

Entrepreneurship Competency Training Model of Private High School Principal Through Knowledge-Based Economy Approach

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Abstract—Private schools has a number of problems that require their principals to have entrepreneurship competencies, which can be obtained through trainings. This study focuses to provide information on entrepreneurship training models for private high school's principal through the Knowledge Based Economy approach. This approach views knowledge as the key to growth, welfare creation and organizational success, where creativity, innovation and the growth of new ideas for human resources are enhanced by relying on information and communication technology (ICT). The results of the study show that entrepreneurship training based on the Knowledge Based Economy approach can improve entrepreneurship competency of the Private High School Principal, which influences the quality of education and the welfare of school citizens. Therefore, the study suggested the importance of principals having the competencies as stated for the achievement of school success.

Keywords—education; entrepreneurship; school principal; knowledge-based economy

I. INTRODUCTION

Private schools are independent educational institutions, which means that they are not managed by regional or national government, such as public schools. Private schools are established on behalf of individuals, groups or foundations, one of which aims is to provide education services by to gain profits or nonprofits. The management of private schools is different from public schools, because they have to face more challenges and forced to provide the needs of the market. Private schools have to solve these challenges:

- The school finance that only relies on SPP or student contributions,
- Students are not generated from tight selection process,
- Less competence teachers,
- The needs to improve facilities and infrastructures despite limited budget.

Due all these limitations, Principals as the top leader in the management of private schools have an important role to solve the problems while tries hard to reach the school goals. The Principal are required to realize following conditions:

- The conducive learning and teaching environment which supports the improvements of school education quality.
- The improvements of school citizens welfare.

The Regulation of the Minister of National Education of the Republic of Indonesia Number 13 of 2007 concerning the Standards of Principals / Madrasas, states that a school principal must have several competencies, such as: personal, manager, supervisor, social, and entrepreneurs. Competencies here are defined as mastery of knowledge, skills, and traits. One of the most important competence which is a must to a private school principal is entrepreneurship skill. Entrepreneurship term in the social education context is not for commercial purposes, but to have entrepreneur characters such as innovative, hardworking, strong motivation, never give up, always looking for the best solutions, and having an entrepreneurship instinct.

Entrepreneurship is also defined as the ability to create something new and innovatively create added value. Creative means producing something new. Innovative means fixing / modifying / developing something that already exists. Added value means having more value than before. The aim of developing entrepreneurship for school principals is the create to be innovative, work hard, have strong motivation, never give up, and creative leader that can produce best solution for school problems, and to became best role model to all the school citizens. Thus, it is very important for principals to have entrepreneurial competencies obtained from training or workshops.

Along with the advance of information technology in the era of globalization, entrepreneurship training for school principals needs to adopt the latest economic and entrepreneurship theory, such as knowledge-based economic approach. The term "knowledge-based economy" comes from recognition of the significant role of knowledge and technology in economic growth. Knowledge, as manifested in humans (as "human resources") and in technology, became a source of economic development. A similar transformation is now taking place in the world of education when the business has developed globally, making the atmosphere of the economy more competitive, fast and smooth. Information and

communication technology (ICT) trigger this new economic transformation.

Based on the descriptions above, the author identified the problem as follows:

- What are the factors which influence the competence of a Private High School Principal?
- How the training using the Knowledge Based Economy approach may improve entrepreneurship skills of high school principals?
- To what extent the training using the Knowledge Based Economy approach may address the problems of private schools, in this case improving the quality of education and the welfare of the school citizens?

A. School Principal

The school principal has the key role in improving the quality of school education and the welfare of school citizens. He also has responsibility for optimizing and organizing educational activities, school administration, coaching other personnel, utilizing and maintaining facilities and infrastructure. Moreover, Principals as agents of change in schools have an active role in improving the quality of education. A good principal is one who able to manage all the school resources to achieve educational goals. The Principal should be able to create a good organizational climate so that all components of the school may arrange themselves together to achieve organizational goals and objectives [1].

The functions of the school principal according to Aswarni Sujud, et.al [2] are:

- To formulate the work objectives and as school policy makers.
- As regulators, who regulate the job divisions and regulate the distribution of tasks and arrange the implementation agents, and organize activities.
- As supervisors of school activities, including: arranging activities, directing the implementation of activities, evaluating the implementation of activities, guiding and improving implementation capabilities.

According to Davis et al., a successful principal can affect student achievement through: (1) Effective teacher support and development, and (2) The implementation effective organizational process). The influence of principals on student achievement even though it is indirectly, will have great influence to the development of school organizations, because the main human resources of education – teachers – will be able to develop and increase along by the increasing of effective organizational processes [3].

