Factors to increasing the employee performance through knowledge management systems implementation at PT. XYZ

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Abstract. Organizational ability to manage knowledge is becoming increasingly important in the current era of globalization and the industrial revolution era 4.0, especially for companies. By optimally managing knowledge in the company, the business processes in the company will be effective and efficient. In order to obtain high effectiveness in the process of sharing knowledge that already exists in PT. XYZ, the evaluation of the implementation of knowledge management systems is needed to find out how to manage knowledge optimally. The purpose of knowledge management is to transform the knowledge possessed by employees into explicit knowledge owned by an organization where employees work, so that the effectiveness of knowledge management can be used to improve employee performance and employee knowledge can be maintained properly, so as to provide more benefits for the company, especially for handling customer complaints. All knowledge held by the company must be disseminated so that the company's core knowledge can be developed and knowledge management as an instrument in achieving company or company goals. Knowledge Management Systems are the main facilities for sharing the knowledge and experience of employees. So, the evaluation process is needed to find out how the process of knowledge transfer can affect KMS performance to improve employee performance. The analytical method to analyze the implementation of management in PT. XYZ is to use factor analysis and the questionnaire will be processed using factor analysis to obtain new factors that can be used as forming factors for evaluating the implementation of existing knowledge management systems to be competitive advantage.

1. Introduction
Knowledge sharing is an important process for PT. XYZ to get the effectiveness of knowledge management process. According [1], in an organization requires the transfer of knowledge from the organization to individuals in the community and from individuals to individuals in the organization. Knowledge and Knowledge Management has been researched on various aspects by several researchers which results in the conclusion that knowledge is a collection of insights, understandings, experiences and practical knowledge of each individual. From this understanding, actually the knowledge that exists in each individual can be further processed into company assets. Modern concepts in the mid-nineties produced by Nonaka and Takeuchi (1995), understanding knowledge management as a set of methods for gathering knowledge, processing knowledge and combining
knowledge, transferring knowledge assets, for the creation of new knowledge, then redistributing that knowledge. Knowledge management practices initially focus on the management of existing knowledge, and only on the idea of innovation that results from knowledge management. But with rapid progress to date, where data collection has been very smooth, a sophisticated search and search system in providing direct access to the latest historical information, and combining large groups of data with artificial intelligence techniques has provided something new in the creation and innovation of knowledge which utilizes historical data knowledge [2]. Understanding of socialization in the broadest sense is a process of interaction and learning done by a person from his birth to the end of his life in a culture of society. [3]. Socialization activities appear to share knowledge through direct experience for a particular substance or object [4]. Externalization is the process of transformation from a form of Tacit knowledge based on individual experience into a documented form of explicit knowledge so that it can be used as a reference for subsequent knowledge management [5]. Through this externalization process, the knowledge possessed by each individual can be released and formulated into other knowledge that can be easily understood and learned by other individuals [6].

Combination is a process of merging existing explicit knowledge in order to create new knowledge that is not limited among individuals in an organization [7]. Internalization is the process of transformation of the shape explicit knowledge to tacit forms. For example, the learning process is then followed by ‘learning by doing’ which gradually form a new knowledge within the individual [8].

Knowledge Management System (KMS) implementation at PT. XYZ is used by employer to share knowledge and experience that they have to another employer. In order to knowledge sharing process that already exist in that company can work effectively, it needs an activity evaluation by examining how existing knowledge management processes through Knowledge Management System in order to transform tacit knowledge into explicit knowledge so that the knowledge possessed by each individual can be transferred to another individual through the process of knowledge sharing and knowledge presentation and through effective knowledge management is expected to improve the performance of its employees and the knowledge that there can be properly maintained so as to provide benefits to the company. KMS become the main means of execution of processes that exist in the Knowledge Management itself, the analysis is needed to find out the extent to which existing processes affect the performance of KMS [9]. The results of analysis of existing evaluation is expected to be a material that will have an impact on the future development of the organization [10].

2. Methodology
Analysis method that can be used for evaluate KMS at PT. XYZ is by using Factor Analysis. These are the step of analysis factor for analyze the data in order to become a model to evaluate KMS by determine new factors and indicators to choose what the best factors and indicators that can affect the employer performance through KMS : Determine what factors will be used to evaluate the KMS related to the knowledge management. These factors are: People Perspective, Process Perspective, and Technology Perspective. Determine the indicators that can be used to evaluate KMS implementation in order to get analysis result for assess the KMS implementation. Testing the data questionnaire that has been given to the respondents by using analysis factor in order to can get new factors and indicators that can affect the employer performance [11]. Making a conclusion what is the factors that can affect the employer performance through KMS implementation to improve employer performance and management of knowledge at the organization.

3. Results
After we test the data by using analysis factor method, we can know what is the factor and indicator that can be affect the employer performance. These are the new factors and indicators:
First new factor, consist of:
1. KMC7 = KMS provides opportunities for employees to share knowledge and experience.
2. KMC6 = Knowledge is shared as SOP, working instruction, Customer Handling, and Tenant Services through KMS helps employees to minimize the problems.
3. **SECI2** = KMS creates an interaction in the process of sharing knowledge and gain new knowledge.

4. **SECI4** = KMS facilitate employees in finding needed information related to handling tenant complaints.

5. **SECI1** = KMS create a process of sharing knowledge within the organization.

Second new factor, consist of:

1. **SECI3** = The use of KMS facilitate employees in acquiring and developing knowledge.
2. **SECI10** = The process of "learning by doing" that is shared through KMS help create new knowledge.

