



**UPSKILLING AND RESKILLING STUDY FOR BETTER EMPLOYMENT  
OPPORTUNITIES AMONG YOUTH**



**KNOWLEDGE-ACTION-IMPACT**

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Institute For Youth Research Malaysia. (2021). *Upskilling and Reskilling Study for Better Employment Opportunities Among Youth*. Putrajaya: IYRES

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**Published in Malaysia by:**

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## **EXECUTIVE SUMMARY**

This study aims to investigate the skills gap brought about by IR 4.0 and the strategies needed in ensuring youth are equipped with the relevant skill sets and talent to face the future job market. With the rapidly changing economic environment, young job seekers need to be equipped with the appropriate and right skills that are relevant to the industries' demand. Evidence has shown that employability and skills mismatch are among the factors that contribute to youth unemployment. This problem has negatively impacted their economic wellbeing, therefore, registering the lowest dimension in the Malaysian Youth Index (IYRES 2019). The main objectives of this research consist of profiling existing youth in regard to TVET programs, identifying critical skills gap indicators, proposing best practices benchmarked from industrialized countries, coming up with action plans of reskilling and upskilling initiatives relating to IR4.0, and recommending suggestions for policy decision making by relevant regulatory bodies.

There is no standard definition of the youth age group agreed by all countries. The operational definition of the term youth for a country will depend on institutional, sociocultural, political, and economic aspects. However, for statistical reporting, many established agencies such as the United Nations and OECD have outlined that the youth age is between 15 and 24 years old. The youth age in most Western economies in this benchmark exercise, tends to be younger than the Asian counterpart.

The youth development index in the Western economies has performed well compared to the economies in the Asian region. Australia and Germany achieved an excellent indicator with the index of 0.838 and 0.894, respectively. Meanwhile, Malaysia's YDI shows an encouraging achievement in providing opportunities and initiatives for youth development with an index of 0.729. Overall, most high-income economies showed a better achievement in both HDI and YCI than the upper middle-income countries like Malaysia and China.

Most countries are struggling with the youth unemployment rate particularly due to the Covid-19 pandemic. For instance, the youth unemployment rate in 2020 had

increased compared to in 2019 in the UK, China, and Malaysia, particularly among people aged between 15 and 24 years old. Among the benchmarked countries, Germany and Singapore managed their youth unemployment rate better than other countries as both countries' rate was 5.3 percent and 8.35 percent, respectively. Meanwhile, Australia recorded the highest youth unemployment rate (14.2%) among the benchmarked countries in this study.

TVET education system is initially offered at secondary school level as early as lower secondary school. In China, for instance, TVET begins with primary vocational education offered at the lower secondary level. The primary vocational education will be taught in vocational middle schools and usually takes about two or three years. Upon completion of the primary vocational education, the graduates can proceed to secondary vocational education or start work in the industry. Meanwhile in Singapore, TVET education starts at upper secondary school. Students will undertake a 4-year technical course by taking between 5 and 7 subjects, including English, Mathematics, and Computer Applications as compulsory subjects. Upon completion of this course, graduates can advance their study at the post-secondary non-tertiary level at the Institute of Technical Education (ITE) for the duration of two or three years. Similarly, in Germany the students who want to further their study through the TVET pathway can choose either to take general and vocational education or vocational education and apprenticeships. The graduates may also have the opportunity to advance to the tertiary level at Technical Universities, Technical Universities of Applied Sciences, Comprehensive Universities or University of Applied Sciences.

Skills gap is common in any country, including in the developed countries. Although the UK's percentage of establishment with a skills gap had dropped from 14% in 2015 to 13% in 2017 and 2019., operational skills, which consisted of knowledge of products and services offered as well as knowledge of how the organization works were still the most lacking skills among the employees. Similarly, Australia data showed that 31% of applicants lack the technical skill or qualification to perform the job, which was the most common reason for recruitment difficulties in 2019. Most of the employees were lacking self-management skills, especially in terms of managing their own time and task prioritization as well as managing their own feelings or handling those of others. Instead of taking academic qualification as the main consideration, employers in

Singapore emphasized on the applicant's skills, work experience and attitude. Therefore, lack of specialised skills were the most common causes of vacancies that were hard to fill in PMETs job sector, followed by the lack of necessary work experience. Similarly, technical and computer skills are the main focus of Japanese employers. Germany, on the other hand, faces growing labour shortages both in high- and medium-skilled occupations despite a well-managed labour migration system to mitigate the shortage. Although labour migration system is very open for highly educated immigrants with a corresponding job offer, this is not the case for medium skills jobs as knowledge of the German language is essential.

