

Implementing entrepreneurial leadership in technology and vocational education (TVE) organisations

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ABSTRACT: The study presented in this article was aimed at investigating how entrepreneurial leadership can build the commitment and loyalty of stakeholders to technology and vocational education (TVE) organisations. A phenomenological qualitative approach was adopted to carry out the research. Data were collected through in-depth interviews, observation and documentation. The key research informants included five directors; deputy heads of study programmes; parents and school committees. All data collected were validated through a triangulation technique. The results of data analysis showed that the application of entrepreneurial leadership significantly increased the commitment and loyalty of stakeholders to the vocational education organisation, with the educational institutions noted for excellence.

INTRODUCTION

The low quality of human resources is still an issue in vocational education in Indonesia. It is characterised by the low competitiveness of graduates, their limited relevance, and lack of industry support from the primary stakeholders of technology and vocational education (TVE). The relevance gap can be seen from the high unemployment rate of TVE graduates [1]. Industry participation in supporting vocational education has been insufficient and does not provide encouragement [2]. Efforts to increase co-operation between industry and TVE also have been fruitless and needs much improvement [3-5]. The perception of most people of TVE has not altered much.

Government policy to improve the quality of TVE has been established through various programmes, such as the promotion of TVE via mass media, teacher education and training, and leadership training. Also, since 2016, the President of the Republic of Indonesia has assigned high priority to vocational education through Presidential Instruction No. 9 of 2016. However, the effectiveness of these programmes has not fully met expectations.

Leadership is one of the key elements in efforts to improve the quality and competitiveness of vocational education graduates [6][7]. In this global era, leaders with entrepreneurial traits are necessary to promote excellent vocational education. However, vocational education often encounters obstacles, such as weak leadership in a decentralised system of education; lack of leadership to innovate and promote schools and poor entrepreneurship. Maintaining a good image is necessary to foster trust, commitment, loyalty and stakeholder support to achieve educational goals [8].

The dynamics of change due to advances in information technology and science have implications for the changing needs of teachers' competences and capabilities [9][10]. At present, there is an ever-increasing demand for creative and innovative vocational teachers to provide instruction. However, according to the results of the national competency test of teachers, the average score achieved was below the defined standard, i.e. 55 out of a maximum score of 80. The competency test results of vocational education principals also showed unsatisfactory outcomes regarding personal competency (67.3%); managerial competency (47.1%); supervisory competency (40.4%); social competency (64.2%); and entrepreneurial competency (55.3%) [11]. Nonetheless, there has been an increase in the results of competency tests of principals nationwide, with an average overall score of 56.37 with managerial and entrepreneurial competency scores of 58.55 and 58.75, respectively [11].

Teachers' abilities to innovate and make changes needs to be supported by vision-oriented leaders and policymakers. Entrepreneurial school principals could significantly stimulate school innovation [12]. Furthermore, teachers also strongly support entrepreneurial leadership in schools. Callan et al emphasised that the key leadership and management skills required in TVE today are related to the ability to transform and communicate organisational vision, build teamwork and inspire staff to commit to change [13]. In addition, having the capability to formulate strategy and

business planning skills is also important. All in all, entrepreneurial leadership has been shown to improve school competitiveness and, hence, is necessary for the improvement of the quality of vocational education.

On the basis of previous studies, the transformative leadership model coupled with empowerment is an ideal model for the implementation of vocational education leadership [14][15]. The application of entrepreneurial leadership could improve organisational performance in an uncertain atmosphere and intense competition. In other words, efforts to change and develop the quality of vocational education need to be accompanied by a leadership capable of promoting the advantages of vocational education institutions [16]. By doing so, stakeholders can realise, understand and achieve satisfaction that ultimately leads to trust, commitment, loyalty and support for vocational education.

This study was aimed at examining entrepreneurial leadership strategies for vocational school principals; to identify desirable entrepreneurial leadership characteristics of vocational school principals and to determine how entrepreneurial leadership can augment the stakeholders' commitment and loyalty to vocational schools.

