

**2nd International Conference on Logistics & Transportation 2023**  
Convention Hall, Universitas Andalas, Padang, Indonesia, 20 - 22 Nov 2023

Organised by: Research Nexus UiTM (ReNeU), Universiti Teknologi MARA

**Perception of Students and Alumni on Technical and Vocational (TVET) Program as a Skilled Workforce Scheme and Entrepreneurship**

Hasrul Hashom<sup>1\*</sup>, Ahmad Shabudin Ariffin<sup>2</sup>, Nainatul Farzuha Nor<sup>3</sup>

<sup>1</sup> Pusat Bahasa & Pengajian Umum, Universiti Islam Antarabangsa Tuanku Syed Sirajuddin, Perlis, Malaysia

<sup>2,3</sup> Fakulti Sains Pengurusan & Perniagaan, Universiti Islam Antarabangsa Tuanku Syed Sirajuddin, Perlis, Malaysia

hasrul@unisiraj.edu.my, shabudin@unisiraj.edu.my, farzuha@unisiraj.edu.my Tel:  
Tel: +6024777925

---

**Abstract**

Research has shown that TVET offers several advantages. It is crucial to evaluate TVET's curriculum and career perspectives to understand how to strategically and efficiently manage work-based learning. This study uses a qualitative method, such as in-depth interviews, to learn how respondents felt about TVET. As a result, the research confirms the strategic efficiency of a work-based learning style, as reflected in students' and alumni's perceptions of TVET as a potential skilled workforce and an entrepreneurship capability. The study reflects the latest position of the affected group in non-intensive industrial and medium-income states.

Keywords: TVET, career perception, academic perception

eISSN: 2398-4287 © 2025. The Authors. Published for AMER by e-International Publishing House, Ltd., UK. This is an open-access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer review under the responsibility of AMER (Association of Malaysian Environment-Behavior Researchers) DOI: <https://doi.org/10.21834/e-bpj.v10iSI41.7727>

---

**1.0 Introduction**

Technical and Vocational Education Training (TVET) often consists of general education, technological concepts, and practical skills specific to the multi-sector. It is an essential element that brings business and education together while producing future quality workers. Research has shown that TVET provides several perks. Akoojee and Hai (2018) agree that the effort helps the government achieve the nation's long-term goals. It encourages the social and economic development of our country. It also teaches students how to use the skills they have learned in the workplace. Despite efforts, it has been shown that today's students are less inclined to enrol in TVET, resulting in a shortage of TVET students below market demand (Aziz, 2019). Only a few of the significant factors that have been identified as having an impact on TVET's attractiveness include student interest, parental influence, negative social perception, negative employer perception, the government's current policy, higher education costs, inexperienced TVET instructors, and poor infrastructure in TVET institutions (Hong et al., 2021; Wong & Atan, 2021). Moreover, the percentage of TVET graduates who did not secure employment immediately after completing their studies also declined from 34.5% in 2010 to 12.4% in 2020. In fact, since 2012, this rate has been lower than that of non-TVET graduates (2020: 18.0%) (Hawati & Tan, 2023). Therefore, the study intended to explore and understand students' and alumni's perceptions of Technical and Vocational Education and Training (TVET) as a pathway for skilled workforce development and entrepreneurship, particularly in non-industrialised and medium-income states. This is important since studies on the impact of TVET on students' career paths are not widely examined (Grundall, K., & Mack, A., 2023). The objectives of the study include identifying how work-based learning and technology alignment in TVET contribute to the formation of a skilled workforce and assess the role of TVET as an alternative education pathway for students with a lower academic inclination but a strong skills orientation, especially in optimising skills to start a business.

eISSN: 2398-4287 © 2025. The Authors. Published for AMER by e-International Publishing House, Ltd., UK. This is an open-access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer review under the responsibility of AMER (Association of Malaysian Environment-Behavior Researchers) DOI: <https://doi.org/10.21834/e-bpj.v10iSI41.7727>

