

Competitive Intelligence and Sustainable Competitive Advantage in Middle School Institutions

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Abstract—Competitive Intelligence (CI) is a business tool in strategic management, and thus gets significance as a process that allows institutions or organizations to achieve sustainable competitive advantage. This study explores the state of CI in education services at SMP Kanisius Jakarta. The purpose of this study is to find out empirically the impact of applying CI processes on educational institutions to sustainable competitive advantage. The CI process that has been implemented and developed shows a real impact on the institution's competitive advantage. The results obtained indicate environmental and organizational characteristics that affect CI's efforts, and vice versa, CI efforts affect the use of CI. This research provides implications and recommendations to help principals develop sustainable competitive advantage through the potential offered by CI in education services.

Keywords—competitive advantage; competitive intelligence; education services; strategic management

I. INTRODUCTION

The speech of the President of the Republic Indonesia, Joko Widodo, at the 68th Anniversary of the Universitas Indonesia and the Inauguration of the Indonesian Nationality Forum, February 2, 2018 underscored the competitive conditions of this world. Therefore, to develop Advanced Indonesia, it requires advanced, superior and reliable human resources. Human resources that can help solve fundamental problems, fulfill basic needs of the people but on the other hand we also need Human Resources who are able to win global competition, able to win global competition. Advanced Indonesia is impossible for us to achieve without superior and competitive human resources [1].

Educational institutions are the right place to perform human resources became superior and competitive. Superior and competitive human resources is very much needed to win Indonesia in global competition. Thus educational institutions are expected to continue to innovate so that they can become educational institutions that have a sustainable competitive advantage [2]. The literature on the sustainability of institutions and organizations identifies three areas of research: efficiency, differentiation and sustainability of services. This article focuses on the efforts of educational institutions to address the long-term competitiveness of education services. Strategic management is related to the dimensions of future estimates,

because it aims to strive for a sustainable education institution that has a competitive advantage [3].

In the field of strategic management, the practices of Competitive Intelligence (hereafter written as CI) have become increasingly important both in practice and in research. CI is a business tool that supports organizations with strategic management and enables them to improve the performance of educational organizations through knowledge of improvement, internal communication, and strategic quality plans. CI is a process that involves the discovery, analysis and use of information about the organization's environment and the conversion into knowledge on an ongoing basis [4]. In the past few decades, the need for technology, cost efficiency, and alignment of business strategies with the environment have enabled rapid expansion and development. CI helps organizations to detect new opportunities, to create added value, and to improve performance. In addition, because CI in educational institutions formally and systematically can continue to be developed to be more qualified. Quality principals will be increasingly able to make better decisions in relation to future events to develop sustainable competitive advantages.

II. COMPETITIVE INTELLIGENCE (CI)

There is no simple and clear CI definition. Many writers have written about this topic and many definitions have been given for the same. The concept of CI can be traced to more than 5,000 years of Chinese history. Many writers point to various historical examples that discuss intelligence concepts, such as Sun Tzu, who was 2,400 years ago wrote *The Art of War*, an influential work that provides a detailed explanation of how to develop intelligence [5].

The idea of CI comes from a military and government context and it is defined as an organized and systematic effort to gather information, assess carefully and integrate it to form clear ideas about things that will happen. There has been an increasing effort by the Society of Competitive Intelligence Professionals (SCIP) since the 80s to promote concepts, expressions, and definitions of CI. However, the same thing does not represent consensus and activity and is still confused with other organizational practices, such as business intelligence, knowledge management, competitive analysis and the environment. In addition, some are still confusing terms of

corporate or industrial espionage, illegal activities with CI [6]. The point is that CI is a methodology that supports strategic thinking which automatically helps in the decision making process. Furthermore, this includes the selection, interpretation and distribution of information held by the public that has strategic interests.

Rouach and Santi states that CI has become the art of collecting, processing, and storing information so that it is available transversely to everyone in the company, with the aim of helping them shape their future and protect them from the current threat of competition. The information must be legal and respect all ethical codes. Furthermore, this involves the transfer of knowledge from the environment to the organization in the established rules [7].

