

Journal of Intelligence Studies in Business



Journal of Intelligence Studies in Business

Publication details, including instructions for authors and subscription information: <https://ojs.hh.se/index.php/JISIB/index>

How competitive intelligence can be used to improve a management vocational high school: A case from Indonesia

Verry Ronny Palilingan^a and Johan Reimon Batmetan^{a*}

^aInformation Technology and Communication Education Department, Universitas Negeri Manado, Indonesia;
*john.reimon@unima.ac.id

To cite this article: Palilingan, V.R. and Batmetan, J.R. (2019) How competitive intelligence can be used to improve a management vocational high school: A case from Indonesia. *Journal of Intelligence Studies in Business*. 9 (3) 56-61.

Article URL: <https://ojs.hh.se/index.php/JISIB/article/view/477>

PLEASE SCROLL DOWN FOR ARTICLE

This article is Open Access, in compliance with Strategy 2 of the 2002 Budapest Open Access Initiative, which states:

Scholars need the means to launch a new generation of journals committed to open access, and to help existing journals that elect to make the transition to open access. Because journal articles should be disseminated as widely as possible, these new journals will no longer invoke copyright to restrict access to and use of the material they publish. Instead they will use copyright and other tools to ensure permanent open access to all the articles they publish. Because price is a barrier to access, these new journals will not charge subscription or access fees, and will turn to other methods for covering their expenses. There are many alternative sources of funds for this purpose, including the foundations and governments that fund research, the universities and laboratories that employ researchers, endowments set up by discipline or institution, friends of the cause of open access, profits from the sale of add-ons to the basic texts, funds freed up by the demise or cancellation of journals charging traditional subscription or access fees, or even contributions from the researchers themselves. There is no need to favor one of these solutions over the others for all disciplines or nations, and no need to stop looking for other, creative alternatives.

How competitive intelligence can be used to improve a management vocational high school: A case from Indonesia

Verry Ronny Pailingan^a and Johan Reimon Batmetan^{a*}

^aInformation Technology and Communication Education Department, Universitas Negeri Manado, Indonesia

**Corresponding author: john.reimon@unima.ac.id*

Received 8 December 2019 Accepted 30 December 2019

ABSTRACT Vocational high school needs professional management in order to increase competitiveness. This requires easy, efficient and comprehensive management techniques to maximize potential. The purpose of this study is to improve vocational high school competitiveness by applying competitive intelligence methods. This study uses competitive intelligence methods that are divided into two steps: the competitive intelligence circle in formulating problems and the competitive framework of intelligence as a management model. The results of this study show that problems can be mapped using different competitive intelligence tools. The use of a competitive intelligence framework produces a prime management model and strategies. This applied framework enhances the competitiveness of the vocational high school in our case.

KEYWORDS Competitive intelligence, management, vocational high school

1. INTRODUCTION

Vocational high schools are primary producers of workers in developing countries. This skilled labor industry is needed in developing countries to supply laborers for industries and other sectors that need skilled labor. Schools should produce professionals that are instructed by teachers who are professionals in their fields [1]. It takes a superior vocational high school to realize this goal, which shows it is a quality school. The characteristics of quality are high competitiveness and strong competitive advantage. Another feature is that vocational high schools can provide public education and training services for students. The Indonesia Central Bureau of Statistics shows that there are 13.68 million people, making up 11.03% of the skilled workforce, that came from vocational high schools in 2018 [2]. The data are an increase from the 2017

numbers, which show only 10.40% of the workforce came from these schools. The majority of graduates from vocational high schools work as employees at a company (49.23%), 23.62% are self-employed, and the rest are in other jobs. Based on the field of work, the majority of workers (56.84%) work in the informal sector. On the income side, the average vocational high school graduate receives a wage of IDR 2.23 million. This shows that the majority of vocational high school graduates do not work in relevant jobs and are instead working according to the opportunities available at that time. The unemployment rate in 2018 is dominated by vocational high school graduates, making up 11.24% of the 7 million people who are unemployed nationally in Indonesia [3].

These data indicate that the competitiveness of vocational high schools is

still low in order to be able to compete in the fields studied at the school. A school management model is needed which is directed at increasing competitiveness [4]. Good managerial skills influence schools in managing their resources and opening up opportunities for stakeholders. Technology will make schools more competitive [5]. This management is not only limited to the school curriculum and human resources available, but also complete and massive complete management. This study aims to improve the competitiveness of vocational high schools and is supported by applying competitive intelligence. This research is expected to produce a way to improve the competitiveness of vocational schools that are significant and able to improve the management of vocational secondary schools professionally.

