Entrepreneurial University of the 21st Century

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Entrepreneurial University of the 21st Century

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Preface from the Editors

The SEAAIR 2004 China Conference is the fourth annual conference of the Southeast Asian Association for Institutional Research. In view of current development affecting education and the many challenges faced by institutions of higher learning today, the theme “Entrepreneurial University of the 21st Century” has been aptly chosen to provide a valuable platform for academics, researcher and managers in higher education to explore, share, discuss and reflect on the many related issues.

The Papers Committee received over 100 paper proposals that were refereed by appropriate experts. The Proceedings include the keynotes and parallel session papers received. Regrettably some papers presented at the conference are not in the Proceedings as they arrived too late to be included.

The papers are primarily based on experiences and research conducted in various universities and other higher education institutions in the region as well as in the United States, United Kingdom, Australia and New Zealand. We believe this is a valuable collection of papers covering a broad area on the management of entrepreneurial universities and other higher education institutions and its related issues, innovations in teaching and learning, as well as institutional research and strategic planning.

There is enough for the reader to dwell on and to benefit from the experiences and research that each paper highlights. It is also believed that we will develop new perspectives and gain new insights from the papers in the Proceedings. As each of us try to help universities move forward our roles require us to be more open and receptive to these changes and challenges.

We hope the collection of papers in this set of Proceedings will help you do just that.

Finally we would like to take this opportunity to thank the many people who lent their precious times to make both the conference and this Proceedings a worthwhile collection of thoughts, research and experiences that will be useful to continually improve higher education in Asia in particular and in the world generally.

Warm regards,

Associate Professor Dr Zoraini Wati Abas & Professor Fansheng Kong
Joint Editors
SEAAIR 2004 China Conference Proceedings
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Accelerating Entrepreneurship Competency in Higher Education Graduates Through Competitive Intelligence Learning

A. Edi Sudiarto  
Dyah Kusumastuti

ABSTRACT
The development of using Competitive Intelligence (CI) in industrial sector has brought about new competency needs of Higher Education (HE) graduates that are Entrepreneurship Competency (EC). In the mean time, the implementation of CI in HE, especially in Indonesia is considered as a new thing. Therefore, HE as the agent of change in the society should respond to such changes immediately through CI learning in HE by developing EC for its graduates. In this case CI could be used to assist the student learning to control and monitor external information in the field of economics, knowledge, technology, social science, environment, politics, patents, and business competition. HE that applies CI learning is believed could accelerate the establishing of EC for their graduates. To implement CI, Dou (2003) introduces four CI cycle levels, these are: (1) Information gathering, (2) Information management, (3) Information Analysis, and (4) Information understanding. The transformation of raw materials of information into strategic information that has more added value happened in these CI cycles and this is called knowledge – intelligence. Through CI learning, HE graduates not only have the competency as job seekers but also as job creators.

This study reported that CI learning could be implemented by: (1) special lecture topics are given by all study program, or (2) CI only being a part of course content of several lecture topics, such as: Strategic Management, Decision Making, Marketing Management, Management of Information System, or other relevant lecture topics.

Keywords: Competitive Intelligence, Entrepreneurship Competence.

1. INTRODUCTION
The concept of Competitive Intelligence (CI) has been in the process of developing for more than 20 years [2], but its implementation in Indonesia is very scarce. Meanwhile, it is believed that in the era of the knowledge society, CI method is one of the effective tools in assisting the transformation of raw information into intelligence-(new) knowledge.

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In this case, CI can assist both individuals and organizations to observe external information in several fields such as technology, science, economy, politics, finance, and industry. These external informations then be gathered, managed, analyzed, and disseminated to the stakeholders as the basis for the strategic decision making that has an affect added value.

Along with the development of the quality of Indonesian higher education, the Directorate General of Higher Education – Ministry of National Education, Republic of Indonesia has designed the development strategy for Indonesian higher education in the 21 century that is outlined on the document of “Higher Education Long Term Strategy (HELTS) 2003 -2010” [8]. This document contains the guiding strategy for managing Indonesian higher education’s in order to implement the new paradigm of higher educations. This paradigm concist of autonomy and accountability, quality, and efficency which is based on the autonomy of the implementation in of education and health as a means of developing nation’s competitiveness superiority. Porter (2002) in [8] defines a definition of the nation competition power as “a country’s share of world markets for its products.”

