

TALENT MANAGEMENT AMONGST GRADUATES: SURVEY INSTRUMENT DEVELOPMENT

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ABSTRACT

Job creation is critical to the economic well-being and has become an urgent national priority. Such issue thus creates a need for further investigation to address the severe unemployment problems among graduates. The main objective of this study is to construct a TM instrument as job creators. Results from previous studies and interviews with seven experts showed that the need for TVET graduates to strengthen their talent management as job creators leads to nine main elements, namely (i) Job Adaptation Ability, (ii) Technological Ability, (iii) Team Skills, (iv) Lifelong Learning, (v) Communication Skills, (vi) Innovative Thinking, (vii) Leadership, (viii) Entrepreneurial Thinking, and (ix) Ethical and Professional Values. This study used the Modified Delphi technique to obtain experts' agreement on the Talent Management elements and items developed based on the findings from previous studies and interviews. Their areas of expertise include career development, TVET, and industry management. The research instrument in this study was a questionnaire containing 117 items under the nine elements of TM. This study also provided an example on how to obtain the interquartile range (JAK) values via the Modified Delphi technique that was performed in the second round until agreement was reached. Based on the instrument constructed, a pilot study was conducted involving 32 respondents consisting of TVET students. The analysis showed Cronbach's Alpha values exceeding 0.80, subsequently proving that the constructed set of items is acceptable. This study can help graduates to identify the specific career fields that they wish to explore, encourage participation in trainings that can enhance their talents, and in turn helps to prepare themselves in becoming job creators.

Keywords: Talent Management, Job Creator, Graduates, TVET, Modified Delphi Technique, Interquartile Range

INTRODUCTION

The Covid-19 pandemic has had a major impact on the world's economic crisis. What began as a global health crisis has turned into a global economic crisis that imposes significant threat to the health, employment, and income of millions of people around the world (Ocheni, Ogaboh Agba, Agba & Eteng, 2020). The stringent preventive measures imposed by many countries in the first half of 2020 to alleviate its contagion have had a major impact on most economic and social activities. The reduction of workers in various employment sectors has urged the affected individuals to create their own careers in order to control the impact of household income (Aucejo, French, Ugalde Araya, & Zafar, 2020). Job creation is critical to economic well-being and has become an urgent national priority following the financial crisis resulting from the recent pandemic. It often starts from the existing talents possessed by each

individual. One of the fields associated with job creation is entrepreneurship. Entrepreneurs are believed to have the potential to generate the national economic growth by acting as job creators (Afshan, Shahid, & Tunio, 2021). Therefore, job creation is seen as the best mechanism to reduce unemployment among youths in Malaysia, especially involving the Technical and Vocational Education and Training (TVET) graduates in higher education institutions (HEIs).

The main objective of the TVET program is to provide skills and practical knowledge within a particular field of employment. TVET promotes the acquisition, maintenance, and further development of abilities, skills, and attitudes in enabling individuals to engage in income-generating and non-dependent employment while benefiting from increased opportunities for social participation (Paryono, 2017). The acquisition of skills is crucial for an economy to compete and grow, especially during the era of economic integration, transformation, and technological change. One of the important features of TVET is its job orientation along with a curriculum that emphasises on the acquisition of usable skills (Yunos, Sern, & Hamdan, 2019). The TVET delivery system also trains its graduates to become skilled workforce and entrepreneurs with the capability to create jobs in the future (Ismail, Adnan, Masek, Hassan, Hashim, & Ismail, 2019). Thus, TVET graduates are indirectly empowered to proactively shape their lives and work situations.

Malaysia's plan to achieve the Fourth Industrial Revolution (IR4.0) is important not only for the expansion of the industrial sector but also for the career field. Talent refers to an individual's ability to make significant difference to a company's performance and achievements now and in the future (Younas & Bari, 2020). Talent management (TM) is an important element to improve the abilities of an individual as it positively impacted any organisations that act as an employer (Aina & Atan, 2020). One of the factors that sets organisational development in a good direction is to have talented employees, subsequently maximising work performance. This is because TM acts as an effort to attract, retain, motivate, and develop the talents needed by an organisation to ensure its efficient and competitive operation in order to create a long-term success (Johennesse & Chou, 2017). Furthermore, the success of an organisation is dependent on employees who are talented and responsible for the tasks assigned (Aina & Atan, 2020).