## 2.0 Literature Review

The inclination of action is influenced by social perception. While prevalent social perception held that TVET students were the ones with poor academic achievement, reality shows a double standard between academic and non-academic performance. Studies (Omar et al., 2020; Abdul-Aziz et al., 2020; Chan, 2018) revealed that, in many instances, negative social impressions led students to lose interest because they did not want to be perceived as having low academic success. Sadly, social perception will also influence how parents see their kids. Because students commonly regard their parents' advice and assistance when making decisions, parents' perceptions are important (Hussin et al., 2017; Koya, 2019). When employers disregard TVET qualifications because of unsavoury social behaviour, this is invariably the case (Cheong & Lee, 2016; Chan, 2018). When it comes to their children's academic success, parents are crucial. As the individuals who are closest to their children, parents, in a way, are responsible for their education. Listyaningrum et al. (2020) argue that parents' engagement is essential for helping a person succeed from a young age by fostering a supportive home environment, providing learning opportunities, and offering support. Parents also need to model positive behaviour for their kids, according to the authors. According to Rahman et al. (2021), children do better academically the more time parents devote to their education (about 2 hours per day). Latest research focuses on quantitative methods to assess the TVET framework's readiness and industrial benefits (Abdullah et al., 2021), while qualitative studies mainly examine pre-career paths and students' preparation for industry (Grundall, K., & Mack, A., 2023). Therefore, the study will support previous research by providing the latest findings on students' and alumni's perceptions of TVET programs regarding the industry skills benefits and their tendency towards entrepreneurship.

## 3.0 Methodology

This study employs a qualitative research approach, using semi-structured interviews, to explore students' and alumni's perceptions of TVET as a skilled workforce and an entrepreneurial pathway. A qualitative design is appropriate as perceptions, experiences, and attitudes are socially constructed and context-dependent, requiring in-depth exploration rather than numerical measurement. Semi-structured interviews allow flexibility while ensuring alignment with research objectives, enabling participants to articulate academic, emotional, and career-related experiences. Thematic analysis systematically identifies recurring patterns and meanings within the data, enhancing analytical rigour and credibility. The focus on purposively selected TVET students and alumni in non-industrialised regions strengthens the study's contextual relevance and contribution.

The study reviewed previous studies which focus on the effect of TVET's attractiveness on students' and alumni perceptions. The literature was strengthened by the survey method, which used an interview approach to frame questions based on perception factors, thereby shaping the interview procedures. The interview follows the guidelines provided by this question. These factors were based on how TVET students, instructors, and managers in Myanmar saw IR 4.0 (Tun, K. C., et al., 2021). The data collected by the researchers were based on the structured interview questions in Table 1, used in the interview protocol. Participants were asked to respond to the interview questions, and the researcher documented the interview data. Researchers use the semi-structured interview approach as a reference. Thematic analysis was used to examine the data in relation to the study's variables.

Table 1: Structured Interview Questions Used in the Interview Protocol

Category	No	Structured Questions in the Interview Protocol
Perception	1	Do you think TVET is important? Why do you think so?
	2	Do you think TVET will expand in Malaysia? How will it influence the expansions?
	3	Will the employment opportunities decrease without TVET? Why do you think so?
	4	Do the current TVET courses align with the requisite skills? Why do you think so?
	5	Will TVET create new job opportunities? Which industry do you think will create a new job opportunity?
	6	Can the students who complete their studies in TVET get a job after graduation?
	7	What is your interest in technology? (E.g. Big Data, IoT, 3d Printing, System Integrating, Artificial Intelligence). How do these technologies influence your interest?

## 4.0 Findings

TVET's presence offers a range of perspectives. In this finding, the study identifies two areas: views of academics and careers, which are connected to perceptions of TVET. Details of the findings are explained as follows:

### Theme 1: The Academic Perception

Four (4) sub-themes have been found beneath the academic viewpoint. It contains skill lessons, technology alignment with curriculum, academic opportunity and emotional stability. The first sub-theme was the skill lesson. The respondents stated that learning skills is the main reason for enrolling in a TVET institution. According to Respondent 2, one advantage of gaining skills is that finding employment is simple. As stated below by Respondent 2:

*"Luckily... it is easy to get a job, because he has the skills. Whether he wants to or not, he just has to go to work."* (R2)

In addition, developing learning skills may be enjoyable and valuable in other fields as a new career opportunity, according to Respondent 5:

R: *"In your opinion, is TVET very important?"*

R5: *"It is also important for us to know... these methods of cultivation, who knows, they might be useful later"*

R: "Which industry do you think will open up new career opportunities?"