RESEARCH METHOD

This was multi-site, phenomenological, qualitative research [17]. The research subjects were selected purposively from five excellent vocational technical schools in Malang City. The five sites are vocational technical education institutions established by the Directorate of Vocational Education, Ministry of Education and Culture. The principals were the key informants, while other informants were selected by snowball sampling based on the results of interviews with the key informants. The numbers of research informants is presented in Table 1.

Table 1: Research informants.

No	Informant	Site I	Site II	Site III	Site IV	Site V
1	Principal	1	1	1	1	1
2	Vice Principal	3	2	3	1	3
3	Head of Department	3	2	3	2	2
4	Teacher	4	2	1	3	3
5	Staff	1	1	-	-	1
6	Parent	2	1	1	1	1
7	Student	2	2	-	2	2
	Total	16	11	10	10	13

Site I = Public TVE 6 Malang; Site II = Public TVE 3 Malang; Site III = Public TVE 2 Malang;
Site IV = Public TVE 5 Malang; Site V = Private TVE PGRI 3 Malang

Informal interviews were conducted, where subjects were asked open questions and could answer freely. Statements and responses were validated using secondary sources, such as documentation and observations as evidence of the impacts of actions and policies. After being classified and reduced, the collected data were analysed.

Each datum was given a code for tracking purposes. Cross-case data analysis was conducted to compare and contrast the data. Data credibility was assessed through data source triangulation, member checking and peer discussion. Examples of assigning codes to research data are as follow:

1. (W.A.S2.N1.F2) where W = Interview; A = Primary informant/principal; S2 = Case/site 2; N1 = Informant 1; F2 = Focus on the second question.
2. (D.A.S2.N1.F2), where D = Documentation; A = Primary informant/principal; S2 = Case/site 2; N1 = Informant 1; F2 = Focus on the second question.
3. (O.A.S2.N1.F2), where O = Observation; A = Primary informant/principal; S2 = Case/site 2; N1 = Informant 1; F2 = Focus on the second question.

RESULTS AND DISCUSSION

Results of this study are presented in Figure 1. Entrepreneurial leadership was implemented through two leadership functions, i.e. leader and manager. As a leader, the principal began to lead by inculcating an entrepreneurial vision to every unit leader in a TVE institution. All unit leaders were encouraged to develop an innovative and creative vision and mission in their respective units by developing entrepreneurial insights. Furthermore, the principal provided opportunities to each unit that already had business activities i.e. (W.A.S1.N1.F1); (W.A.S4.N1.F1); (W.A.S3.1.F1); (D.A.S1.N2.F1). The principal implemented entrepreneurial leadership to develop the vision and mission, strategies, and goals set forth in the grand design for the school. The next stage was an intensive promotion to internal stakeholders. It was carried out, so that all units in the school pull in the same direction to reach the set goals. Each unit was given the freedom to improvise in choosing strategies and means to achieve goals, and all were discussed openly as indicated by the results: (W.A.S1.N1.F2); (W.A.S1.N2.F2); (W.A.S5.N1.F3); (W.A.S2.N1.F2); (W.A.S5.N1.F2); (W.A.S4.N1.F2); (W.A.S3.N1.F2).

