attempted to investigate this learning approach and assess its impact. A study by Iyortsuun et al (2021) found that stimulating practical activities and hands-on training as part of the entrepreneurship curriculum has a positive effect on the student's motivation to have their own 'start-up' company (see also Foo & Turner, 2019; Hassan et al., 2020; Jabeen et al., 2017; Turner & Mulholland, 2017). These suggest that entrepreneurship skills and knowledge should be aligned with the student's intention and motivation toward making entrepreneurship their career path (Nungsari et al., 2023). An integration of self-efficacy of the students and entrepreneurship education is essential in defining the students' intentions towards becoming an entrepreneur.

In the context of education curriculum, prevalent studies found that entrepreneurship education positively affects graduates (Al-Lawati et al., 2022; Iyortsuun et al., 2021). Nevertheless, Al Issa (2022) posits that students are inclined to become entrepreneurs should business opportunities arise. Studies also found that non-technical students are willing to pursue their careers as entrepreneurs regardless of difficulties in financial aid as long as they have sufficient knowledge and self-efficacy (Londono et al., 2020). Stimulatingly, a study by Wernick and Ledley (2020) found that some science students are inclined to choose business ventures as their career path compared to working in their field of study. Gabrielsson et al (2020) also found that students in non-business programs are inclined to be entrepreneurs. These signify that entrepreneurship education provided by higher learning institutions does influence nurturing the students' interest in venturing into business-related activities.

Nonetheless, the determination for entrepreneurial career decisions does not happen in a vacuum. Many students or graduates may need to consider the possibilities as they embark on their desired careers. A study by Al Issa (2022) found that young graduates are inclined to choose to be employed by an organization because of its job characteristics and pay. Apart from that, an individual's surroundings can also affect one's self-efficacy in deciding on his/her career. This probable factor may provide an impetus for graduates to be innovative and take the opportunities to venture into entrepreneurial activities that have a competitive advantage.

Sim et al (2023) argue that a university education efficiently obtains the necessary knowledge about entrepreneurship. According to the study results, university education positively impacts entrepreneurial intention. The findings showed that educational support from a university could influence students' preference and interest in entrepreneurship among students. In the same vein, Iyortsuun et al (2021) argue that education programs should pay particular attention to positively influencing students' attitudes toward entrepreneurial activity. According to Iyortsuun et al (2021), even though education is often criticized due to its theoretical emphasis being divorced from reality, educationalists can still influence the choice of entrepreneurship as a career. A previous study by Turner and

Mulholland (2017) in the UK contended that enterprise education initiatives did not necessarily make students more entrepreneurial; however, students that are exposed to and practice activities of real-world business challenges in their education program can develop students with the necessary hard and soft skills which is required for the employment market. Hence, these studies show that entrepreneurship education is crucial and should incorporate more fundamental hands-on literacy and enterprise thinking within the syllabus so that students can develop better skills, knowledge, creativity, and innovation in their employment.

Further, Turner and Mulholland (2017); Gutiérrez and Baquero (2017) raised the debate that entrepreneurship can be learned. However, some believe it is not easily taught and trained for individuals without the necessary intrinsic motivation. One reason for such concern is the teaching and learning of entrepreneurship that goes beyond the business plan. Notwithstanding such debates, this indicates that the role of HLI is becoming challenging as they need to equip students with knowledge compatible with the right skills to meet the market demand (Sim et al., 2023).

Krueger Jr et al (2000) highlighted that the *antecedents of attitudes* could affect an individual's self-efficacy toward entrepreneurship. This view suggests that many successful entrepreneurs can influence one's decision to become an entrepreneur in their family and circle of friends. Thus, this social influence positively impacts individuals, consciously or unconsciously (see also Ahmed et al., 2021; Raza et al., 2018). This influence can be from within (i.e., innate characteristics such as risk-taking propensity, tolerance for ambiguity, internal locus of control, innovativeness, and independence) that can shape a person's interest in becoming an entrepreneur. In addition, according to Rahi et al (2021), some individuals can be influenced into entrepreneurship because of motivational factors (love for money, desire for security, and desire for status) rather than contextual factors. The study of Boldureanu et al (2020) also provided helpful insight into young adults' perceptions of entrepreneurship. The study shows that the respondents perceived entrepreneurs primarily by their innate characteristics. However, most of them thought that external factors should nurture entrepreneurial traits.