According to Porter, competitive advantage is a specific way of an organization whose presence in the market gets better benefits from its competitors. Organizations that identify opportunities to create different competencies allow companies to get economic benefits better than competitors operating under the same conditions as home companies. Therefore, the main objective of the company is to maintain the economic value generated by the distorted competencies and to protect them from imitation and substitution. Through identification and analysis of competitive threats, CI plays a key role in protecting the competitive advantage that the company acquires. Sustainable competitive advantage is the single most reliable single contributor to profitability above average. A company has a competitive advantage every time it has an edge over its competitors in attracting customers and defending itself against the competitive forces found in its external environment [8].

By analyzing competitors' capabilities, vulnerabilities, intentions and movements, CI allows companies to proactively anticipate market developments, rather than just reacting to them. This in turn allows companies to remain competitive by increasing their strategic decisions and leading to better performance against their competitors. CI supports competitive advantage and better performance by enabling better business planning, the introduction of successful new products and the development of new markets.

Executives at educational institutions with good CI programs have a better understanding of the competitive landscape and this helps them to quickly adjust their strategic plans and market activities when needed, thus maintaining their competitive advantage [9].

The stages that must be passed in the CI process include the following five steps:

A. Identifying Information Needs

The CI process begins by identifying information needs, namely what information is really needed, when, and where the format is so that the company can make the right decision. This is the basis of a successful competitive intelligence process, because without it is impossible to understand what information is useful, making it impossible to get it [10]. The main task of this phase is to define the most important information needs, reduce the accumulation of excess

information, promote the use of relevant information, keep important information safe from those who do not need it to do their jobs.

B. Integrating Information

The next phase is to collect information from the appropriate source according to identified needs. The main task of the information collection phase is to obtain information from various sources, evaluate the quality, reliability and usefulness of information.

Sources of information must be chosen carefully and their observations and evaluations must be continuous. This is important to ensure the reliability of information. Criticism is very important especially when information is obtained from external sources. Depending on the interests of the source itself, the truth of the information can be questioned. For example, companies may deliberately disseminate information that obscures, that is, false information to mislead their competitors. Information must be obtained from a variety of different sources so that the company can choose the most relevant information and best fits its purpose. Using multiple sources also helps in strengthening information and therefore provides more certainty in using information [11].

C. Process and Information Analysis

Information collected from different sources is usually not in a form that can be utilized as such in decision making and therefore needs to be processed. The main task of the processing and analysis phase is; evaluate the quality, reliability, and usefulness of information, index and store information, analyze information.

Thus, information is evaluated for its reliability, validity and timeliness, and information does not meet the criteria discarded [12]. The remaining information is analyzed to understand its meaning from the point of view of the company or situation at hand. Analysis can be defined in many ways, but basically doing different activities and applying appropriate techniques to interpret information to understand its implications for certain situations [13].

D. Dissemination

As stated in the previous section, if the analysis is made by someone other than the end user, it needs to be conveyed to the end user so that they can follow up. In addition, this phase includes sharing one's interpretations and insights that come from information with other people in the company, for example, by discussing them at meetings and at coffee breaks. Thus, the main tasks of the dissemination and distribution phase are sending information to decision makers and sharing information and insights with others.

To get the benefits of the information analyzed, it needs to be provided for those who may feel useful in their work. This can be done by providing information products or giving oral presentations, telephone discussions and so on. Information products produced by competitive intelligence personnel vary from regular bulletins, memos, presentations and market reviews to personalized ad hoc reports [14]. Information products in explicit form can be delivered by technological

means, such as intranets, e-mails and webcasts, or whatever channels or media are suitable for every occasion. Disseminating information in companies is increasingly related to technology, although it can be said that the most valuable way to share competitive knowledge is through personal and informal human interaction.

