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Knowledge management system's implementation in private universities through SECI model

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ABSTRACT

The purpose of this research is to analyze the implementation of the Knowledge Management System (KMS) at x University in Jakarta. The research model implemented is qualitative research. Research data were collected through observation, interviews, documentation and triangulation techniques. The technical analysis of the collected data uses data reduction with the SECI model from Nonaka and Takeuci (Socialization, Externalization, Combination and Internalization), data display and drawing conclusions. These data were tested to ensure the validity of the data by testing the credibility, transferability test and confirmability test. The research results prove that x University has implemented a Knowledge Management System using the SECI Model. These results are a new theory originating from the field (grounded theory).

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INTRODUCTION

Since the beginning of the independence of the Republic of Indonesia, the position of Higher Education as a higher education institution in Indonesia has an important role as a catalyst for the progress of the nation, as well as a dynamicator in the context of educating people's lives (Astuti & Khoiri, 2023; Latif, 2021). This is a necessity where in college, students are equipped with various skills both in the form of hard skills and soft skills that will later be useful for their daily lives.

In addition to preparing students to be ready to work, universities are also an alternative place for how various sciences are tested and various discourses of thought are discussed (Larrain et al., 2019; Lee et al., 2020). There is a kind of hope that universities become a suitable link and match with various needs that develop in society (Rhenald Kasali, 2018). No exception to the business world, where excellent job candidates are those from universities who do have broad insight and technical abilities that are suitable for the business world (Allal-Chérif et al., 2021; Di Gregorio et al., 2019).

To support these expectations, the government of the Republic of Indonesia has prepared the National Standard for Higher Education (*SN Dikti, Standar Nasional Pendidikan Tinggi*) derived from Permendikbud No. 3 of 2020 as a national standard unit which includes National Education Standards, plus National Research Standards and National Standards for Community Service. In *SN Dikti*, the quality of higher education is not only determined in terms of the amount of academic teaching in class, but is supported and has a balance with research and community service. For this reason, structurally and systematically, *SN Dikti* regulates the process and quality assurance system and assessment system that will be a guideline for the implementation of education in universities, both public and private. The policy has serious implications not only for the university organizational system, including the lecturers who are in it.

Lecturers no longer only teach in class but must also have the ability to manage various teaching materials and other activities such as research and community service (Rapanta et al., 2020; Simamora et al., 2020). In other words, in addition to mastering knowledge in their respective fields, a lecturer must also have management skills on how tips and techniques for managing various activities to be in line with the guidelines that have been compiled in the *SN Dikti*. If a lecturer wants to move up his functional position and get a lecturer certificate, knowledge management within the scope of the individual becomes inevitable (Prasetyo et al., 2022; Yigzaw et al., 2021).

Higher education as a center of knowledge, ideally has a professional knowledge management system to support the running of the organization (Kallio et al., 2020; Siekkinen et al., 2020). According to Kotler et al. (2021), there is no choice for an organization to survive in this Society 5.0 era except to make traditional organizations into digital-ready organizations. In this era, the position of data, information and knowledge becomes vital and can be the strength of an organization if managed optimally and can be an obstacle to an organization if not managed properly.

University x as one of the Private Universities established since 1998 has the same obstacles as the conditions above. As a private university founded by Prof. Dr. Nurcholish Madjid, who is known as an Indonesian Muslim scholar, has an organizational vision as "To become a leading ethical-religious-based university to realize a noble civilization". The emphasis on the development of scientific culture accompanied by professional management skills is also contained in the Opening Speech of Universitas x delivered directly by him in 1998.

To implement the Knowledge Management model, four main components are needed that can be used as a reference in understanding the implementation process in an organization, namely human aspects, process aspects, technological aspects and content aspects (Sedarmayanti et al., 2020). The human aspect is crucial in the application of KM in an organization. For humans, in addition to acting as a document control or knowledge manager, it can also act as a source or reference for KM references. In terms of the KM process, various implementation concepts can be used as references such as the SECI (Socialisation, Externalisation, Combination, Internalisation) concept developed by Nonaka and Takeuchi (1995).

