

**Identification of Employee Core Capability Through Knowledge Management
(Study at Plant Conservation Botanic Gardens, Indonesian Institute of Science)**

Novia Putri Andriani Mahar Dheny

E-mail: novia.mahardheny@gmail.com

Biro Organisasi dan Sumberdaya Manusia, Lembaga Ilmu Pengetahuan Indonesia

Abstract

The ability of employees known as employee competency is one of the strengths for the organization. Recently the concept of core competency has shifted to a core capability that is an organizational ownership that is different from the others. The aim of the research is to identify the core capability of employees at Plant Conservation Botanic Gardens through knowledge creating activities. This type of research uses a description method with a qualitative approach. The results showed that in the Plant Conservation Botanic Gardens has carried out a process of knowledge creating activities consisting of consisting of joint problem solving, integration of new tools and methodologies, experimentation and prototype preparation, and absorption of knowledge from outside the organization so that core capability from skill dimensions and knowledge.

Keywords: *core capability, knowledge management*

Introduction

In Law Number 17 of 2007 concerning RPJPN 2005-2025 states the direction of bureaucratic reform is one of which is the development of state apparatus to improve the professionalism of state apparatus and realize good governance. Therefore the state apparatus has a very important role for national development. Government officials are expected to be characterized by professional, competent and accountable people who can support the conditions of a transparent, democratic, fair, effective and efficient government by respecting the law that encourages the success of a national development. In accordance with the opinion of Marsono (1974: 66) states that "The smooth implementation of government and national development depends mainly on the perfection of the state apparatus and the perfection of the state apparatus in principle depends on the perfection of civil servants".

Referring to national development which requires competitive presence in all bureaucratic systems in Indonesia, the development of the State Civil Apparatus is also

an absolute requirement of one of the organization's sources to be able to have its own uniqueness. Barton (1995) states that the existence of a series of routines that have been carried out in the bureaucratic system cannot continue to develop which later can lead to core rigidity of an organization. Core rigidities are interpreted as the condition of an organization that cannot develop according to existing developments. In the end the organization only experienced a stagnant change.

Therefore, the theory from Leonard Dorothy Barton stated in his book *Wellspring Knowledge, Building and Sustaining The Source of Innovation* brings the ownership of an organization that is considered different from the others. This is used as an reinforcement for organizations to be able to compete with other organizations. This core capability (core capability) is not something new because previously the concept developed through core competencies (core competence) and core skills (core skills). But the core capability concept introduced by Barton (1995) seems to be a more focused thing because with the existence of dimensions that exist in their own core capabilities.

Plant Conservation Botanic Gardens is an institution that has the function of conservation of ex situ plants and plant research also has a function as a place of education, tourism, and environmental services. This is what makes botanical gardens different from other institutions. There are four Botanical Gardens in Indonesia, which are under the Indonesian Institute of Sciences, but for the Plant Conservation Botanic Gardens itself is the one that distinguishes the focus for wet lowland plants. Through knowledge creating activities (Barton, 1995), it is stated that this activity can eradicate pathology in the form of core organizational rigidity.

Some forms of knowledge management activities are carried out by the Plant Conservation Botanic Gardens. The author focuses on identifying core capability through the dimensions of knowledge and expertise of employees, especially employees in 9 functional positions that already have their own core in carrying out the duties and functions of botanical gardens. The dimensions of skill and knowledge are chosen because it is the second level that is difficult to change and looks for the characteristics of the organization (Barton, 2008: 123). In line with Drucker's thinking (1999) states that developing knowledge of workers (knowledge workers) will have value from their own knowledge. Based on the description above, the researcher wants to analyze what the core capability of employees is obtained through the process of knowledge creating activities in the Plant Conservation Botanic Gardens.

Method

This study uses a type of qualitative research with a descriptive analysis approach. This is done so that researchers can find data and facts directly in the field about identification of core capability in the Plant Conservation Botanic Gardens then connected with the theory that has been developed, namely with Barton's theory (1995) in the form of knowledge creating activities, which include:

- 1) Solving joint problems;
- 2) Integration of new tools and methodologies;
- 3) Experiments and preparation of prototypes;
- 4) Absorption of knowledge from outside the organization.