2. LITERATUR REVIEW

Competitive intelligence encourages competition to utilize all the resources needed to win the competition by paying attention to its competitors [6]. Related to that, competitiveness can be increased by overcoming the shortcomings raised and being prepared for each challenge that arises. In order to be more competitive, you can also use other competitive model tools [7]. Institutions can use information technology to build strength and take advantage of the opportunities they have [8]. Information technology support enables vocational schools to reach an agreement and increase competitiveness. Technology has become a driving force for vocational high schools that provide high-quality training [9]. Information technology can be used as the main enabler for all business processes that it has. Information technology has encouraged vocational secondary schools in a fast and unlimited era of globalization [10]. There is support for information technology as an enabler, a finding that can be achieved in a way that is easily obtained from the results, with highly competitive power in accordance with industry and society.

The competitive method of intelligence with the support of information technology will produce quality graduates. Therefore, vocational high schools needs to make improvements in terms of professional human resources [11], reliable management, quality teaching and learning activities, access to quality domestic and foreign higher education institutions and the availability of equal

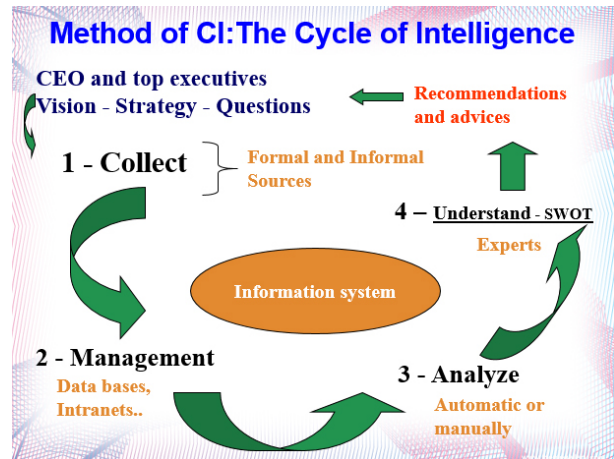


Figure 1 Competitive intelligence method.

facilities with international standard education [12]. The increasingly difficult challenge in the world of education, especially for planning and management, education policymakers, is that, in this case, the government must have a tool or device to evaluate the extent to which education development, especially the performance of educational services for the community can be achieved [13]. The best way to ensure an organization (school) has the durability and viability of the present and sustainability in the future is to create a new strategy using several analyses, such as SWOT analysis, Potter five force analysis, key of success analysis or analysis patent.

A SWOT analysis of factors determines all systematic factors to formulate organizational strategies for both business enterprises and social organizations [14]. Strength analysis can maximize strength (opportunity), opportunity (weakness) and weakness (threat). Strategic decision-making processes consider the vision, mission, goals, and policies of an organization. Thus the strategic planner (strategic factor) must analyze the organizational strategy factors (strengths, weaknesses, opportunities, and threats) in the current conditions [15]. Five forces Porter's analysis is a simple but very useful tool for where the strength of our company lies in competition in the business world [16]. By using this five strength analysis, we can find the current competitive position and position competition in businesses that are fighting. The key success factor (KSF) was the implication of the process of matching the company, which was used to support the company's internal factors. The KSF has the potential to gain a competitive advantage in a particular industry, especially in matters that

are important for companies and who challenge successful companies [17]. Analysis of intellectual property rights (IPR) is divided into two types: copyright and industrial property rights. Based on Indonesian Law Number 19 of 2002 concerning Copyright, Copyright is the exclusive right for the Creator or the right to announce or reproduce work permissions for it by not allowing it to improve with the regulations requested [16]. Industrial property rights are based on patents, brands, industrial designs, layout designs of integrated circuits, trade secrets, and plant varieties.

3. METHOD

This research was conducted by collecting formal and informal data. Formal data is obtained from various scientific sources such as school performance reports, scientific journals, and books. Informal data is obtained from various observations of the institution, surveys, and interviews with respondents. This data collection contains human resources, learning methods, achievements, financial data, and school curriculum data. Data is collected from direct observation and interviews with school principals, teachers, students, and school administrators.