E. Utilization

The main tasks of this phase are; make actions based on the understanding given by the information received and provide feedback on whether information meets needs or creates new ones. Decision makers evaluate the information they receive for its uses and benefits and decide whether that information should have an impact on their actions. Even though the information is timely, accurate and very valuable, the decision maker can ignore it or decide not to act according to the information shown [15].

If the decision maker has taken into account the information but still decides to act against it, the information still influences the decision. So even if information is used to make decisions, that does not mean that information always leads to the best decisions. Using information leads to action, and this again creates changes that affect the environment. When information is used to form decisions that guide activities, it simultaneously provides input for information gathering and analysis phases.

Using information and knowledge to support decision making is part of a larger discussion that borders many other discourses than just CI. For example, human information behavior, information science, and strategy are fields where information is used in decision making. middle part. However, because competitive intelligence is a support function that does not determine the broader context (ie company or industry) that is utilized, competitive intelligence itself also shares many organizational discourses and activities [16].

III. METHOD

The method used in this study is a descriptive method with a type of case study research. The focus in the case study is an analysis of people, events, activities, processes and also the impact of their activities [17]. This study explores the environmental context of the research place in applying CI. The researcher examines and understands the contemporary situation of the object of research in depth. The study was conducted at Kanisius Middle School Jakarta, starting from November 2018 to May 2019. The study involved 10 people as resource persons in depth interviews.

This research is also intended to provide answers to the use of CI which has an impact on sustainable competitive advantage in educational institutions. In the literature review, a number of different books and articles are compiled to produce thoughts that lead to the use of CI processes in educational institutions. Then the author confirms the literature review in field research and reports in the research report.

IV. FINDING AND DISCUSSION

The main objective of the CI process is to support the management of institutions to have a sustainable competitive advantage. The criterion for an institution to have a sustainable competitive advantage is effectiveness, differentiation and the quality of sustainable services.

A. Efficiency

One of the purposes of the CI process is to increase efficiency. Institutions have resources that are expected to contribute optimally in achieving the goals of the institution. Based on the CI process that occurs in the Jakta Kanisius Middle School, there are several types of efficiency arising from the CI process. Next we will explain the discussion regarding efficiency.

1) Decision-making: World uncertainty and the demands of an ever-changing organization require leaders to have the courage, willingness, and ability to make decisions even though sometimes they are in difficult conditions. Decision making is part of managing the organization. Good leaders and bad leaders are distinguished in taking decisions made. The ability of a leader to make decisions that will realize the mission of the organization while ensuring the well-being of the people in it [18].

Decision making can be considered a mental process (cognitive process) which results in the selection of actions among several alternative scenarios. Every decision making process produces the final choice. The output can be action or choice of opinion. Every organization needs good decision making. When asked, people don't easily point to what they consider to be a big decision.

There are several important factors that influence decision making. Important factors include past experience, various cognitive biases, escalation of commitment and ambiguity of orientation, individual differences, including age and socioeconomic status, and belief in personal relevance. All of this has an impact on the process of decision making and decision making. According to Trigo, CI is an operational system for collecting, processing and providing information that directly contributes to strategic decision makers. The purpose of CI is to provide the right information at the right time and in the right way to the right person, so that he can make the right decision [19].

In other words, CI generates knowledge for strategic decision making, because the information provided by the CI team makes it possible to take action in real time, as well as continuous learning about competitors, customers, suppliers, and important market developments. Thus, decision makers in addition to utilizing CI results must also provide learning to teachers and employees so that they increasingly understand the CI process.

Kanisius Jakarta Middle School uses the CI process in decision making because it realizes that fast and appropriate decisions will result in sustainable competitive advantage for the institution. This process is also what makes SMP Kanisius Jakarta able to maintain its educational services while maintaining and increasing its competitiveness in the midst of

the increasing movement of other educational institutions. Good and right decisions always assume a good and appropriate process. The CI process has proven to be a good, accurate and fast decision-making process.