Data collection is done by interviewing informants, observing phenomena or events, and reviewing documents. The analytical method used in this study is an interactive model analysis method developed by Miles and Huberman (2014). This method consists of 4 processes, namely: data collection, data condensation, data display, conclusion drawing.

Result and Discussion

Barton, who first carried out core capability (1992: 111) shifted from the concept of core competence (Prahalad and Hamel, 1990) and core skills (McKevitt, 1970). Core capabilities which mean something developed by an organization which shows competitive advantage from an organization that is different from the other in order to be able to face future developments. Core capability is obtained through the process of creating activities knowledge which includes:

Solving joint problems

Discussion activities in carrying out joint problem solving both carried out by employees functional positions researchers and non-researchers in the Plant Conservation Botanic Gardens is one of the containers to channel ideas, knowledge possessed and concepts that will or are being worked on. This functional office meeting activity is carried out by representing what will, is, or information related to what is done according to his position. There are no limitations in solving a problem, this is what Barton (1995) calls a signature skill.

In the discussion activities at Plant Conservation Botanic Gardens consists of two namely scientific research meetings held every once a week and routine non-researcher

meetings held every once a month. Even though meetings have different topics, it encourages employees to provide feedback and related input presented. For example at a scientific meeting of researchers, the author had the opportunity to attend the meeting in question. Knowledge sharing is in the form of constructive criticism from senior researchers to junior researchers who are presenting. At different times the author also attended regular non-researcher meetings. The existence of a discussion process that is carried out between functional positions, such as functional positions of public relations institutions that provide input on what is conveyed by computer staff employees.

Barton (1995: 63) distinguishes between 3 types in the signature skill, which is the preferred task where employees are required to choose what problems will be raised. Preferred cognitive approach is how employees can provide solutions to what is presented. Lastly, preferred technology is if the problem can be helped by new tool preferences as a solution to the problem. In the concept of discussion conducted at Plant Conservation Botanic Gardens the process of signature skill occurs in the preferred cognitive approach. The existence of this meeting also shows one that is said by Barton (1995: 64) that is creative abrasion which means the process of channeling existing challenges becomes a creation. The intended creation is something that is done by each functional position contained in the presentation material during the meeting.

Integration of new tools and methodologies

Knowledge creating activities in the integration of new tools and methodologies in the Plant Conservation Botanic Gardens have 4 activities involving functional positions of researchers, computer institutions, archivists, and librarians. These activities can be seen in the following table:

The Process of Knowledge Creating Activities:
Activity Integration of Tools and New Methodology

No	Knowledge Creating activities	Functional Position	<i>Core Capability (Skill and Knowledge)</i>
1	Application of the Maxent Program	Researcher	<i>Skill :</i> 1. Application of technology in the distribution of rare plants <i>Knowledge :</i> 1. Knowledge of rare plants

No	Knowledge Creating activities	Functional Position	<i>Core Capability (Skill and Knowledge)</i>
			2. Knowledge of location / vegetation / plant distribution conditions
2	Application of the Carry Map Program	Computer Staff	<i>Skill :</i> 1. Skills in operating applications / technology <i>Knowledge:</i> 1. Knowledge of collection plants in botanical gardens 2. Knowledge of GIS (Geographic Information System) 3. Knowledge of programming languages
3	Application of the Digital Archive Program	Archivist	<i>Skill:</i> 1. Skills in operating a computer 2. Skills to sort the types of archives <i>Knowledge:</i> 1. Knowledge of active / inactive / static / vital archives

In the application of the Maxent program is a process of user involvement (user involvement). Barton (1995: 92) states that the reason for user involvement is one of them because involving users (in this case outside parties to teach program applications) in tool design produces superior designs. The Maxent program makes it easy for researchers to be able to determine the location of rare plants by operating the program. This is then called Barton (1995: 94) as embodying knowledge (realizing knowledge) because it is considered outside parties and researchers interact with each other so that knowledge can be formed. However, based on the results of the sample interviews with several researchers at the Plant Conservation Botanic Gardens, only some of them use this application. This is due to the limited use of the application which lies in the data to be processed only by a few researchers.

