

# CREATING ENTREPRENEURIAL SPIRIT IN INDONESIA: ROLE OF EDUCATORS?

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## ABSTRACT

*Educational institutions have flooded the market with various classes, subjects, and curriculums. There are institutions that may have established ventures with other educational institutions overseas. This is mainly done to attract prospective students and parents toward particular educational institutions. The most common avenue to increase the competitiveness is to put-forth the classroom study methodology. It has become common practice that educators may have to change the teaching method to ensure that the actual delivery of teaching materials are in accordance with the needs of advanced education and marketplaces. This should have been conducted, not only as a mere of specific knowledge transfers, but also to transfer general knowledge, practical knowledge, emotional stability, and maturity.*

*Undoubtedly, a teaching method aims toward boosting entrepreneurial spirit may have to enhance the individual creativity in playing his/her role in organizations, either as entrepreneurs, or intrapreneurs. The Coasean theory of the firm (Coase, 1937) and the Penrosean theory of the firm (Penrose, 1959) are used as a foundation on the thinking process, including its development, particularly the entrepreneurial theory of the firm (Stam, et al, 2006). In addition, thinking process and concepts from entrepreneurial studies from Hisrich, et al (2005) are also used in this study, besides the synergy references and performance measurements. Studies on quality of educators are used as an approximation on teaching method toward shaping the entrepreneurial spirit. Group synergy is used to proxy group interaction as a supporting cushion to leverage the entrepreneurial spirit even more. Performance measurements are used to note the outcomes of quality of educators and group synergy. Using the combination of the theory of the firm, entrepreneurial studies, synergy references, and performance measurements, it is expected that this study is able to reveal the theoretical foundation on building arguments toward changes in teaching method from*

*childhood education to university level. It is expected that this study is able to evaluate the critical role of creative education toward building entrepreneurial spirit in Indonesia.*

Keywords: education, creative, entrepreneurs, intrapreneurs, entrepreneurial spirit, creative education, entrepreneurial theory of the firm

## **1. INTRODUCTION**

Students are the backbone of a nation. Although every country in the world is confident that students are important asset for the country's future economy, but not all countries have given maximum attention to the education sector. Given that Indonesia is still considered as a third world country or a developing country, Indonesia has not given maximum attention to the education sector to date (Yogaswara, et al, 2006). In comparison, China is an example of a country which is very concerned to the importance of education for its people (Yogaswara, et al, 2006). Results of human development in China have been relatively known to the world. For example, China has succeeded in some sports. In China, education processes for athletes have begun since the early age. In a relatively short time, Chinese athletes are able to be the world champions. This reflects that the attention to the early age educational process could not only improve the economic conditions of the country in the future, but also could reduce poverty (Anantadjaya and Nawangwulan, 2006b). To establish a solid platform and direct Indonesia to better economic conditions, various efforts should be directed to education, such as students tutoring process (Bell and Gersbach, 2001).

Bell and Gersbach (2001) further mentioned that the role of parents is crucial in the early age education process, as a way to prepare children enter formal education. The uses of multiple languages, ranging from daily conversations to the bedtime story, or simply just read a book together, have affected the language and intellectual capabilities (Santosa and Setiawan, 2004). Ability to read and understand the numbers is the basis of an individual's intellectual ability (Anantadjaya and Nawangwulan, 2007; Bell and Gersbach, 2001).

In terms of strategic thinking, and goals achieving, Barton (2006) states that the government should give priority to the education sector. The attention from government is expected to create competitive advantage and thus it is expected to bring prosperity to that country in the future. A country's budget could not only show how much the government should spend on education sector but also whether the public has already shifted to knowledge-based society. Tobin (2004) says that when a country experienced a decline in foreign investment, the future of students and country's economic stability would likely be threatened. At the same time, though there is a decline in foreign investment, the government still should give a priority to education industry. As it was previously mentioned, attention to the education sector is not only a way of a country to rise from poverty, but also a way to develop exposures, build networking, and improve technical, conceptual and human relations skills. As studied by Anantadjaya and Nawangwulan (2006a; 2006b), and further supported by Bell and Gersbach (2001), students from lower income family relatively face difficulty in acquiring experiences and human relations skill, while students from wealthier family do not relatively face those difficulties (Tobin, 2004; Yogaswara, et al, 2006).

Learning process at university level is relatively different from previous education level. This does not mean that the learning process in university level is more difficult than in high school. Further, this does not imply that learning process in play group or kindergarten is simple or least complex. Teaching and learning process at every level has its own degree of difficulty (Anantadjaya and Nawangwulan, 2006a; 2006b).

Just like leadership style, teaching style practiced in an educational institution plays a crucial

role. Teaching method is a key success of educational process. Variety teaching methods have been studied from different perspectives (Tomlinson, 1999; Silver, et al, 2000; Bell and Gersbach, 2001; Brown, 2001; Chaudhury, 2002; Early and Mosakowski, 2004; Tobin, 2004; Anantadjaya, 2005; Dailey, 2005; Barton, 2006; Yogaswara, et al, 2006). Classroom teaching method classroom in majority of educational institutions in Indonesia, is generally based on the control and higher authority from the teaching team. Only few teachers, lecturers or instructors are willing to accommodate the students' needs during the education process. By accommodating different needs to different students, every teacher/lecturer must be ready to give modification at any time, thus this sounds like facing customer with customized order (Anantadjaya and Nawangwulan, 2006a; 2006b; Yogaswara, et al, 2006). Educational institution should able to influence the use of technology for students in the learning process. But for some institutions, this can not be done maximally. Even though the use of black or white board and overhead projector in class s can still accommodate learning process, but adoption of using other technologies is also important (Anantadjaya and Nawangwulan, 2006a; Yogaswara, et al, 2006). Perhaps, the use of technology in classroom setting can improve learning process.

Barton (2006) had studied the relations between the effectiveness of learning process with experiences and the effect of academic atmosphere that teachers/lecturers could transpose to the students in classroom setting. The result of this empirical study showed that there was a positive correlation between the effectiveness of teaching-learning process with the experiences and the effect of academic atmosphere.

Silver, et al (2000) had previously studied the effectiveness level of teaching-learning process. As a further study, Barton (2006) stated that an example of an academic effect that could be transferred to students is the teaching method. Different teaching method gave positive impact to the effectiveness of classroom learning process (Silver, et al, 2000). Examples of the effect of academic atmosphere that could be transferred to students include the use whiteboard as compared to blackboard or the use of LCD (using computer with Power Point) projector than Overhead (using transparency sheet) projector. Empirically, Yogaswara et al (2006) stated that the use of whiteboard or blackboard could influence understanding level of students. Therefore, the use of whiteboards or blackboard is directly influence the effectiveness level of learning process. Further, Yogaswara, et al (2006) concluded that the use of OHP or LCD projector also influence understanding level of students. Both off-line and on-line simulations had been done to measure the students' understanding level. Off-line simulation could be conducted using OHP while on-line simulation could only be conducted using LCD projector and internet.

Moreover, educational institutions should use good strategic thinking. By giving positive value to the students, the students will directly experience that value. This value could benefit the shareholders, organization members and other stakeholders.

From the financial report perspective, it is clearly indicated that there is a gap between book value and market value in organization, for example in educational institution. Saleh, et al (2006) mentioned that the gap existed because there was a shift in economic source used by organization as way to create organization value, for example, moves from tangible assets to intangible assets. In educational industry, some institutions do not pay attention only to tangible assets such as the condition of building, facilities offered, but also to intangible assets such accreditation level, teacher's skills and knowledge, and social responsibility.

From economic view, it is clearly shown that there is an increase in intense competition among organizations, such as; market penetration, diversification and networking (Bridoux, 2004; Cardy and Selvarajan, 2006; Carroll and Hunter, 2005; Sangkala, 2006). Education industry also experiences similar case, at which the institution needs to do diversification and build network

with other institutions. Building networking can be commencing from individual level within organization (Sutter, 2008). This individual then forms a group synergy among people within organization to do daily job activities together (Geisinger, 2004). Forming a group synergy in organization could make daily operational activities goes smooth, especially in the learning process (Yolles, 2008).

Human resources are expected to create a group synergy within organization. It is expected that the teacher/lecturer is able to transfer the learning process well. Thus, this can support the output process and create an organization value so that organization performance is better than before (Bridoux, 2004; Namasivayam dan Denizci, 2006; Richieri, et al, 2008; Saleh, et al, 2006).