Nevertheless, the IR4.0 transition gives job creators the responsibility for their learning and career development needs. Therefore, it is essential for job creators to be smart in managing existing talents in order to better achieve the organisational objectives and success (Veteška, & Kursch, 2018). Therefore, good talent management among TVET graduates can help them determine the qualifications and suitability as a job creator in their respective career field before planning the training needs that can to strengthen their enterprises.

The Differentiated Model of Giftedness and Talent (DMGT)

This research has adopted the Differentiated Model of Giftedness and Talent (DMGT) as a guide as well as interpersonal measures as the main construct to identify the elements of talent management among TVET graduates to pursue their careers. The DMGT model comprises Giftedness (G) which indicates untrained innate ownership and ability with at least one domain of ability, and Talent (T) that is specific to a respective field of employment (Gagné, 2004). There are also three main catalysts that help or hinder such process, namely (i) interpersonal catalysts (I), (ii) environmental catalysts (E), and (iii) opportunity (C).

The level of mastery that prompts a person to gain giftedness is within the range of 10% and above. Meanwhile, talent refers to an extraordinary mastery of abilities (skills) that are systematically developed in at least one area of human activity where a talented individual is defined as those mastering at least 10% skills in a particular field. Furthermore, it is believed that interpersonal is the most important catalyst in the DMGT model. It refers to the important skills involved in dealing and relating to others, or better known as soft skills. Interpersonal also

includes several other fractions of skills that need to be mastered and developed namely in communication, leadership, critical thinking and problem solving, teamwork, information management, ethics and professionalism, as well as entrepreneurship. In addition, previous studies have shown that 91% of employers in various fields agree that the most important talent seen in an employee is interpersonal skills (soft skills) (Lippman, Ryberg, Carney, & Moore, 2015).

Problem Statement

The issue of unemployment among graduates has received a major attention from the Ministry of Higher Education (MoHE), parents, and graduates. Statistics released by the MoHE through the 2019 Graduate Tracking Survey show that 74.9% out of 14,859 graduates of Public Institutes of Higher Learning (IPTA) are still looking for jobs and such percentage also implies to TVET graduates from Community Colleges, Vocational Colleges, and the Institute of Training and Skills (MoHE, 2019). MoHE further reported that 23% of graduates failed to secure a job within 6 months after graduating while 15% from 57% working graduates are in part-time positions. Moreover, the recent outbreak of the Covid-19 pandemic has imposed adverse implications for job marketability among graduates (Ismail, Chik, & Hemdi, 2021). This is because, in addition to the health sector, the global economic sector has also been affected by the pandemic. 70% of universities in Malaysia believe they have prepared students for employment; however, employers continue to state the difficulty of finding suitable employees to meet their organisational needs (Hossain, Yagamaran, Afrin, Limon, Nasiruzzaman, & Karim, 2018).

Core job skills or soft skills are highly important and can be cultivated through involvement in social activities at higher learning institutions. The difficulty faced by TVET graduates to place themselves in careers is often due to their lack of exposure towards the importance of soft skills at the institutional level (Hossain, Yagamaran, Afrin, Limon, Nasiruzzaman, & Karim, 2018). However, it raises a question whether the soft skills elements developed are sufficient or whether there is a need to add new elements according to the suitability and current changes. This posits the need to further explore such gap and subsequently addresses the unemployment issue among graduates.

The main objective of this research is to build an instrument on the needs of the TM aspects as future job creators. The Modified Delphi technique was used to perform validation and instrument construction with experts at each round of the questionnaire in order to obtain items with high agreement among the experts. The developed instrument was then distributed among TVET students in order to determine its reliability.

LITERATURE REVIEW

Although TVET has been propounded as an important construct in the global world, the question whether graduates' mastery of skills is sufficient in preparing them for the working world is still open for discussion. The core skills for employability are essential for job placement as well as in improving individuals' ability to create jobs, retain their employment, and move flexibly across the labour market over a lifetime. Results from previous studies and interviews with seven experts have showed the need for TVET graduates to strengthen their talent management as job creators pertaining to nine main elements, namely (i) Job Adaptation Ability, (ii) Technological Ability, (iii) Teamwork, (iv) Lifelong Learning, (v) Communication Skills, (vi) Innovative Thinking, (vii) Leadership, (viii) Entrepreneurial Thinking, and (ix) Ethical and Professional Values.

