The Innovation Leadership Skills for Middle-Vocational Leader of Technical and Vocational Education and Training (TVET) in Malaysia

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Abstract---This article consists a literature review to identify the elements of innovation leadership skills for middle-vocational leaders in the Technical and Vocational Education and Training (TVET) system in Malaysia. The elements of innovation leadership skills are based on transformational theory, innovation leadership theory, the Four Pillars of Innovation theory, innovation models in leadership and organization, competency profiles for innovation leaders and innovation leadership modality models. Innovation leadership is a synthesis of different leadership styles in an organization to influence employees to come up with creative ideas, products, services and solutions. In this systematic literature review, among the identified aspects of innovation leadership skills are relationships building, generating ideas, taking risks, decisions making, problems solving, implementation, technology, entrepreneurship, capacity builder and innovation. Without the innovation leadership, there will be high possibilities for an organization to work harder in order to succeed. Therefore, the development of innovative leadership skills is essential to be encouraged at all levels of educational leadership, especially for middle-vocational leaders in TVET organization.

Keywords---Innovation Leadership, Middle-Vocational Leader, TVET, Skills

I. INTRODUCTION

Technical and Vocational Education and Training (TVET) transformation is the basis of TVET's effort to engineer (reengineering) the existing vocational education system to create a new vocational education that contributes to Malaysia's transformation agenda as a nation high-income. In 2012, a change occurred when the Vocational Secondary School (VSS) was upgraded to a Vocational College (VC) involving 15 VSSs to be a pilot VC. The upgrading of 72 VSSs to VCs by offering diploma courses as young as 16 years old has provided more opportunities for TVET access throughout the country (Muhammad Aiman, Roziah Mohd, Mohd Ashraff, & Muhd Khaizer, 2018). According to Mohd Jalil, Noor Hisham, and Annas Akhmal (2015), during the Tenth Malaysia Plan (10MP) the government sought to modernize and expand access to TVET to develop an effective teaching staff, improve and harmonize the quality of its curriculum, and streamline its delivery of TVET. Institutions are entailed to make innovation as a culture that needs to be applied to teachers and students. TVET leaders are the most important individuals in TVET institutions as they need to be responsive to any form of industry changes, changes and

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innovations that will occur in the curriculum. In line with this, middle-vocational leaders are the individuals that responsive in generating students who are proficient in VC as they are the teacher leaders (Azlinda, Azlimi, & Ahmad, 2014). Middle-vocational leaders are individuals who require a set of leadership skills of the innovation leadership to realize TVET transformation in VC.

Based on Alsolami, Guan Cheng, & M. Ibn Twalh (2016), innovation Leadership is a different leadership style synthesis in an organization to influence employees to generate ideas, products, creative service and solutions. Zuraik (2017) explains that innovation leadership is a set of leadership behaviours needed to facilitate innovation and to have better innovation performance at the organization and team level. The innovation leadership is important to improve the theory of leadership behaviour that only emphasizes on the ability of an individual or innovative leader of innovation. Innovation leaders are required to use a different set of strategies to develop the skill sets which prerequisite for the innovation process (Rahman, 2016).

As such, middle-vocational leaders need a set of innovation leadership skills to overcome subordinates in generating new ideas, products, services, and solutions. This is because, the middle-vocational leaders are responsible to influence the subordinates to cope with any changes in the industry, reforms and curriculum in realizing TVET transformation in VC.

Therefore, this critical review will scrutinize the challenges and skills elements which regard to the innovation leadership in creating innovative organizational climate of TVET in Malaysia. A number of studies had been accomplished by researchers in respect of innovation leadership attributes that are associated with a variety of leadership from different perspectives which will assist the reader to be aligned with the right path throughout the research and help the reader to identify the intended outcome of this study.

II. RESEARCH METHOD

In this article, systematic literature review is conducted through observations of scholarly articles, journals, reference books and other relevant sources such as proceedings of the seminar which regards to the discussed issue and the parameter of research.

III. RESULTS AND DISCUSSION

Issues and Challenges of Middle-Vocational Leaders in TVET

Innovation and creativity are critical to economic prosperity in globalization and knowledge-based economy(Akbar, Sadegh, & Chehrazi, 2015; Hassan & Sanusi, 2014; Haughey, 2015; Horth & Buchner, 2014; Isaksen & Akkermans, 2011). In the context of industry, innovation and creativity are believed to be the main source of competitive advantage and a key factor in productivity achievement that will lead to economic growth (Bhattacharyya, 2006; Lukoschek, Gerlach, Stock, & Xin, 2018; Rahman, 2016; Vlok, 2012). Productivity helps society to improve their organizations and be inventive by leveraging the ability of employees to innovate (Feng, Huang, & Zhang, 2016). The ability of individuals to innovate must be supported by management and organizational systems (Bari'ah & Haris, 2012).