This research also aims to study factors effecting the teacher/lecturer quality in teaching method. Factors creating organization value can be studied through organization performance which can be measured by dimensions such as institution accreditation grade, number of students in institution and institution's reputation. These factors are deeply analyzed to see how much every factors influence organization's performance (Bridoux, 2004). Topics related to human resources quality, group synergy and value creation in education industry would be used for further study.

## **2. LITERATURE REVIEW**

The following table shows that American researchers have dominated the research on human resources development since 2000, though, some countries, such as; Canada, Australia, and some parts of Asia and Europe, have also researched similar topics. Some notable points are as follows;

1. The financial condition of organization still remains the parameter used for the research (Anantadjaya, 2007a). The focus on human resources remains integrated with a large industrial scale. Market value or market capitalization has been used to measure the impact from human resources.
2. Since the year 2000, researches on human resources have not only been focused on employees at organization, but on areas such as:
  - a. SC (capital structure) consists of system, procedure, and rules of organization,
  - b. CC (customer capital) refers to organization needs to maintain good relations with customers,
  - c. PC (partner capital) represents involvement of people and other organizations from which a particular organization has a joint-cooperation with,
  - d. IC (information capital) oversees the availability of information system, knowledge management application and other necessary infrastructures to support the execution of organization strategy, and
  - e. OC (organization capital), which involves vision and mission of organization, the availability of capable leaders in every management level, in order to achieve organization's strategic plan. The leaders must be able to direct the organization to achieve its goals, motivate the employees by providing incentive, sharing knowledge with the team and third party.
2. Additional factors discussed on the previous studies, include; commitment, talent, diversity, wisdom, idea, innovation, brainpower, networking, internal corporate governance, competitive advantage, organization structure, organization culture, collaboration and knowledge management. These additional factors aim to create organizational value.

The table supports the argument that human resources play an important role as a prime source of strategic competence of organization. Strategic competence is major driving force of

organization to survive (Cardy and Selvarajan, 2006; Colombo and Grilli, 2005; Sales, et al, 2006). The following table shows some previous research. It illustrates how those researches were conducted after the year 2000.

From the managerial view, Kaplan and Norton (2004) mentioned that the use of Balance Score Card (BSC) could support the role of managers in organization. Strategic managerial role could only be shaped if organization focused on intangible assets that were categorized into human capital, information capital and organizational capital (Buckingham and Coffman, 1999). A country that did not invest in human resources would receive less output. The company growth would also be slower than other countries which make enormous human resources investment (Penrose, 1959; Stam, et al, 2006). At macro and micro level, intangible assets are proven to encourage long run value creation, including the growth of organization (Mansi and Reeb, 2002; Stam, et al, 2006). Intangible assets clarify how individual, technology and climate within organization enhance organization's strategy (Kaplan and Norton, 2004). Yolles (2008), in the theory of social psychology of collectives, added that every individual will try to interact with others to form networking within inside or outside organization (Sutter, 2008).

**Table 2.1: Previous Research after year 2000**

<b>Writer, Institution/Source</b>	<b>Year</b>	<b>HR Dimensions</b>	<b>Analysis and Conclusion</b>
Dzinkowski (Accounting Management )	2000	Human Capital Measurement and Management	Combination between human capital, organizational (structural) capital, customer (relational) capital greatly influenced to the intellectual capital measurement in organization
Silver, et al (Association for Supervision and Curriculum Development, Virginia, USA)	2000	Important role of multiple intelligence (verbal-linguistic, logical-mathematical, spatial, bodily-kinesthetic, intrapersonal, musical, interpersonal, and naturalist) for teacher/lecturer	<ul style="list-style-type: none"> <li>• Studied various intellectuals owned by individuals</li> <li>• Teacher/lecturer must be able to exercise various classroom teaching methods</li> </ul>
Tanaszi and Duffi (Institute of Management Accountants, Canada)	2000	Knowledge assets	Showed the importance of knowledge for organization
Bell and Gersbach (Universitat Heidelberg, Germany)	2001	Young worker and education role in society	Relation between your worker quality and education quality to support economic condition.
Brinker (Institute of Certified Public Accountants, USA)	2001	Competence, ability, knowledge and commitment	<ul style="list-style-type: none"> <li>• HR Ability and competence is the main key of knowledge, innovation.</li> <li>• HR ability and competence level influenced employee commitment level to customer</li> </ul>
Brown (Addison Wesley, USA)	2001	Teaching principles which lead to	Relations between interactive methods with the success of

Writer, Institution/Source	Year	HR Dimensions	Analysis and Conclusion
		interactive learning process	classroom learning process.
Kalafut and Low (Strategic Leadership)	2001	Human capital quality, talent, diversity, Management and employee relation, and intangible value index	<ul style="list-style-type: none"> <li>• Index is useful to calculate accurately organization value creation</li> <li>• Key main success: quality, employee talent, relations between management and employee and diversity</li> </ul>
Malhotra (BizTech Network, USA)	2001	Ability, Skills, wisdom	<ul style="list-style-type: none"> <li>• Ability and Skills influenced to organization performance</li> <li>• Wisdom was additional factor which influenced to the improvement of organization performance</li> </ul>
Marti (Journal of Intellectual Capital)	2001	Idea and innovation	<ul style="list-style-type: none"> <li>• Human capital reflects how an organization shapes its intellectual capital</li> <li>• Human capital is the prime source of organization value</li> <li>• Human capital is a power tool of innovation</li> <li>• Structural capital is needed (procedure, technology and system)</li> </ul>
Peppard and Rylander (European Management Journal)	2001	Competence and intellectual intelligence	<ul style="list-style-type: none"> <li>• Employee competence level illustrates intellectual intelligence level of an organization</li> <li>• The existence of capital structure (system, structure, brand and intellectual property) encourages intellectual intelligence level</li> </ul>
Seetharaman, et al (Journal of Intellectual Capital)	2001	Ability and brainpower	The ability the employees perform their job is concentrated on their brainpower
Bontis and Fitz-enz (Journal of Intellectual Capital)	2002	Compensation, training and development cost, employee turnover and return on investment (ROI) gained from intellectual capital	<ul style="list-style-type: none"> <li>• Human capital is a combination of compensation received by employees, training and development cost which could impinge on employee turnover</li> <li>• Employee turnover enhancement reveals ROI reduction</li> <li>• Intellectual capital impacts on organization's ROI</li> </ul>
Campbell, et al (Harvard Business School, USA)	2002	BSC, control system and organizational change strategy	<ul style="list-style-type: none"> <li>• Research was conducted in an organization which has 82 retail stores in the USA</li> <li>• BSC is beneficial to implement a control system of organization</li> </ul>

Writer, Institution/Source	Year	HR Dimensions	Analysis and Conclusion
			<p>activities</p> <ul style="list-style-type: none"> <li>• The success of controlling and organizational change strategies relies on the employees' ability to maintain their efficiency level</li> </ul>
Goleman, et al (Harvard Graduate School of Business, USA)	2002	Leadership and emotional intelligence	<ul style="list-style-type: none"> <li>• Leaders of organization require emotional maturity to lead</li> <li>• Emotional maturity of leaders and employees shapes organization's success</li> </ul>
Edvinson (The Unic-Concepts)	2003	Brain, ability, and networking	<ul style="list-style-type: none"> <li>• Human brain affects employee's skills and knowledge</li> <li>• Human brain shapes execution process in organization to increase customer satisfaction</li> </ul>
Engstrom, et al (Journal of Intellectual Capital)	2003	<i>Intellectual capital</i> at hotel industry	Employee's intellectual capital influences hotel industry performance
Meritum (www.kunne.no)	2003	Knowledge, skills, experience and ability	Human capital is the knowledge acquired by employee after leaving the organization
Marr and Adams (Measuring Business Excellence)	2004	BSC and intangible assets	Implementation of BSC is relatively unclear in measuring organization's intangible assets
Tobin (University of Cincinnati, USA)	2004	Role of human investment, especially students	Relations between investment amount and economic condition and performance
Colombo and Grilli (Research Policy, Politecnico di Milano, Italy)	2005	Human capital quality of owners/founders of organization	<ul style="list-style-type: none"> <li>• Human capital quality of owners/founders impacts on organization growth and development</li> <li>• Research was performed on information-technology organizations in Italy</li> </ul>
Carroll and Hunter (MIT Sloan School of Management, USA)	2005	Competence is necessary to give an influence to market value	Learning process and market value escalation of organization depend on the ability of human capital within organization
Florackis (Applied Financial Economics Letters)	2005	Competence for influencing internal corporate governance	<ul style="list-style-type: none"> <li>• Human capital capabilities greatly influence controlling process continually so that organization could better organize and attract potential investor</li> <li>• This relates to the overall performance improvement</li> <li>• Research was done in large organizations in England</li> </ul>
Stewart (University	2005	Component sections of	<ul style="list-style-type: none"> <li>• Organization measurement of</li> </ul>