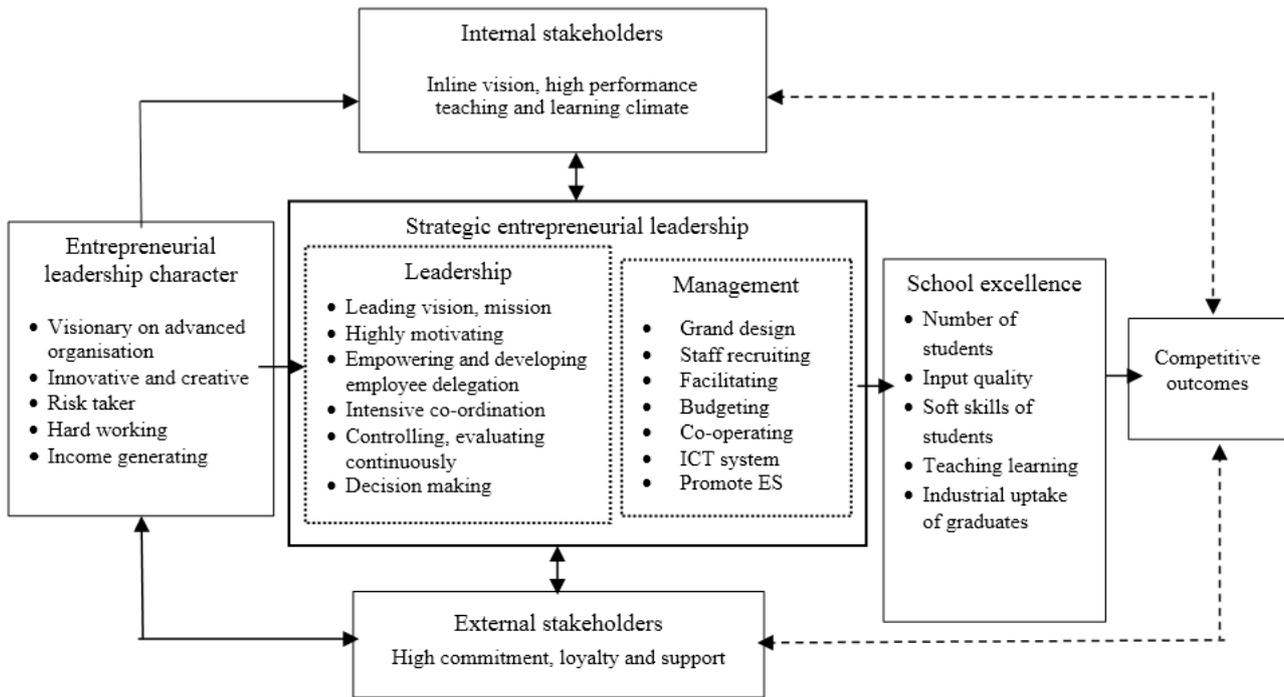


Figure 1: Model of entrepreneurial leadership for TVE excellence.

A vision contains the future goals to be achieved by an educational institution. The clearer the vision, the easier it is for the principal to make a journey map to achieve the goals. A principal has the task of developing and promoting the vision and mission to all staff and community members in the school. With a complete understanding of the vision statements, all school members will have the same views, commitment, loyalty and spirit to achieve the goals. Also, the stakeholders will be convinced that the educational goals will be achieved and the welfare of the members of the organisation improved. A principal is required to demonstrate strong leadership that has a long-term vision and integrity; is willing to empower others; is inspiring and capable of organisation; as well as maintaining harmony between an individual's goals and organisational goals. The development of stakeholders' commitment is through building an organisational culture. If stakeholders get satisfaction from the services of an organisation, then it can foster loyalty to the institution.

Entrepreneurship and the Organisation

Entrepreneurship is a process that aims to make changes and do something different to produce well-rounded individuals and add value to society [18][19]. Entrepreneurs should have the ability to take risks and see every situation as an opportunity. An entrepreneur should be able to start a business and understand the required actions. Entrepreneurship can be seen as the formation of a new organisation [20]. Entrepreneurship can raise awareness that every workplace provides opportunities that should be seized. A school principal who has this perspective will take the opportunity to advance the school. The commitment of all school members to achieve targets was strengthened periodically by the entrepreneurial principal through co-ordination sessions once a week. Co-ordination is meant for the dissemination of ideas, discussion and participatory decision-making. Furthermore, the principal continuously monitored the implementation of the policy viz. (W.A.S1.N2.F5); (W.A.S2.N3.F2); (O.A.S1.N1.F2); (W.A.S3.N3.F2). Entrepreneurial Leaders

The leader and leadership are important in educational institutions, because they support and steer the organisation to effectively achieve goals. The Regulation of Indonesia Minister of National Education no. 13 year 2007 on Standards for TVE Principals defines five dimensions of leadership that should be displayed by principals, i.e. personal, managerial, entrepreneurial, supervisory and social skills.