Daily complex issues force education leadership to be ingenious and originative in line with today's economic reality (Marron, 2014). Innovation is nothing new but its importance in modern society and organizations escalated

significantly. These innovations include the use of new technologies, processes, services, business models and practices and organizational re-emphasis (Vlok, 2012). Some of the leadership strategies can impact creativity such as increasing self-efficacy, increasing participation and increasing psychological capital - confidence, hope, and resilience - to subordinates (Kruyen & Tummers, 2015); generate new ideas, act differently on how to lead, manage and enhance creativity that can lead to more innovation in developing innovative products and services and organizational climate (Horth & Buchner, 2014).

In today's reality, leaders and educators need to demonstrate leadership qualities with all stakeholders in educational institutions such as trustees, senior leaders, colleagues, subordinates, parents and students who give them confidence in their leadership abilities (Marron, 2014). Studies show that top leaders (principals) who always have new ideas, seek every opportunity that life can offer, willing to do something challenging and ready to take on any risk that can maintain a good school reputation. In addition, top leaders who are constantly working to strengthen the network of relationships with the community inside and outside the school (Kruyen & Tummers, 2015).

One of the biggest challenges faced by today's leaders is the need and ability to adapt when faced with a more dynamic and challenging environment (Uhl-Bien & Arena, 2018). The deciding factor in organizational innovation is affected by individual characteristics, such as leadership, resistance to changes or innovation support roles (De Jong & Den Hartog, 2007; Marron, 2014). Moreover, many scholars agreed that leadership can stimulate innovative work behaviour (Azlinjasmi & Naem, 2018). However, the influence of social environment as innovative work behaviour factors remains unclear (Daniel, 2013), and only a few studies were conducted to study such behaviours in Western countries.

Based on the context of education in Malaysia, Zaidatol Akmaliah and Asfaneh (2012) elucidated that leadership is the process of influencing individuals or society towards its goal at once it plays a very important role in evolving culture and climate of educational institutions. Breakspear, Peterson, Alfadala, and Khair (2017) connoted that the goal of transformation in education requires a clear expectation that innovative practices will contribute to the development of the school. The school leaders need to examine the approach they use to make their educational institutions as an organization that moves towards to fulfil the mission and vision of the organization (Zaidatol Akmaliah & Asfaneh, 2012). Education leaders need to be creative and inventive in order to solve all problems easily, create new ideas or new innovations that will benefit to the institution (Roselena & Mohd Izham, 2015). On top of that, according to Rahman (2016), innovation leaders should use common sense to become innovative.

On the other hand, innovative management can be seen in two aspects which are creative thinking style and innovative by a leader. According to Neo (2017), the head of department is a change agent that consistently requires to generate new ideas to develop organizations and identify opportunities to achieve a predetermined goal. Furthermore, the study conducted by Heng and Marsh (2009) found that intermediate leaders felt less comfortable with learning ideas involving in making joint decisions. The head of department needs to influence the subordinated (teacher) by creating mutual understanding and mutual respect to each other. Therefore, a leader requires basic changes to how the school leaders think about the subordinated (their teachers) and how they see the working relationship to achieve competitive success (Zaidatol Akmaliah & Asfaneh, 2012).

In summary, some of the challenges that innovative leaders faced in implementing innovation and creativity are as follows:

- 1. The ability of leaders to innovate that must be supported by management and organizational systems.
- 2. The ability of leaders to be ingenious and originative.
- 3. The ability of leaders to demonstrate leadership qualities with all stakeholders.
- 4. The ability of leaders to adapt when faced with a more dynamic and challenging environment.
- 5. The ability of leaders to use approaches to fulfil the mission and vision of the organization.
- 6. The ability of leaders to be as a change agent to generate new ideas, how to lead, manage, and enhance creativity, risk taking, decisions making, creating mutual understanding, and mutual respects and working with relationship to subordinates.