Career adjustment skills are conceptualised as one's readiness to face the tasks entrusted to them. As job creators, career adjustment skills are likely to influence the way individuals

view their ability to plan and adapt (Schrita, & Mohamad, 2017). In addition, job adaptability can help job creators or entrepreneurs in adapting to changes in career plans when faced with unforeseen events such as the Covid-19 pandemic. Past studies showed that graduates with job readiness are not only well-mastered in TVET skills but also better prepared to manage, plan, perform tasks, and control employment issues in their respective organisations (Tien & Wang, 2017). Graduates with high job adaptation are also able to identify and realise good career opportunities while demonstrating a high level of career professionalism (Monteiro, Taveira, & Almeida, 2019). In conclusion, early awareness of career readiness helps graduates to accept the transition from the university life to career, subsequently activating their career adaptation resources.

Generally, technological capability is a set of knowledge that integrates both theoretical and practical methods with the knowledge describing technical assets that are closely related to certain types of technology. Technological capability is defined as one's ability to manage and operate their capabilities in skills, expertise, and knowledge to produce new technologies, processes, and goods (Gewe, Abebe, Azene, & Bayu, 2016). Graduates should be aware about the needs and relate their technological capabilities in order to meet future needs of the organisations, whether it is process technology, design technology, and information technology (Ohei, Brink, & Abiodun, 2019). The ability of graduates to master technology in line with technological developments in facing the IR4.0 can affect organisational management, career performance, and productivity at a high level (Sima, Gheorghe, Subić, & Nancu, 2020). Therefore, technological capability can be best described as one's ability in striving to acquire complete technological knowledge according to the organisational needs in line with the development in their respective field and economy.

From the context of teamwork, entrepreneurs should manage their employees wisely in order for them to jointly develop the organisation. This is because team leaders are the key persons who can instil strengths and significant influence to other team members (Brock, McAlaine, Ma, & Sen, 2017). Some graduates may be highly adept in the monitoring or evaluating progress while others can be good team pushers, yet the wisdom of planning and implementing signifies their dependency on one another in order to become excellent in contributing new ideas (Khawam, Didona, & Hernández, 2017). The training process and part-time employment are among the excellent platforms to develop teamwork skills among graduates as part of the preparations for them to start their own businesses (Ahmad & Manzoor, 2017). This demonstrates that students' involvement with group activities at their respective HEIs clearly serves as a preparation for graduates to create teamwork skills at the workplace.

Meanwhile, lifelong learning serves as a possible solution to the question of workplace and work productivity. Acquiring and mastering skills that are appropriate to one's job roles is crucial, yet today's evolving work environment requires employees to constantly improve their developmental knowledge in order to maintain a competitive advantage (Alt, & Reichel, 2018). While the future of employment is unpredictable and causes uncertainty about what skills to acquire, a good place to start is by exploring any training and skills development opportunities in tandem with the policies announced by the government (Yusup & Saepudin, 2017). Graduates need to wisely deal with a large amount of information through technology to show their motivation in learning and managing information throughout life (Hairani, 2018). Their commitment and sensitivity to the development of new knowledge and technology is aligned with the government's commitment to foster lifelong learning in the community.

Communication skills have been regarded as one of the essential soft skills that should be acquired in the competitive 21st century. Effective communication is considered as an important skill for students and graduates (Patacsil & Tablatin, 2017). Having good communication enables employers to work together and produce effective solutions to problems and challenges faced (Charoensap-Kelly, Broussard, Lindsly, & Troy, 2016). Workplace communication is not limited to how well employers and employees work but also revolves

about building relationships, minimising mistakes, and most importantly encouraging working to be as productively as possible (Bucăța & Rizescu, 2017). Thus, employers must be able to provide employees with clear and concise explanation about the organisational goals as well as every detail related to specific tasks (OECD, 2016). In fact, leaders must master all forms of communication, including one-on-one conversations, departments, and full staff, as well as communication via telephone, email, video, chat, and social media. Therefore, having good communication skills is an important step towards basic business practices for a committed and productive workforce.

Furthermore, the ability to creatively and critically evaluate a solution is also known as innovative thinking. It also refers to solving any problems and subjects that are within the reach of one's experience, research knowledge, and logical reasoning (Rodzalan & Saat, 2015). Creativity at the workplace is a "must have" as the majority of organisations nowadays are operating in a highly competitive global environment, thus making creativity an important construct to have (Pearl, Rayner, Larson, & Orlando, 2019). Nevertheless, graduates might be wondering about the elements that are associated with creativity for a business or organisation. Such creative and critical thinking is what keeps a business thriving with fresh innovations and new ideas, along with streamlined efficiency and productivity (Rodzalan & Saat, 2015). Thus, the application of innovative thinking will enable employers to obtain more meaningful results to generate productivity within their organisations.