In other activities, namely the application of the Carry Map program, Digital Archives, is a mutual adaption. Barton (1995: 104) states that "mutual adaptation is

the reinvention of the technology to conform to the work environment and the stimulating adaption of the organization to use the new technical system". The two activities are the results of the knowledge and skills of the interaction and cooperation between functional office employees in the work unit. The program that was developed made the absorption and dissemination lead to the circulation of knowledge within the organization so that it had the potential for the Plant Conservation Botanic Gardens itself. The knowledge management process developed through the integration of technological tools as described above is in line with the thinking of Dalkir (2005) defining knowledge management as a systematic and directed effort to coordinate organizational components, such as humans, technology, processes, and organizational structures to produce innovation through creation, sharing, and use of knowledge, and capturing and developing proven practical experiences in organizational memory to shape learning for the organization.

Experiments and preparation of prototypes

Knowledge creating activities in the experiment and preparation of prototypes in the Plant Conservation Botanic Gardens have 3 activities involving functional positions of researchers and planners. These activities can be seen in the following table:

The Process of Knowledge Creating Activities :
Experiments and Preparation of prototypes

No	Knowledge Creating activities	Functional Position	<i>Core Capability (Skill and Knowledge)</i>
1	Propagation of Plant Acclimatization	Researcher	<p>Skill:</p> <ol style="list-style-type: none"> 1. Skills for propagating plants 2. Skills for using laboratory equipment for the acclimatization process <p>Knowledge:</p> <ol style="list-style-type: none"> 1. Knowledge of conservation plants that can be acclimatized 2. Knowledge of acclimatized plant tissue culture

No	Knowledge Creating activities	Functional Position	<i>Core Capability (Skill and Knowledge)</i>
2	Preparation of Regional Botanical Gardens Masterplan	Planner Staff	Skill: <ol style="list-style-type: none"> 1. Skill in applying location to the map of the garden 2. Skills in compiling a new regional botanical garden masterplan Knowledge: <ol style="list-style-type: none"> 1. Knowledge of spatial analysis 2. Knowledge of the condition of vegetation / climate / soil in the location of new regional botanical gardens
3	Compilation of KTI Researcher & Abstract Information Package Researchers	Librarian	Skill: <ol style="list-style-type: none"> 1. Skills in operating a computer 2. Skills in compiling plantation information and abstract information in print media (books) Knowledge: <ol style="list-style-type: none"> 1. Knowledge about plantations 2. Knowledge of the results of scientific work

The multiplication of plant acclimatization activities and the preparation of regional botanical garden masterplan also become its own core for researchers and planners. Such actions are called virtuous cycle of innovation (Barton, 1995: 114). This can be a dominant character and become a superior ability in an organization. Propagation of acclimatization of plants is carried out by domestication researchers who are the result of plant propagation that has been conserved. This acclimatization plant that can make a characteristic of the Plant Conservation Botanic Gardens can especially make budget inputs because it is sold to the public. In the process of acclimatization of this plant there will indirectly be a learning alliances process (Barton, 1995: 131) which is intended to enlarge knowledge. Because in the process, the experiments carried out in addition to involving researchers as key persons also involved engineering engineers to be able to absorb the knowledge carried out.

The presence of regional botanical gardens is also a target for each year by the institution. In this case there must be a great leader formula where the top authority is able to support the capabilities possessed by the planner to compile a new regional botanical garden masterplan. Grindle (1997: 22) states that the concept of capacity building is one of them through the dimension of Human Resources development. This activity also includes the development of human resource capabilities so as to create strength for the Plant Conservation Botanic Gardens. Barton (1995: 131) states that positioning alliances is a strategy for entering markets. In this case the Plant Conservation Botanic Gardens which has a 2015-2019 RPJMN strategic plan on the construction of regional botanical gardens makes its own land for the work unit, especially the planner's functional position. Because the construction of the area's botanical gardens makes it a new core strength in the development of plant conservation in Indonesia.

The Process of *Knowledge Creating Activities* :

Absorption of knowledge from outside the organization.