Higher Educations in Indonesia has considered that in facing global problems, it needs to develop knowledge based on solution. It shows that the role of knowledge become more important on facing future challanges. Therefore, the HE graduates that have knowledge based competency like entrepreneurship competency is an urgent needs and need to be accelerate to fullfill it. For that purpose, the implementation of CI learning in HE is very appropriate to be implemented. It’s convinced that the HE that apply CI learning could increase the acceleration in establishing the entrepreneurship competency of its graduates, which is not only able to compete domestically but also in internationally.

1. PROBLEM IDENTIFICATION

From the explanation above, this study formulates 3 mayor factors. First, how to implement CI in establishing the Entrepreneurship Competency of HE graduates. Second, how CI learning could accelerate the establishing of Entrepreneurship Competency of HE graduates. Third, how CI learning in HE should be implemented effectively in order that its graduates have a minimal competency as job seekers and at the same time as job creators.

2. THE AIM OF STUDY

The aim of the study is to get a picture about CI application method in helping to increase the acceleration of Entrepreneurship Competency establishment of HE graduates.
Moreover, this study is also able to recommend CI learning process which can be applied in HE in accordance with characteristic and priority of the HE itself. Through such CI learning process, it is convinced that the HE is able to produce the graduates that have creative, innovative, and high critical thinking.

3. LITERATURE REVIEW

3.1 Competitive Intelligence

Intelligence is a process of creating new knowledge in an organization. The new knowledge creating process is basically related to the data transformation to the intelligence [7], and as described below.

Figure 1: Transformation of data & information to the knowledge

**Data.** The picture of an event or fact of the things that happen in a certain period of time. Data has no meaning and benefit yet.

**Information.** A group of data which has a relationship that could give a meaning. Information could give the meaning both in positive and negative side.

**Knowledge.** Something that wider, deeper, and more comprehensive than information. Knowledge is the unity of tacit knowledge (the invisible skill of a person) and explicit knowledge (documented skill)

In the other word, intelligence is a collection of various information that have been filtered, managed, and analyzed. It has changed to become something that has an added value that can be used later. In Decision making what we need is intelligence, not information. Later on, the term intelligence has been used widely in many different sectors and based on its range and level. The term Economic Intelligence, Technology Intelligence, Business Intelligence, Market Intelligence, Competitive Intelligence, Customer Intelligence, are some of the example.
Intelligence should have high accuracy, focuses on one side, with futuristic time dimension, and can be implemented and responsive to the management demand. The thing that is more attractive to be discussed is the significant difference between the meaning of issue, data, information and intelligence based on the dimension like content, activities, placement, time, and quality/strategic. Table 1 summarize these differences.

<table>
<thead>
<tr>
<th>Informational Level</th>
<th>Description</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue</td>
<td>• Far from the main object</td>
<td>Placement</td>
</tr>
<tr>
<td>Data</td>
<td>• Raw facts</td>
<td>Content</td>
</tr>
<tr>
<td></td>
<td>• Over along period of time.</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>• No meaning or advantage</td>
<td>Quality</td>
</tr>
<tr>
<td>Information</td>
<td>• Collection of facts organized in such a way that they have value beyond the facts themselves</td>
<td>Activity</td>
</tr>
<tr>
<td></td>
<td>• Close to the main object</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>• Something which has just happened</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>• Advantageous</td>
<td>Quality</td>
</tr>
<tr>
<td>Intelligence</td>
<td>• At the source of the object</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>• Something that has not happened</td>
<td>Time</td>
</tr>
<tr>
<td></td>
<td>• The process of creating new knowledge</td>
<td>Activity</td>
</tr>
<tr>
<td></td>
<td>• It damages the system of the organism</td>
<td>Strategic/Quality</td>
</tr>
</tbody>
</table>