The method of research is a competitive intelligence method which is divided into two main steps: a competitive intelligence circle in formulating the problem and an intelligence framework as a management model. This study uses SWOT analysis to produce a competitiveness strategy, and the researchers used competitive intelligence analysis techniques as shown in Figure 1.

Competitive intelligence methods start with the question of how the company vision can be realized with the best strategy. Thus the three basic questions are asked, namely: Where are we now? Where do we want to go? and How do we get there? The competitive intelligence method will formulate a four-step company strategy as shown in Figure 1. The first step is to gather information from various sources, both formal and informal. The second step is management. The information should be managed successfully in the form of databases and intranets so that it is easy to analyze. The third step is analysis. The information is analyzed both automatically and manually with various tools available. The result of this process is a strategy. The fourth step, is to understand. The results of the analysis are then extracted into a strategy that will be applied as a way to increase competitiveness.

The results of the strategy are then recommended to the CIO and top executives as a strategy that will be implemented to achieve the company's vision.

4. RESULT AND DISSCUSION

4.1 Profile: Indonesian Vocational High Schools

The average vocational high school vision covers a certain period of time. In the vocational high schools that were sampled, they have a vision of "being a faithful vocational secondary school, being honest, courteous, intelligent, cultured, achieving, disciplined, diligent, nationalist and holding on to Pancasila and the 1945 Constitution". This vision is still difficult to realize. While its mission is, 1) educate and train students to be safe and polite, 2) educate and train students to be smart and trained in the fields of nursing, pharmacy, automotive, and graphics preparation, 3) educate, train and encourage students to be able to perform according to competence, 4) educate and train students so that they can be diligent, faithful, national, based on the Pancasila and the 1945 Constitution.

Vocational high schools require buildings, facilities, teachers, administrative staff, and all students need to be improved and developed. The location is supportive to improve the learning process. Schools have a principal, deputy principal, teachers, employees, students and also school guards/security guards. The conditions for productive learning are sufficient to carry out vocational learning.

The learning process uses guidelines that are in accordance with the government-determined curriculum. There are two curricula that are applied in vocational high schools: the 2013 Curriculum for Class X and KTSP 2006 for class XI & class XII. The school curriculum is a series of activities arranged in accordance with the needs of the school carried out in vocational high schools. The curriculum includes the division of teachers' tasks, preparation of lesson schedules, preparation of learning units, preparation of KBM tools, implementing the teaching learning process (KBM) and evaluation. Second, extra-curricular programs include: homework (development of learning materials), sports and competitions, line training, worship, regional arts training, skills, arts and scouts. This has an impact on students because

students no longer accept material that can be understood.

Financial requirements are met as all vocational secondary schools receive funding from the government in accordance with the number of students approved at the school. In addition, sources can also be obtained from subcommittee payments with fees determined by the school. From these various sources, vocational secondary schools are able to finance all costs obtained in school management. The school is able to manage various things to realize its vision, be able to survive and be able to compete well.

4.2 SWOT Analysis of Vocational High Schools

SWOT analysis is used as a basis for discussing work strategies and programs. An assessment

	EXTERNAL	OPPORTUNITY	THREATS
INTERNAL			
STRENGTH		Comparative Advantage	Mobilization
WEAKNESS		Divestment/Investment	Damage Control

Figure 2 Matrix SWOT Kearns.

of the factors of strength (weakness) and weakness (weakness). Meanwhile, external analysis limits opportunities (challenges) and challenges (threats). There are two types of information that are equipped with boxes, namely the top two are external factor boxes (opportunities and challenges). The two adjoining boxes are internal factors (strength and weakness). The other four boxes are boxes of strategic issues that emerge as a result of points related to internal and external factors (Figure 2).

Table 1 Result of the SWOT analysis of a vocational high school.