As such, the leaders need the self-quality, multi-skill style, behaviour/ practice and competency in achieving higher performance in the sustainable and innovative organization. Therefore, the leader is highly needed a set of innovation leadership skills in implementing innovation and creativity to achieve organizational goal.

IV. Theory and Model of Innovation Leadership

The elements of innovation leadership skills are based on transformational theory (Zuraikh, 2017) and the theory of innovation leadership (Alsolami et al., 2016). The theory of "Four Pillars of Innovation" by Watt (2002), model of innovation in leadership and organization (Deschamps, 2008), competency profile for innovation leaders (Vlok, 2012) and the model of innovation leadership modalities (Banerjee et al., 2016) is the referred model in producing elements of innovation leadership skills.

The transformational theory consists of four sub-dimensions i.e. ideal influence, motivation inspiration, intellectual stimulus, and individual judgement (Deinert, Homan, Boer, Voelpel, & Gutermann, 2015). Juliana, Don, and Ismail (2014) explained that the transformational leadership is divided into five dimensions. The first dimension is charismatic or nature, which is the leader that can influence his followers through nature or charisma that is in selfleader. This leader is made a role model by his disciples. The second dimension is the charismatic or behaviour where leaders influence the followers in the way of showing impressive behaviours and constantly strive to achieve the values, missions and visions of the organization. The third dimension is the leader to inspire his followers by affecting them through the words of enthusiasm that can inspire them to improve their quality of work. The fourth dimension is that of an intellectual stimulus, the leader gives guidance to followers in solving problems inventively and the leader must also keep a good relationship with all parties at all times (Juliana al., 2014). Besides, intellectual stimulation involves behaviours that stimulate followers with a frame of problems by pushing them to expand creative and inventive ideas and by approaching the old way (Deinert et al., 2015). The last dimension is an individual consideration where leaders pay attention to each follower. For instance, by consistently give good judgements to all followers and evaluating them based on their strengths and talents. These will make them to feel valued and will indirectly induce a sense of responsibility to the organization. Apart from that, individual considerations are considered as a leadership behaviour that includes providing a new support climate and learning opportunity (Deinert et al., 2015). Innovation leadership proposed the leaders of innovation play a lot of roles to facilitate innovation in organizations, especially the role that influences creativity and innovation. Through appropriate leadership, realistic goals will be achieved (Norlaila Wati & Arasinah, 2019). An active organization of excellence requires support from organization hierarchy, and a culture that values and nurture creativity, large resources and focus on innovation (Alsolami et al., 2016). Innovation leaders are managers, executives or entrepreneurs of any function or position, those who successfully initiate, sponsor, and drive innovation in their organization(Deschamps, 2008).

In addition, the key elements of innovation are based on the theoretical framework of "Four Pillars of Innovation" by Watt (2002) which analysed the foundations and criteria for the organization practicing innovation. Watt (2002), highlighted four elements of innovation existence such as 1): Human resource capacity, 2) leaders, 3) culture/ climate and 4) structure and process. All these elements have innovation features and are equated to precipitate innovation that helps to create new ideas for products, processes and services of methods, techniques, new or better practice. Watt (2002) through The Conference Board of Canada (CBOC) itemised four factors of innovation skills for an individual, namely: 1) ideas generating skills, 2) risk taking skills, 3) relationship building skills and 4) implementations skills.

Based on the denision model, there were four quadrants that comprised in the models for instance, adaptability, involvement, consistency and mission. First and foremost, adaptability (Charbonnier-Voirin, El Akremi, & Vandenberghe, 2010; Money, Rode, Shi, Luo, & Chen, 2013; Zhou & Wu, 2018), which is located in quadrants's versatility and outdoor focus that aligns with a built culture. Next, involvement (Guerrero & Kim, 2013; Koeslag-Kreunen, Van der Klink, Van den Bossche, & Gijselaers, 2018; Markman, 2018; Wan Roslina Wan Ismail, 2011) which means engaging and coordinating employees, creating sense of ownership and responsibility. Quadrants flexibility and internal focus resemble the collaborative culture (Elrehail et al., 2018; Liu & Chan, 2017; Reppa, Botsari, Kounenou, & Psycharis, 2010). Meanwhile, consistency Avolio & Gardner, 2005; Breakspear et al., 2017; Charbonnier-Voirin et al., 2010; Elrehail et al., 2018; Hopkins & Hopkins, 2006; Wang et al., 2013; Woolley, Caza, & Levy, 2011; Zhou & Wu, 2018) where it refers to the integration of activities, coordination and control, and established an internal governance system that is rooted in internal stability and orientation and in line with control culture). Last but not least, mission requires a mission maker to answer; why the organization, and how the daily work of employee resources contributes to the goals and results together (Mohamed Sani & Mumtaz Begum, 2008). Apart from that, this is also based on the stability and external orientation (resemble the competing culture).