2) *Management information system*: The CI process involves three basic components, namely human, technology and process. Competence, technology, and process are important elements needed for successful CI implementation regardless of the organization whatever form of organization is built. This awareness also wants to be applied to Kanisius Middle School education institutions in Jakarta. Management information systems on the one hand as information providers but at the same time as a tool that makes institutions more competitive [20].

Kanisius Middle School in Jakarta experienced a significant development since the implementation of the school management information system in the ESM. As time went on and the CI process continued, the development of the system and its network also always developed. The current system has not yet been able to answer all the needs, but its role is vital in supporting institutions and changes.

The main problem that requires serious attention is related to its users, both teachers, employees and students. Some teachers and employees still experience poetry in the use of this information system, while students are generally adaptable, but there is also a tendency to misuse existing learning systems and information systems.

3) *Financing*: Education funding in the concept is based on education as an investment in human resources, so that economists have given serious attention to education because education will improve the ability of humans to produce. This is where the starting point of the emergence of views about humans as development capital or often called human capital. While the notion of education financing is all funding that is available or used to support the realization of the education process so that effective education goals can be realized [21].

As formulated in the description of the findings, the impact of the CI process also supports financing efficiency. The CI process and the resulting application result in efficiency in many ways. First is financing measured in the budget plan for school income and expenditure, thus all financing has been budgeted from the start and this becomes a benchmark of efficiency in the sense that the entire process of management and learning activities can be adequately financed. The second relates to savings. The CI process that has been carried out has delivered the Kanisius Middle School to implement a management information system and learning system digitally. With this system the cost of the learning process, the cost of learning equipment, the source book, the use of paper for learning and administrative purposes is reduced significantly.

4) *Management process*: The management process is the activity of planning, organizing, leading and controlling the course of an institution or organization [22]. The CI process in a certain sense also has the same flow with the management of the general. Because of that, the CI process is also very much related to the management process. Thus institutions that are

familiar with the CI process will easily also run the management of the institution.

Efficiency in institutional governance is better with a consistent CI process. Kanisius Jakarta Middle School has shown consistency in this. This can be seen clearly from the time span of the institution's educational services that have been running for more than 90 years. The CI process in the course of time has produced innovations that are very useful for the running of the institution's governance process. The application of the school management information system has made it easier for the entire management movement of the institution.

Organizational culture is very influential in developing the uniqueness of the institution. Between teachers and employees and also with students, the atmosphere of brotherhood is very thick. Such a culture and school climate are certainly also very influential in the course of managing the institution. The process goes not because of an atmosphere of compulsion, but on the realization that the process must indeed be carried out in such a way that it produces good results.

B. Differentiation

As an educational institution, SMP Kanisius Jakarta has the same business core as other educational institutions, namely providing educational services to the public. However, this institution also always develops distinctiveness in its education services. Porter said that differentiation is one of the strategies in winning competition. Differentiation is an effort to create a unique and attractive attraction.

In this context the institution has sought to be competitive in educational services by seeking to be differentiated. Differentiation found in Kanisius Jakarta Middle School has several reasons; the first educational institution was founded by a religious community in the Catholic Church called *Serikat Jesus*. With this principle, the established educational institution was also built on the basis of the spiritual order of the congregation whose essence is dedication to the world for the glory of God. Second; In addition to developing students' intellectual abilities, this institution also gives serious attention to character development. This institution has many activities in order to develop student character. This particularity is enshrined in the 4C slogan; competence, conscience, compassion, commitment [23,24].

Another differentiation is that this school only accepts male students. There is a separate reason for deciding to only accept male students. The main reason is to make it easier for institutions to provide assistance and focus on developing characters. Although in the concept of education today, educational institutions like this are not recommended, because the current tendency of educational institutions must be inclusive.

C. Sustainable Services

Educational institutions have a focus on education services. Therefore service is a very important factor in the framework of building competitive educational institutions. In the Ignition Pedagogy Paradigm scheme, students are placed in a service center.