Studies by Hassan et al (2020); Baskaran et al (2020); Jayabalan et al (2020) in Malaysia argued that universities are influential in students' interest in starting a business and developing an entrepreneurial mindset, knowledge, and skills. Nevertheless, many HLIs have yet to incorporate modules and programs in developing entrepreneurial spirit, skills, attitude, and the intention of creating a sustainable business. Thus, graduates may have higher expectations from universities or HLIs. Graduates may anticipate that the entrepreneurship curriculum activities are relevant and can acculturate their interests in entrepreneurship. Further, graduates may expect lecturer and student support systems to be at the highest level of quality, which is the most influential factor in providing valued education (Shamsudin et al., 2017).

All these factors have contributed to the significant expansion of the entrepreneurship topic in terms of curriculum perspective and graduates' ability, skills, and knowledge towards entrepreneurship. Despite the increasing discussion on entrepreneurship, there is ongoing debate regarding the consistency of entrepreneurship curricula with graduates' expectations (Iyortsuun et al., 2021; Rahi et al., 2021; Sim et al., 2023). Nevertheless, it is suggested that university students who pursue entrepreneurship courses acquire additional skills and knowledge, increase their confidence, and create opportunities for employment through entrepreneurial careers (Foo & Turner, 2019; Nungsari et al., 2023; Uddin et al., 2022).

On the other hand, some previous studies argued that several factors drive graduates to choose entrepreneurship as their career. For instance, Ahmed et al (2021); Boldureanu et al (2020) highlighted that factors such as a desire for job satisfaction, market opportunities, family commitments, limited career opportunities, life dissatisfaction, flexibility and independence, and desire for achievement are among the reasons for graduates to pursue an entrepreneurial career. Based on the arguments beforehand, there are inconclusive findings on the effect of entrepreneurship education on graduates' interest in pursuing entrepreneurship as a career. Particularly in Malaysia, study on the effectiveness of entrepreneurship education still requires further attention (Nungsari et al., 2023). It shows that the reasons for graduates to be thrust into the corporate world or pursue an entrepreneurial career are multifaceted.

Therefore, there is a need to understand the effectiveness of entrepreneurship education and its post-course perceptions. This study aims to understand students' perceptions and opinions on HLI's roles towards their entrepreneurship intention and motivation after completing the courses. By carrying out this study, it is also aimed at investigating the impact of entrepreneurship education on students' entrepreneurship ability, knowledge, and skills. The impact of entrepreneurship courses is in line with the crucial roles of HLI in nurturing and creating future entrepreneurs as the present industrial revolution aspires to produce more "job creators" rather than regular salaried workers.

This study will bridge the knowledge between the current expectation of entrepreneurial courses/subjects offered in Malaysia HLIs and how the students perceived the entrepreneurship courses about their entrepreneurial interest. In a recent study, young graduates' inclinations toward entrepreneurship are far and few. Hence, in understanding the students' perceptions and acceptance of entrepreneurial education provided by the HLIs, studies focusing on the success of entrepreneurial education would support the government's aspiration to produce more young entrepreneurs in Malaysia by 2025. These align with the Entrepreneurship Integrated Education (EIE) blueprint 2020 for tertiary-level education that aims to make Malaysia an entrepreneurial nation (Ministry of Higher Education, 2020).

Methodology

This study is framed within a positivist approach to examine the influence of HLI's in preparing students with entrepreneurship skills necessary to secure employment. The study employed an electronic survey via Google Forms. In order to examine the students' perceptions of their skills, ability, and knowledge to become an entrepreneur and university roles, three sections of questionnaires were distributed. These sections are grounded on the study's theoretical framework presented in Figure 1.