Another element associated with the talent management among job creators is leadership skills. In this regard, a good leader is someone who empowers, motivates, and inspires other employees. It is necessary for a leader to have the skills, abilities, and influence in making others to move forward, make decisions, and do things that they would never normally do (Surji, 2017). Furthermore, employers with effective leadership qualities have the ability to communicate well, motivate their teams, address and delegate responsibilities, listen to feedback, and have the flexibility to solve problems in an ever-changing workplace (Luthra & Dahiya, 2015). In fact, it is also necessary for a leader to know how to control conflicts among employees while completing tasks so that the employees continue to focus on improving organisational performance and productivity (Patton, 2020). It is also suggested that an employer or leader should make employees feel comfortable during discussions related to specific assignments or personal issues (Hannis Ansah, Osei, Sorooshian, & Aikhuele, 2018). Therefore, it is important for an employer to show integrity between employer-employee because employees need to be confident with their leadership and the direction that they are leading.

Meanwhile, entrepreneurship thinking should never be limited to purely business focused, instead it should provide key competencies for both life and employment that can be developed and practiced by students through the TVET curriculum. Entrepreneurial thinking and skills serve as a key asset for TVET graduates who plan to contribute towards job creation, which is expected to create new businesses or build new products (Pimpa, 2019). Field differences in the market or job losses encourage graduates to re-evaluate their careers to make learning in TVET as entrepreneurs. Yet, entrepreneurial thinking must go hand in hand in exploring usable resources and developing the skills needed for organisational success (Morehouse & James, 2019). Furthermore, such entrepreneurial thinking also has a creative, innovative, and daring approach in taking risks that would be avoided by the average person (Rozaan & Zibarzani, 2018). The current economic policy also encourages employees to have an entrepreneurial mindset for them to be able to plan and market the products or services produced by the organisations. Therefore, entrepreneurial behaviour is important which encompasses traditional skills and efforts in mobilising organisational activities as well as providing opportunities and readiness towards a career.

The final element is ethical and professional values that involve the graduates' tendency to apply the principles of ethics and professional ethics such as societal, cultural, and

environmental awareness. Moral and professional ethical skills are specifically related to the ability of understanding the impact of ethical principles on the economy, environment, and socio-culture, as well as the ability to make ethical decisions (Ngang & Chan, 2015). Employees with excellent work ethics and culture as well as high productivity can benefit the industrial sector and the country's competitiveness in the international arena, rather than merely memorising facts and figures (Durkheim, Brookfield, & Turner, 2018). Furthermore, it is important for employers to have the moral responsibility of looking after the employees' welfare. This is not limited to fair wages and good working conditions but also involves the provision of a real and lasting concern for the well-being of the workers (Thierry, 2018). For the benefit of the organisations and colleagues, employers should make dominant judgments, be ethical with the willingness to make decisions, and implement policies in a way that demonstrates genuine concern even when there are liabilities that affect profits (Valentine & Godkin, 2016). Therefore, aspects like ethical, moral, and professional skills are highly important in implementing the hands-on components as well as in collaborating with others from different socio-cultural backgrounds.

RESEARCH METHODOLOGY

This study employed the modified Delphi technique to obtain experts' agreement on the elements and items of the talent management survey instrument that was developed based on the findings of previous studies and expert interviews in this study. A total of seven experts who were career management professionals from different industries, including lecturers from Malaysian higher educational institutions were recruited for this study as respondents. Their areas of expertise included career development, technical and vocational education (TVE), and industry management. The instrument used in this study was a questionnaire comprising 117 items categorised under the nine elements of TM.

The process of implementing the modified Delphi technique began with the researchers determining the elements to be investigated in this study after perusing the findings of past research. The researchers then selected a group of experts who gave consent to be interviewed and contributed their experience through the expression of their ideas, notions, and criticisms in improving the elements and items of the questionnaire. These experts were notified in advance to confirm their participation in several phases of the interviews until a mutual consensus on the instrument items was established. Upon the receipt of their consent, an appointment letter was issued via email to every expert. A total of three rounds of interviews were administered to all experts.