No	Knowledge Creating activities	Functional Position	<i>Core Capability (Skill and Knowledge)</i>
1	Workshop on Preparation of Plantations Functional Position	Staffing Analyst	Skill: 1. Skills in compiling analysts for plantation offices 2. Skills in arranging the number of credit for functional office plantation Knowledge: 1. Knowledge of the position of plantation 2. Knowledge of proposing new functional positions
2	Public Speaking Training, Environmental Education, and	Public Relation Staff	Skill: 1. Public speaking skills 2. Skills in using foreign languages 3. Skills guide school children in the garden Knowledge:

No	Knowledge Creating activities	Functional Position	<i>Core Capability (Skill and Knowledge)</i>
	Dutch Language		1. Knowledge of collection gardens 2. Knowledge of foreign languages
3	Seed Bank Millennial Training	Research And Engineering Technicians	Skill: 1. Skill in testing seed moisture content 2. Skill in testing seed germination 3. Skill of processing seeds Knowledge: 1. Knowledge of the types of plant seeds 2. Knowledge of how to multiply plant seeds

Knowledge absorption is a treatment chosen by Barton to form a core capability. In this case the Plant Conservation Botanic Gardens carry out these activities with training / workshops / seminars to improve and shape employee competencies. Training activities at the Plant Conservation Botanic Gardens are carried out through internal and external. But most training conducted is external training by bringing in parties from outside. External sources for importing knowledge originate from the parties namely consultants, universities, vendors and others. Internal training is usually done by inviting resource persons to provide knowledge to employees. While external training is usually done by sending employees to conduct training outside the work unit.

Most external training that is followed by minimizing costs and implementation is borne by the organizers. Supplay alliances (Barton, 1995: 136) mentioned Barton in this case a form of minimizing costs from the absorption of knowledge from outside. In addition, training was carried out in the internal manner by presenting presenters who were also from Plant Conservation Botanic Gardens employees. Until now there is still little internal training that uses internal sources as well. Even though it is so easy to do, for example, on the relevance of tasks between researchers and related engineering technicians, the researcher can provide both credit transfer and collaboration to develop knowledge for engineering technicians.

The existence of internal absorption like this is an appropriate alliance (learning alliances) to import knowledge (Barton, 1995: 138) because it can also minimize costs.

In line with the research conducted by Efendi (2015) that by creating conducive conditions for the transfer of knowledge and development of knowledge management within the organization, so that tacit knowledge possessed by employees can be transformed into explicit knowledge and support employee competency development. Drucker (1954) also stated that there is knowledge capital that changes money capital and natural resources. In this case the organization is expected to be able to manage its knowledge well for example by transferring knowledge. Likewise in the Plant Conservation Botanic Gardens training should be increased among seniors and juniors in internal training.

Conclusion

Analysis of core capability of employees in functional positions in the Plant Conservation Botanic Gardens (researchers, technicians, engineering, public relations, archivists, librarians, planners, staff analysts, computer staff) has been obtained through the process of creating knowledge that is joint problem solving, integration of new tools and methodologies (can be seen in table 4.1), experiments and preparation of prototypes (can be seen in table 4.2), as well as the absorption of knowledge from outside the organization (can be seen in table 4.3). The concept of knowledge creating activities is one of the strategies in Plant Conservation Botanic Gardens to obtain and develop capabilities that have been owned by employees of previous functional positions based on job requirements in job analysis.

To get the core capability through knowledge creating activities, it must be developed in a work unit. Because knowledge creating activities are a cycle so that the ability of organizational resources continues to grow especially with the condition of the government system along with the enactment of the PP on ASN Management which requires employees to enter competitive zones. But support from managerial roles is needed to strengthen the commitment of the organization.

References

- Barton, Leonard D. (1995). *Wellspring Knowledge, Building and Sustaining The Source of Innovation*. London : Harvard Business School.
- Dalkir, K. (2005). *Knowledge Management in Theory and Practice*. Oxford (GB) : Elsevier Butterworth-Heinemann.
- Drucker, Peter, F. (1999). *Management Challenges for the 21st Century*. First Edition. Harper Collins Publisher..
- Efendi, Nur. (2015). *Pengembangan Sumber Daya Manusia Berbasis Kompetensi di*

Kantor Pemerintah Kota Bandar Lampung. Dalam MIMBAR. Volume 31, No. 1, hal. 1-10.

Grindle, M.S., (1997). *Getting Good Government : Capacity Building in the Public Sector of Developing Countries*. MA Boston: Harvard Institute for International Development.

Marsono. (1974). *Pembahasan Undang – Undang Republik Indonesia Nomor 8 Tahun 1974 Tentang Pokok – Pokok Kepegawaian*. Jakarta: Ikhtiar Baru

Muluk, Khairul. (2008). *Knowledge Management: Kunci Sukses Inovasi Pemerintahan Daerah*. Malang : Bayumedia Publishing.