There are several Knowledge Management models, one of which is SECI. Nonaka and Takeuci's (1995) Knowledge Management model is better known as the Model of Spiral Knowledge or better known as SECI (Socialization, Externalisation, Combination and Internalisation). The main focus of the KM Nonaka and Takeuci models is around the knowledge transfer process that occurs in an organization so that the learning process and organizational innovation occur (Tung, 2019).

This research tries to analyze the application of Knowledge Management System in Private Universities through the SECI Model. The researchers hope that this study can shed a light on SECI implementation in Indonesian universities, both for now and in the future.

METHOD

The design of this study is qualitative research. This research uses qualitative grounded theory method. Some of the theories used in this study are tacit knowledge and explicit knowledge theories as developed by Michael Polanyi (1891 – 1976), a British philosopher (Tung, 2019). The next theory used in this research is the theory of knowledge model from Nonaka and Takeuci known as the spiral knowledge model (model of spiral knowledge) or also known as the SECI model (Socialization, Externalisation, Combination and Internalization). This SECI model is commonly used in Knowledge Management in photographing the entire process of implementing KM in an organization in order to improve the performance of the organization (Indarti & Dyahjatmayanti, 2022).

In this study, the source of data is internal data in the form of the number of students, the number of lecturers, the number of scientific publications, the number of community service and so on, then external data in the form of data from the government such as data on study program accreditation, institutional accreditation and so on. Related data sources used are primary data derived from interviews with each predetermined resource person and secondary data in the form of organizational decision letters, SOPs, regulations and others. As for the data sources interviewed in this study as many as 14 resource persons conducted purposively where researchers choose the resource persons according to research needs. The data obtained then analyzed through Miles and Huberman (2014) technique: Data reduction, display, and conclusion.

RESULTS AND DISCUSSION

The results of the research described below are answers to various questions that arise at the beginning of the research in the form of problem formulations. The preparation of answers comes from observation, interviews and documentation. The focal point of discussion is about KMS as a university development strategy, the implementation of KMS based on the SECI model (Socialization, Externalisation, Combination and Internalization) and various x strategies in strengthening various organizational standards to conform to the standards set by SN-Dikti.

Knowledge Management System and University Development Strategy

In university development, the Knowledge Management System (KMS) element becomes an important thing that cannot be ignored. In terms of the development strategy, the presence of KMS can be the main support for increasing the university's competitive advantage, especially in the development of the increasingly massive digital world. In the context of University x, the existence of KMS has been a concern since 2013 in

the form of drafting procedures for managing Knowledge Sharing which was then followed by various other related policies.

The preparation of these procedures is in line with the establishment of KMS structures at the university level which are directly under the Academic Director, where in the past KMS was in a directorate united with the directorate of quality assurance. In line with the passage of time and changes in challenges that occur, KMS is united with the Directorate of Research and Community Service Institutions (LPPM) which is then separated again and merged under the Academic Director directly to support various activities related to the interests of lecturers.

Knowledge Management System Socialization Process

In the development of Knowledge Management System, especially related to the management of tacit knowledge and explicit knowledge. Tacit knowledge is often interpreted as implist knowledge. This advantage of tacit knowledge is not easily adopted or duplicated by other parties, it is more frugal and has a high level of innovation and creativity. However, this tacit knowledge has the disadvantage that it is not easy to communicate with other parties, it is easily lost because it is stored only in each individual, there is no intellectual property protection for those who own it, not to mention if the owner does not want to share knowledge with others. Unlike the case with explicit knowledge which has advantages in the form of intellectual property protection, it is easy to communicate to others because it is in the form of documents, can be stored anywhere, even though in terms of financing requires high investment costs for technology development, and requires a large storage area and if it has become a document it is very easy to be adopted by other parties (Indarti & Dyahjatmayanti, 2022).