During the first round, all experts were interviewed to provide their verbal agreement on the proposal of the new elements. The second round followed this wherein the researchers issued a selected number of items based on the interview results of the first round to the experts, and inquired the experts again on the levels of their agreement towards each item on a 5-point Likert scale from strongly agree, agree, disagree, disagree, and to strongly disagree. Several open-ended questions that served as an opportunity for the experts to provide their views on each item were also included and the interview also allowed the experts to add any suitable items to the elements. Collected data were then translated into quartile numbers and analysed by using Microsoft Excel. All comments and suggestions provided by the experts were taken into consideration to improve the items.

The data collection and analysis processes were continued in the third round of interviews. All experts were asked to re-validate every item in the instrument as per their consideration and point of view during the second round. The third round was conducted to establish a significant level of agreement on the items amongst the experts.

After constructing the survey instrument, the researchers then conducted a pilot study amongst TVE students to determine the suitability and comprehension levels of the items for

respondents. A pilot study is a common method employed to assess the reliability and determine the levels of completeness of questionnaire items before conducting an actual study (Md Ghazali, 2016). The reliability of this study's questionnaire was determined through the Cronbach's alpha reliability value, which was an internal estimate for each variable that served as a level of indicator for each variable to be well related (Taber, 2018). There was a total of 32 questionnaires answered by the students.

RESEARCH FINDINGS

There are several important aspects in the analysis that applies the modified Delphi technique, namely the communication process, a group of experts, essential feedback and the interquartile range (IQR). It is used to generate a modified scale by translating linguistic variables to modified numbers. The agreement levels for the modified scale are within the ranges of 0 to 1.00, 1.01 to 1.99, and 2.00 and above. IQR ranging between 0 to 1.99 indicates the establishment of an agreement between experts while the value of IQR ranging 2.00 and above indicates the absence of such agreement, and the items should be dropped. In the second round of expert interviews, the data obtained were analysed through Microsoft Excel for a better process of tabulation before being converted into IQR format. Table 1 shows the levels of agreement on the three-point modified scale. It also illustrates the lower the range, the higher the consensus on the data obtained. To establish experts' agreement, the IQR value of every item should not exceed 2.0.

Level of Agreement	Modified Scale	Result
High agreement	0 to 1.00	Item accepted
Moderate agreement	1.01 to 1.99	Item accepted
No agreement	2.00 and above	Item rejected

Below are several steps of analysis conducted to verify the items for each construct. An example of IQR value analysis can be witnessed for the construct of career adaptability and technological capability. Following (Subri, Che Rus, Mustapha, Hanapi, 2020), the calculation of IQR value is based on the IQR formula as displayed in Table 2.

Steps to identify the IQR values:
1. Order of expert agreement scale ranges from small to large values for each item.
2. Use the formula in Microsoft Excel to determine the values of Quartile 1 (Q1) and Quartile 3 (Q3).
3. IQR values = $Q3 - Q1$

Table 3 demonstrates the eleven items developed for the construct of career adaptability before being distributed to the experts for their review. The IQR values of the experts' agreement for the construct items were determined during the second and third rounds of interviews, and all items were maintained in the list as shown in Table 3. This was because the IQR values for all the items were within the range of 0 to 1.99. As recommended by (Satibi, Rokhman, Aditama, 2019), IQR values between 0 to 1.99 indicated a moderate-to-high agreement amongst the experts on the items.

Items	Round 2	Round 3
I am a person who:		

AP1	always thinks about my future.	0.5	0.5
AP2	is confident with my ability to learn about my career field and show excellent performance in the career that I choose.	0.8	0.5
AP3	can defend my ideas and be confident with myself.	1.1	0.9
AP4	is a risk-taker and often try something new.	1.3	1.1
AP5	is curious, loves to meet new people, experiences new things and situations.	1.1	1.1
AP6	looks at various aspects of my dream career from different points of view.	1.0	1.0
AP7	thinks that I should continue to study and follow career development in the future.	1.5	0.5
AP8	is ready to face future career challenges.	0.9	0.8
AP9	loves to read and improve my knowledge and preparation for a career.	1.3	1.1
AP10	tries to plan for my future career.	1,5	0.5
AP11	thinks that the things I do now will determine my future.	1.0	0.5

Table 4 displays the twelve items of the technological capability element before being distributed to the experts for their perusal. After the scrutiny, only the KT2 item was dropped as the IQR value was 2.3 in the second round of interviews, suggesting low consensus on this item amongst the experts when the IQR value was ≥ 2.00 (Giannarou, & Zervas, 2014). Nonetheless, other items obtained IQR values < 2.00 in the third round of interviews and all eleven items were included in the actual questionnaire.