Writer, Institution/Source	Year	HR Dimensions	Analysis and Conclusion
of Bath, UK)		intellectual capital	intellectual capital
Barton (American University, USA)	2006	Scholarly productivity, scholarly influence and teaching effectiveness in class	<ul style="list-style-type: none"> <li>• Correlations between dimension, productivity, effect and effectiveness level</li> <li>• Research was conducted for Faculty of Law in the USA</li> </ul>
Cardy and Selvarajan (Arizona State University, USA)	2006	Human competence and competitive advantage	Human capital level influences organizational competitive advantage
Namasivayam and Denizci (Pennsylvania State University, USA)	2006	Human capital is a driving force in organization value creation	<ul style="list-style-type: none"> <li>• Human capital closely relates to organizational success</li> <li>• Research was performed on service industry, particularly one that have customer high-contact</li> </ul>
Nielsen and Nielsen (Aarhus School of Business, Denmark)	2006	Skills, customer capital	<ul style="list-style-type: none"> <li>• Analysis Scenario research on large organizations in Europe</li> <li>• Skills, customer capital and work-in-process greatly influence to profit</li> </ul>
Sampurno (Universitas Indonesia)	2006	Human capital, structural capital, customer capital, and partner capital	<ul style="list-style-type: none"> <li>• The interrelations of 4 subcomponents of intangible assets</li> <li>• Research was done in pharmaceutical industry in Indonesia</li> </ul>
Yogaswara, et al (ETC & Foundation, Indonesia)	2006	Role of teacher/lecturer in classroom teaching-learning process	<ul style="list-style-type: none"> <li>• Relations between teacher/lecturer, teaching method and outcome</li> <li>• Teaching method used</li> </ul>
Brahmbhatt and Hu (The World Bank, Singapore)	2007	Idea and innovation	<ul style="list-style-type: none"> <li>• Information from the USA and Japan greatly affect to idea and innovation of organization in East Asia</li> <li>• Research was conducted in organization within East Asia, such as Singapore, Korea, Taiwan and China</li> </ul>
Anantadjaya (The South East Asian Journal of Management)	2007	<ul style="list-style-type: none"> <li>• Impact of hypercompetition to HR</li> <li>• Impact of technological advancement to HR</li> <li>• Impact of shorter product lifecycle to HR</li> <li>• Impact of innovation to HR</li> </ul>	<ul style="list-style-type: none"> <li>• Organizational business portfolios are mainly influenced by hypercompetition, shorter product lifecycle, technological advancement, and innovation.</li> <li>• There are “street-smart” entrepreneurs, who have involved with organizational daily activities</li> <li>• There are “book-smart” entrepreneurs, who have studied</li> </ul>

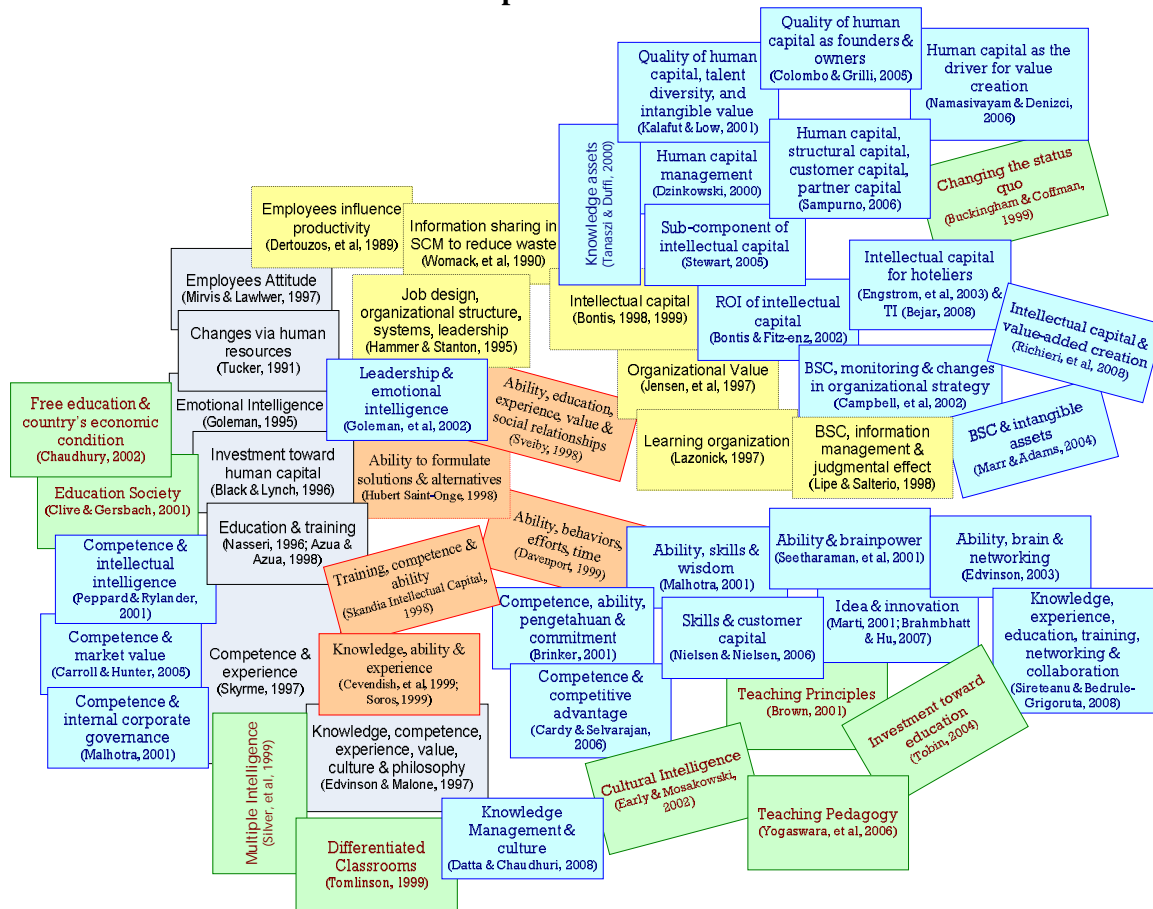


Writer, Institution/Source	Year	HR Dimensions	Analysis and Conclusion
			and worked with others prior to setting-up their own organization
Sireteanu and Bedrule-Grigoruta (University of Iasi, Romania)	2008	<ul style="list-style-type: none"> <li>Individual knowledge, experience, education, training, networking, collaboration and innovation</li> <li>Knowledge goods, intellectual capital, human capital, customer capital, and market capital</li> </ul>	<ul style="list-style-type: none"> <li>Internet offers a tremendous influence on the success of the interaction in dynamic business environment</li> <li>Education institution plays a role to disseminate information and learning in knowledge management</li> </ul>
Bejar (Institut Telecom & Management SudParis, France)	2008	Intellectual capital helps technology oriented organization survive	<ul style="list-style-type: none"> <li>Intellectual capital level of human resources greatly affect the organization lifecycle</li> <li>Research was performed to technology-oriented organizations in France</li> </ul>
Datta and Chaudhuri (ICFAI Business School, India)	2008	Knowledge Management, organization structure and culture	<ul style="list-style-type: none"> <li>Role of capital structure in organization development</li> <li>Organization structure shapes organization culture and influences the success of utilizing knowledge management</li> </ul>
Richieri, et al (Escola Superior de Propaganda e Marketing, Brazil)	2008	Intellectual capital and value creation	<ul style="list-style-type: none"> <li>Intellectual capital affects the organization's financial condition</li> <li>The effect of intellectual capital cannot be separated from capital structure of organization</li> <li>Research was done to 1,000 large organizations in Brazil</li> </ul>

**Source: Anantadjaya, 2007b; Barton, 2006; Bejar, 2008; Bell and Gersbach, 2001; Brown, 2001; Campbell, et al, 2002; Cardy and Selvarajan, 2005; Carroll and Hunter 2005; Colombo and Grilli, 2005; Datta and Chaudhuri, 2008; Florackis, 2005, Namasivayam and Denizci, 2006; Richieri, et al, 2008; Sampurno, 2006; Sangkala, 2006; Silver, et al, 2000; Sireteanu and Bedrule-Grigoruta, 2007; Stewart, 2005; Tanaszi and Duffi, 2000; Tobin, 2004; Yogaswara, et al, 2006**

The diagram below illustrates the development of early concept on human resources development toward individual performance and organization (Bridoux, 2004). This paper aims to see whether people play an important role in the process of building entrepreneurial spirit, especially, the role of educators, teachers, lecturers, or instructors (Foss and Klein, 2004). Undoubtedly, creative education deserves special attention in learning process.