University x, which was established in 1998, realizes the importance of knowledge management, both tacit knowledge and explicit knowledge. According to Nonaka and Takeuchi (1995), the process of managing or creating tacit and explicit knowledge can go through four knowledge creation processes, namely socialization, externalization, combination and internalization (Tung, 2019). Socialization is the first stage of knowledge transfer from tacit to tacit. In the knowledge process of this socialization stage, the parties share experiences together, talk heart to heart, exchange opinions (brainstorming) which are all done much more informally (Tung, 2019). From these informal meetings, new ideas will usually be born from tacit knowledge so far possessed by individuals into knowledge that is shared with others. Socialization is the most effective way to encourage the cycle of knowledge from tacit to tacit even though the implementation takes a long time (Indarti & Dyahjatmayanti, 2022).

In the context of University x, the socialization process is carried out in various forms such as knowledge sharing, coffee morning, kick-off meeting and employee gathering program. Each is carried out at different times. For knowledge sharing is usually held every Wednesday of every week, as for coffee morning held once a month and for kick-off meetings held at the beginning of each semester and for employee gathering programs held once a year.

Externalization Process of Knowledge Management System

The next process in the process of transferring tacit knowledge to explicit is externalization. Through the process of externalization, knowledge that previously still existed at the individual and individual level is transformed into explicit knowledge and with it then becomes public knowledge that can be shared with others. In this stage, there has been documentation of individual knowledge in the form of transcripts of recordings, regulations, procedures and so on. In this process, often the role of the intermidiary becomes very important, such as management who help the process of making important organizational documents (Indarti & Dyahjatmayanti, 2022).

In the context of University x, the implementation of the externalization process of knowledge management systems has been carried out at various levels of the organization. In the formation of a policy, it must go through various stages starting from various proposals both from students, lecturers, managers, directors, deans, vice rectors to rectors. This means that the proposal of documents can be through anyone. Based on the proposal, it will then be processed by related parties so that the proposal, which is still in the form of tacit knowledge, can be documented into explicit knowledge.

After the proposal stage, the document that will first be drafted into a document is a policy document. In this policy document it is classified whether the proposal is included in academic, management or quality assurance documents. It is noted that until now several documents have been issued based on this classification. Every policy issued must be immediately followed by follow-up documents in the form of prosuder documents or quality manuals, guidance documents, work instruction documents to the forms needed to implement these various policies at the field technical level.

Strategy Combination of Knowledge Management System

The next process after socialization and externalization is a combination. In knowledge management theory, combination is an attempt to combine various tacit knowledge that has become explicit into a database that can be optimized to improve organizational performance. With this combination, the available database can be raw material for the development of new knowledge further. In another sense, the combination process is the process of reintegrating explicit knowledge entities in a new model (Indarti & Dyahjatmayanti, 2022).

When the knowledge document has entered the combination phase, what will be born later is a knowledge system that has its own systematics and of course can be accessed at any time for its development. In the context of university x, after going through the process of socialization and externalization, the next stage that becomes the focus is the stage of combining knowledge documents in an integrated system. According to data submitted by the Directorate of Technology and Information Systems, there are 22 information system portals as a place to store documents. Among the information systems that are already active and often used, especially related to knowledge management, are: E-Learning, ASIK, Repository and Internal Quality Assurance System.

Knowledge Management System Internalization Process

Internalization is the last phase passed related to the journey of the science cycle in an organization. In this phase, the combined knowledge that is a set of explicit knowledge is internalized again so that it can become practiced knowledge so as to create another new tacit knowledge model. In this internalization effort, various organizations have their own ways and systems so that the implementation of internalization can run optimally. In the case study of University x the internalization phase is also an important thing related to improving organizational performance, especially in the context of implementing various work documents in the form of policies, procedures, regulations and so on.

Based on observations made by researchers, University X took various media in order to internalize a knowledge document. The entire internalization process that is carried out always includes three stages, namely the information provision stage, the implementation stage and the evaluation stage.