Items		Round 2	Round 3
I am a person who:			
KT1	uses various digital media.	1.1	1.1
KT2	believes technology is required in the career field.	2.1	Dropped
KT3	employs the best source of technology in the career field.	1.5	1.3
KT4	applies technology in the field involved.	1.1	1.1
KT5	uses basic ICT devices (laptops, tablets, smartphones, desktop computers, digital instruments, and equipment).	0.9	0.8
KT6	customises in-service applications to suit my career field.	0.9	0.8
KT7	has found a way of seeing new opportunities that arise from technological developments in my field.	1.5	1.1
KT8	knows how to promote products by using technology.	1,3	1.0
KT9	knows how to promote products in line with the development of technology.	1.1	0.8
KT10	conveys messages via various types of digital media (texts, graphics, videos, animations, audios, haptics, and multimedia).	1.1	1.0
KT11	edits and uploads information by using digital media.	0.8	0.8
KT12	collects data related to the field of study via various online sources.	0.5	0.5

The next analysis was to pinpoint the reliability of the questionnaire by conducting Cronbach's alpha. Cronbach's alpha values that are between 0.70 to 0.99 indicate that the constructed items are reliable and acceptable (Heale & Twycross, 2015). Table 5 shows the Cronbach's alpha values of each element in which each element has met the requirement in achieving acceptable values of reliability.

Elements	Number of Items	Cronbach's Alpha
Career Adaptability	11	0.943
Technological Capability	11	0.959
Teamwork	15	0.943

Lifelong Learning	9	0.959
Communication Skills	15	0.971
Innovative Thinking	15	0.959
Leadership	18	0.974
Entrepreneurial Thinking	11	0.964
Professional and Ethical Values	12	0.977

CONCLUSION

When performing the analysis of the modified Delphi technique, the researchers also considered all the comments and suggestions provided by the experts in the process of refining and improving the questionnaire items. Once the items were finalised after three rounds of expert interviews, the sentence structure of each item was also further enhanced and polished. The instrument was then piloted to determine the reliability of the instrument items. The findings showed that all nine elements and 116 items should be emphasised to prepare TVET students in becoming job creators based on the existing talents. This highlights on the significance of this study in order to look at the items that are necessary for a student to be considered as a career preparation in the future.

For the purpose of becoming a high-income nation with low unemployment rate, both HEIs administrators and industry players in Malaysia need to work together in training students to meet the current industrial needs and improve the graduates' skills. Such collaboration can help graduates to identify suitable career fields based on their interests, encourage participation in trainings that can enhance their talents and skills, and thus prepare themselves as good job creators in the future. This is in line with the main goal of Human Resource Management (HRM) which is to design and provide appropriate training in producing individuals or employees with talent in accordance with the current needs of the industry as well as the government plans and policies.

RECOMMENDATIONS

This section provides further suggestions that can be used as a guide and reference to other researchers. Several aspects of the study need to be expanded to obtain additional knowledge and information on talent management among graduates. It is proposed for future research to further strengthen the scope of the study through the development of a model. This is because the present research is based on the first catalyst in the DMGT model. It is therefore suggested for other researchers to further develop this instrument by exploring the second and third catalytic processes. They can also identify new attributes and form a complete talent management model that can be adapted to all fields in describing the current career situation in Malaysia.

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REFERENCES

- Afshan, G., Shahid, S., & Tunio, M.N. (2021). Learning experiences of women entrepreneurs amidst COVID-19. *International Journal of Gender and Entrepreneurship*, 13(2), 162–186.

