Model of knowledge portal system for higher education: Literature review

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Abstract. This study presents a discussion of the Tridharma-based university knowledge portal model (education, research, and community service). This study aims to ensure that lecturers activities are in accordance with the Tridharma of higher education and national standards of higher education. The analytical method used is the literature review, with the object of research being hypothetical colleges in the form of universities. Based on the results of the identification of university needs, the knowledge portal model is required to have the ability to develop lecturer competencies in accordance with the Tridharma of higher education. Knowledge portal is designed to have the ability to manage knowledge well, by providing facilities: information gathering, information categorization, information distribution, information collaboration, information retrieval, and knowledge sharing.

1. Introduction
Academic development in college is inseparable from the development of science, technology and the demands of society in tune with the increasing quality of life. With higher education, it is hoped that human resources that have academic, professional, ethical and leadership skills will emerge, and be responsive to the needs of science and technology. Therefore, the Tridharma of Higher Education both the research programs conducted in college are required to produce quality and useful products. While the community service program is directed towards the application of research results and the results of education in college for the welfare and progress of society [1].

The new paradigm of higher education has a significant change, one of the changes is that other state higher education institutions can hold higher education in the territory of the Republic of Indonesia. The challenge that must be answered by universities to win the increasingly rapid competition in the era of globalization is collaboration of innovation, adaptation and mastery of technology, and management of intellectual assets.

These challenges encourage the emergence of the need for knowledge management implementation. The implementation of knowledge management is expected to be beneficial for educational institutions to find out the power of resources in reusing existing knowledge, and accelerates the creation of new knowledge from existing knowledge [2].

However, as the study conducted on knowledge management in education in Indonesia shows, in Indonesia there are many educational institutions but not many have implemented knowledge management as a strategic vision, through its mission to achieve a comprehensive goal [3]. The organizations that have implemented knowledge management in Indonesia as presented in the table 1.
Table 1. Knowledge-based organization in 2013.

| Knowledge-Based Organization |
|-----------------------------|
| 1. Anugrah Argon Medica     | 11. Pertamina                  |
| 2. Bank Mandiri             | 12. Perusahaan Listrik Negara |
| 3. Bank Syariah Mandiri     | 13. Sinar Mas Argo Resources & Technologies |
| 4. Bank CIMB Niaga          | 14. Telkom Indonesia           |
| 5. Binus University         | 15. Tigaraksa Satria           |
| 6. Daya Adicipta Mustika    | 16. Toyota Astra Motor         |
| 7. Federal International Finance | 17. Unilever Indonesia   |
| 8. GMF Aero Asia            | 18. United Tractors            |
| 9. Medco Energi Internasional | 19. Wijaya Karya            |
| 10. Pembangkitan Jawa Bali  | 20. XL Axiata                  |

Then in 2016 the Institut Teknologi Bandung (ITB) used a knowledge management system, a source from Dunamis Organization Services [4].

Higher Education Institution as an institution that has the task of knowledge dissemination and collection, has a very important role in managing its intellectual assets, so as to create innovative, adaptive, and superior [5].

2. Methodology
The analytical method used is based on literature review, with the object of research being hypothetical higher education in the form of a university.

![LITERATURE REVIEW](image)

Figure 1. Stages of literature review [6].

3. Results and discussion
Islamic higher education institutions should make their research and research results to solve problems that occur in society; not stare indefinitely at the direction of the goal and what it will solve. In this context, the policy of the Ministry of Religion of the Republic of Indonesia to synergize research and community service is very appropriate so that science and research are not just to understand, to explain, and to predict, but also to change of emancipatory [7].

Higher education performance can run well if the lecturer has the competencies stipulated in Law Number 14 of 2005 concerning Teachers and Lecturers which include pedagogic competence, social competence, professional competence and personality competence. High competence will produce
optimal performance, lecturers are also expected to be able to improve professional competence, namely the ability to master learning material widely and deeply [8].

Universities in Indonesia have developed along with the awareness of academics to improve the education system. This makes the competition even tighter. Higher education institutions as educational institutions must provide quality education. Especially must be supported by qualified lecturers and always try to improve their competence. From the results of the strategic gap analysis above, there are several strategic gaps, namely that the lecturer cannot: Periodically discuss the subject / course material with the Coordinator, get the correct conclusions about knowledge as a result of the discussion, which is verified by the Coordinator; get the knowledge needed quickly [9].

Lecturer teaching style is the way lecturers provide material in the teaching and learning process in the classroom. The better the teaching style of the lecturer, the better the level of understanding of the student [10].

Community service is directed to the application of research results and the results of teaching in college for the welfare and progress of society. Therefore, community service activities are not just activities without science basis, but are a forum for the application of research and education results with clear objectives. But in reality, there are many mistakes in practice. Community service is often irrelevant to the needs of the community and scientific fields which are occupied by lecturers and students who carry out services. Because dedication is done sometimes only for certain requirements, such as Lecturer Workloads and promotions and other academic requirements. Whereas in Regulation of the Minister of Research, Technology, And Higher Education no 44 of 2015 has stipulated twenty-four standards of higher education that are implemented in the Tridharma of higher education so that the results of their dedication will support material or teaching materials [1, 11].

The development of a knowledge management model in higher education does not have a standard to be used as a strategic vision, combining parts of the organization into one entity: people, processes, and technology are aligned with the improvement of higher education in an effort to improve the quality and competitiveness of higher education in the face of its competitors at regional, national and global levels [2].

From the problems above the researchers concluded in table 2 below:

Table 2. Conclusion of the problem.

| No | Problem |
|----|---------|
| 1  | In this context, Islamic higher education institutions in the field of education and their research fields must be able to solve problems that occur in society; synergizing between research and community service so that science and research are not only to understand, explain, and predict, but also to change emancipatory forces [7]. Community service is often less relevant between the needs of the community and the field of lecturers and students who do service. |
| 2  | There are some lecturers who are passive, in seeking new information and knowledge, and only use knowledge as it is, even though lecturers are expected to be able to improve professional competencies, namely the mastery of learning material skills widely and deeply [8]. |
| 3  | The development of a knowledge management model in higher education does not have a standard to be used as a strategic vision, combining parts of the organization into one entity: people, processes, and technology are aligned with the improvement of higher education in an effort to improve the quality and competitiveness of higher education in the face of its competitors at regional, national and global levels [2]. |

There are several things that are the objectives of this study, including:

- To develop a new model for the implementation of Tridharma in higher education institution.
• To develop a knowledge sharing model for lecturers in order to be able to develop their competencies according to Tridharma of higher education;
• To develop evaluate the profile higher institution lecturers against the standard set by the Tridharma of higher education.

![Knowledge Sharing Model](image)

**Figure 2.** Knowledge sharing model of lecturer competency development according to Tridharma of higher education.

From the results, the contributions of this research will be to:

• Synergizing government policy with the implementation of Higher Education Tridharma
• Support the development of lecturer competencies in accordance with the Tridharma of Higher Education
• Support and accelerate the career development of lecturers.
• Measuring the fulfillment of the minimum lecturer performance load in accordance with the Tridharma of Higher Education
• develop a knowledge management system model in universities that have standards and in accordance with the strategic vision of the university

4. Conclusion
The Knowledge Portal is built to improve the performance of the duties and functions of lecturers about the Tridharma of higher education in accordance with their field of science and Regulation of the Minister of Research, Technology, and Higher Education No. 44 of 2015.

Based on research conducted by Dunamis Organization Services shows that the application of knowledge management in Indonesian universities until 2016 has only reached 3 universities namely: Binas University, Telkom Indonesia and ITB.

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