ESSENCE

Professional Lecturer Strategies and Learning Challenges in the Era of Digital Transformation

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ARTICLE INFO	ABSTRACT
	In the era of digital information, this discusses how to be a professional lecturer and the challenges of the shift to Industry 4.0. The method used was qualitative-descriptive. The purpose of this descriptive research is to make a description, description or painting systematically, factually and accurately about the facts, characteristics, and relationship between the phenomena being investigated, while the data sources used as references in this study include literature references source from literature-related to the lecturer profession and learning challenges in digital transformation era. Specifically, the government has determined that the strategies and priorities of national education development. The finding also showed that lectures are a profession that must have innovation and creativity because lectures must be able to provide quality teaching so as to produce students who are unable to think critically. Artificial intelligence (AI) is one of the strategies used in technology. It is one of the innovative initiatives that has great potential to change the way the educators teach in the era of digital information. *Keywords:* *Professional Lecture, digital transformation, strategies and learning challenges.*

Introduction

In the face of today's digital transformation era, efforts to improve the quality of human resources are made through education. With digital transformation, creativity, productivity, and the improvement of the quality of education, there will be a good competition system. Higher education is one of the education sectors that always conducts studies and research to develop these problems. Higher education in Indonesia sees the need to hold Higher education in Indonesia sees the need to hold a transformation towards the digital era, as has been implemented by several developed countries. In this regard, operationally, "the government has determined that the strategies and priorities of national education development are directed at three main things, namely (1) equal distribution and expansion of access to education, (2) improving quality, relevance and competitiveness; and (3) strengthening governance, accountability and public image". (Samsudin, 2019, p.20)

Without exception, the presence of higher education as an institution that organizes education requires qualified human resources, in this case, lecturers, who are able to master science and technology and have creativity, innovation, adaptiveness, and personality. Given the very complex tasks of lecturers, a lecturer must have certain requirements. According to the provisions of article pasal 28 ayat (1) PP Standart Nasional Pendidikan (SNP), educators must have requirements such as academic qualifications and competence as learning agents, who are physically and mentally healthy, have the ability to realize national education goals. Meanwhile, the basic competencies that must be possessed by educators are pedagogic, personality, professional and social competencies. With the above regulations, "it is expected to produce professional lecturers who can provide protection for lecturers legally, security and comfort in carrying out their duties and welfare guarantees". (Yasin, 2022, p. 50)

The professionalism of lecturers in an educational institution is an interesting factor to study for the following three reasons: *First,* lecturers are teaching staff who have three main tasks, namely the tridharma of higher education, teaching, research or research and community service (PKM) which must be carried out in every semester. In the success of teaching and learning activities (KBM), lecturers must be able to provide quality teaching, so as to produce students who are able to think critically. *Secondly,* lecturers not only carry out the Tridharma but also have to do other work that is referred to as support; for example, in this case, they are working on

accreditation of study programs (APS) and accreditation of universities (APT). *Thirdly, the* quality of lecturers' performance is not something that is final and always right. Lecturers must be able to keep up with changes in every era.

This update is absolute, because learners, in this case students, are always *updated,* one of which is in the digitalization era. Entering the era of digital transformation in the o n g o i n g world of higher education, without exception in Indonesia. Higher Education as an institution that organizes education, it requires human resources in this case qualified lecturers, who master science and technology. This article will discuss how to be a professional lecturer and its challenges in the era of digital transformation.

Method

The method used in this research is qualitative. The qualitative method is a method that uses a literature review or library research. This research is carried out by collecting previous articles that support this research. "Qualitative research aims to maintain the form and content of human behavior and analyze its qualities rather than turning them into quantitative entities" (Mulyasa, 2008, p. 39).The purpose of this descriptive research is to make a description, description or painting systematically, factually and accurately about the facts, and characteristics and relationships between the phenomena being investigated, while the data sources used as references in this study include literature references sourced from literature related to the lecturer profession and learning challenges in the era of digital transformation.

Results and Discussion

1. Professional Lecturer

In the education process, lecturers are one of the important components. According to UU No. 14 tahun 2005 on Teachers and Lecturers, article 1 paragraph 2 and paragraph 4 states that "Lecturers are professional educators and scientists with the main task of transforming, developing, and disseminating science, technology, and art through education, research and community service". While the definition of "Professional is a job or activity carried out by a person and becomes a source of life income that requires expertise, proficiency, or skills that meet certain

quality standards or norms and require professional education".(Yusaini, 2017, p.20).

Specifically, one of the interesting aspects of the regulation is the government's *political will* to improve the quality of teaching staff as part of improving the quality of national education, especially at the primary and secondary education levels. Substantially, the regulation not only contains the rights and obligations of lecturers but more importantly also regulates and sets a number of criteria and requirements that must be owned by educators. (EDUCATION, n.d.).

As professional educators, lecturers are required to have a number of certain competencies to support the smooth running of their professional duties. Competence is a set of knowledge, skills, and behaviors that must be owned, lived, and mastered in carrying out professional duties. In pasal 39 ayat (2) of the National Education System Law explains that educators are tasked with planning and implementing the learning process, assessing learning outcomes, providing guidance and training, and conducting research and community service (PKM).