**Illustration 2.1: Map on Human Resources Research**



Source: various references

The following table shows market value and government spending on education industry in some countries. These tables illustrate the condition and development of a country depends on its people. For instance, Indonesian GDP, from 2008-2011, declined. The allocation for education budget was cut from 3.6% to a mere 2.8%. On the other hand, stock market value in Indonesia had increased dramatically from US\$99 billion to US\$390 billion, during the same period of 2008-2011.

**Table 2.2 (a): Data Comparison Among Countries**

Data per 2008	Indonesia	Singapore	Malaysia	India
GDP	US\$916.7 billion	US\$237.9 billion	US\$385.2 billion	US\$3,304 billion
GDP per Capita	US\$3,900	US\$52,600	US\$15,200	US\$2,900
Market share value	US\$98.76 billion	US\$268.6 billion	US\$187.1 billion	US\$645.5 billion
Inflation	9.9%	6.5%	5.4%	3.5%
Education budget	3.6% of GDP (US\$33 billion)	3.7% of GDP (US\$8.8 billion)	6.2% of GDP (US\$23.8 billion)	3.2% of GDP (US\$105 trillion)

Source: www.cia.gov, 2010

Since the education budget was calculated as a percentage of GDP, unsurprisingly, education budget allocation in Indonesia was higher than Malaysia. However, as a percentage of GDP, Malaysian educational budget remained higher than Indonesian percentage of GDP, 6.2% in 2008 for Malaysia as compared to 3.6% in 2008 for Indonesia, and 4.1% in 2011 for Malaysia as compared to 2.8% in 2011 for Indonesia. As a result, the GDP and stock market value in Indonesia was also higher than Malaysia.

**Table 2.2 (b): Data comparison among countries**

<b>Data per 2011</b>	<b>Indonesia</b>	<b>Singapore</b>	<b>Malaysia</b>	<b>India</b>
GDP	US\$845.7 billion	US\$259.8 billion	US\$278.7 billion	US\$1,676 trillion
GDP per Capita	US\$4,700	US\$60,500	US\$15,800	US\$3,700
<b>Market Share value</b>	<b>US\$390.1 billion</b>	<b>US\$569.4 billion</b>	<b>US\$414 billion</b>	<b>US\$1,015 trillion</b>
Inflation	5.4%	5.2%	3.2%	8.9%
<b>Education budget</b>	<b>2.8% of GDP (US\$23.7 billion)</b>	<b>3% of GDP (US\$7.8 billion)</b>	<b>4.1% of GDP (US\$11.4 billion)</b>	<b>3.1% of GDP (US\$51.7 trillion)</b>
<b>Source: www.cia.gov, 2012</b>				

From the table, it is also apparent that GDP per capita for Malaysia was significantly higher Indonesia's GDP per capita. Hence, since the total population of Indonesia may have been a lot dense than Malaysian, though the overall GDP for Indonesia was about 3 times higher than Malaysian GDP, Indonesian GDP per capita was substantially lower. With a much higher GDP per capita, Malaysians appeared to have been better-off than the Indonesian counterparts. This provided a domino effect toward increasingly vital role of human resources as leverage toward country's prosperity. It is obvious that the higher education budget allocation, the better the education system, and the better the role of teacher/lecturer.

### 3. RESEARCH METHOD

Based on previous literatures, this paper incorporated hypothetical-deductive method (HD method) to construct the research analysis. Lau and Chan (2009) indicated that HD method was useful to evaluate theories or hypotheses, and this HD method has been used and widely accepted in other field of studies, such as economics, chemistry, physicist and other technical field of studies.

This research attempts to explain the relations between occurring phenomena. Descriptive research is used to pursue an explanation about the variables used in the research, while explanatory research is used to test the validity of hypotheses through data collection. To achieve this objective, qualitative and quantitative methods were used. Structural Equation Modeling (SEM) was also utilized to note the empirical evidence among variables and indicators.

The research object includes educators, group synergy, efficiency and effectiveness teaching-learning process in educational institutions in Bandung and Jakarta. Based on previous research, variables, dimensions and scales have been created based on literature study, interview with respondents and field observation. The initial operations of variables are illustrated based on previous research;

**Table 3.1: Operations of Variables**

<b>Variable</b>	<b>Dimension</b>	<b>Measurements</b>	<b>Scale</b>
Quality of educator	According to research performed by Datta and Chaudhuri (2008),	<ul style="list-style-type: none"> <li>• Frequency of participating in training programs</li> <li>• Frequency of organization</li> </ul>	Ordinal (Likert Scale 1-5)

Variable	Dimension	Measurements	Scale
	Namasivayam and Denizci (2006), Saleh, et al (2006), Sangkala (2006), dimensions that could be used are; <ul style="list-style-type: none"> <li>• Training</li> <li>• Incentives/bonus</li> </ul>	<p>sending employees to participate in training programs</p> <ul style="list-style-type: none"> <li>• Training materials offer new knowledge</li> <li>• Frequency of receiving bonus or incentives</li> <li>• Frequency of organization provides bonus or incentives</li> <li>• Effect of performance appraisal to bonus or incentives</li> </ul>	
	According to research done by Maes, et al, (2003), Sangkala (2006), dimensions include; <ul style="list-style-type: none"> <li>• Education</li> <li>• Position</li> <li>• Experience</li> </ul>	<ul style="list-style-type: none"> <li>• Level of education</li> <li>• Level of position</li> <li>• Years of experience</li> <li>• Years in the current position</li> </ul>	Ordinal (Likert Scale 1-5)

Variable	Dimension	Measurement	Scale
Group Synergy	Internal Locus of Control (Hoell, 1998; Yolles, 2008)	<ul style="list-style-type: none"> <li>• Level of self-control</li> <li>• Attitude in working in a team</li> <li>• Self-organization</li> <li>• Employee perception toward fortune in life</li> <li>• Achievement of success</li> <li>• Realization of work plan</li> <li>• Self accomplishment and career</li> <li>• Willingness to admit mistakes</li> </ul>	Ordinal (Likert Scale 1-5)
	Involvement (Hoell, 1998; Yolles, 2008)	<ul style="list-style-type: none"> <li>• Harmonious teamwork</li> <li>• Perception toward chances in working in a team</li> <li>• Willingness to work more hours</li> <li>• Perception toward taking part in teamwork</li> <li>• Perception toward the work environment</li> <li>• Willingness to perform additional job</li> <li>• Willingness to think better ways to do the job</li> </ul>	Ordinal (Likert Scale 1-5)
	Motivation (Hoell, 1998; Yolles, 2008)	<ul style="list-style-type: none"> <li>• Challenging jobs</li> <li>• Job tediousness</li> <li>• Self-motivation to do the job</li> <li>• Long hours</li> <li>• Work satisfaction</li> <li>• Job idleness</li> <li>• Job as a part of life</li> <li>• Hardworking</li> </ul>	Ordinal (Likert Scale 1-5)

Variable	Dimension	Measurement	Scale
		<ul style="list-style-type: none"> <li>• Pride toward the completion of job</li> <li>• Desire toward work</li> </ul>	
Quality of Students	Knowledge, idea/concept development (Anantadjaya, 2007a; Istijanto, 2006)	<ul style="list-style-type: none"> <li>• General knowledge</li> <li>• Special knowledge about particular industry</li> <li>• Knowledge/concept on business sense/economic reasons</li> </ul>	Ordinal (Likert Scale 1-5)
	Risk tolerance (Anantadjaya, 2007a; Istijanto, 2006)	<ul style="list-style-type: none"> <li>• Risk tolerance toward learning process</li> <li>• Risk tolerance toward doing business</li> </ul>	Ordinal (Likert Scale 1-5)

Variable	Dimension	Measurement	Scale
Efficiency	<ul style="list-style-type: none"> <li>• Delivery process</li> <li>• Timeframe</li> <li>• Assignment</li> <li>• Multi-tasking</li> </ul>	<ul style="list-style-type: none"> <li>• Material discussion turnover</li> <li>• On-time submission of work/tasks</li> <li>• The impact to students</li> <li>• Ability to do multitasking activities</li> <li>• Time to finish assignments</li> <li>• Quality of work</li> </ul>	Ordinal (Likert scale 1-5)
Effectiveness	<ul style="list-style-type: none"> <li>• Level of understanding</li> <li>• Knowledge development</li> <li>• Skill development</li> <li>• Target achievement</li> </ul>	<ul style="list-style-type: none"> <li>• Value</li> <li>• Better work performance quality than previous work</li> <li>• Better work process than previous period</li> </ul>	Ordinal (Likert Scale 1-5)

Since these operations of variables are merely based on previous researches, those sets of variables and indicators need to be verified accordingly.