Source: Sudiano (2004)

But it has to be remembered that:

*Knowledge, Intelligence, is not found, in libraries, books, scientific, or technical papers. Knowledge, Intelligence must be created, whereby, a mechanisms of understanding information according to the vision of the company has to be created within the process of Competitive Intelligence [3].*

Massari and Dou in [3] gave the parameters of Competitive Intelligence as follows:

*Competitive Intelligence (CI) is a systematic program to treat, analyze, disseminate information upon the activities of the competitors, the technologies and the general tendencies of the company’s activities, in view to achieve the best strategic goal of the company.*

*In this figure, the process of the Competitive Intelligence cycle, might be presented in four steps: the first, deals with information gathering, the second with the information management, the third with information analysis, and the forth with information understanding and the creation of high (strategic) valuable information products.*
This picture shows that CI activity is very important in explaining on how the information is obtained, collected, analyzed, and protected, so that the information will have an added value both for individual and organization. Here is the explanation of each CI cycle level.

(1) **Information gathering.** The information source could be obtained from the formal and informal sources, for instance: personal or public interviews with management, speeches, annual reports, government documents, trade shows, patent searches (show you what product the company may be planning to produce), newspaper, magazine articles, books, Edited TV interviews or others’ opinions. To get the valuable information, it is necessary to have a person(s) who is competent enough in handling the information and the technology that gather the information.

(2) **Information management.** Information need to be arranged, protected, cared, and developed so it is still up-to-date. This information is expected to be in accordance with what we want it to be. It can be easily be accessed by the users of information. The information is saved on the database that can be accessed through internet / intranet. This in turn will help in sharing information between the user and information provider.

(3) **Information analysis.** The information collected must be transformed from a bunch of scattered tidbits into a useful report. One way of analyzing all the information is to turn it into a **SWOT** (Strength, Weakness, Opportunities, Threats) Analysis.
Use the gathered information to make educated assumptions about the strength, weakness, opportunities, and threats of competing firm.

(4) **Information understanding.** To get a valuable information, the information must be analyzed by an expert. Interaction, structure, and network of information must be understood well. Doing processing data such as: frequency lists, matrix, and its network design. Doing synthesis to get the strategic information products.

### 3.2 Entrepreneurship Competency

Spencer and Spencer (1993), *competency is define as an underlying characteristic of an individual that causally related to criterion referenced effective and/or superior performance in a job or situation*

Five types of competency characteristics:

![Diagram of Competency Characteristics](image)

**M**otives. The things a person consistently think about or wants that cause action. Motives drive, direct and select behavior toward certain actions or goals and away from others

**T**raits. Physical characteristics and consistent responses to situations or information.

**S**elf concept. A person’s belief that he or she can be effective in almost any situation is part of that person’s concept of self. Example: self confidence a person’s belief that he or she can be effective in almost any situation is part of that person’s concept of self

**K**nowledge. Information a person has in specific content areas

**S**kill. The ability to perform a certain physical or mental task.

Based on Spencer and Spencer (1993), the generic Entrepreneur Competency model can be explain as follow:

**I. ACHIEVEMENT**

(1) Initiative
   a. Does things before being asked or forced to by events
   b. Acts to extend the business into new areas, products or services