B. Entrepreneurship Competence

Generally, the term entrepreneurship was first mentioned by Ricard Cantillon, an Irishman who lived in France, in his book entitled *Essai Bar la Nature du Commercen*, in 1755. Furthermore, Hisrich-Peters in Alma states: "Entrepreneurship is the process of creating something different with value by

devoting the necessary time and effort, assuming the accompanying financial, personal satisfaction and independence" [4].

Entrepreneurship is the ability to create something new creatively and innovatively to create added value [5]. Creative means producing something like never before. Innovative means fixing / modifying / developing something that already exists. Added value means having more value than before. The skills needed by an entrepreneur according to Hisrich and Peters are technical skills, business management, and personal entrepreneurial spirit [4]. Technical skills include: being able to write, speak, hear, monitor the environment, business techniques, technology, organize, network, management style, train, work together in teamwork. Business management includes: business planning and setting business goals, decision making, human relations, marketing, finance, bookkeeping, management, negotiation, and managing change. Personal entrepreneurial spirit includes: discipline (self-control), risk-taking calculated, innovative, change-oriented, hard work, visionary leader, and able to manage change.

The Policy of Republic of Indonesia Minister of National Education No. 13 concerning Competency Standards of Principals and Madrasah states five principals' competencies as follows: personality competency, managerial competence, entrepreneurial competence, supervisory competence, social competence.

A person is declared competent in a specific field if he masters a skill in harmony with his field. A school principal as education manager is required to master certain skills and competencies that can support the implementation of their duties. Suhertian defines competence as "the ability to implement something obtained through education and training" [6]. Competence is obtained through various kinds of education and training which are followed in accordance with certain standards and qualities with the tasks to be carried out. Supandi agrees as he quoted in the Wahyudi that: "Competence is a set of abilities to do a position, and not merely knowledge. Competence requires specific cognitive abilities, affective conditions, values and specific and specific skills related to the characteristics of the position or task carried out" [7].

Principal entrepreneurship competencies based on Wahyudi interpreted [7] as the ability to:

- Create innovations that are useful for school development.
- Work hard to achieve school success.
- Having a strong motivation for success in carrying out the main tasks and functions as school leaders.
- Never give up and always look for the best solution to solve the obstacles faced by the school.
- Having entrepreneurial instincts in managing school production / service activities as a learning resource for students.

C. Knowledge Based Economy

At the end of the 20th century, national economies throughout the world experienced unprecedented economic challenges and opportunities. The progress of electronic technology, software applications revolutions, and the expansion of telecommunications infrastructure have changed basic economic functions and interactions between agents [8]. The Knowledge Based Economy (KBE) concept was first introduced by the Organization for Economic Co-operation and Development (OECD), which defines it as an economy that is directly based on the production, distribution and use of knowledge and information. Then, the Asia-Pacific Economic Cooperation Forum (APEC) 2000 & 2004 and WBI (World Bank Institute) 1999 refer the KBE as an economy where the production, distribution and use of knowledge are the main drivers of growth, welfare creation and employment in all industries. A stronger and better economy is directly rooted in the production, distribution and use of knowledge than ever before because new ideas and innovations produce comparative advantages. Knowledge Based Economy practice is based on increasing of specialization, research, innovation and learning [9]. One of the main features of the knowledge-based economy is their dependence on the latest information technology.

The changes to Knowledge Based Economy occur on a global scale. Transformation is taking place in all advanced industrial countries and many developing countries that also aspire to achieve this target. The World Bank mentions four pillars towards Knowledge Based Economy, as follows: Effective Government and Institutions as well as economic incentives, Education and training, Technology and Information infrastructure, and Development of research and development systems (R & D). Md. Qamruzzaman and Jannatul Ferdaous describe the four pillars [10] as follows:

1) *Effective government and institutions and economic incentives:* Effective government influence on economic performance can be seen in developed countries. Experience in developing countries shows a strong correlation between good governance and per capita income. Economic incentives in the form of good taxes, law, flexible financial and intellectual initiatives, regulation of property, create a more competitive business environment. This is important for the creation and accumulation of new knowledge. In general, in competition-poor countries and thus the lack of pressure to create new products and services results in a very low level of new knowledge creation and hence low economic growth rates.