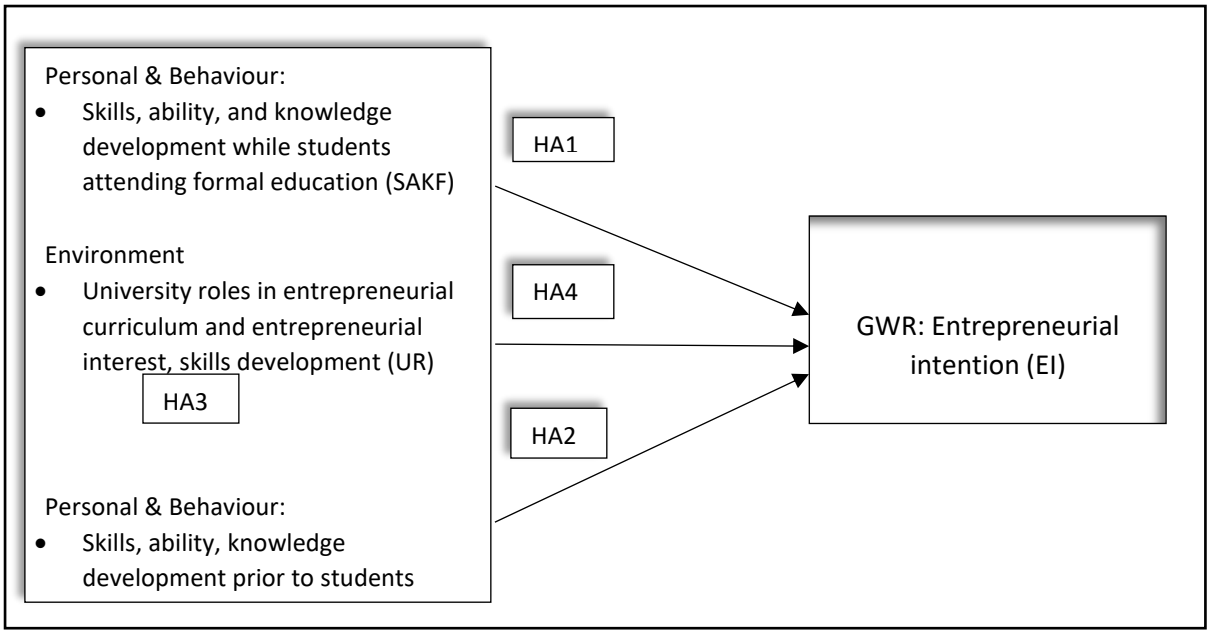

Figure 1. The theoretical framework of this study

Based on the theoretical framework design for this study, the following are the hypotheses developed

(a) HA1: There is a positive relationship exists between students' entrepreneurial intention and their skills, ability, and knowledge while attending formal education (SAKF → EI).
(b) HA2: There is a significant relationship between students' entrepreneurial intention and their skills, ability, and knowledge prior to formal education (SAKP → EI).
(c) HA3: There are differences in students' entrepreneurship skills before and during university education (SAKP → SAKF).
(d) HA4: There is a positively perceived usefulness of university roles in preparing students' entrepreneurial intention and developing entrepreneurship skills (UR → EI).

Participants

Universities with a clear entrepreneurial theme in the curriculum were selected to participate in the research. Of those invited to participate, only one agreed, citing the pandemic as the main reason not to engage with this research. From this tertiary education provider, respondents from across the Schools of Business, Marketing, Media, Arts and Design, Computing, Mathematics, and Engineering participated in the research. The collection of data was performed using purposive sampling with the minimum number calculated at 82 students, based on the formula by Tabachnick et al (2007), "50 + 8" in determining the sample size where the 'm' is the number of variables, in which four categorical variables involved in this study [50 + (4x8)]. A total of 106 responses (43 females and 63 males) were received, with the survey running for two weeks.