A highly competitive environment demands principals focus on developing a TVE to create competitive graduates in the 21st Century. Competent leaders of educational organisations need the knowledge, skills, attitude, performance and work ethic to accord with the duties and responsibilities of the school principal. The qualities of the school principal include professional competence, pedagogical and managerial competence, personal competence, social competence and entrepreneurial competence. In the TVE environment, the principal is an educator, manager, administrator, supervisor, leader, entrepreneur, motivator, climate setter and organiser.

Entrepreneurial leaders build on the commitment of stakeholders through conducting multiple meetings with all members of the organisation. Their actions should be exemplary. They should also provide support to stakeholders. Patience, serenity and motivating ability become essential parts to building good relationships with the stakeholders.

Functions of the Entrepreneurial Leader

The results of the managerial analysis of entrepreneurial leadership identified the following characteristics:

1. development of the organisation's grand design;
2. recruitment of staff;
3. improvement of facilities and infrastructure;
4. funding innovation;
5. development of relationships;
6. intensive communication by exchanging information with stakeholders;
7. promotion of educational excellence i.e. (W.A.S5.N1.F2.); (W.A.S5.N3.F2.); (W.A.S3.N1.F2.); (W.A.S4.N1.F2.); (O.A.S5.N3.F2.); (W.A.S3.N2.F2.).

Furthermore, the principal presented challenges to innovative teachers, i.e. (W.A.S1.N2.F1.); (W.A.S1.N2.F1.); (O.A.S1.N3.F1.); (W.A.S1.N4.F1.). The principal explained the application of an industry-based curriculum and stated that *...in order for the graduates to fit the demands of the industry, our curriculum is based on industry needs*, i.e. (W.A.S5.N1.F3); (D.A.S5.N4.F3); (W.A.S3.N2.F3); (O.A.S3.N3.F3); (W.A.S4.N4.F3); (O.A.S4.N3.F3).

In this era of global competition, visionary leaders need to be able to apply business leadership style in managing education. Leaders of TVEs are required to adopt a transformational leadership style, be competent in building communication networks with stakeholders, be capable of communicating improvement programmes and achieve the vision and mission. The TVE leaders are required to have communication skills; a work ethic; courage, negotiation skills, business intuition, and entrepreneurial spirit [21].

Three elements of entrepreneurship that affect the performance of the organisation are: the courage to take risks; a proactive stance; and positive actions. The application of entrepreneurial leadership gives a sense of confidence in determining goals and controlling new business ventures [22]. This self-confidence is essential in understanding the dimension of entrepreneurship. Entrepreneurial leadership also creates an organisational innovative climate and significantly affects the independence of organisational members.

Parents are greatly impressed by media reports of the placement of graduates by the school to work in industry. Therefore, the principal sought to build networks with industry, to promote the quality of graduates. The pattern was mainly oriented to sending graduates to industry, i.e. (W.A.S5.N1.F3); (D.A.S5.N3.F3); (W.A.S5.N3.F3). At Site I, Site V and Site III, an industry-based curriculum was created by developing a programme based on the demands of the industry. By doing so, students can be recruited by companies in need of employees, i.e. (W.A.S3.N2.F3); (O.A.S3.N2.F3); (D.A.S5.N2.F3).

The types of co-operative commitments with industry are:

1. internships;
2. scholarships for third-level students;
3. student recruitment for on-the-job training programmes, i.e. (W.A.S5.N3.F3); (W.A.S3.N3.F3).

Parental understanding and acceptance of school services and open school information are part of the system developed by the school, i.e. (W.A.S5.N2.F3); (W.A.S3.N1.F3); (W.A.S4.N1.F3). The findings are in line with the view that entrepreneurial principals strengthen their commitment through graduate placement in industry, develop curricula according to industry needs and establish communications with parents of students [8].

Based on the analysis results of the five research sites, the entrepreneurial principal's managerial functions included:

1. managing school resources based on performance;
2. making use of business-oriented school facilities and infrastructure;
3. managing co-operation with industry to promote graduate employment;
4. arranging finances in a transparent and accountable manner;
5. carrying out strict and continuous monitoring, i.e. (W.A.S1.N1.F1); (O.A.S1.N2.F2).