2) *Education and training:* The second pillar of the knowledge economy is an effective and productive education system that can meet economic needs. The primacy of human resources is the result of better skills (eg teamwork or cognitive skills) and lifelong learning in order to overcome changes and business challenges. The influence and accumulation of knowledge at the level of productivity shows that an adequate education system is needed to ensure the transfer of knowledge in the community. The education system is a key factor in the creation of innovative cultures needed for the development of a successful modern economy.

The education system must ensure the flow of knowledge between individuals, companies and institutions through cooperation between educational institutions and companies that can save on research and development costs in the company.

3) *Information-communication technology and infrastructure (ICT):* The KEB literature emphasizes the importance of ICT in the knowledge economy and the economic development of the country. But the potential of information technology infrastructure cannot be utilized properly with an uneducated workforce, traditional management practices and inadequate legal frameworks. ICTs do not generate knowledge, but they allow individuals, companies and other organizations to access, use and transfer knowledge in a fast and cost efficient way. The development of ICTs and their applications has contributed to a significant increase in demand for educated workers. For developing countries, the development of ICTs can be an important factor in achieving economic growth.

4) *Research and development (R & D) and innovation:* The culture of innovation depends on the ability of a country's government to create an environment that enables the development of innovations in the private and public sectors. R & D activities require significant long-term investment.

In accordance, Zuhail mentions Knowledge Based Economy as an economic system that has characteristics such as: (1) based on intellectual assets, not physical assets or places; (2) competitive advantage will make the organization able to learn and innovate; (3) labor must be able to think critically; and (4) mastery of technology will make the organization capable of managing knowledge (knowledge management) and its workforce is able to continue learning. According to the world bank, the change in the information society into an era of knowledge occurs very quickly, strongly and real.

KBE is not only formed from the development and diffusion of computer hardware and software, but also purchases that are cheaper and rapidly increasing on electronic connectivity. The term economically, the main feature of the IT revolution is the ability to manipulate, store and transmit large amounts of information at very low costs. Because of its low costs, information flows freely on the Internet and consequently the application of knowledge to all aspects of the economy is possible.

Research by Laura James et al. reveals that the development of a Knowledge-based economy requires individuals to obtain measurable knowledge or skills through formal education and training, which are thought to improve national economy competitiveness and productivity.

Because knowledge is the main capital, other capital becomes derivatives that depend on knowledge. Thus, the key to human resource development in the current era is the development of the capacity of knowledge and skills as well as motivation and ability to continue learning, while increasing productivity. There is no other choice for private schools to survive except to improve the quality and capability of human resources as knowledge workers with high competence. If

individual creativity is low, the school will not grow because it does not have a competitive advantage. The view of old human resource theory has been reinforced by the latest theory which argues that not only education is more important, but also experience-based education that fosters active learning and innovative talent. Romer has promoted concepts such as 'creative class' as a basis for forming a competitive economy.

A flexible education system supports KBE. The system starts with basic education which provides the foundation for learning; continuing with secondary and high education that develops core skills (including technical skills) and encourages creative and critical thinking, problem solving and innovation; and extends to a lifelong learning system that extends from early childhood to retirement. Human resources in science and technology are very important because investment in human resources is the key to innovation and growth.

II. RESEARCH METHOD

The type of research used in this study is Qualitative Research and Development (RnD). Sugiyono said that: "Qualitative research method is a research method that is based on post positivism philosophy, used to examine natural object conditions, (as opposed to experiments) where researchers are key instruments, purposive and snowball sampling of data sources, triangulation collection techniques (combined), data analysis is inductive / qualitative, and the results of qualitative research emphasize the meaning rather than generalization" [11].

The model in this development research is a procedural model, which is a descriptive model and outlines the steps of development. Based on the theory from Sugiyono, the steps that must be followed to produce a product include the potential and problem stages, data collection, product design, design validation, product design revision, product testing, product revision, usage testing, revision products, and mass production [11].

There are several development procedures proposed by several experts. One of them is the development research procedure proposed by Sugiyono. In this development research refers to procedures that are tailored to the needs of the researcher [11].

III. RESULTS AND DISCUSSION

The model of KBE-based principals training was designed using ADDIE based frameworks (Analysis, Design, Development, Implementation, Evaluation). This framework was chosen because it is usually used by designers and training developers. The five phases in it can represent a dynamic and flexible guide to building effective training and performance supporting tools.



Fig. 1. ADDIE process.

The following is an explanation of the process above:

A. Analysis

Analyze the needs of institutions and individuals.

The need to fulfill the policy Minister of National Education Regulation Number 13 of 2007, which states that the principals should have five competencies, especially entrepreneurship skill.

B. Design

Design training systems in order to achieve learning goals.