(2) Sees and acts on new business opportunities
   a. Sees and acts on new business opportunities
   b. Seizes unusual opportunities to obtain financing, land, work space, or assistance
(3) Persistence  
a. Takes repeated or different actions to overcome an obstacle  
b. Takes action in the face of a significant obstacle  
(4) Information Seeking  
a. Does personal research on how to provide a product or service  
b. Consult experts for business or technical advice  
c. Seeks information or asks questions to clarify supplier’s needs  
d. Personally undertakes market research, analysis, or investigation  
e. Uses contacts or information networks to obtain useful information  
(5) Concern for High Quality of Work  
a. States a desire to produce or sell a top or better quality product or service  
b. Compares own work or company’s work favorably to that of others  
(6) Commitment to Work Contract  
a. Makes a personal sacrifice or expends extraordinary effort to complete a job  
b. Accept full responsibility for problems in completing a job for customers  
c. Pitches in with workers or works in their place to get job done  
d. Expresses a concern for satisfying the customer  
(7) Efficiency Orientation  
a. Look for or find ways to do things faster or at less cost  
b. Uses information or business tools to improve efficiency  
c. Express concern about costs versus benefits of some improvement, change, or course of action  
II. THINKING AND PROBLEM SOLVING  
(8) Systematic Planning  
a. Plan by breaking a large task down into subtasks  
b. Develop plan(s) that anticipate obstacles  
c. Evaluate alternatives  
d. Take a logical and systematic approach to activities  
(9) Problem Solving  
a. Switches to an alternative strategy to reach a goal  
b. Generates new idea or innovative solutions  
III. PERSONAL MATURITY  
(10) Self Confidence  
a. Expresses confidence in his or her own ability to complete a task or meet a challenge  
b. Sticks with his or her own judgment in the face of opposition or early lack of success  
c. Does something that he or she says is risky  
(11) Expertise  
a. Had experience in the same area of business  
b. Possesses strong technical expertise in area of business  
c. Had skill in finance before starting business  
d. Had skill in accounting before starting business  
e. Had skill in production before starting business  
f. Had skill in marketing/selling before starting business  
g. Had skill in other relevant business area before starting business  
(12) Recognizes Own Limitations  
a. Explicitly states a personal limitation  
b. Engages in activities to improve own abilities  
c. States learning from a past mistake  
IV. INFLUENCE  
(13) Persuasion  
a. Convince someone to buy a product or service  
b. Convince someone to provide financing  
c. Convince someone to do something else that he or she would like that person to do  
d. Assert own competence, reliability or other personal or company qualities  
e. Assert string confidence in own company’s product or services
Accelerating Entrepreneurship Competency in Higher Education Graduates Through Competitive Intelligence Learning

(14) Use of Influence Strategies
   a. Act to develop business contacts
   b. Use influential people as an agent to accomplish own objectives
   c. Selectively limit the information given to others
   d. Use a strategy to influence or persuade others

V. DIRECTING AND CONTROLLING
(15) Assertiveness
   a. Confront problems with others directly
   b. Tell others what they have to do
   c. Reprimand or disciplines those failing to perform as expected

(16) Monitoring
   a. Develop or use procedures to ensure that work is completed or that work meets standards of quality
   b. Personally supervise all aspects of a project

VI. ORIENTATION TO OTHERS
(17) Credibility, Integrity and Sincerity
   a. Emphasize own honesty to others (e.g., in selling)
   b. Act to ensure honesty or fairness in dealing with others
   c. Follows through on rewards and sanctions (to employees, suppliers)
   d. Tell customer he or she cannot do something (e.g., complete a task) even if it means a loss of business

(18) Concern for employee Welfare
   a. Takes action to improve the welfare of employees
   b. Takes positive actions in response to employees personal concerns
   c. Expresses concern about the welfare of employees

(19) Recognizing the importance of Business Relationship
   a. Sees interpersonal relationships as a fundamental business resource
   b. Places long-term good will over short-term gain in business relationship
   c. Emphasizes importance of maintaining cordiality or correct behavior as all times with the customer
   d. Acts to build rapport or friendly relationships with customer

5. STUDY APPROACH
This study is made based on the development of Competitive Intelligent and Entrepreneurship Competency concepts along with its implementation in organization. It is also the result of our analysis and daily life activities that have been done by authors at Widyatama University environment. The Widyatama University currently is developing Competitive Intelligence as one of its MBA concentration program. Through the establishing of Center for Analysis and Developing Competitive Intelligence in MBA program, the students and the lecturers could learn the concept of CI and its implementation in HE or industries. One other thing, Widyatama University has made a research cooperation with University of d’Aix Marseille III – France, especially to develop the CI implementation in Indonesia.
6. **HOW CI CAN ACCELERATE THE ESTABLISHING OF ENTREPRENEURSHIP COMPETENCY**

The CI learning process is a key part that cannot be separated from Entrepreneurship Competency establishment for HE graduates. Figure 4 shows how CI learning process to the students that can accelerate the establishing of Entrepreneurship Competency in HE graduates. The acceleration happens because of the entrepreneurship learning process to the students is based on the implementation of Competitive Intelligence cycle, that is how to transform the raw material of information to become intelligence or (new) knowledge. This new knowledge creation can motivate the graduates to be more innovative, creative, and productive.