R5: "Stars this one... tourism can be like a fruit orchard, people can visit it... Like in Perlis, it has a *Harus Manis* (type of local mango), the people are crazy about the sweet smell, and people keep coming in"

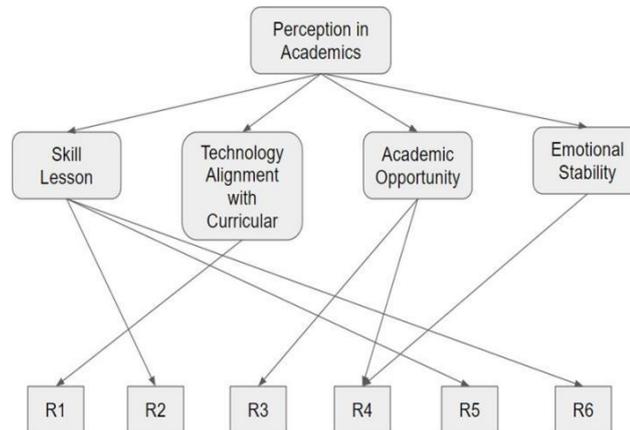


Figure 1: Perception of the Academic

Skills lessons may also be applied to entrepreneurship. Learning skills are vital for both working in the sector and being self-employed, according to Respondent 6:

"For me, skills are important... being able to do my own work" (R6)

The second sub-theme under perception in academics is technology alignment with the curriculum. According to Respondent 1, the technology provided in the TVET institution is aligned with the current technology in the industry, as stated below:

"It can be said that it is in line, because if it is like MARA (a government agency), it is an okay institution because its equipment can be said to be in line with current developments... the technology is there if it is a MARA institution." (R1)

The academic opportunity sub-theme is the third one. According to respondents, attending a TVET institution gives students who do not perform well academically a "second chance" to succeed. Respondents 3 and 4 make the following claims about academic opportunity:

"Yes.. It is for Malaysians who do not want to take the academic part; they can go towards skills. So that is also possible... sitting in U, many become unemployed. So these skilled kids, they already have the basics, because job opportunities are everywhere. It is just that they cannot get it by a long shot... positively, they have developed a lot because they see that... we Malays have a lot of people who have done it, compared to the Chinese who make air conditioners. Think about it, there are a lot of Malays, you can see it... take care of quality, neatness, be fast in doing work, be ethical..."(R3)

"It is okay, because sometimes these boys lack interest in studying, right... They are interested in skills. They cannot do it anymore... sometimes even if they are interested in learning, they will not work. These TVET students can do their own work" (R4)

The fourth sub-theme of the research is emotional stability. The responder claims that students might reduce their academic stress by learning skills in TVET institutes. This is because of the current academic environment, where students feel burdened.

According to Respondent 4:

"I feel like I will grow, because there is a lot of pressure with the boys at this school. I can already study. The pressure I can handle is like... if the Vocational College relaxes a little, he will not have much pressure. I relax a lot, no pressure.. he studies a little, a little, a little, .. he does not press it" (R4)

#### Theme 2: The Career Perception

Three sub-themes were found in this study: career opportunities, technology interest, and entrepreneurship. The first sub-theme is career opportunities, and the results show that all respondents agree that studying in TVET institutions provides career opportunities. Some respondents said that the skills they learned can be helpful not only for working in the industry.

"I think that 70% of them will get a job, because TVET has a wide range of job opportunities. Most of them go to factories, what else... Apart from going to factories, some open their own workshops... some do too, because everyone can get that skill, it is just a matter of level. They say 'professional straight away' or 'just okay, okay,' because if it is welding... It is the quality of the welding" (R1)

"You can. Whether you want to or not, because TVET has a wide range of job opportunities. You can do your own work, you can become an entrepreneur, because MARA encourages its students to become entrepreneurs" (R2)

"Most of them get jobs because after they have spent time practising, if they do their best at their job, they might be absorbed by the company... Most of them get jobs." (R3)

"Hmm, he has... everyone has a job. Some do it themselves, they know more, they have experience... some do it themselves... some work with others too" (R4)

"Yes, there is work... related to that. It is in Perlis near Paya, related to this too, these plants... take care of the trees. Bukit Temiang is there too, the farmers are there too, but...." (R5)

"For me, skills are important, because it is easy to get a job... more or less like that. I can do my own work." (R6)