In addition, Banerjee et al. (2016) asserted that the next generation leadership will not be solely embodied in the Organization's position or necessarily to be the function of the seniority, but the modality of certain functions in the context of Organization, institution or project. The innovation leadership is not merely on the ability to manage, administer, and make executive decisions, but incorporates with greater suppression throughout several other dimensions that anticipate an alternative future, re-evaluate the seriousness and success, creative judgments, strategic decisions, inspiring actions, organizational transformation and changing ecosystems.

Vlok (2012) reckoned that the model provided is a coherent with the profile of a innovation leadership competency which not only contributes to one solely individual element or certain level of discipline. The Vlok (2012) competency was made from the observations to the practice of successful innovation leaders. The Vlok (2012) profile is suitable for the evaluation framework for a descriptive leadership development at the same time providing opportunities for improvement and further validation. A study on the profile will contribute to professionalism in the discipline of innovation leadership. Quadrants's leadership Competency profile by Vlok (2012) encompassed strategist, capacity builder, match maker and achievers. This innovation leadership propounded that the leader of innovation plays many roles to facilitate innovation in organizations, especially the role that influences creativity and innovation. Besides, through appropriate leadership, realistic goals can be achieved. Furthermore, an active organization of excellence requisites supports from the organization hierarchy, and a culture that appreciates and fosters creativity, numerous resources and a focus on innovation (Alsolami et al., 2016). These innovation leaders are managers, executives or entrepreneurs of any function or position, those who successfully initiate, sponsor, and drive innovation in their organization (Deschamps, 2008).

Results of the study by De Jong and Den Hartog (2007); Watt (2002) delineated the personal characteristics of an innovative leader: 1) Visionary – that is to know the direction of the organization and how to achieve that goal. 2) Focus – have clear goals and objectives. 3) Reliable and supportive – emotionally and financially for the vision and effort of staff and students. 4) Good listener and communication. 5) Consultants-open to ideas and new ways of work and to do new things. 6) Optimistic – encourages staff to take risks and initiatives. 7) Encourage-by celebrating students ' initiatives, achievements and success. Table 1.1 shows the analysis of the matrix elements of innovation leadership.

Transformational Theory (Zuraik, 2017, Imran et al., 2017)	Innovation Leadership Theory (Alsolami et al., 2016)	'Four Pillars of Innovation' Theory (Watt, 2002)	Denision Model (Deschamps, 2008)	Innovation Leadership Competency (Vlok, 2012)	Innovation Leadership Model as A Modalities (Banerjee et al., 2016)	Literature Review (Roselena & Mohd Izham, 2015), Rahman (2016), (Irdayanti, 2016), (Zuraik, 2017)	Elements of Innovation Leadership Skills
Ideal Influence							Ideal Influence
Motivation Inspiration							Motivation Inspiration
Intellectuals Stimulating							Intellectuals Stimulating
Considerations Making							Considerations
, in the second s							Making
		Idea Generating					Generating Idea
		Risk Taking					Risk Taking
		Relationship Building				Social	Relationship Building
		Implementation					Implementation
		-		Capacity Builder			Capacity Builder
			Involvement				Involvement
						Teamwork	Teamwork
						Decision Making	Decision Making
			Mission	Strategist			Mission Strategist
	Innovation			5	Innovation		Innovation
			Adaptability	Match Maker			Adaptability Match Maker
			Consistency				Consistency
			,	Achiever			Achiever
	Creative Thinking					Collective Thinking	Collective Thinking Creative Thinking
	Entrepreneurship						Entrepreneurship
						Problem Solving	Problem Solving
						Technology Technical	Technology
							Technical
						Management	Management

 Table 1.1: Matrix Analysis of Innovation Leadership Skill Elements

V. Innovation Leadership Skills

V.1.1.1.1 1) Ideas Generating

Intellectual stimulation is a feature of transformational leaders in encouraging their followers to be creative and inventive (Horth & Buchner, 2014; Isaksen & Akkermans, 2011) by exacting the status quo by questioning old ways, traditions and beliefs, redefining problems, and adopting old-fashioned situations new methods (De Jong & Den Hartog, 2007; Dodgson, 2018; Jones & Crompton, 2009; Mokhber et al., 2018). These leaders constantly remonstrate their followers to think creatively (Isaksen & Akkermans, 2011), create new procedures and programs, solve problems using new perspectives, encourage learning new ways of doing things and avoid public criticism of individuals who make Hoy mistakes (2016); Zaidatol Akmaliah and Asfaneh (2012). The performance of the followers is by changing the attitude of individuals and acting through a climate that includes sharing understanding of influence, vision of leaders (Bass & Avolio, 2007).