Measures

For a convincing argument, a pilot test was carried out with ten (10) participants to identify if there were any challenges in understanding the questionnaire. Among the feedback received in the testing of the instruments were the sequence of the questions, complex words usage, and inconsistency of measurement scale. Based on these, amendments were taken

appropriately. Prior to the pilot survey, an appropriate ethics research protocol had undertaken.

In this study, the questionnaire adopted a formative scale as it provides the view as a descriptive study that comes with its indicator (Sekaran & Bougie, 2016). The instrument of this study was divided into four parts, namely i) entrepreneurial intention, ii) university roles, iii) skills, ability, and knowledge prior to formal education, and iv) skills, ability, and knowledge while attending formal education. In order to achieve the objective of investigating the graduates' perception, a list of items (18 items) was used, focusing on self-perception towards entrepreneurial intention. These items were measured with other composite measures, including the skills, ability, and knowledge prior to university education (30 items) and while attending formal education in the university (30 items), and on the roles of the university (10 items). Each item category was observed and measured using a Likert scale, starting from 1 to rate "strongly disagree" to 5 to indicate "strongly agree." All measures were distributed and administrated in the English language.

The validity and reliability of the questionnaire were measured. The Cronbach alpha test was performed to check the normality and reliability of the scale. Using Pearson's correlation coefficients test to determine the relationships of the items selected in this study; the test shows a positive relationship range between very strong and fair (refer to Table 2).

Table 2
Summary of validity testing of independent and dependent variables

Variable type	Validity testing	Very strong (0.80-1.00)	Strong (0.60-0.79)	Moderate (0.40-0.59)	Fair (0.20-0.39)	Poor (0.00-0.19)	Total items
Independent Variable (Section A)	Prior Formal education skills (SAKP)	-	17	12	-	1	30
Independent Variable (Section B)	Skills during Formal education (SAKF)	1	24	4	-	1	30
Independent Variable (Section C)	University roles (UR)	6	2	1	1	-	10
	Total	7	43	17	1	2	70
	Percentage	10%	61.43 %	24.28%	1.42%	2.85%	100%

Analysis and Findings

The data collection was analyzed using SPSS in this study. The data collected is high in robustness against the non-normality type. Therefore, this study applied a statistical method based on skewness and kurtosis (Hair, 2009; Tabachnick & Fidell, 2013).

A descriptive analysis was conducted to observe the variables' mean score and standard deviation. Table 3 depicts the descriptive mean and standard deviation comprising the dependent variable of entrepreneurial intention (EI) and independent variables, which are: skills, ability, and knowledge prior to attending formal education (A), skills, ability, and knowledge while attending formal education (B) and university roles (C). The highest mean score is for A and followed by B. In this study, the higher the mean score, the higher the expectation for A and B to influence EI.

Table 3
Descriptive statistics of all variables

	Mean	Std. Deviation	N
EI	63.2170	5.82933	106
A	115.6509	15.16892	106
B	110.2547	17.54888	106
C	34.3962	7.30124	106

In order to determine the correlation that exists between the dependent variable and independent variables, Pearson's correlation matrix was generated. Sections A and B of the questionnaires focus on the primary soft employability skills needed for entrepreneurship skills. Students' ability to improve their skills and knowledge is also gauged from the same respondents based on their experience before pursuing their studies in the university and while attending their education at the tertiary level. Section C represents students' perception of the university's role in preparing them with skills and developing them. Table 4 shows the correlation matrix analysis results for the variables' influence on entrepreneurial intention (EI).