![Diagram](image.png)

*Figure 4: Acceleration in Establishing Entrepreneurship Competency*

Based on CI cycle concept [3] and the generic Entrepreneur Competency model (Spencer & Spencer, 1993), the contribution of CI learning on the establishing of Entrepreneurship Competency at HE graduates can be set up as in diagram shown in Figure 5 below.
Accelerating Entrepreneurship Competency in Higher Education Graduates Through Competitive Intelligence Learning

Activity of CI Cycle

INFORMATION GATHERING (1)

INFORMATION MANAGEMENT (2)

INFORMATION ANALYSIS (3)

INFORMATION UNDERSTANDING (4)

Entrepreneur Competency Generic

<table>
<thead>
<tr>
<th>Achievement [I]</th>
<th>(1) Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(2) Sees and acts on new business opportunities</td>
</tr>
<tr>
<td></td>
<td>(3) Persistence</td>
</tr>
<tr>
<td></td>
<td>(4) Information Seeking</td>
</tr>
<tr>
<td></td>
<td>(5) Concern for High Quality of Work</td>
</tr>
<tr>
<td></td>
<td>(6) Commitment to Work Contract</td>
</tr>
<tr>
<td></td>
<td>(7) Efficiency Orientation</td>
</tr>
<tr>
<td>THINKING AND PROBLEM SOLVING [II]</td>
<td>(8) Systematic Planning</td>
</tr>
<tr>
<td>PERSONAL MATURITY [III]</td>
<td>(9) Problem Solving</td>
</tr>
<tr>
<td></td>
<td>(10) Self Confidence</td>
</tr>
<tr>
<td></td>
<td>(11) Expertise</td>
</tr>
<tr>
<td></td>
<td>(12) Recognizes Own Limitations</td>
</tr>
<tr>
<td></td>
<td>(13) Persuasion</td>
</tr>
<tr>
<td>INFLUENCE [IV]</td>
<td>(14) Use of Influence Strategies</td>
</tr>
<tr>
<td>DIRECTING AND CONTROLLING [V]</td>
<td>(15) Assertiveness</td>
</tr>
<tr>
<td>ORIENTATION TO OTHERS [VI]</td>
<td>(16) Monitoring</td>
</tr>
<tr>
<td></td>
<td>(17) Credibility, Integrity and Sincerity</td>
</tr>
<tr>
<td></td>
<td>(18) Concern for employee Welfare</td>
</tr>
<tr>
<td></td>
<td>(19) Recognizing the importance of Business Relationship</td>
</tr>
</tbody>
</table>

Figure 5. Diagram showing the relationship of CI in accelerating the establishment of Entrepreneurship Competency

Figure 5 shows that almost all the activities in CI cycle contributes to generic entrepreneurship competency. This is possible because every generic competency that exist needs the external data source, information, and new knowledge. For example, to develop generic competency such as “thinking and problem solving”, data availability, raw material information, and new knowledge produced by CI cycle is the main capital to arrange the plan and to solve many kinds of problems.

In the case of Widyatama University as one of the 1,631 private universities in Indonesia, the implementation of CI learning has not been organized formally. The first effort that is implemented by Widyatama is to determine itself as a school of business and e-commerce, as the great goal that want to be achieved in developing Widyatama in the future. With the number of students amounted for about 6,500, all Widyatama graduates are directed of having the competency like sense of profit making. This is built through continuous and simultaneous learning system to create (new) added value for market and public. To realize that vision, Widyatama has placed its knowledge foundation which include Business and Technology Intelligence (BTI) and Entrepreneurship fields as one of its steppingstones in developing the learning process to its students.