First, the information provision stage is the initial stage of internalization and usually in this stage the management uses several information channels such as mailing lists, direct socialization, workshops, mentoring programs and so on. For example, when there is a new policy such as a research financing policy, the relevant management, namely the Directorate of Research and Community Service Institutions (LPPM) will inform this through mailing lists or direct socialization by inviting the entire academic community to attend a special meeting related to the socialization of research cost policies. If there are some academicians who do not attend the meeting for one reason or another, LPPM will share recordings and points both through mailing lists and in the form of event recordings.

Second, the implementation stage is the implementation of any knowledge document in the form of concrete actions or practices. In relation to the LPPM document above, in this phase the LPPM will hold various workshops and trainings so that parties related to the policy can understand correctly the existing documents and be able to implement them properly.

Third, the evaluation stage is the final stage in order to internalize a knowledge document. In this final stage, other directorates are involved such as the Directorate of Operations and General Affairs which has an interest in HR has its own evaluation system such as the Lecturer Employee Performance Target (SKP) reporting system which must be reported in every semester, including related to research documents. The Directorate of Planning and Quality Assurance has an interest in photographing the implementation of research in order to meet the needs of *SN Dikti*. The Directorate of Research and Community Service Institute (LPPM) itself has the need to evaluate the implementation of research related to the necessity of providing appropriate research costs and in accordance with existing planning and needs.

In this internalization phase, various explicit knowledge documents after being understood and practiced in the form of performance will return to inner tacit knowledge and return to personal knowledge. Therefore, the form of the knowledge cycle that occurs will continue to rotate endlessly, therefore the knowledge management process is a process that does not stop at a point. Knowledge management system (KMS) has dynamic and continuous characteristics. Take a look at the following figure.

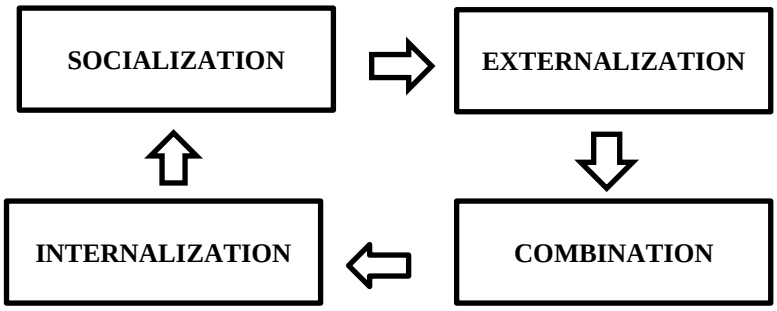

Figure 1. Knowledge Cycle
Source: Knowledge Cycle Model (Nonaka & Takeuchi, 1995)

From the picture, it is clear that the knowledge cycle from *tacit* to *explicit* is spiral and will continue to rotate dynamically. In this case, the management of the *Knowledge Management System at* University x continues to process and at the same time continues to improve things that are still lacking. Although there are some systems that are considered still lacking, in terms of principles, various processes carried out at University x have fulfilled the modern knowledge cycle.

CONCLUSION

University x is transforming its Knowledge Management System (KMS) from a traditional institution to a modern one. The KMS development process involves knowledge sharing, coffee mornings, and employee gatherings to transfer tacit knowledge. The externalization process involves input, policy making, and setting procedures. The KMS strategy includes 22 information portals, including e-learning, ASIK, repository, and Internal Quality Assurance System. Internalization involves socialization, mentoring, and evaluation, supervised by the Directorate of Internal Planning and Quality Assurance.

Furthermore, the research could delve into the impact of specific knowledge management tools, such as information portals, e-learning platforms, and internal quality assurance systems, on the externalization and internalization of knowledge within the university setting. This could involve examining how these tools facilitate knowledge sharing, policy-making, and the establishment of procedures, as well as their role in socialization, mentoring, and evaluation processes supervised by the Directorate of Internal Planning and Quality Assurance.

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