Upskilling and reskilling are common practices in benchmarked countries. The Australian Department of Education, Skills, and Employment, for instance, offered various upskilling courses for apprentices or trainees, school leavers and employees above 45 years old, to assist them with skills needed to perform a job and explore their career pathways. In the United Kingdom, the government has introduced the Lifetime Skills Guarantee that enables all British citizens to acquire skills needed at every stage in their career paths, through blended lifelong learning. The Ministry of Finance in Singapore has introduced SGUnited Job and Skills Package (SGU JS) in May 2020 to support the workers affected by the COVID-19 outbreak. Meanwhile, dual vocational training is of vital importance to the success and competitiveness of German employees. It allows young people to obtain a practical and high-quality vocational qualification as the basis for further personal development and numerous career pathways, including self-employment.

Most of the funding for TVET education derives from the government budget, either at state and federal level or both. Students also contribute some percentage of tuition fees. In Australia, some students pay all their tuition fees without obtaining any financial assistance or subsidies from the government.

Both quantitative and qualitative research designs were utilised in this research. An online survey of youth aged between 15 and 40 was conducted using stratified sampling methods encompassing regional and youth groups in Peninsular Malaysia, Sabah, and Sarawak. The selection of respondents was stratified by taking into consideration regional and institutional (TVET training institutions) factors. In ensuring



that the online survey system operated smoothly, registered users were created in the system for tracking and monitoring purposes. To ensure only the intended target group were included in the survey, and to avoid multiple responses from similar persons, the link was only sent to the designated email which the respondents had given earlier in their consent form.

In response to the research questions raised, a structured self-administered questionnaire was used to collect data via an online platform from graduates trained at public TVET institutions under the purview of eight ministries. In reaching the potential respondents, the survey was assisted by a representative officer from the respective TVET institutions. Their role was to provide email addresses of graduates for the past five years. This was to ensure that the selected graduates had completed the TVET programme and are between the ages of 15 to 40. A total of 2195 TVET-trained youth responded to the survey request. However, after considering the missing items from their responses, the usable sample was reduced to 982.

Table 1 presents the demographic characteristics of the 982 respondents. Apparently, males have a higher representation in the sample than females. Majority are single and between the ages of 15 to 24. Respondents are well represented by all six regions, but Sabah has the lowest number. Given the fact that most TVET institutions offer certificate-level education, it is of no surprise that the overwhelming majority of respondents earned a certificate (SKM) credential ranging from level 1 to level 3. Another 11.5% respondents did not reveal their level of SKM.

Table 1: Respondents Profile

<b>Demographic profile</b>		<b>Percentage (n)</b>
Gender	Male	55.6 (546)
	Female	44.4 (436)
Age	15 - 24	64.9 (637)
	25 - 30	28.7 (282)
	31-40	6.4 (63)
Marital status	Single	85.6 (841)
	Ever married	14.4 (141)
Region	Northern (Perlis, Kedah, Penang and Perak)	17.1 (168)
	Central (Selangor, Kuala Lumpur, Negeri Sembilan)	17.3 (170)

	Southern (Melaka, Johor)	24.5 (241)
	Eastern (Pahang, Terengganu, Kelantan)	19.5 (191)
	Sabah	4.7 (46)
	Sarawak	16.8 (165)
	Overseas	0.1 (1)
TVET educational level	SKM/SKM1/SKM2	28.8 (283)
	SKM 3	27.1 (266)
	Diploma	36.9 (362)
	Advanced Diploma	3.7 (36)
	Degree	2.0 (20)
	Other	1.5 (15)
Ministries as TVET Providers	Kementerian Belia dan Sukan	15.5 (152)
	Kementerian Kerja Raya	7.8 (77)
	Kementerian Pendidikan	8.1 (80)
	Kementerian Sumber Manusia	9.1 (89)
	Kementerian Pertanian dan Industri Makanan	23.3 (229)
	Kementerian Pertahanan	0.5 (5)
	Kementerian Pengajian Tinggi	11.2 (110)
	Kementerian Pembangunan Luar Bandar	21.2 (208)
	Institut Latihan Kemahiran Swasta	3.3 (32)

The focus group discussions were also conducted with the regulatory agencies and employers. The initial session with ILMIA and key TVET regulatory agencies was done via physical meetings while, due to the Movement Control Order imposed nationwide, the remaining sessions were done via online meetings using Zoom. Similarly, focus group discussions with employers in the Central, Northern and Southern regions were conducted via Zoom except for employers in Sarawak, whereby meetings were face-to-face. The session with employers was in collaboration with the Social Security Organization (SOCSO) and to encourage participation from the industries, a series of talks on MYFutureJobs and Hiring Incentive by SOCSO were included in the itinerary.