Efforts to reform a TVE to become an excellent institution require entrepreneurial principals; namely, those who:

1. refocus school management using a business approach;
2. improve the quality of the teaching-learning process;
3. strengthen industrial linkages;
4. enhance an entrepreneurship focus.

A vocational school principal should be competent in managing the school by utilising a business approach; namely, business planning, cost efficiency, marketing and mentoring. The entrepreneurial leadership style of vocational school

principals significantly affects teacher acceptance of instructional innovation. Thus, it can be said that in the global era applying entrepreneurial leadership is essential in the development of TVE.

The results of observations on all sites indicate that firm leadership in controlling the policies is one of the leading aspects of management. The development and utilisation of educational facilities and infrastructure, as well as business facilities (production units) of schools was significant at all sites. The principals also conducted much innovation of school facilities and infrastructure to build up stakeholders' trust. Examples of innovation in infrastructure are a well-kept basketball court (Site I); a comfortable green environment (Site I, Site III, Site II, Site IV); and regularly painted schoolyard (Site I, Site III).

The results of interviews, documentation and observations on the five cases showed that industrial co-operation promotes schools. The principal of Site V stated *...we perform competency tests that involve all testers from the industry to gain industry trust in the quality of the graduates*, i.e. (W.A.S5.N1.F3); (D.A.S5.N6.F3). This statement indicates that entrepreneurial TVE leaders think creatively to make innovative breakthroughs, resulting in new programmes different from other institutions. Breakthroughs are associated with new systems, processes and products that may have *more value* than other institution. The entrepreneurial performance of the principal is shown by the character of discipline, hard work, and self-confidence, firmness, risk-taking and by always encouraging entrepreneurship among teachers and employees, i.e. (W.A.S1.N5.F3).

In an era of rapid change, there is an escalating demand for vocational education with changed educational practices and orientation to suit the work culture [23]. In this context, therefore, a leader needs to be able to make decisions quickly and accurately. Decisions taken based on careful data analysis could have less harmful impacts. Entrepreneurial ability plays a critical role in transforming entrepreneurial passion into performance [24].

Entrepreneurial characteristics involve three dimensions; namely, innovation, risk-taking and proactivity. Innovation refers to the development of unique products, services or processes that include conscious efforts to create specific goals, as well as focusing changes on the socio-economic potential of an organisation based on individual creativity and intuition. Risk-taking refers to the active will to pursue opportunities. Lastly, the proactive dimension refers to the assertiveness to constantly find market opportunities and experiment to change the environment.

A successful promotion of vocational education has a positive impact on the organisation, which ultimately fosters community trust and support. The community will show their confidence in the academic quality and have trust and pride in the quality of graduates; the school will have the support and co-operation of parents. The community will support the school and have pride in the school infrastructure.

Image is the set of beliefs, ideas, impressions that a person has of an object [25]. Image is the impression gained in accordance with the knowledge and experience gained about something. Image is the rounded perception regarding an object formed by processing information from various sources. Based on these definitions, image is the impression of an object against another object that is gained by processing information from reliable sources of information. The level of confidence in the source of information is one of the bases for accepting or rejecting information related to the image.

Principals who apply their entrepreneurial skills in making innovations contribute to the success of the TVE they lead, because they are capable of addressing the needs, wishes and expectations of the community on education services. Thus, to succeed in leading the TVE, a principal should be a creative and innovative individual who makes valuable contributions in the form of significant educational innovations. Entrepreneurial leaders build on the commitment of stakeholders by conducting multiple meetings with all members of the organisation. Their actions should be exemplary. They should also provide support to stakeholders. Patience, serenity and motivating ability become essential parts to building good relationships with the stakeholders.

Entrepreneurial Leaders of TVE Institutions and Stakeholder Commitment

The entrepreneurial leaders of TVE institutions recognise that stakeholder commitment and loyalty are the key aspects that must be developed to achieve the school's vision and mission. Developing an organisation's success basically builds a culture of quality work, so that stakeholders obtain satisfaction. Indirectly, loyalty can be measured from the growth of trust and commitment to the organisation [26][27]. In other words, the high commitment to the organisation will affect:

1. the growth of strong co-operation awareness of goals;
2. willingness to follow rules;
3. concentrated attention;
4. the growth of pride in the organisation.