	EXTERNAL FACTOR	OPPORTUNITY	THREAT
External Factor		<ol style="list-style-type: none"> Local government assistance in completing facilities & infrastructure Demands from the surrounding community for a quality collection Parental support Get support from BOS funds from the government 	<ol style="list-style-type: none"> Similar educational institutions Progress on health & automotive technology Competition to enter vocational school
Internal Factor			
STRENGTH		STRATEGY Strength- Opportunity	STRATEGY Strength-Threat
<ol style="list-style-type: none"> Having a student teacher who is confirmed and obeyed by students The motivation of teachers & students Student's scare, they still have a good relationship with the teacher The learning process is done adjusting to the circumstances & willingness of students 		<ol style="list-style-type: none"> Continue to motivate teachers & students in teaching and learning with government support in completing infrastructure facilities Doing learning for students by applying interesting learning methods and having optimal learning outcomes. 	Work to improve what must be the best in all fields, both teachers and students in the context of competition with other schools
Weakness		STRATEGY Weakness- Opportunity	STRATEGY Weakness-Threat
<ol style="list-style-type: none"> The salary of the teaching staff is too small Does not have complete learning facilities Does not have complete laboratory facilities Most teaching staff cannot overcome student delinquency There is a no teacher acceptance test There is a no student acceptance test Only 1 teacher is a civil servant, the rest are honorary teachers Most teaching staff are not in accordance with teaching time School buildings need a lot of improvement School equipment is old and needs to be replaced 		<ol style="list-style-type: none"> Increase the wages of the teaching staff, so that the teaching staff will become more professional and succeed maximally by using government assistance Replacing & repairing school equipment with government assistance Facilitating laboratories with government assistance Trust 1 staff for school finance Utilizing improvement support with joint service work to improve the school building Submit requests to the government to procure qualified teaching staff 	<ol style="list-style-type: none"> Receiving teaching staff by conducting tests according to their respective fields, especially teaching the staff of productive subjects Accept students' test so that each student enters guaranteed quality and character Conduct special training for teaching staff Conduct character coaching for students Conduct a joint evaluation every week to discuss learning methods & integration of teaching staff as well as everyone involved in the school

In Figure 2, Cell A is the comparative advantage where you can develop faster. Cell B is mobilization, where the cell is the interaction between threat and strength. Here, resource mobilization must be carried out, which is the strength of the organization to be the threat from outside, the event then turning the challenge into an opportunity. Cell C is divestment/ investment. This cell is an opportunity between organizational weaknesses and opportunities from outside. A situation like this provides an option for an escape location. The opportunities available are guaranteed but cannot be used because of insufficient strength. The choice of a decision taken is issuing opportunities available for other organizations to use or forcing them to work on opportunities (investment). Finally, Cell D is control damage, This is the weakest condition of all cells because it is a meeting between the weaknesses and the resolution of decisions that will bring a great disaster to the organization. The strategy of returning losses is so that it doesn't become more severe than expected.

The results of SWOT analyses are possessed by vocational high schools. On the external side, there are many opportunities that can be maximized by vocational secondary schools, but there must also be questions about the challenges that arise in competition (Table 1).

Some of the strong strategies that need to be built in vocational high schools are conducting innovative learning using various project-based learning methods, based on problems, learning to find discoveries and other students who take more and increase higher interest. A targeted apprenticeship program and appropriate scientific competition can also be applied in the step of increasing the competitiveness of secondary school graduates. The internal strategy that can be applied is the improvement of visionary leadership patterns and strong and resilient managerial capabilities. Vocational secondary school is supported by leaders who drive competition, develop good technology, have strong leadership abilities and are able to move all the components in front. Calculated strategies can maximize organizational strength. In addition, organizations also need special attention. Calculated strategies are needed to reduce and overcome organizational weaknesses. For example, a strategy to get new students who are qualified and meet basic standards for vocational school students is needed.

External-based strategies must be built on the strengths of the organization. Vocational high schools must formulate strategies to take advantage of their competitors. This strategy must be solved by considering the strategies that can be generated after making a strategy. Continuous evaluation is needed to develop a strategy that is sustainable over a long period of time. Vocational high schools need to carry out strategies to implement sustainable service improvements for the provision of quality services available in the long term. The strategies needed for invitation requirements arise. This threat can come from other competitors, regulatory changes and social events phenomena that arise in the community. This is a strategy to anticipate. One strategy that can be applied is to increase the human resources needed. Competent human resources can significantly improve the competitiveness of secondary schools so they are able to compete with various challenges.

5. CONCLUSION

Strong competitiveness can be built with strategies that are good and feasible to implement. Competitive intelligence techniques are proven to be able to significantly improve the competitiveness of vocational high schools, in our case from Indonesia. The application of competitive intelligence can formulate various strategies for managing vocational secondary schools that can be applied by utilizing various strengths they have and utilizing opportunities that are available and fast ways to produce competitive work. Minimizing weakness with the right strategy can reduce the weaknesses specified. Appropriate implementation strategies to enhance competitiveness and ensure the sustainability of vocational secondary schools in the long term are needed.