- Ahmad, I., & Manzoor, S.R. (2017). Effect of teamwork, employee empowerment and training on employee performance. *International Journal of Academic Research in Business and Social Sciences*, 7.
- Aina, R.A., & Atan, T. (2020). The impact of implementing talent management practices on sustainable organizational performance. *Sustainability (Switzerland)*, 12(20), 1–21.
- Alt, D., & Reichel, N. (2018). *Lifelong citizenship: lifelong learning as a lever for moral and democratic values. Moral development and citizenship education*. Brill Sense, 168.
- Aucejo, E.M., French, J., Ugalde Araya, M.P., & Zafar, B. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey. *Journal of Public Economics*, 191.
- Brock, S.E., McAliney, P.J., Ma, C.H., & Sen, A. (2017). Toward more practical measurement of teamwork skills. *Journal of Workplace Learning*, 29(2), 124–133.
- Bucăța, G., & Rizescu, A.M. (2017). "The role of communication in enhancing work effectiveness of an organization", *Land Forces Academy Review*, 22(1), 49-57.
- Charoensap-Kelly, P., Broussard, L., Lindsly, M., & Troy, M. (2016). Evaluation of a soft skills training program. *Business and Professional Communication Quarterly*, 79(2), 154–179.
- Durkheim, É., Brookfield, C., & Turner, B.S. (2018). *Professional ethics and civic morals. Professional Ethics and Civic Morals*. Taylor and Francis, 1–242.
- Gagné, F. (2004). A Differentiated Model of Giftedness And Talent (DMGT). *Personal Notes*, 1–3.
- Gewe, A.M., Abebe, B.B., Azene, D.K. & Bayu, F.G. (2016), "Local industry technological capability development using outsourcing opportunities". *Strategic Outsourcing: An International Journal*, 9(3), 287-302.
- Giannarou, L., & Zervas, E. (2014). Using delphi technique to build consensus in practice. *International Journal of Business Science and Applied Management*, 9(2), 65–82.
- Hairani, E. (2018). Pembelajaran Sepanjang Hayat Menuju Masyarakat Berpengetahuan. *Tajdid: Jurnal Pemikiran Keislaman Dan Kemanusiaan*, 2(1), 355–377.
- Hannis Ansah, R., Osei, J., Sorooshian, S., & Aikhuele, D.O. (2018). Importance of employer-employee relationship towards the growth of a business. *Quality - Access to Success*, 19(166), 42–49.
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative research. *Evidence-Based Nursing*. 18. 66-67.
- Hossain, M.I., Yagamaran, K.S.A., Afrin, T., Limon, N., Nasiruzzaman, M., & Karim, A.M. (2018). Factors influencing unemployment among fresh graduates: A case study in Klang valley, Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 8(9).
- Ismail, A., Adnan, W.N., Masek, A., Hassan, R., Hashim, S., & Ismail, M.E. (2019). Effectiveness of entrepreneurship programmes in developing entrepreneurship skills towards quality TVET graduates. *Journal of Technical Education and Training*, 11(1), 81–86.
- Ismail, J.B., Chik, C.T., & Hemdi, M.A. (2021). TVET graduate employability: Mismatching traits between supply and demand. *International Journal of Academic Research in Business and Social Sciences*, 11(13).
- Johennesse, L.A., & Chou, T.K. (2017). Employee perceptions of talent management effectiveness on retention. *Global Business and Management Research: An International Journal*, 9(3), 46–58.
- Khawam, A.M., Didona, T., & Hernández, B.S. (2017). Effectiveness of teamwork in the workplace. *International Journal of Sciences: Basic and Applied Research (IJSBAR) International Journal of Sciences: Basic and Applied Research*, 32(3), 267–286.
- Lippman, L.H., Ryberg, R., Carney, R., & Moore, K.A. (2015). Key “Soft Skills” that foster youth workforce success: Toward a consensus across Fields. *Workforce Connection*, (June), 1–4.
- Luthra, A., & Dahiya, R. (2015). Effective leadership is all about communicating effectively: Connecting leadership and communication. *International Journal of Management & Business Studies*, 5(3), 43–48.
- Md Ghazali, N.H. (2016). A reliability and validity of an instrument to evaluate the school-based assessment system: A pilot study. *International Journal of Evaluation and Research in Education (IJERE)*, 5(2), 148.
- Ministry of Higher Education (MoHE) (2019). Report of Graduate Tracking Survey Statistics on 2019.
- Monteiro, S., Taveira, M.C., & Almeida, L. (2019). Career adaptability and university-to-work transition: Effects on graduates’ employment status. *Education and Training*, 61(9), 1187–1199.
- Morehouse, E.R., & James, T.P. (2019). Employer perceptions of undergraduate student entrepreneurial experience. In *ASEE Annual Conference and Exposition, Conference Proceedings*. American Society for Engineering Education.
- Ngang, T.K., & Chan, T.C. (2015). The Importance of Ethics, Moral and Professional Skills of Novice Teachers. *Procedia - Social and Behavioral Sciences*, 205, 8–12.
- Ocheni, S.I., Ogaboh Agba, A.M., Agba, M.S., & Eteng, F.O. (2020). Covid-19 and the tourism industry: Critical overview, lessons and policy options. *Academic Journal of Interdisciplinary Studies*, 9(6), 114–129.
- OECD (2016). *Innovating education and educating for innovation: The power of digital technologies and skills*, OECD Publishing, Paris.
- Ohei, K., Brink, R., & Abiodun, A. (2019). Information and Communication Technology (ICT) graduates and challenges of employability: A conceptual framework for enhancing employment opportunities in South Africa. *Gender and behaviour*, 17 (3), 13500-13521.