Table 4
Correlation matrix of independent variables

		EI	Section A (SAKP)	Section B (SAKF)	Section C (UR)
EI	Pearson Correlation	1	.509**	.397**	.232*
	Sig. (2-tailed)		.000	.000	.017
	N	106	106	106	106
Section A (SAKP)	Pearson Correlation	.509**	1	.721**	.350**
	Sig. (2-tailed)	.000		.000	.000
	N	106	106	106	106
Section B (SAKF)	Pearson Correlation	.397**	.721**	1	.478**
	Sig. (2-tailed)	.000	.000		.000
	N	1pear06	106	106	106
Section C (UR)	Pearson Correlation	.232*	.350**	.478**	1
	Sig. (2-tailed)	.017	.000	.000	
	N	106	106	106	106

Note: Pearson's correlation coefficients can be recognized through the value that ranges between -1 to +1, in which the correlation coefficient "r" indicates the strength or the degree of the linear relationship between two variables.
** Correlation is significant at the level 0.01 level (2-tailed)
*Correlation is significant at the 0.05 level (2-tailed)

The matrix shows Pearson's correlation coefficients showing a positive correlation between EI and A (SAKP) with correlation coefficients r = 0.509, indicating a moderate correlation between the two. There is also a positive correlation between EI and B (SAKF) with

a correlation coefficient of r =0.397, which is fair in the correlation range. The EI and C (UR) correlation coefficients are positive and fair, with r = 0.232. Of all the independent variables, the weakest correlation coefficient is r= 0.232 between EI and C (UR). Regarding skills, ability, and knowledge, there is a moderately strong correlation between prior and while attending formal education, in which the correlation coefficients C (SAKP) and D (SAKF) show r=0.721.

According to Anwar et al (2020), the Standardized coefficient (βeta) equals Pearson's correlation value for a single independent variable. Therefore, based on the results of Pearson's as in Table 4, SAKF is positively and fairly associated with EI (β =0.397; p<0.01). Therefore, there is sufficiently evident that this study has supported the second alternate hypothesis in HA1. The standardized coefficient (βeta) for SAKP and EI shows a positive and significant effect: β =0.509; p < 0.01. Hence the alternate hypothesis in HA2 is supported.

In terms of the differences in skills, ability, and knowledge, there is a positive and robust relationship between prior (SAKP) and while attending formal education (SAKF) (β=0.721, p<0.01). Nevertheless, the test result shows a positive relationship between UR and EI, although they are very weak associated in this study (β =0.232; p < 0.05).

Discussion and Conclusions

The unprecedented Covid-19 outbreak has disrupted the labor market. This situation has further led to declining labor employment in various sectors in Malaysia. Previous literature shows that in any crisis that can affect the economy and finances of a country, the labor or employees are among the vulnerable group facing the unemployment threat. As stated beforehand, the youths have the highest rate of unemployment (Department of Statistics Malaysia, 2020). Alternatively, young people can venture into entrepreneurship and become self-employed business entrepreneurs. Previous study indicates that the growth of self-employed has dramatically increased, particularly in online businesses, but these startups can only sustain their business for a short period (Al Issa, 2022; Ramadani et al., 2022). One of the contributing factors for this stems from the role of universities in preparing them with the required skills and knowledge to become an entrepreneur. Within this perspective, this paper proposed that universities play vital roles in preparing students with comprehensive formal knowledge in various aspects of business and entrepreneurship skills. It is argued that the role of university educators cultivates not only entrepreneurial intentions, enthusiasm, and knowledge covering various aspects but also emphasizes soft skills that can bring value to a practical understanding.

Many HLIs have restructured their entrepreneurship programs by embedding more flexible and cross-disciplinary learning to produce multi-skilled graduates (Selvaratnam, 2021). In other words, the university is integrating entrepreneurship in various courses to develop and equip students with fundamental and necessary skills that enhance their employability and provide the added advantage of enabling students to create jobs in the present rise of the digital economy.

Students' Skills, Ability, and Knowledge

Findings from this study revealed that students had established their intention to become entrepreneurs before pursuing their formal study in HLI. The formal study indicates that individual traits towards entrepreneurship have existed within themselves for years. Nevertheless, the level of entrepreneurship skills, ability, and knowledge is minimal and requires further guidance and a comprehensive approach such as mentoring (Sim et al., 2023; Valencia-Arias et al., 2022) to nurture entrepreneurial intention and motivation among