Third new factor, consist of the following indicators:

1. **KMI1** = Organizational culture is able to create more value for the company through the implementation use of KMS.
2. **SECI6** = KMS is a media sharing appropriate information for employees.

Fourth new factor, consist of:

1. **KMI6** = Distribution of information can occur quickly and accurately through the sharing of knowledge in KMS.

Fifth new factor, consisting of the following indicators:

1. **KMI7** = The physical environment includes the KMS as supporting the process of knowledge sharing applications that can be used by employee.
2. **SECI5** = Data and information delivered via KMS easy to understand.
3. **SECI7** = KMS make employees able to create an innovation and develop new ideas.

![Figure 1](image-url)

**Figure 1.** Indicators and factors to improve employer performance.

After analyze the data by using analysis factor method, conducting a factor analysis of the data obtained, we get some new factors and indicators to improve employer performance and management.
of knowledge at PT. XYZ. Those new factors and indicators will be used to evaluate KMS implementation at PT. XYZ. Figure 1.

Simulation model that can be used to evaluate KMS implementation at PT. XYZ shown five new factors. That five factors can affect employer performance through KMS implementation, these are the factors: Human Resources Ability (X1), Effective Information (X2), KMS Quality for User (X3), Accurate Information Transfer (X4), and Adequate IT Infrastructure (X5). Please see the model to evaluate KMS implementation below:

![Simulation model](image)

**Figure 2.** Values factors that can be used for evaluate KMS implementation.

The regression analysis result has been shown the equation values. This equation will be used to evaluate KMS implementation at PT. XYZ. That equation can be seen below:

\[ Y = 8.289 - 0.004X_1 + 0.110X_2 + 0.015X_3 + 0.019X_4 + 0.180X_5 \]

With the minimum and maximum values:

\[
\begin{align*}
-2.86723 & \leq X_1 \leq 1.93588 \\
-2.55212 & \leq X_2 \leq 1.96504 \\
-2.38520 & \leq X_3 \leq 2.51133 \\
-2.92823 & \leq X_4 \leq 2.21377 \\
-2.98907 & \leq X_5 \leq 2.02969
\end{align*}
\]
4. Discussion
Increasing awareness of the user in utilizing KMS as media sharing through the provision of equal opportunities for employees in terms of sharing knowledge and experience - experience that. There are five factors that can affect employer performance. Based on the results of data processing, the most influential factor is human resources ability, people role which is employer role at company is important aspect, if employer doesn’t know how to share their knowledge and experience by using media sharing such as KMS, so, it’s impossible for company to improve their employer performance. The quality of information that is said to be effective as a whole or an Effective Information with emphasis on the data and information in the form of knowledge that is constantly developed and enriched and experience - the experience of the employees who can assist in decreasing problems that may occur in the company as tenant complaints. KMS quality for user including data and information that always update can influence employer to join sharing their knowledge and experience to another employer. Because of KMS quality, user can get more info and knowledge to create a new knowledge for corporate innovation. Beside that, accurate information transfer is important, it’s because of the real time information distribution can make sharing process more effective and efficient. Adequate information technology infrastructure is an important point in the implementation of KMS, without the support of infrastructure, the implementation of KMS not be run only by relying on the human resources aspect alone. It required a supporting application that can support the sharing of knowledge and experiences in order to create innovation and development of new ideas in order to create new knowledge.

5. Conclusion
Based on the research that has been conducted, the factors - factors that can affect the performance of employees and knowledge management PT. XYZ is as follows:
Factors that may influence or affect employer performance by implement KMS at PT. XYZ, are:
- Human Resources Ability, this factor is important, because without human resources role, KMS can’t be effectively. If user can’t operate KMS include how to find and create a knowledge, so it’s impossible to share knowledge without human resources skill. The second factor is Effective Information, the effective information including knowledge and experience from employer will create an innovation. Innovation is an application of knowledge to produce new knowledge. Thrid factor is KMS Quality for User, especially how to make customer intimacy by minimize tenant complain, such as:
- Solution development, Results management, and Relationship management. Empowerment close to customer contact and High skills at boundary of the organization. Customer equity measures like life time value and share-of client Managing outcomes. and Emphasize complete solutions. The fourth factor is Accurate Information Transfer, knowledge sharing process must be integrated which is without people, process, and technology aspects, knowledge sharing process can’t be effectively. The last factor is Adequate IT Infrastructure, technology is really important to support knowledge sharing process at company in order to can create new knowledge and innovation and also knowledge development can develop continuously.

The indicators that can represent the factors which is can affect the employer performance by implement KMS for sharing knowledge and experience are the first factor consist of sharing opportunity, user knowledge, employer sharing, tenant complain handling and sharing process. Without human resources role, KMS implementation can’t be effective because human resources ability through sharing knowledge is an important matter to improve employer performance. Second factor which is Effective Information including knowledge managament and sharing experience is one of important aspect, it’s because the data and information at knowledge storage in KMS must be up to date in order to the employer can get the best knowledge and experience for create a new knowledge that can be share to another employer. Thrid factor that consist of data and information management and also sharing media is the best media for sharing, so, the KMS quality must be note, both in terms of data and sharing process. The fourth factor is Accurate information transfer which is including real time distribution information, distribution of information can occur quickly and accurately through the
sharing of knowledge in KMS. The last factor is Adequate information technology infrastructure. The fifth factor is representation of easy to understand the data and information, KMS usage for innovation, and sharing application support. Some indicators are interpreted as adequate IT infrastructure, where an adequate IT infrastructure will be able to help smooth the process of transfer of knowledge and experience possessed by the employees.

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