Ideas generating are also part of the characters of an entrepreneurial leader (Bagheri & Pihie, 2012; Bastin, 2018; Roomi & Harrison, 2011; Schoemaker, Heaton, & Teece, 2018). For instance, these entrepreneurial characteristics are innovative and creative, self-motivated, initiative-driven, flexible and adaptable, persistent, growth-oriented, opportunity-driven, active and dynamic, focused on implementation and effective, productive, driven to create value, focus on individuals and groups, firm in decision making (Watt, 2002).

Watt (2002) through the 'Innovation Skills Profile' (ISP) lists the criteria for an innovative leader to generate ideas through the leader's own attitude and behaviour - seeking different perspectives, adapting, identifying and solving problems, creatively facing challenges, impartiality in solving problems, giving confidence, finding value in products, processes and services, insinuating alternatives in achieving goals, believing in other people's ideas and actions, fostering and promoting creativity and invention, thinking beyond individuals and organizations, open to new ideas and different ways of doing things, rewarding original ideas and making progress. Studies by De Jong and Den Hartog (2007) also found that rewards either in the form of financial or in-kind rewards are helpful instruments when concentrating on the employee's effort in executing new services or processes.

2) Risk Taking

Risk taking skills are one of the determinants of human motivation and development. There is a close link between organizational climate, innovation and risk-taking to make an organization inventive. Innovation is about creating new things and in everything new there is no risk (Caldwell & O'Reilly, 2003; ElSayed ElKhouly, 2018; Schoemaker et al., 2018). Therefore, risk taking is one of the criteria for innovative leaders as well as balancing risks with opportunities for risk. In the end, innovative leaders are dared to take risks but at the same time they balance it with their actions and take risks (Watt, 2002).

Watt (2002) through the 'Innovation Skills Profile' (ISP) enumerated the criteria for an innovative leader to take risks, attitudes and behaviours in risk-taking by looking at the risks they take, allowing themselves to change, evaluating potential risks when using new methods, learning from past experiences, not fear of failure, willingness to experiment with new ideas, committed to practice their skills in new situations, encouraging others to come up with

new ideas, supporting risks by making observations and evaluating decisions and actions, identifying and rewarding risk taking (Caldwell & O'Reilly, 2003; ElSayed ElKhouly, 2018; Schoemaker et al., 2018).

3) Relationship Building

Individual judgment means that transformational leaders focus on the scarcity of the individual for growth and achievement. This is by applying knowledge and acting as mentors (Koeslag-Kreunen et al., 2018; Lumpkin, Claxton, & Wilson, 2015), transformational leaders help in developing the highest success for potential followers and take responsibilities for their own development (García-Morales, Jiménez-Barrionuevo, & Gutiérrez-Gutiérrez, 2012; Jiang & Chen, 2018; Schuckert, Kim, Paek, & Lee, 2018). Transformational leaders are required to proliferate the necessities of staffs and cater opportunities for them to develop real capabilities where they must be provided with support, encouragement, and knowledge (Watt, 2002).

Motivation Inspiration is a characteristic of leaders that must prevail in raising awareness and understanding amongst the followers of common goals through their symbols and influence. Bass and Avolio (2007) stated that inspirational motivations in leaders' attitudes create meaning and challenge for their followers. Transformational leaders (Charbonnier-Voirin et al., 2010; Elrehail et al., 2018; García-Morales et al., 2012; Sattayaraksa & Boon-itt, 2018; Wang et al., 2013) encourage their followers by creating interesting and optimistic for the future, creating an idealistic vision (De Jong & Den Hartog, 2007; Jones & Crompton, 2009; Koeslag-Kreunen et al., 2018; Lukoschek et al., 2018; Sawyer, 1978) for organization and accurate explanations of followers of the vision they want to achieve. Motivation is an instrument to be used in governing the school (Martin, 2019). The teamwork spirit (Belda & Fornes, 2016; Caldwell & O'Reilly, 2003; Jain & Jain, 2010; J. Liu, Liu, & Zeng, 2011; Sheard, Kakabadse, & Kakabadse, 2016), passion, optimism (ElSayed ElKhouly, 2018), commitment in achieving goals (Authors, 2016; Babić, Savović, & Domanović, 2014; Im, Campbell, & Jeong, 2016; Minghat & Yasin, 2010; Nishimura & Okamuro, 2018; Wan Roslina, 2011) and improvement integration and sharing of vision between group work or organizations.