students. In addition, this finding shows that students perceived universities or HLIs play sufficient roles in providing entrepreneurship education to enhance students' skills. However, based on evaluation, findings from the self-assessment of the student's skills, ability, and knowledge show a decline in their skills, ability, and knowledge. The assessments indicate a gap in the educators' role which could be explained by other factors that affected the overall self-assessment by the students. This study's findings also explain that students who learned or were exposed to entrepreneurship education do not necessarily become more entrepreneurial (Foo & Turner, 2019; Saadat et al., 2022; Turner & Mulholland, 2017). An individual's personality traits are significantly related to acquiring entrepreneurship skills, ability, and knowledge. Thus, external changes intervention, particularly entrepreneurship education introduced for a limited period, will not guarantee a student can become an entrepreneur, as personality traits (i.e., risk-taking and self-belief) are usually stable in an individual for years (Al Issa, 2022; Bleidorn et al., 2021). This finding signifies that the self-efficacy factor is one of the limitations for students venturing into entrepreneurship careers regardless of the universities' programs or courses provided to the students. Moreover, a study by Saadat et al. (2022) posited that culture and upbringing environment factors influence the entrepreneurship process in the form of motivation and intention of the students (see also Ahmed et al., 2021).

University Roles as Perceived by Students

Findings in this study also revealed that students agree with the university and educators' substantial role in preparing them for the right skills and knowledge to venture into entrepreneurship. Nevertheless, despite the positive outcome of universities' roles, the declining trend in students' skills, abilities, and knowledge while attending formal education is contrary to their favorable view. The finding shows a mismatch between students' perception of universities' roles and their existing skills, ability, and knowledge of entrepreneurship. Findings from this current study have similar outcomes to previous studies such as (Nungsari et al., 2023; Valencia-Arias et al., 2022; Ma'dan et al., 2020). These authors argued for the integration of entrepreneurship elements in the universities because of other external factors and internal factors such as financial support (internal and external), networking (external), professionalism (internal), and government policy (external) can influence the students' entrepreneurship venture. Therefore, this study argued that developing and preparing students with entrepreneurial skills cannot be the sole responsibility of the universities/HLIs as students must play a significant role in enhancing their graduate work readiness skills that can accommodate them for any form of future employment. It can be observed from this study that students' skills, ability, and knowledge prior to attending formal education in the universities/HLIs is higher than when students are attending their university education.

The responsibility to inculcate entrepreneurship skills, ability, and knowledge lies with the students. Again, it possibly comes with a high belief that entrepreneurship is a way to mainly generate money which can be in the form of meeting their 'necessity' rather than the mindset of recognizing the 'opportunity" for a long-term or sustainable vision. In this context, students' self-efficacy or belief in their ability to perform a task or achieve goals might be higher than their actual capability before attending formal education. Self-efficacy indicates students' early mismatch of perception on the skills required to venture into business, compared to the integrated skills advocated and taught in university in developing the required skills Boldureanu et al (2020); Valencia-Arias et al (2022), and in this case, is for

entrepreneurship. This study's outcome is also consistent with Saadat et al (2022), who found that students become less entrepreneurial due to the education system's role in reducing the entrepreneurship aspirations of learners. In a similar vein, Iyortsuun et al (2021) argued that various challenges of being an entrepreneur through education programs may lower the graduates' intention to be entrepreneurs. Thus, the education courses and syllabuses should be designed according to the current business setting transition and graduates' attitudes and intentions.