According to Parasuraman, there are five dimensions of SERVQUAL, known as RATER, which consist of the following elements:

- Reliability, namely the reliability / ability of the school to provide educational services in accordance with the promise accurately and reliably. Performance in accordance with customer expectations of educational services in the form of timeliness, uniform service for each customer of educational services without errors, sympathetic attitudes and high accuracy.
- Assurance, namely knowledge, politeness, and the ability of school employees to foster customer trust in education services in schools, including communication, trust, security, competence and courtesy.
- Tangible, the ability of the school to show its existence on the external side of the school, including physical facilities (buildings, warehouses and others), educational equipment and equipment used and the appearance of school employees.
- Empathy (Empathy), schools are able to give sincere and personal attention to customers of educational services by understanding the desires of education service customers. Schools are also expected to have an understanding and knowledge of customers of educational services, understand the needs of customers of educational services in particular, and have a convenient operating time for educational services for customers of educational services.
- Responsiveness, namely policies to help and provide fast and appropriate educational services to customers of education services. From the experts' explanation of the dimensions of service quality above, it can be concluded that several dimensions are appropriate so that education services can provide satisfaction to service customers (students). The dimensions are reliability (reliability), assurance (guarantee), tangible (physical evidence), empathy (empathy), and responsiveness (responsiveness) [25].

In line with what Parasuraman revealed, the 4C motto (Competence, Conscience, Compassion, Commitment) that the SMP Kanisius lives on has also illustrated how the criteria for adequate education services. This institution gets all parts of the institution both teachers, employees and students in one learning community [24].

Likewise with the services of the teachers. Teachers and employees realize that effective schools are learning communities, core elements which are a culture of collaboration and collective responsibility for the development of effective teaching practices and improving student achievement. Teachers cannot be expected to create a strong learning community among students if they do not have a parallel community that maintains them professionally.

Learning communities also appreciate and recognize that teachers are adult students who learn in different ways, come from different backgrounds, work in a variety of specific

regulatory contexts, and meet diverse student needs. They realize that teachers have individual needs, different motivations for learning, and prior knowledge and experience that will have an impact on the type of learning they choose to involve [26].

V. CONCLUSION

The application of CI processes to educational institutions has had several impacts; first, the CI process is a development in a process that combines management processes, technology, and best practices to offer insights that guide strategic decision making based on data accumulation. Second, the CI process also impacts on efficiency. Third, differentiation is one form of competitive advantage. Kanisius Middle School Jakarta has built educational institutions that have specialties, especially in developing student character with reference to PPI. The fourth relates to sustainability and innovation. Kanisius Jakarta Middle School can maintain sustainable education services because of the ability to find innovation in the face of various changes in the course of its history. Thus CI processes are very necessary for this era, especially changes that are influenced by technological developments are running so fast nowadays.

The implications of the CI process for institutions are; First, the CI process has produced intelligence that is very useful in decision making. Second, efficiency can occur from the CI process. Efficiency will increase even more if there is a development especially in the application of information technology that is getting better. The three CI processes also have an impact on institutional service differentiation. The implication is that peculiarity will become increasingly competitive if it continues to be developed with a quality CI process. Fourth, related to sustainability and innovation. Educational service innovations must still be developed to be able to continue to provide educational services in today's rapidly changing world situation.

When the world is global, the pace of change is at a high pace, driven by information technology. Top managers will be under intense pressure to react spontaneously to these changes and with the right decisions. The need for better decision-making in such conditions will drive the need for CI processes to new heights not only for the use of top management but fully assimilated throughout the organization. The creation of data and its accumulation will be much easier making it possible to create a culture of analytical decision making in organizations today. As a result this effect will affect analytic tools to be more user friendly and easier to carry out analytical operations with little or no expert support. The CI process in organizations that is applied in information technology systems will reduce implementation costs and therefore be advantageous in their use.

A good CI process will be very useful for making decisions that are fast, good and accurate. On the basis of quick and precise decisions, institutions can continue to strive for sustainable competitive advantage. Thus this research provides recommendations to principals to pay attention to and develop a quality CI process.

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