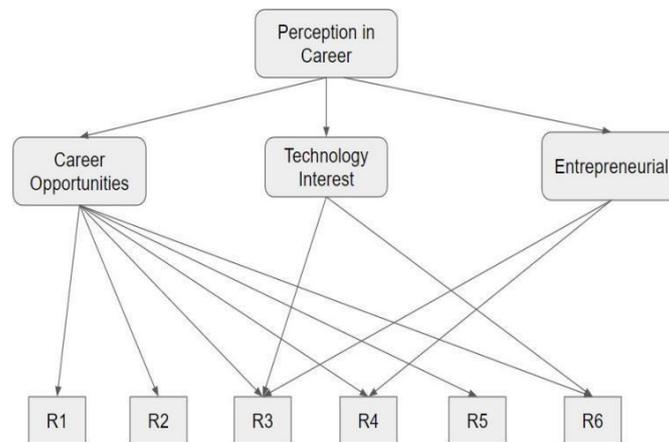


Figure 2: Perception of the Career

Technology interest is the second sub-theme. Respondents 2 and 6 expressed interest in the new technology regardless of the outcome. They claim that as technology advances, people may learn to use it to work with fewer people. "Developing because in terms of technology, it is getting more...what is it, following developments over time" (R2)

"Drones. Interest in new technology. So we can have fewer people talking about dependency on people, labour. If we used people before, another thing is that sometimes people are not feeling well, right? With this drone, we know that when we use it, we also want to plot it on the map, right? Then it will be all over, we can plot, plot, plot, right? Then it will auto... we plot it, then it will follow. We can do it manually or automatically, and we can also look at the plots. Sometimes the plots are not the same; for example, at the edge of the forest, we have to control it too. Otherwise, it will not detect it because there are three branches." (R6)

The third sub-theme identified in this study is entrepreneurial. In accordance with the outcome, persons who received degrees from TVET institutions can also work as freelancers. From the viewpoint of Respondent 3, the majority of TVET students are thriving business owners. According to Respondent 3:

"It is important because we, as people who have just finished school, do not know where to go with TVET, who are not interested... but some of them are forced to, some do not want to, but what we see is that because of TVET, some are successful, most of them are successful... becoming entrepreneurs, air conditioner entrepreneurs." (R3)

Respondent 4 said that people who are no longer interested in academics might enrol in a TVET program to pick up skills. In addition, they can start their own business.

"It is okay, because sometimes these boys are not interested in studying, right... They are interested in skills. They do not care. sometimes even if they are interested in learning, they do not work.. studying TVET can do their own work". (R4)

## 5.0 Discussion

When updating curricula, pedagogy, learning materials, and evaluations at TVET institutions, the need for e-learning should be taken into account. TVET colleges should be ready to develop thorough, well-structured lesson plans before loading their Learning Management Systems (LMS) with the appropriate data to promote student learning. According to Krishnan (2020), TVET institutions may successfully use online learning by creating courses with a 70% practical and 30% theoretical content split. Additionally, e-learning gives skill-training organisations the flexibility to adapt to student assessment by external evaluators. Because of this, the providers need to discuss evaluation and accreditation procedures that can adapt to the new normal situation without jeopardising policies

and procedures (Majumdar & Araiztegui, 2020). It is critical to ensure they have access to the internet and to encourage students' participation in e-learning through active involvement by TVET institutions (Hassan et al., 2020). As a result, student dropout rates will decrease, and online learning will benefit students more. In addition, TVET institutions might open new opportunities to focus on staff development, learning science, and the development of digital infrastructure for digital pedagogy.

Instructors can provide engaging teaching and learning (T&L), such as collaborative learning, to foster students' interest and learning skills (Abd. Talib et al., 2017), which benefits them after graduation. This strategy, namely in education, helps students to successfully convey and advance their knowledge in a public setting (Baćzek et al., 2020). Online discussion can enhance collaborative group work when utilised in conjunction with problem-based learning (PBL). Incorporating PBL into TVET instruction helps students learn actively, ask questions, and engage in in-depth study at their own discretion (Okolie et al., 2020). Minimising interruptions in online learning, TVET institutions should also provide high-quality web-based tools or free learning platforms. In Malaysia, an online platform such as Google Classroom is utilised as the primary medium for teaching and communicating with students because accessing TVET resources online can be challenging (Abdul Razak et al., 2022). It is recommended that TVET institutions establish their own e-campus to host and manage online education for instructors and learners. Technical assistance should be integrated with professional assistance in TVET programs to maximise the use of instructional technologies. Sufficient competencies for instructors/teachers are crucial, as they are needed to improve their technology and ICT abilities for online learning and to strengthen a variety of programs, including Information and Communication Technology (ICT) courses (Amran & Yahya, 2020).