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Nowadays, Widyatama does not determine specifically CI learning as a lecture subject in its curriculum. However, several lecture subjects have been combining with the content of CI, especially in MBA program. Those lecture subjects include: Marketing Management, Management Information System, and Strategic Management. Apart from that, a number of international seminars concerning Business and Technology Intelligence and Information Society have been held by Widyatama University as the follow up of its collaboration with Indonesian government through Menristek (The Ministry of Research and Tehcnology) and LIPI (Indonesian Board of Science) with ROISAP (Regional Observatory of Information Society in Asia Pasific), an institution under the UNESCO whose members come from 21 countries in Asia Pasific. In this program of ROISAP-UNESCO, Widyatama is pointed as a host for the information exchange between its members. The program specifically discuss the problem concerning the developing of information society and knowledge society in Asia Pasific countries. Moreover, Widyatama also has made a cooperation with University of d’Aix Marseille III – France to do a joint research and Ph.D. program. One of its program that is currently running is the implementation of Competitive Intelligence program in Indonesia.

4. ANALYSIS & DISCUSSION

Implementation of CI learning in HE could be accomplished through two approaches. First, CI learning can be embodied into the curriculum of a study program. This implies an increase in the number of lecture topics and course load in the study program. Second, CI learning can be included in relevant lecture topics, for instance: Strategic Management, Marketing, Management Information System, or Decision Making System. Table 2 shows the advantages and disadvantages of those 2 approaches.

<table>
<thead>
<tr>
<th>Approach</th>
<th>Advantage</th>
<th>Disadvantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. CI learning as independent subject</td>
<td>More focused</td>
<td>Increase in the number of lecture topics</td>
</tr>
<tr>
<td></td>
<td>Measurable clearly</td>
<td>Increase in the number of course load</td>
</tr>
<tr>
<td></td>
<td>More complete</td>
<td>New resources requirement</td>
</tr>
<tr>
<td>2. CI learning as part of several courses</td>
<td>Easy to change</td>
<td>Difficult to monitor outcome</td>
</tr>
<tr>
<td></td>
<td>Do not need new resources</td>
<td>Responsibility process spread</td>
</tr>
</tbody>
</table>

To implement the CI learning process of HE in the right way will require hard work and commitment from all those involved: namely students, lecturers, and the institutions themselves. This is required because of several barriers that emerge (especially at
Widyatama University) such as: Infrastructure of Information & Communication Technology (ICT) that has not spread out yet and is difficult to be accessed at any time by both lecturers and students; the problem of the digital gap, where data and documents still can not be converted yet into digital data; the low motivation of students in learning ICT; the consideration that ICT is an expensive and difficult course.

According to the short explanation above IC learning for HE graduates has several benefits, namely:

a. Knowing early tendencies of how future technology will develop;
b. Kinds of industries that will be developing in the future;
c. Understanding the government’s policy in concern with the labor industrial development, employment opportunities, etc.
d. Understanding the competency that is required by industrial

e. Business chance opportunities now and in the future.
f. The capability of using information and knowledge to make decisions.

5. CONCLUSION

Implementation of CI learning method to accelerate the establishment of entrepreneurship competency of HE graduates is considered as a new and effective development. Through this method students are taught how to use external information sources from technology, industry, science, economy, environment, and the social-cultural milieu. This information must be gathered, protected, maintained and analyzed to create a new knowledge. Through CI learning, Entrepreneurship Competency can be generated. This may result in achievement, thinking and problem solving, personal maturity, also the ability to influence, direct and control, and orient others can be accelerated so that, the HE graduates have a competency both as job seekers and as job creators. The implementation can be applied through two approaches. First, CI is included into study program as a new course subject. Second, CI becomes a part of the relevant course subjects.

This study still required a follow up study, for example, how to measure the contribution of every level of the CI cycles toward the establishment of Entrepreneurship Competency in HE graduates as explained by Spenser and Spenser (1993). Another topic of research would be to compare how well Entrepreneurship Competency is established in HE graduates through the two learning methods that have recommended above.
6. REFERENCES


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