- Paryono. (2017). The importance of TVET and its contribution to sustainable development. In AIP Conference Proceedings, 1887. American Institute of Physics Inc.
- Patacsil, F.F., & Tablatin, C.L.S. (2017). Exploring the importance of soft and hard skills as perceived by it internship students and industry: A gap analysis. *Journal of Technology and Science Education*, 7(3), 347–368.
- Patton, C.M. (2020). Breaking the health-care workplace conflict perpetuation cycle. *Leadership in Health Services*, 33(2), 147–162.
- Pearl, A.O., Rayner, G.M., Larson, I., & Orlando, L. (2019). Thinking about critical thinking: An industry perspective. *Industry and Higher Education*, 33(2), 116–126.
- Pimpa, N. (2019). Entrepreneurship education in the transnational vocational education context. *Journal of Technical Education and Training*, 11(4), 18–25.
- Rodzalan, S.A., & Saat, M.M. (2015). The Perception of Critical Thinking and Problem-Solving Skill among Malaysian Undergraduate Students. *Procedia - Social and Behavioral Sciences*, 172, 725–732.
- Rozan, M.Z.A., & Zibarzani, M. (2018). A study of entrepreneurial mindset through the dual sided role as service seeker and service provider among university students. *Pertanika Journal of Social Sciences and Humanities*, 26(4), 2473–2487.
- Satibi, S., Rokhman, M.R., & Aditama, H. (2019). Developing consensus indicators to assess pharmacy service quality at primary health centres in yogyakarta, Indonesia. *The Malaysian journal of medical sciences : MJMS*, 26(4), 110–121.
- Schrita, O., & Mohamad, S.H., (2017). Effective employee engagement in the workplace . *International Journal of Applied Management and Technology*, 16(1), 50–67.
- Sima, V., Gheorghe, I.G., Subić, J., & Nancu, D. (2020). Influences of the industry 4.0 revolution on the human capital development and consumer behavior: A systematic review. *Sustainability*. 12(10), 1-28.
- Subri, U.S., Che Rus, R., Mustapha, R., & Hanapi, Z. (2020). The use of modified delphi technique to develop the instrument for factors of career satisfaction among female engineers. *Journal of Technical Education and Training*, 12(3), 154-160.
- Surji, K. (2017). Understanding leadership and factors that influence leaders' effectiveness. *European Journal of Business and Management*, 7(33).
- Taber, K.S. (2018). The use of cronbach's alpha when developing and reporting research instruments in science education. *Res Sci Educ*, 48, 1273–1296.
- Thierry, A.Z. (2018). Punctuality, attendance policy and organizational performance. *International Journal of Research Science & Management*, 5(8), 20–39.
- Tien, H.S., & Wang, Y. (2017). Career adaptability, employability, and career resilience of Asian people.
- Valentine, S., & Godkin, L. (2016). Ethics policies, perceived social responsibility, and positive work attitude. *The Irish Journal of Management*, 35(2), 114–128.
- Veteška, J., & Kursch, M. (2018). The research on the efficiency of the methods of talent management within organizations. *New Educational Review*, 52(2), 28–42.
- Younas, M., & Bari, M.W. (2020). The relationship between talent management practices and retention of generation 'Y' employees: mediating role of competency development. *Economic Research-Ekonomiska Istrazivanja*, 33(1), 1330–1353.
- Yunos, J.M., Sern, L.C., & Hamdan, N.H. (2019). Criteria for sustainable curriculum of TVET teacher education programme in Malaysia. *Journal of Technical Education and Training*, 11(3), 49–54.
- Yusup, M.P., & Saepudin, E. (2017). Praktik Literasi Informasi Dalam Proses Pembelajaran Sepanjang Hayat. *Jurnal Kajian Informasi Dan Perpustakaan*, 5(1), 79–94.