### 3.1. POPULATION & SAMPLE

Since this study concentrates on the role of educators, the population for this study includes all teachers, lecturers, facilitators, trainers, parents, entrepreneurs/business owners, and business practitioners/managers in Indonesia. However, since the comprehensive coverage may require an enormous time, efforts and resources, this study may have to limit the areas into two cities of Jakarta and Bandung, including their neighboring regions. This was particularly true for the intended offline questionnaire distribution, interview sessions, classroom observations, and research model verifications.

**Table 3.2: Sample Size Determination**

Data	
Estimate of True Proportion	0.5
Sampling Error	0.1
Confidence Level	95%
Intermediate Calculations	
Z Value	-1.95996398
Calculated Sample Size	96.03647052
Result	
<b>Sample Size Needed</b>	<b>97</b>

## Source: PHStat

Relying on the use of PHStat, an approximate sample size can be statistically calculated. Since the mean of the population was basically unknown, the sample size estimation was simply based on proportion. Using the assumptions that 50% of selected population was true, and the level of tolerable mistakes was at 10% maximum, but would like to maintain at least 95% confidence, the sample size was statistically calculated to be a minimum of 97 people.

Though this study attempts to maintain randomness, nonetheless, approaching colleagues and acquaintances at various schools, universities, colleges, and business establishments were also conducted. This was done to provide ease of access toward future verification processes, particularly on interview sessions, classroom observations, and research model endorsements. A total of 100 questionnaires were distributed to colleagues and acquaintances. The response rate on this physical distribution of questionnaires was a mere 48%. To conform to the probabilistic sampling method as well as maintaining the sense of randomness, online questionnaires were also distributed via several social media.

At the end of the agreed-upon period of questionnaire distribution of about 3 months following the physical distribution of questionnaires, and initial posting of questionnaires on the social media, a total of 121 responses were received; 48 were offline<sup>1</sup>, and 73 were online<sup>2</sup>. Though the majority of those online responses were originated from Jakarta, other provinces were also included, such as; West Java, Banten, Central Java, East Java, North Sumatera, and Bali. About 30 people of those colleagues and acquaintances were approached to participate in the pre-testing phase of the questionnaires.

In addition to the above online and offline respondents, additional 30 participants on focus group were also important respondents in this study. The participants were college students, parents, teachers, lecturers, training facilitators, business owners (entrepreneurs), and business practitioners (employees who hold managerial positions in various departments, such as; auditors, human resources, production, accounting/finance, and marketing). Except for parents, the basic criteria for these members were positions and their years of experience. This simply meant that as the position held increased, and the years of experience increased, individuals may be requested to become a part of the focus group. For parents, the basic criteria<sup>3</sup> were whether their children have graduated from any colleges/universities, and have worked successfully for some years in any firms, or have established business establishments of themselves. Basically, such criteria were used to note the parents' perception on educational success stories given the situation and condition that their children may have gone through in their lives, either as employees or business owners.

### 3.2. VERIFICATION PROCESS

Research activities that have been conducted were as follows;

1. Literature reviews, which contain of various literature research, ranging from teaching process, teaching method, strategic management, teamwork, group synergy, value chain, organizational performance, human resources, control systems, operation management, and performance evaluation management.
2. Field studies, which include interview sessions and observations. Interviews and

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<sup>1</sup> This was translated into 48% response rate, which was derived from 48 responses out of 100 distributed offline questionnaires.

<sup>2</sup> The response rate of these 73 online responses cannot be calculated since the total exposures on actual online distribution were unknown.

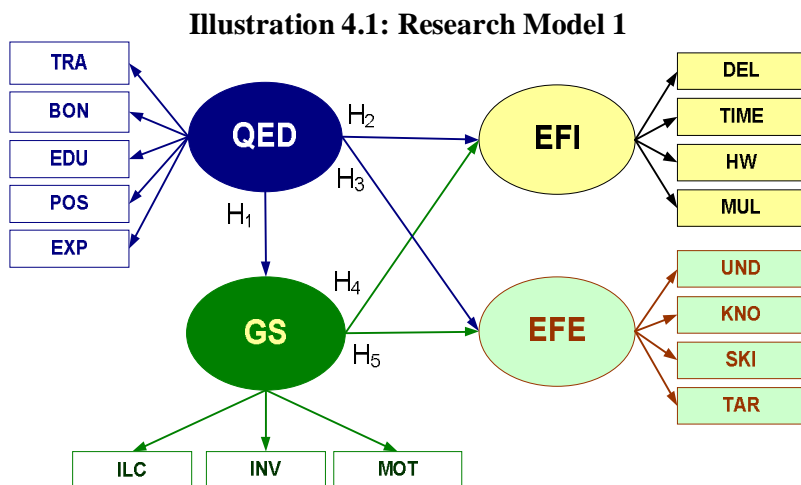
<sup>3</sup> This was used to note the parents' perception on educational success stories on their children, whether their children have gone becoming successful employees and held managerial positions at any firms, or have chosen to open-up business of themselves and became successful business owners/entrepreneurs

observations were targeted to education institutions, including teachers/lecturers/instructors, students, and parents of the students, and profit-oriented organizations<sup>4</sup>. These interviews and observations aim to discover the creativity/innovation and perception about education method that should be performed at educational institutions in Indonesia.

3. Classification of research method, research model and variables that will be used in this research. During this process, dimensions/factors, and scales were also identified. Then, verification process would be made within educational institutions and profit-oriented organization to ensure the equivalency among the theory and the actual process in the field. At this stage, involvement of the participants of the focus group was crucial.
4. The next step is data gathering and analysis. Such activities involve constructing questionnaires, distributing questionnaires, pre-testing questionnaires<sup>5</sup>, data entry using pre-testing questionnaires, final distribution of questionnaires at targeted time, and data analyzing process.
5. A further step involved data verification, research model verification<sup>6</sup> and temporary conclusion. This step was also to test validation of temporary research findings.

#### 4. DATA ANALYSIS

Based on the previous studies and literature reviews, including the interview sessions and field observations, variables and indicators were used following the early hypotheses. Hence, the research model was as follows:



From the preliminary model above, and following the in-depth interviews, the research model was modified as shown below. A new added variable was introduced. This new variable “the quality of students” was instituted to indicate impact to students. The agreed-upon indicators were awareness and risk tolerance. As this variable was intended to note the outcome of the quality of educators as well as the impact of group synergy toward the development of students, it was deemed necessary as a measurement on students’ quality. Referring to the agreed-upon indicators, it was obvious that as the level of student’s awareness increases, the quality of students improves. Similarly, as the level of student’s risk tolerance toward potential business deals increases, the quality of students enhances. As the quality of students develops, the level

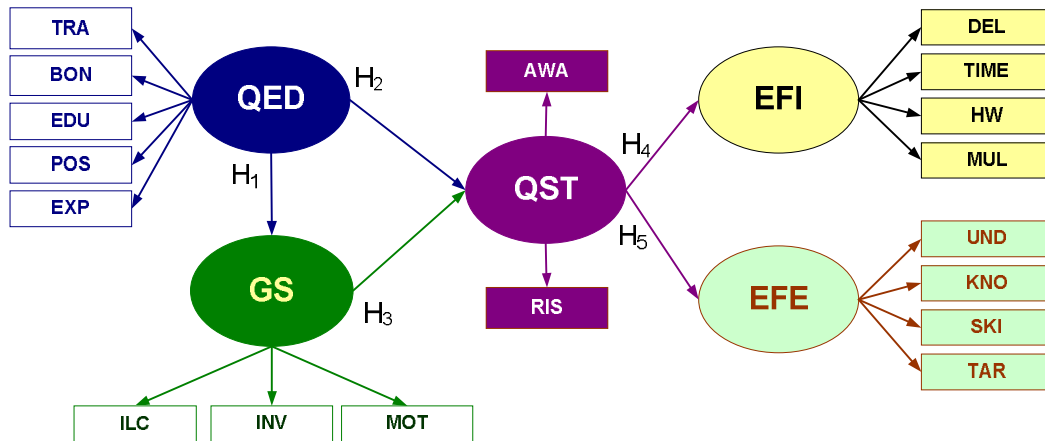
<sup>4</sup> Some of these individuals were involved as participants in the focus group.