The goals of the training are to:

- Provide theoretical and practical provisions to Principals to have entrepreneurial competencies that can be applied in private schools.
- Equip the theory understanding and Knowledge Based Economy practice to the Principal.

The training design uses the andragogical approach. Participants must be able to do something. Curriculum, organization, evaluation, and referring to the competencies that must be owned and needed by training participants. After participating in training activities, participants must be able to do something. Therefore, the learning process used is experiential learning with a variety of methods, for example:

- Brainstorming and interactive dialogue with training participants;
- Group / class discussion;
- Practice, completing case studies;
- Individual and group assignments;
- Demonstrations / simulations;
- role playing, and various other relevant learning methods; and self-reflection.

C. Development

Develop training resources and materials.

Based on the KBE training curriculum that has been practiced by the Institute of Management in Economic, Ecological and Social Systems at Southern Federal University, Russia and adjusted by the author. The KBE-based entrepreneurship training curriculum is designed as follows:

1) *Group dynamics*: To form the leadership, personality, social and communication spirit of the principal by increasing leadership potential, changing the mindset, attitudes, behaviors and actions of the principal who is focused on improving skills based on mapping results.

2) *Managerial skill*: Facilitating school principals to understand eight national education standards, components of planning, school self evaluation, and preparation of school plans and strategies.

3) *Entrepreneurship*: Debriefing of entrepreneurship competencies of principals is innovation and creativity competency, hard work, never giving up, and entrepreneurial instincts.

4) *Knowledge-based economy formation and development*

- Basic characteristics, concepts and issues;
- The change of companies' nature in new economy;
- Knowledge staircase;
- Relationship between innovation, knowledge, competitiveness;
- Knowledge as a source of competitiveness.

5) *Knowledge-based economy: trends and implications*

- Knowledge and economics;
- Knowledge codification;
- Knowledge and learning;
- Knowledge networks;
- Knowledge and employment;
- Measuring knowledge, knowledge inputs, outputs, networks.

6) *Knowledge-based economy and enterprise management*

- Knowledge in economic theories;
- Knowledge-based enterprise: theories and fundamentals;
- Knowledge management theories.

7) *Public dimensions of knowledge and innovation*

- Fundamental public aspects of the knowledge economy;
- Privatization of knowledge;
- Three E's in support of the revival of public property.

8) *Science system in the knowledge-based economy*

- Knowledge production;
- Knowledge transmission;
- Knowledge transfer.

9) *Innovation tank and the four pumps: mapping innovation in the education sector*

- Science-based innovation;
- Collaboration between users and / or doers – horizontally organized innovation;
- Modular structure, with freedom to innovate yet joined together as a whole system;
- Information and communication technologies;
- The four pumps to fill up with innovative capacity;
- The four pumps and the education sector;
- Four pumps to fill up with innovative capacity.

10) *Intellectual capital*

- Basic characteristics, concepts and problems;
- Differences between physical and intellectual capital;
- Relationship between the notions of intellectual capital, intellectual property and intangible assets;
- Valuation techniques and measurement methods of intellectual capital.

11) *Analysis of intellectual potential*

- Level of technology;
- Intellectual potential of employees;
- Intellectual potential of the enterprise;
- Intellectual potential of the university.

12) *Knowledge management*

- The concept of knowledge management;
- In-house control technology of companies' knowledge;
- Model of dynamic knowledge transformations;
- Process-based knowledge management models;
- Decision-making structures and practices in knowledge models;
- Forms of knowledge management;
- Successful knowledge management;
- Knowledge management scheme.

13) *Lifelong learning and self-development*

- Learning values and self-development;
- Learning organization;
- Creative organization;
- Intellectual organization.

D. Implementation

Carry out training activities.

Each session lecturing accounts for about 60% of time, students' participation in discussion accounts for 40%.

Specifically, the lecturer will invite students to speak during the lecture. At the end of each session, questions are presented for discussion.

During the trainings, students will have an opportunity to analyze some knowledge processes, to work with open source software for knowledge management and recognize how to deal with linguistic values (as knowledge) by using information technologies.

E. Evaluation

Activities to get feedback from participants and presenters.

Comprehensive development of student discipline involves:

- Students involvement in problem-based presentation;
- Students self-guided reading of the further literature;
- Students participation in case studies;
- Written essay;
- Interview and testing.

IV. CONCLUSION

Entrepreneurship competency training for principals based on KBE that is suitable with the development of the latest economic theory and advances in information technology, can answer various problems faced by private schools and can

improve the quality of education and welfare of school residents.

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