The TVE entrepreneurial leaders make accountability and information transparency an important aspect of loyalty and commitment by stakeholders to educational institutions. Organisational transparency has a direct and positive effect on the achievement, integrity and good faith of stakeholders to the organisation [28-30].

Organisational transparency is a new way to create long-term loyalty of stakeholders. Accountability and openness imply the TVE organisation has an open and accountable educational system. Thus, all institution policies and programmes will have full support from stakeholders. Building a culture of transparency and accountability can contribute to improving loyalty. Corporate transparency is the new way to create long-term customer loyalty. Being transparent in business means the company is open and accountable, and that the TVE leader's policies and programmes are visible to the public. It is no longer enough to think of customer loyalty in terms of reward programmes and reactivation campaigns. Building a strong, open corporate culture can also play a role in engaging and attracting customers. Transparency does create trust and build customer confidence, as well as making a customer feel as though they are a part of the process. A customer will continue to be loyal as long as they are made to feel secure; their expectations are delivered, and their confidence is continuously affirmed.

The entrepreneurial leaders develop a Web-based school information system that can be accessed by parents and the community. The TVE leader should ensure the openness and accountability of the TVE management. The substance of the information systems includes openness and accountability of finance/funding, student learning and school programmes. An open information system can increase stakeholders' trust. Management innovation, performance orientation, professional orientation and innovation orientation are significant in affecting a school's innovative atmosphere [31]. The trust of internal and external stakeholders' organisations can support the leader's policies [28]. In other words, a policy to create a culture that is open and accountable contributes to improving community loyalty and appeal of the organisation.

The Entrepreneurial Leader of a TVE and Industry Co-operation and Collaboration

The entrepreneurial leader of a TVE builds collaboration with government agencies, industry and other institutions to strengthen the organisation. Co-operation with the government is done through school activities. Co-operation with industry focuses on placing graduates in industry, which increases an industry's loyalty to the organisation. The TVEs should produce high-quality candidates and skilled workers who meet the needs of industry.

Collaboration between educational and industrial institutions is an important component of the innovative vocational learning system. Referring to the German vocational education model or dual system, a TVE principal establishes co-operation with industry, to gain support for students in undertaking internships. Dual system education in the form of internships, apprenticeships, mentoring or technical guidance should be well integrated into the education system to encourage industry to recruit graduates. Both vocational education institutions and industry need a mutually beneficial interaction. However, in Indonesia, industry has not approached TVEs, and therefore the TVEs should be proactive. On the other hand, a dual system is a mode of learning, focusing on a specific learning site in an organisational setting designed to qualify and educate young adults for work and society [32][33]. Good organisational co-operation will be achieved, if each party gains benefits from the co-operation. Some of the benefits of co-operation can be identified as:

1. an increase in the relevance of graduates as a result of a jointly planned curriculum;
2. industry obtaining information on the quality of the prospective workers;
3. industry taking responsibility for preparing candidates for the workforce;
4. help in preparing competent workforce candidates for industry;
5. joint research conducted with industry;
6. funding assistance for apprentices;
7. students determining preferred jobs for their future careers;
8. students gaining experience working in a relevant field;
9. students experiencing a real workplace, work ethic and work climate.

CONCLUSIONS

Taken together, the findings and discussion of this research suggest the following conclusions. Entrepreneurial leadership involves the fulfilment of the role of school principal as a leader by developing an entrepreneurial vision and a mission; motivating the institution; controlling and providing reinforcement; delegating decision-making authority to stakeholders and conducting rigorous and continuous evaluation and monitoring.

In addition, the entrepreneurial principal has the following managerial functions: preparing the grand design of the school; selecting specific staff to be allocated tasks in accordance with their abilities and, in addition, they will facilitate innovation and creativity, develop information systems, and strengthen co-operation and communication with stakeholders.

There is more that could be discovered about implementing entrepreneurial leadership in school. Therefore, future research will explore how entrepreneurial leadership can improve technological vocational education schools' excellence.

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