The survey results revealed a high rate of employment among youth, with 60.4 percent of the 982 respondents surveyed being currently employed. The remaining 39.6 percent of youths are either not in the labour force or still searching for jobs. Delving deeper, employment distributions show regional variations, with a higher share of employment in Central, Northern, and Southern zones while in the East Coast, Sabah,

and Sarawak, youths reported a higher incidence of unemployment. This trend is found to be aligned with the trend in the 2019 labour force survey.

Job hierarchy distributions have also been identified as a source of concern. Dismally, only a small number of youths are occupying high skills jobs while most of the TVET-trained youth are working in semi-skilled occupations. Looking further into gender equality, female employment in high-skilled jobs is lower than that of male youth at the same level. For example, only three out of every ten high-skill jobs are held by females. Noticeably, males are more likely to work in non-service industries like manufacturing and construction, while females are more likely to work in service industries like retail, hospitality, and education.

The study shows that there is a lack of adequate skill matching and training needs among youth. Youth, regardless of their demographic backgrounds, have been confirmed to be lacking in preparation for challenging duties and potential employment. While youth are exposed to or have experienced a high pace of technological changes and advancements in their jobs or workplaces, TVET youth receive little on-the-job training, putting them at risk of lacking necessary skills to be future-proof workers. Interestingly, youths in the low-skilled category display higher skill matching than their peers in the high-skilled category. Although both male and female youth have a high percentage of skill matches, female youth are more likely to have lower skill matches due to the skills needed for the employment and their possessed skills.

According to the TVET survey, the majority of TVET graduates reported that their jobs require both technical and soft skills. The majority stated that their basic skills should be strengthened in all dimensions (technical, numeracy, literacy, computer, and English) in order to perform better in their jobs. Additionally, the youths indicated that in order to be ready for IR4.0 work environment, the majority of respondents (70-85 percent) stated that they would need to develop their core competency skills. Similarly, industry participants in the focus groups said that while TVET graduates had adequate technical skills, they lacked communication, complex problem-solving, and creative thinking skills, all of which are needed in a challenging workplace.

The issues regarding qualification matching have also been reported. More than half of those polled stated that their qualifications did not match the requirements of their jobs. In the over qualification group, the mismatch is seen in the TVET youth is greater at 45.5%. As a result, less than half (46.2%) of the respondents stated that their jobs matched their qualifications. While gender does not affect mismatch, a youth who graduated with a Diploma and higher is more likely to experience over qualification. Over qualification is also reported to be common in low and semi-skilled job categories. It appears that more young people in Sabah are working for wages that are lower than the qualifications that they hold (overqualified); at the other end of the scale, youths in the Eastern region are more likely to be employed in jobs that require lower credentials than their possessed qualifications (underqualified).

In terms of field of study, slightly more than half of the respondents (56.5%) considered their TVET specializations to be very relevant while just slightly above a quarter stated it was moderately relevant. These are mostly witnessed in those holding high-skills jobs. A small proportion of the respondents stated that their specialization is irrelevant to their jobs particularly those in the overqualified group. Non-services sectors tend to have youth with a greater relevancy of their specialization to their jobs. The study also found that industries such as manufacturing as well as Oil & Gas tend to have higher proportion of employees having TVET education compared to employees in the services and plantation sectors.

Another major finding of the study is the wage differential issues that occurs particularly in terms of gender disparity. A higher proportion of female youth reported a significantly lower income than male youth. As expected, those with matched qualification to their job reported higher income than those working in jobs that do not match with their qualification.

The study has put forward key recommendations that encompass the whole spectrum of TVET implementation in Malaysia. These include job creation and career development, upskilling and reskilling needs, rebranding of TVET focusing on quality and future potentials, establishment of integrated TVET labour market information through data warehouse as well as wage-enhancement initiatives.

The findings will assist the government to develop action plans of reskilling and upskilling initiatives targeted towards the youth talent pool geared with the IR 4.0 skill sets for better employment opportunities.