<sup>5</sup> As previously mentioned, the pre-testing questionnaires were tested offline, which was distributed to 30 colleagues and acquaintances. These 30 colleagues and acquaintances were also included in the overall sample in this study.

<sup>6</sup> This was performed to the participants of the focus group.

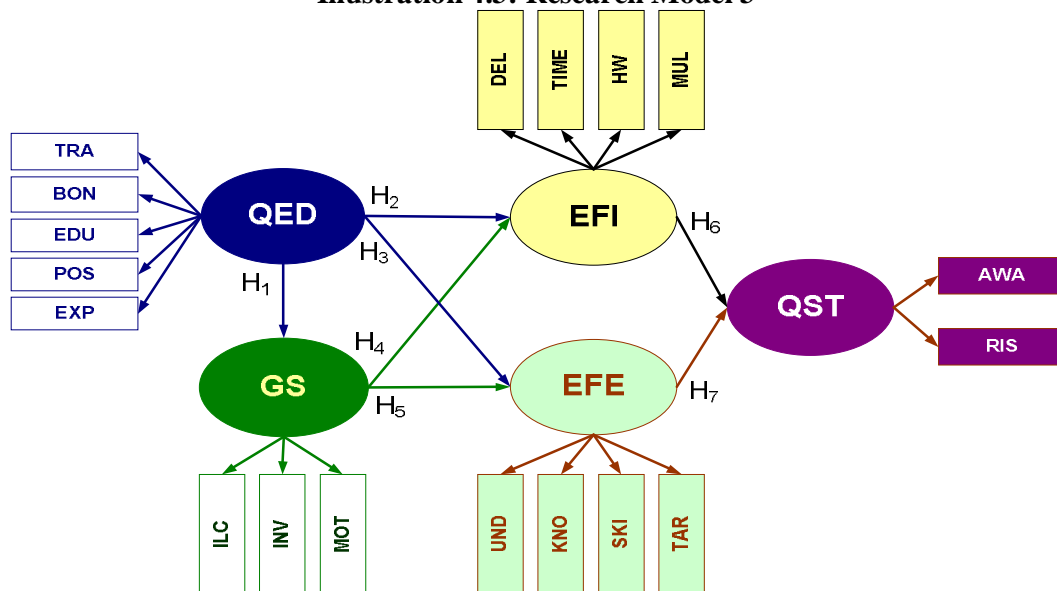
of efficiency and effectiveness expand. This simply signifies that the role of educators and the presence of group synergy among educators within the educational institutions have influenced the quality of students, which are able to be approximated by efficiency and effectiveness.

**Illustration 4.2: Research Model 2**



The second model above was modified after further expanded literature reviews, as shown below. Logically, the efficiency and effective measurements were supposed to be influenced by the quality of educators and the existence of group synergy in organizations. The quality of students should be the ultimate output of the overall learning process (Lazonick, 1997). Hence, the combination of quality of teachers/lecturers and group synergy influenced the level of efficiency and effectiveness of educational processes. Depending on the level of efficiency and effectiveness, the quality of students may be influenced, particularly their entrepreneurial spirit. This third research model was confirmed with the “offline” respondents, including the focus group participants. The third research model appeared to be the most relevant, as confirmed by respondents.

**Illustration 4.3: Research Model 3**



#### 4.1. RELIABILITY TEST

Reliability test is used to measure consistency level of variables used in questionnaires. The following tables show reliability statistics of the data gathered in this study.



Cronbach's Alpha was used to note the level of reliability of variables used. To get a sufficient level of reliability, Cronbach's Alpha must demonstrate the value of a minimum of 0.7 (Cooper and Schindler, 2008). From the SPSS results, as shown in the above table, the value of Cronbach's Alpha is 0.834. Since this value is greater than the standard reliability value, it can be concluded that variables used in the research model is reliable.

**Table 4.1: Case Processing Summary**

		N	%
Cases	Valid	121	100.0
	Excluded <sup>(a)</sup>	0	.0
	Total	121	100.0

<sup>(a)</sup> Listwise deletion based on all variables in the procedure.

Source: SPSS

**Table 4.2: Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.831	0.834	18

Source: SPSS

Corrected item-total correlation can also be used to test reliability level. The critical value for Pearson Correlation Coefficient from 121 data<sup>7</sup> in this research is 0.195.

**Table 4.3: Item-Total Correlation**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted	≥ 0.195?
ZTRA	0.0060	60.697	0.720	0.754	0.807	Yes
ZBON	0.0067	59.140	0.830	0.851	0.800	Yes
ZEDU	0.0065	59.864	0.779	0.811	0.803	Yes
ZPOS	0.0045	60.849	0.710	0.779	0.807	Yes
ZEXP	0.0036	62.764	0.578	0.629	0.815	Yes
ZILC	0.0081	59.277	0.821	0.898	0.800	Yes
ZINV	0.0060	59.708	0.790	0.925	0.802	Yes
ZMOT	0.0076	59.849	0.781	0.952	0.803	Yes
ZDEL	0.0065	73.492	0.392	0.359	0.853	Yes
ZTIME	0.0070	72.872	0.456	0.435	0.851	Yes
ZHW	0.0064	72.492	0.534	0.581	0.850	Yes
ZMUL	0.0063	72.482	0.733	0.736	0.850	Yes
ZUND	0.0064	71.913	0.500	0.594	0.848	Yes
ZKNO	0.0066	72.655	0.444	0.418	0.850	Yes
ZSKI	0.0056	66.591	0.583	0.619	0.590	Yes
ZTAR	0.0067	59.540	0.801	0.855	0.802	Yes
ZAWA	0.0034	57.234	0.651	0.672	0.651	Yes
ZRIS	0.0036	62.764	0.546	0.578	0.563	Yes

Source: SPSS, modified

From the table above, it is identified that the value of corrected item-total correlation of all indicators used is greater than critical value, 0.195. Therefore, all indicators are statistically

<sup>7</sup> The calculation on *degrees of freedom* was 121 data – 1 = 120.

reliable on this study.

#### 4.2. VALIDITY TEST

Model fit test is used for validity testing of the research model. Using AMOS, all variables can be tested for best-fit simultaneously to address the hypothesis testing. The following table shows the result of validity testing.

**Table 4.4: Model Fit Test**

Model	RMSEA	CFI	TLI	NFI	PNFI
Default model	<b>0.119</b>	<b>0.872</b>	<b>0.781</b>	<b>0.822</b>	<b>0.634</b>
Saturated model		1.000		1.000	0.000
Independence model	0.213	0.000	0.000	0.000	0.000

Source: SPSS

Data results from AMOS show that Root Mean Square Error of Approximation (RMSEA) is 0.119. If the value of RMSEA is less than 1, the model is considered valid (Ghozali, 2004). In addition, at the value of Comparative Fix Index (“CFI”) of 0.872, the value of Tucker-Lewis Index (“TLI”) of 0.781, value of Normed Fit Index (“NFI”) of 0.822, and the value of Parsimonious Goodness of Fit Index (“PGFI”) of 0.634, the model can also be said to have satisfactory met the criteria on validity testing (Ghozali, 2004). Thus, since the model has met the criteria of validity testing, the model is considered valid.