## 6.0 Conclusion and Recommendation

Numerous studies have investigated why students select TVET in various national contexts. To determine the factors to be investigated across various study disciplines, some academics employed a variety of tools, processes, and methodologies. Numerous studies, however, have examined the relationships among students' knowledge, interest, and motivation in the TVET sector and the use of informative strategies. Engaging in instructional methodologies that emphasise tasks and activities related to the workplace is one of the key objectives for TVET students. TVET students are more likely to be visual learners who prefer learning through visuals, flowcharts, diagrams, and demonstrations to understand the learning topic better.

This study contributes to the field of Technical and Vocational Education and Training (TVET) by offering contextual insights into students' and alums's perceptions of TVET as a skilled workforce and entrepreneurial pathway, particularly in non-industrialised and medium-income regions. The findings highlight the value of TVET in enhancing employability, emotional stability, and alternative academic progression, while addressing persistent negative social perceptions. The study provides practical implications for policymakers and educators in strengthening curriculum alignment, work-based learning, and industry relevance. Future research should adopt mixed-methods or longitudinal designs to link perceptions with measurable outcomes and include broader stakeholders such as employers and parents. Further improvements may focus on digital readiness, technology integration, and Industry 4.0 responsiveness. This study is limited by its qualitative design and small purposive sample, which restricts generalisability. Findings rely on self-reported perceptions, which may be biased. Excluding employers and parents limits stakeholder perspectives, whereas the cross-sectional approach fails to capture changes in outcomes over time.

## Acknowledgement

The study was sponsored by Faizzudin's Centre of Education Excellence (FCoEE).

## Paper Contribution to Related Field of Study

The contribution of this paper is in the field of technical and vocational education and training.

## References

- Abdullah, N. H. L., Husin, S. N. M., Paimin, A. N., Mohamed, M., & Mahat, H. (2021). Inmates' perceptions of the effectiveness of technical and vocational training (TVET) and entrepreneurship training program. *Journal of Technical Education and Training*, 13(1), 112-118.
- Abdul Aziz, S. N. B., Zulkifli, N., Mat Nashir, I., & Abdul Karim, N. A.-H. B. (2019). Pull and Push Factors of Students' Enrolment in the TVET Programme at Community College in Malaysia. *Journal of Technical Education and Training*, 12(1). Retrieved from <https://publisher.uthm.edu.my/ojs/index.php/JTET/article/view/4374>
- Abdul-Aziz, S. N., Zulkifli, N., Nashir, I. M., & Karim, N. A. H. A. (2020). Pull and push factors of students' enrolment in the TVET programme at community colleges in Malaysia. *Journal of Technical Education and Training*, 12(1), 68-75. <https://doi.org/10.30880/jtet.2020.12.01.007>
- Abdul Razak, A.N., Noordin, M.K., & Abdul Khanan, M.F. (2022). Digital Learning in Technical and Vocational Education and Training (TVET) in Public University, Malaysia. *Journal of Technical Education and Training*, 14(3), 49 – 59
- Akojje, S., & Hai, T. (2018) Rapid assessment of the technical and vocational education and training (TVET) sector in South Sudan. South Sudan
- Amran, M., & Yahya, M. Z. (2020). Faktor Dan Persepsi Yang Mempengaruhi Penggunaan Teknologi dalam pendidikan di kalangan pensyarah kolej komuniti. *International Journal of Technology Management and Information System*, 2, 72-80.
- Baćzek, M., Zagańczyk-Baćzek, M., Szpringer, M., Jaroszyński, A., & Wozakowska-Kaplon, B. (2021). Students' perception of online learning during the COVID-19 pandemic: a survey study of Polish medical students. *Medicine*, 100(7), 1-6. <https://doi.org/10.1097/MD.00000000000024821>
- Chan, Y. S. (2018). We need to change perception of TVET. *The Star Online*