In addition, the influence of idealism / charisma (Alsolami et al., 2016; Cho & Dansereau, 2010) is the trait of transformational leaders in building trust and respect among followers as a basis for accepting change by organizations and individuals over what has been accomplished. Leaders show confidence in important issues, exhibit high ethics and moral values (Grojean, Resick, Dickson, & Smith, 2004), share risks with followers in defining and achieving goals (Liu & Chan, 2017), meeting the needs of others rather than himself, and use his power to mobilize individuals or groups to accomplish their mission, vision. Furthermore, it can be said that leaders are required to escalate their ability to engage and focus their staffs through personal dynamics such as self-confidence, principles and ideology and emotional uplift (Zaidatol Akmaliah & Asfaneh, 2012). Finally, transformational leaders are emulated, respected and trusted by their followers.

Watt (2002) through the 'Innovation Skills Profile' (ISP) drafted the criteria for an innovative leader through relationship building skills that include understanding and being able to work in a dynamic group, building and maintaining relationships within and outside the organization, sharing information (Elrehail et al., 2018; Koeslag-Kreunen et al., 2018) and expertise (Breakspear et al., 2017; Osei-asibey, 2015), being able to ask others to use their skills, knowledge, and skills, to respect and support people's ideas others, receive and provide constructive feedback,

mentor and guide others to share ideas, engage others by delegating responsibilities, facilitating and delivering new solutions, giving sincere praise and constructive criticism to their team, identifying and rewarding success his troops.

4) Implementation

Watt (2002) also mentioned the criteria for an innovative leader by implementing skills are acquiring and applying knowledge and skills from across the organization, being able to adapt to changing demands, using appropriate methods when creating, planning and implementing solutions (Rosnarizah et al., 2008), using the right tools and technology to complete tasks and projects, contingency planning and preparing alternative strategies, demonstrating initiative and commitment, measuring the value of solutions, owning "can do" attitude, being proactive in leading the organization and responding to change, giving others permission to make decisions, being tolerant of mistakes made when trying new ideas, appreciating and responding to any positive changes, making changes clear to and new / improved services.

Implementation (Guerrero & Kim, 2013) referred to the active efforts of members in an organization to introduce new knowledge or methods to enable them to produce better results. The implementation consists of a strategic effort (ElSayed ElKhouly, 2018; Zuraik, 2017) that guides and supports the application of decision-making to real-life situations.

VI. CONCLUSION

Based on the literatures, researchers formulated that innovation leadership requires leaders to play a role to facilitate innovation in organizations, especially the role that influences creativity and innovation. Overall, researchers found that elements of innovation leadership skills includesideal influence, motivation inspiration, intellectuals stimulating, considerations making, generating idea, risk taking, relationship building, implementation, capacity builder, involvement, team work, decision making, mission, strategist, innovation, adaptability, achiever, consistency, creative thinking, collective thinking, entrepreneurship, problem solving, technical, technology and management. Through the appropriate leadership style, the success of innovation as realistic goals can be achieved. Therefore, researchers found that attention to the need to review the innovation leadership skills, based on the attributes that encompass self-quality, multi-skill style, behaviour/ practice and competency in achieving higher performance, and sustainable organization and innovative. The development of innovation leadership characteristics is highly recommended for all levels of education leadership especially the middle-vocational leaders in the TVET organization. It can be inferred that without the leadership of innovation, there will be a high possibility that the organization has to work hard to succeed. In tandem with the TVET transformation of the present, the middlevocational leader in TVET requires innovation leadership skills to be a good leader in making changes to enhance the organization for good management practices, success that continuously and remain competitive in line with the world's ever-changing new technologies. As a result, efficient future middle-vocational leaders who are experts in administration, management and in making changes will be synthetically to achieve organizational goals.

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