**Table 4.5: Tests of Normality**

	Kolmogorov-Smirnov	Shapiro-Wilk	Normally distributed?
	Sig.	Sig.	Sig $\geq \alpha$ ( $\alpha = 0.05$ )
ZTRA	0.072	0.065	Yes
ZBON	0.200	0.378	Yes
ZEDU	0.156	0.168	Yes
ZPOS	0.253	0.265	Yes
ZEXP	0.261	0.274	Yes
ZILC	0.200	0.236	Yes
ZINV	0.200	0.371	Yes
ZMOT	0.141	0.178	Yes
ZDEL	0.120	0.148	Yes
ZTIME	0.200	0.186	Yes
ZHW	0.055	0.059	Yes ( <i>marginal</i> )
ZMUL	0.050	0.061	Yes ( <i>marginal</i> )
ZUND	0.254	0.266	Yes
ZKNO	0.052	0.063	Yes ( <i>marginal</i> )
ZSKI	0.135	0.145	Yes
ZTAR	0.056	0.071	Yes ( <i>marginal</i> )
ZAWA	0.351	0.369	Yes
ZRIS	0.349	0.321	Yes

Source: SPSS, modified

From test of normality table above, it can be inferred that though there were some variables that only marginally satisfied the criteria, all variables used in this study could be considered fulfilling the normal distribution criteria. Therefore, further analysis can be performed.

### 4.3. MODEL TESTING

After model is considered valid and normal, the next step is to test model structure. This test measures causal relations between variables used in this study, particularly, exogenous and endogenous variables. Further, this test is useful to discover whether variables used are relevant with the initial expectations and successfully reflect the underlying theoretical discussion.

From path analysis, it can be implied that the quality of teachers/lecturers/instructors, is latent exogenous variable; while group synergy, efficiency, effectiveness, and the quality of students are latent endogenous variables.

From AMOS structural model, as shown in the following illustration, it can be inferred that:

1. There are strong correlations between “quality of educators” and its sub-variables, though there are also weak correlations.
  - a. A correlation of 0.75 between “quality of educators” and “training” means that 75% of quality of educators can be measured with training programs offered by organization, particularly the soft-skill training. In terms of transferring the “entrepreneurial spirit” to students, this simply means that educators should have adequate training as entrepreneurs (hands-on training, or apprenticeship), or training to become entrepreneurs (hard and soft-skills). The more training that educators have on their belts, the better the quality. At a glance, this conforms to the old saying, “*practice makes perfect*”. The more practice one has, the better one would become. This would lead to become the “street-smart” entrepreneurs or “book-smart” entrepreneurs (Anantadjaya, 2007b). This finding is relevant to what Bontis and Fitz-enz (Sangkala, 2006) and Sireteanu and Bedrule-Grigoruta (2008) have stated in their researches that human capital must be taken care of to minimize the likelihood of employee turnover, which in turns, improving the organizational performance as organizational time and efforts are targeted to operational activities, rather than constant recruitment and selection processes. As employees are trained and developed further, their brain expands. This pushes up the brain power and level of ability, which influences idea and innovation (Namasivayam and Denizci, 2006; Sangkala, 2006; Datta and Chaudhuri, 2008)<sup>8</sup>.
  - b. A correlation of 0.61 between “quality of educators” and “bonus” illustrates that 61% of quality of educators can be measured by amount of bonus/incentives (Namasivayam and Denizci, 2006; Sangkala, 2006; Datta and Chaudhuri, 2008)<sup>9</sup>. Though this may appear ironic, bonuses/incentives are based on the classical theory of motivation. This finding is relevant to what Bontis and Fitz-enz (Sangkala, 2006) have mentioned in their research, which was, the cost of training and development should be perceived as the total investment toward human resources. As human resources were trained and developed further, they would likely contribute to the organizational pool of intellectual capital (Istijanto, 2006; Noe, et al, 2006; Sangkala, 2006). The level of intellectual capital mirrored the organizational ROI. Likewise, Tobin (2004) had also found out that there were relationships among investment in human resources, economic condition of certain regions/countries, and individual/organizational performance.
  - c. A correlation of 0.84 between “quality of educators” and “education” indicates that 84% of quality of educators can be measured by the level of education of those educators themselves. This seems logically accepted. The higher the level of education, the better the quality of educators, in terms of knowledge transfer to students. With regards to transferring the “entrepreneurial spirit” to students, this simply means that educators

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<sup>8</sup> These references are listed chronologically based on the years of research.

<sup>9</sup> Same as above.

should have adequate education (Bell and Gersbach, 2001; Brown, 2001; Maes, et al, 2003; Colombo and Grilli, 2005; Sangkala, 2006)<sup>10</sup>. As knowledge has become increasingly important, organizations may push for more education on their employees (Sangkala, 2006). As the level of education increases, quality of employees jumps (Bell and Gersbach, 2001). This supports the organizational financial condition as well as the surrounding economy (Bell and Gersbach, 2001; Chaudhury, 2002). Also, Brown (2001) indicated that the ability to conduct interactive learning processes may have been influenced by previous encounters during school years. This interaction may lead to the improvement of quality of educators in their attempts in transferring the “entrepreneurial spirit” to students. Successful transfers, eventually, may influence the quality of owners, which then, brings about impact to organizational growth and development (Colombo and Grilli, 2005; Garnsey, et al, 2004).

- d. A correlation of 0.32 between “quality of educators” and “position” implies that 32% quality of educators can be measured by the position held by teachers/lecturers. Though it may not be fully applicable in education industry, at least in the Indonesian educational systems, the higher positions may represent the higher comprehensive level of competence and capability. In terms of transferring the “entrepreneurial spirit” to students, this simply means that educators should have held managerial positions (Maes, et al, 2003; Carroll and Hunter, 2005; Cardy and Selvarajan, 2006; Sangkala, 2006; Datta and Chaudhuri, 2008)<sup>11</sup>. Logically, the higher the level of managerial positions held, the better the level of competence and capability of such individuals. At least this is true in terms of maintaining/keeping the same position for some time. Hence, to keep the same position for some time, one must have entrepreneurial spirit, which may likely treating one’s job and position as one’s own business. Goleman, et al (Sangkala, 2001) indicated that the basic ingredient for one’s leading position was emotional intelligence. One key success factor for those who hold posts as leaders is a relatively high level of emotional maturity. Such an emotional maturity shapes organizational success. As people have held managerial positions for some time, their emotional maturity rises, competence jumps, and capability swells. These combinations push-up quality of educators.
  - e. A correlation of 0.93 between “quality of educators” and “experiences” shows that 93% of quality of teachers can be measured by the years of experiences of educators at non-educational organizations. This is undoubtedly widely-accepted as the length of experience increases, particularly in various organizations/industries, one’s exposure amplifies. This influences the quality of educators. With regards to transferring the “entrepreneurial spirit” to students, this simply means that educators should have adequate length of experience (Maes, et al, 2003; Sangkala, 2006; Sireteanu and Bedrule-Grigoruta, 2008)<sup>12</sup>.
2. Strong correlations occur between “group synergy” and its sub-variables
- a. A correlation of 0.74 between “group synergy” and “internal locus of control” shows that 74% of group synergy formation in organizations can be proxied by internal locus of control of educators. This is logically accepted as one’s internal drive pushes forward, particularly in various organizations/industries, one’s exposure amplifies. This leads to positive influences to the quality of synergy within organizations. With regards to transferring the “entrepreneurial spirit” to students, this simply means that educators, who have adequate level of internal locus of control, would influence the level of efficiency and effectiveness of educators toward the quality of students (Hoell, 1998; Sampurno,

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<sup>10</sup> Same as above.

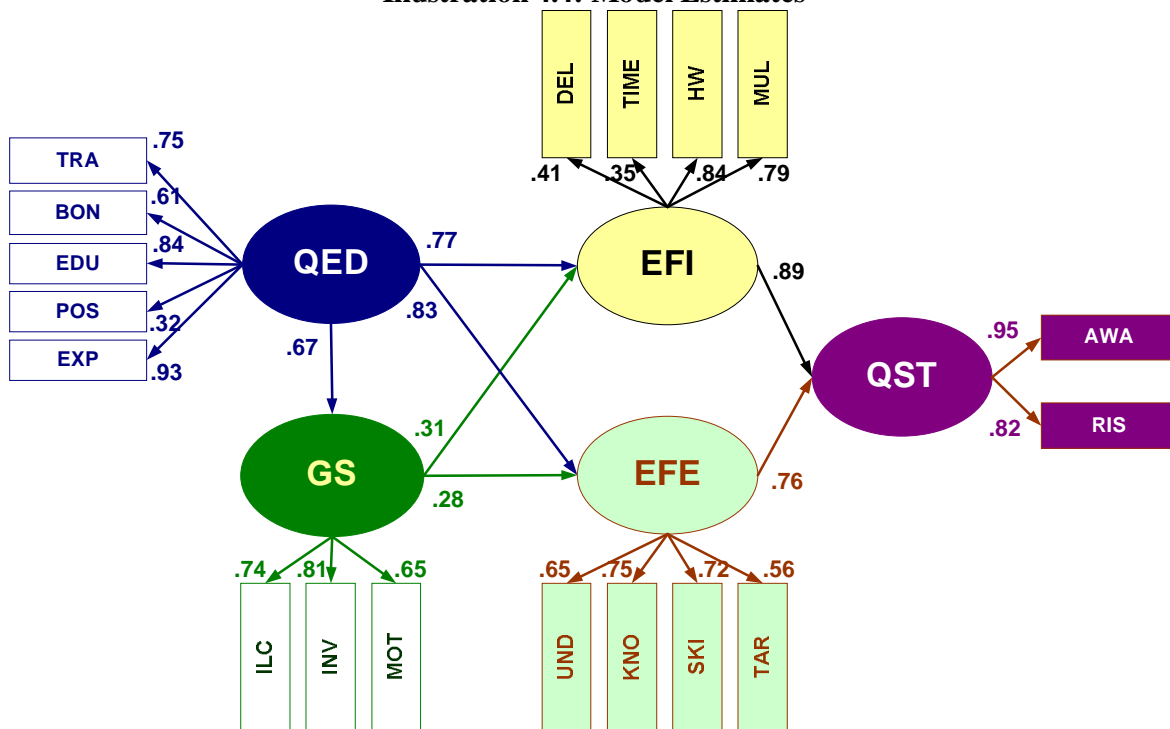
<sup>11</sup> Same as above.