6. REFERENCES

- [1] B. Adil, B. Adil, B. Mustapha, T. Malika, and B. Said, "The ICT-Empowered Pedagogy of Educational Supervisors and the Engineering of their Accompanying Role as Conductive to Quality Teacher Performance," *Int. J. Adv. Trends Comput. Sci. Eng.*, vol. 8, no. 1.4, pp. 434–438, 2019.
- [2] S. I. BPS, "Keadaan Pekerja di Indonesia Agustus 2018 (Laborer Situation in Indonesia Agustus 2018)," 2018.

- [3] S. I. BPS, "Statistical Yearbook of Indonesia 2017," Jakarta, 2017.
- [4] D. P. S. M. K. K. P. dan K. PSMK, *Buku Data SMK 2017/2018*, 2017th ed. Jakarta: Direktorat Pembinaan Sekolah Menengah Kejuruan (PSMK), Kementerian Pendidikan dan Kebudayaan, 2017.
- [5] A. Mazouak, M. Tridane, and S. Belaouad, "Digital in the administrative management of Moroccan School: Contributions, Challenges and Constraints," *Int. J. Adv. Trends Comput. Sci. Eng.*, vol. 8, no. 1.4, pp. 267–271, 2019.
- [6] R. Pellissier, "Towards a universal competitive intelligence process model," *SA J. Inf. Manag.*, vol. 15, no. 2, pp. 1–8, 2009.
- [7] M. Alnoukari, R. Razouk, and A. Hanano, "BSC-SI: A Framework for Integrating Strategic Intelligence in Corporate Strategic Management," *Int. J. Soc. Organ. Dyn. IT*, vol. 5, no. 2, pp. 1–14, 2016.
- [8] G. Opait, G. Bleoju, R. Nistor, and A. Capatina, "The influences of competitive intelligence budgets on informational energy dynamics ☆," *J. Bus. Res.*, 2015.
- [9] Y. Zhang, D. K. R. Robinson, A. L. Porter, D. Zhu, G. Zhang, and J. Lu, "Technological Forecasting & Social Change Technology roadmapping for competitive technical intelligence," *Technol. Forecast. Soc. Chang.*, 2015.
- [10] L. Stefanikova, M. Rypakova, and K. Moravcikova, "The impact of competitive intelligence on sustainable growth of the enterprises," *Procedia Econ. Financ.*, vol. 26, no. 15, pp. 209–214, 2015.
- [11] J. R. B. V R Palilingan, "Profession recommended system for higher education students using Bayesian method Profession recommended system for higher education students using Bayesian method," *IOP Conf. Ser. Mater. Sci. Eng.* 434, vol. 424, no. 2018, pp. 1–7, 2018.
- [12] T. Plessis and M. Gulwa, "Developing a competitive intelligence strategy framework supporting the competitive intelligence needs of a financial institution 's decision makers Research methodology," *South African J. Inf. Manag.*, pp. 1–8, 2016.
- [13] V. R. Palilingan and J. R. Batmetan, "Competitive Intelligence framework for Increasing Competitiveness Vocational High School Management," *Adv. Soc. Sci. Educ. Humanit. Res.*, vol. 299, no. Ictvet 2018, pp. 230–233, 2019.
- [14] M. Shujahat, S. Hussain, M. I. Malik, and J. Ali, "Strategic management model with lens of knowledge management and competitive intelligence A review approach," *VINE J. Inf. Knowl. Manag. Syst.*, vol. 47, no. 1, pp. 55–93, 2017.
- [15] T. Colakoglu^a, "The Problematic Of Competitive Intelligence : How To Evaluate & Develop Competitive Intelligence?," *Procedia - Soc. Behav. Sci.*, vol. 24, pp. 1615–1623, 2011.
- [16] M. Prilop and F. Moez, "Designing Analytical Approaches for Interactive Competitive Intelligence," *Int. J. Serv. Sci. Manag. Eng. Technol.*, vol. 4, no. 2, pp. 34–45, 2013.
- [17] B. John, C. Milewicz, S. Lee, and A. Sahaym, "Industrial Marketing Management Salesperson competitive intelligence and performance : The role of product knowledge and sales force automation usage," *Ind. Mark. Manag.*, 2013.