University's concern on graduate work readiness (GWR) can be enhanced and complemented by improvising the education curriculum in which the emphasis will be on developing the right skills, ability, and knowledge that not only suits the demand and supply of the market but also prepares students with the thinking of being self-employed or to be employed. Consistent with Bauman and Lucy (2021); Turner and Mulholland (2017), integrating hard and soft skills in enterprise education is critical in developing the graduates' competency to engage with the external environment and cope with real-world business challenges. This knowledge is not necessarily able to produce a self-employed young graduate but also a capable graduate ready for employment. In this context, with an appropriate entrepreneurship program, the students must be willing to improve and polish the required soft and hard skills. Hence, self-efficacy or self-belief of individuals in their abilities to perform a task can be motivated by the intervention of their surroundings other than the university, such as social media, peers, family members, or individual's desire (Ahmed et al., 2021; Boucher et al., 2023). In addition, a university can run an intervention program to address students' skills needs. This can be useful to enable students to understand better their career option needs and overcome their competencies deficit (Gawrycka et al., 2020). Universities can also equip students with management resources to handle their attributes and transition smoothly into the labor market (Monteiro et al., 2020; Ramadani et al., 2022). This study suggests that the intervention in the students' learning process helps expose them to improve various aspects of their skills, ability, and knowledge. Thus, in narrowing the competencies gap, students need the right motivation and thinking to prepare them for their future careers. The earlier they decided on the direction of their interest, the better they could focus on improving the required skill set.

Contribution of this Research

The study provides an essential exploration of graduate work readiness in line with the emerging entrepreneurship education in Malaysia. Findings from this study show a contradictory expectation between the students and entrepreneurship education provided by the current higher learning institutions. The education process is inclined mechanistic and lacks entrepreneurial behavior. This survey calibrates the effectiveness of entrepreneurship education in nurturing and developing the student's competency using their entrepreneurship knowledge and skills in preparing themselves for working readiness (i.e., either employed or venturing into a business). In other words, entrepreneurship education needs to be improved and more engaged between in-class and practical experience.

In terms of skills and knowledge factors, this study contributes other related factors relating to matching failures and labor mobility. The characteristics of the graduate labor force still need to be improved in the sense of soft and technical skills. The skills are lacking because of the low integration of theories and practical implementation incorporated in entrepreneurship education. In addition, fewer communication skills among the students can lead to low confidence levels. Streamlining entrepreneurship education programs with

graduate competency, skills, and knowledge is essential to ensure rigorous monitoring of the graduates' work readiness.

This study also reveals that venturing into entrepreneurship education is crucial as it can benefit graduates and society. Given the technology and economic changes, entrepreneurship education could provide an agile, resilient, and innovative graduate for their employment prospect. Higher learning institutions and corporate organizations should recognize the benefits of entrepreneurship education by providing more effective entrepreneurship courses and programs in Malaysia. The entrepreneurship program delivered by the HLIs should focus on something other than class and exam-oriented, instead emphasizing the practical side of entrepreneurship that can demonstrate the student's competency, skills, and knowledge. This approach requires experts from diverse sectors and industries to collaborate with the HLIs for skills and experience. Thus, the current entrepreneurship education should concentrate on a broader scope rather than a narrow concentration on entrepreneurship theory.

Over and above, the study demonstrates a misalignment between student expectations and what is being provided by the HLIs in their entrepreneurship program. This study provides a crucial direction for education programs and student work readiness by integrating entrepreneurship's knowledge and skills to avoid wasting scarce resources, i.e., knowledge and human capital.

Limitations and Further Recommendations

The research does have, however, its limitations. Although the sample size was representative and aligned with previous quantitative research in the area, it is acknowledged that the number of respondents surveyed could have been more significant. Another limitation of the research is that the focus was on students at tertiary education providers. This was considered necessary given the gap in literature. However, arguably the survey could have been widened to include primary and secondary education providers, given that all learners do not necessarily progress to university. Surveying those learners who leave school to join the world of work could yield exciting insight into attitudes toward entrepreneurship and work readiness. Research into learners across education providers is one area of further research; another is to understand better the perspectives of stakeholders, namely, education providers, government, learners, and employers, to gain a more holistic perspective of graduate work readiness and address the graduate skills gap. A final area of further research would be to assess soft skills development, which is argued to be increasingly important in today's transformational labor market. Given that this research revealed the importance of skills development to prepare the graduate for employment, it would be interesting to include questions relating to the emotional and psychological aspects of work-related activity to contribute further to practitioner and theoretical literature.

Declaration of Competing Interest

The Author(s) declare(s) that there is no conflict of interest.

Data Availability (If any)

The data that has been used is confidential.

Acknowledgements (If any)

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