<sup>12</sup> Same as above.

2006; Yogaswara, et al, 2006; Sireteanu and Bedrule-Grigoruta, 2008; Datta and Chaudhuri, 2008; Yolles, 2008)<sup>13</sup>.

- b. A correlation of 0.81 between “group synergy” and “involvement” shows that 81% of group synergy formation in organizations can be proxied by direct involvement of educators in doing their job as educators in education field. There is also another logical explanation on this relationship. As someone is getting involved more on various activities in the institutions, one’s exposure amplifies. This leads to positive influences to the group synergy. With regards to transferring the “entrepreneurial spirit” to students, this simply means that educators, who have adequate level of involvement, would influence the level of efficiency and effectiveness of educators toward the quality of students (Hoell, 1998; Sireteanu and Bedrule-Grigoruta, 2008; Yolles, 2008)<sup>14</sup>.
- c. A correlation of 0.65 between “group synergy” and “motivation” shows that 65% of group synergy formation in organizations can be proxied by the level of motivation of educators in doing their job as educators in the education institutions. A logical explanation is simply the higher the motivation level of educators, the better the quality of group synergy. In terms of transferring the “entrepreneurial spirit” to students, this simply means that educators, who have the adequate level of motivation, would influence the level of efficiency and effectiveness of educators toward the quality of students (Hoell, 1998; Yolles, 2008)<sup>15</sup>.

**Illustration 4.4: Model Estimates**



- 3. Low to high correlations between “efficiency” and its sub-variables
  - a. A correlation of 0.41 between “efficiency” and “delivery of teaching” shows that 41% of teaching efficiency can be approximated by means of teaching and learning process delivery (Lazonick, 1997). Since the correlation is positive, it can be inferred that the

<sup>13</sup> Same as above.

<sup>14</sup> Same as above.

<sup>15</sup> Same as above

- better the teaching delivery method, the better the teaching efficiency.
- b. A correlation of 0.35 between “efficiency” and “time” shows that 35% of teaching efficiency can be approximated by timeframe. Although there is a positive correlation, but the correlation is relatively weak. This contradicts the initial expectations and/or logical rationale.
  - c. A correlation of 0.84 between “efficiency” and “tasks/assignments” shows that 84% of teaching efficiency can be approximated by the tasks/assignments. Since the correlation is positive, it can be implied that the more tasks/assignments, the higher the teaching efficiency. Perhaps, this follows the common sense of “*practice makes perfect*”.
  - d. A correlation of 0.79 between “efficiency” and “multi-tasking” shows that 79% of efficiency can be approximated by multi-tasking abilities. The positive correlation means that the more multi-tasking abilities that students can performed, the higher the teaching efficiency.
4. Strong correlation between “effectiveness” and sub-variables
- a. A correlation of 0.65 between “effectiveness” and “understanding” shows that 65% of teaching effectiveness can be measured by the level of understanding of students following the teaching process. The positive correlation means that the better the level of students’ understanding, the higher the level of teaching effectiveness.
  - b. A correlation of 0.75 between “effectiveness” and “knowledge” shows that 75% of teaching effectiveness can be measured by enormous knowledge acquired by students following the teaching process. The positive correlation means that the better the knowledge of students, the higher the level of teaching effectiveness.
  - c. A correlation of 0.72 between “effectiveness” and “skills” shows that 72% of teaching effectiveness can be measured by higher expertise of students following the learning process. The positive correlation means that the better the skills of students, the higher the level of teaching effectiveness.
  - d. A correlation of 0.56 between “effectiveness” and “target” shows that 56% of teaching effectiveness can be measured by the target achievement of students. The positive correlation means that the more target achieved by students, the higher the level of teaching effectiveness.
5. High correlations between “the quality of students” and sub-variables.
- a. A correlation of 0.95 between “the quality of students” and “awareness” represents 95% of the quality of students as the outcome of teaching process can be measured by the awareness of students on the entrepreneurial field. A positive correlation indicates that the greater the students’ awareness toward entrepreneurship, the better the quality of students as the output of teaching process in entrepreneurship.
  - b. A correlation of 0.82 between “quality of students” and “risk tolerance” represents that 82% of quality of students as the outcome of teaching process can be measured by the level of risk that those students are willing to tolerate. A positive correlation indicates that the higher the students’ tolerance toward risks of doing business, the better the quality of students as the output of teaching process in entrepreneurship.
6. The relationship between “quality of educators” and “group synergy” shows a moderate

correlation of 0.67. Though this is expected to show a higher value, nonetheless, it shows that as the quality of educator increases, the group synergy rises. This is logically expected as the more qualified educators may be more willing to cooperate and collaborate more in trying to formulate the best quality of group synergy among individuals (Siretanu and Bedrule-Grigoruta).

7. The relationship between “quality of educators” and “efficiency” suggests a strong correlation of 0.77. This is also expected as educators become more qualified, those educators should be able to work more efficiently.
8. A strong correlation of 0.83 presents between “quality of educators” and “effectiveness”. Likewise, this is also expected. As educators become more qualified, those educators should be able to work more effectively.
9. A weak correlation of 0.31 occurs between “group synergy” and “efficiency”. Undoubtedly, this is actually expected. As the quality of group synergy improves, individuals may be more engaged in networking and/or “walking around” to create the high level of synergy. Such activities, however, reduce the level of efficiency toward completion of work and/or teaching efficiency.
10. A relationship between “group synergy” and “effectiveness” denotes a weak correlation of 0.28. Similar to the above, this is actually expected also. As the quality of group synergy enhances, individuals may be more engaged in networking and/or “walking around” to create the high level of synergy. Such activities, however, reduce the level of effectiveness toward completion of work and/or teaching effectiveness.
11. There is a strong correlation with coefficient of 0.89, between “efficiency” and “quality of students”. This is expected to show a relatively high value. As teaching efficiency improves, the quality of student increases.
12. A strong correlation of 0.76 occurs between “effectiveness” and “quality of students”. Though it is expected to show a much higher value, nevertheless, it draws on a positive relationship that when teaching effectiveness increases, the quality of students increases.

From the output of AMOS model fit, it can be concluded that all variables are acceptable because they meet expectations and they are in accordance with underlying theories. Therefore, the research model, based on interviewing and pre-testing, can be used for further analysis.

## **5. CONCLUSION & RECOMMENDATION**

Given the analysis and modifications of the model, the final version has shown strong correlations among variables. Though the level of correlations of the group synergy toward the level of efficiency and effectiveness may appear rather minimal, the overall influence toward the quality of students is strong. This provides evidences though minimal, nonetheless the group synergy among educators contributes also to the overall improvement on quality of students. This finding is very much crucial as educational institutions may also need to pay attention on their synergy among members. The absence of this synergy may likely to discount the level of efficiency and effectiveness, as well as the quality of students.

This conclusion is derived from the last agreed-upon model, as previously confirmed with FGD. Nevertheless, this becomes apparent that the research model may become the focal point in the near future. Future research may choose to focus on the variability of synergy, parameters of success, parameters of quality of students, personal diversity of educators, as well as possible

modifications on research model.

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