- Cheong, K.-C., & Lee, K.-H. (2016). Malaysia's education crisis – Can TVET help? *Malaysian Journal of Economic Studies*, 53(1), 115–134. <https://doi.org/10.1787/888933003668>
- Grundall, K., & Mack, A. (2023). Influencing Students' Technical Vocational Education and Training Career Path:: A Qualitative Research. *Caribbean Journal of Multidisciplinary Studies*, 2(1), 165-198.
- Hassan, W. A. S. W., Ariffin, A., Ahmad, F., Sharberi, S. N. M, Nor Azizi, M. L., & Zulkiflee, S.N. (2020). COVID-19 Pandemic: Langkawi Vocational College Student Challenge in Using Google Classroom for Teaching and Learning (T & L). *International Journal of Advanced Trends in Computer Science and Engineering*, 9, 3299- 3305. <https://doi.org/10.30534/ijatcse/2020/127932020>
- Hawati Abdul Hamid dan Tan Mei Yi. 2023. "Unlocking the Earning Potential of TVET Graduates." *Khazanah Research Institute*. 2023. [https://www.krinstitute.org/Working\\_Paper-@-Unlocking\\_the\\_Earning\\_Potential\\_of\\_TVET\\_Graduates.aspx](https://www.krinstitute.org/Working_Paper-@-Unlocking_the_Earning_Potential_of_TVET_Graduates.aspx).
- Hong, Chia Ming & Chi'ng, Chee Keong & Roslan, Teh Raihana Nazirah. (2021). Technical and Vocational Education and Training: Malaysia's Current Scenario and Barriers.
- Hussin, A., Mohamad, M., Hassan, R., & Omar, A. J. (2017). Technical vocational education training branding from perspective of stakeholder (Parent) in Malaysia. *Advanced Science Letters*, 23(2), 1216–1219. <https://doi.org/10.1166/asl.2017.7543>
- Kannan, H. K. (2019, September 26). TVET to have coordinating body. *New Straits Times*. Retrieved from <https://www.nst.com.my/news/nation/2019/09/524847/tvet- have- coordinating-body>
- Koya, Z. (2019). TVET courses are not for those who are academically weak, Kula tells parents. *The Star Online*.
- Krishnan, D. B. (2020, November 8). TVET Plan a Success. *New Straits Times*. <https://www.nst.com.my/news/nation/2020/11/639271/tvet-plan-success>
- Listyaningrum, R. A., Widyaswari, M., Sari, N. N., & Yuniar, D. P. (2020). Analysis of the needs of parents in mentoring early childhood during learning from home. *2nd Early Childhood and Primary Childhood Education*, 223–229. <https://doi.org/10.2991/assehr.k.201112.039>
- Majumdar, S., & Araiztegui, I. (2020). Technical Vocational Education & Training: Reflections on the Issues Facing TVET and Its Potential in the Time of COVID-19 (pp. 9 22). *Colombo Plan Staff College (CPSC)*. <https://pub.cpsctech.org/steps04/>
- Okolie, U. C., Elom, E. N., Igwe, P. A., Binuomote, M. O., Nwajiuba, C. A., & Igu, N. C. N. (2021). Improving graduate outcomes . Higher Education, Skills and Work- Based Learning, 11(1), 92–110. <https://doi.org/10.1108/HESWBL-12-2018-0140>
- Omar, M. K., Rauf, M. A., Ismail, N., Rashid, A. M., Puad, H. M., & Zakaria, A. (2020). Factors on deciding TVET for first choice educational journey among pre- secondary school student. *European Journal of Molecular & Clinical Medicine*, 7(3), 609–627.
- Rahman, M. M., Rashid, M., & Khan, M. S. (2021). Parents' Involvement in Children's Education: A Study on Kachua Upazila of Bagerhat, Bangladesh. *Journal of Media and Communication Studies*, 1(1), 86–101.
- Rajaendram R. "New Higher Education DG aims to strengthen sector," *The Star*, viewed 7 May 2020 [https://www.thestar.com.my/news/nation/2020/05/06/new-higher- education-dg-aims-to-strengthen-sector#cxrecs\\_s](https://www.thestar.com.my/news/nation/2020/05/06/new-higher- education-dg-aims-to-strengthen-sector#cxrecs_s)