A lecturer's competence can affect the quality of his or her teaching, research and contribution to the educational institution. In the context of lecturer performance, competence refers to academic expertise, educational qualifications, teaching ability, and good communication skills. Lecturers who have strong competencies tend to be able to provide quality teaching, contribute to quality research, and interact well with students and colleagues. As a form of learning, lecturers can facilitate an effective learning process in the classroom, encourage student participation to be active in discussions and think critically about phenomena in society. High lecturer competence also has the potential to increase student satisfaction and public trust in the institution. Therefore, "it is important for lecturers to continuously develop their abilities through various workshops, training, advanced education, and practical experience to ensure optimal performance quality" (Nento, 2018, p.80).

In this era of digital transformation or industry 4.0, the qualifications and professionalism of lecturers are required to be a job that must have

innovation and creativity because lecturers are professional jobs, which are tasked with answering the challenges of higher education in Indonesia. Furthermore, if we look at the development of the industrial era 4.0, which emphasizes the big wave of digital transformation, then there are only two choices that lecturers can make in the face of this industrial era, which include: *first,* doing nothing which ultimately leads to the abyss of destruction due to disruption; *second,* having strategic steps to anticipate and respond to waves of disruption. It can be understood that if educators, in this case lecturers, do not have digital readiness, it will lead to destruction, whereas if lecturers have readiness in terms of digital transformation by utilizing digital technology and applying it to every performance such as learning, research and community service (Tri Dharma Perguruan Tinggi), then the anticipation and response can control the waves of disruption, so that digital technology helps improve the competitive performance of lecturers.

2. Lecturer Performance

Lecturer performance is one of the factors determining the success of the teaching and learning process in higher education. "Various learning methods, mastering technology, planning and presenting material must be mastered by each lecturer so that the teaching and learning process takes place effectively and successfully" (Rifkhan, 2018,p.55)

In the education process, lecturers are one of the important components. According to UU No. 14/2005 on Teachers and Lecturers, pasal 1 ayat 2 and ayat 4 says that "Lecturers are professional educators and scientists with the main task of transforming, developing, and disseminating science, technology, and art through education, research, and community service." As for lecturer performance, the profession emphasises the importance of professional development and continuous learning for lecturers. Lecturers must continuously improve their skills and knowledge through training, research, and participation in academic activities, such as learning innovation, professional reflection, and career development.

Therefore, lecturers and or teachers must have four competencies that have been stipulated in Law No. 14 of 2005, namely (1) pedagogic (ability to process students' learning); (2) personality (ability to have a stable personality, noble

character, wisdom, and authority and become a role model for students); (3) social (teacher's ability to communicate and interact effectively and efficiently with students, fellow teachers, parents/guardians of students and the surrounding community; and (4) professional (ability to master subject matter broadly and deeply). "These reasons can certainly provide new hope and optimism to anyone who pays serious attention to the world of education, especially about improving the quality of lecturer performance, both in terms of mastery of material, teaching methods, communication skills or other technical abilities so that the teaching and learning process becomes quality and satisfying". (Nento, 2018, p.66)

3. Lecturer challenges in the era of digital transformation

The challenge for universities to be able to develop in the industrial era 4.0 cannot be separated from the support of human resources (lecturers) because, universities cannot develop alone without the support of lecturers who continue to *update* knowledge. Thus, the main mission of higher education is twofold. First, to provide understanding and develop knowledge, especially basic sciences, namely sciences that have immediate practical use, but are needed in the development of various sciences towards the future, especially in their applied aspects. Secondly, to produce educated graduates to fill various roles in the modern state. "To be able to carry out these two missions, universities need an adequate number of qualified teaching and research staff (lecturers), complete with various supporting facilities, so as to create an academic environment that supports the implementation of the mission" (Muarif et al., 2022, p.192)

Lecturers in the industrial era are required to have qualifications and competencies that can compete and survive in the turmoil of the industrial era 4.0. (Harto, 2018, p.70) It can be understood that if lecturers do not have digital readiness, it will lead to destruction, whereas if lecturers have readiness in terms of digital transformation by utilizing digital technology and applying it to every performance such as learning, research and community service (Tri Dharma Perguruan Tinggi), then the anticipation and response can control the waves of disruption, so that digital technology helps improve the competitive performance of lecturers. The job of educators (lecturers) is a dynamic job,

which always has to be in accordance and adjust to the development of science and technology. Therefore, educators (lecturers) must be sensitive to the dynamics of change and developments that are bound to change, both social, cultural, political and technological developments.

The utilization of digital transformation, one of which can be the use of artificial intelligence (AI) by lecturers in facing the challenges of higher education in the era of disruption is an innovative initiative that has great potential to change the way we view higher education. AI allows lecturers to provide a more personalised and customised learning experience. With in-depth data analysis, AI can understand the needs and potential of individual students. "It also helps lecturers to design curricula that are better suited to students' needs, thereby improving comprehension and pass rates. Lecturers can also utilise AI systems to automate the grading of assignments, exams, and student work" (Muarif et al., 2022, p.195)

This not only saves lecturers time, but also ensures more consistent and accurate assessments. AI can be used to collect, analyse and understand complex college data. Lecturers can use it to monitor student progress, identify patterns of learning behaviour, and evaluate the effectiveness of teaching methods. In this context, lecturers can utilise AI to create more engaging and interactive lecture materials. "This includes the creation of simulations, interactable video lectures, and the use of AI-based applications that can enhance students' understanding of the material" (Harahap et al., 2023, p.102).

4. Lecturer Strategy in the Era of Digital Transformation

In implementing strategic steps to anticipate and respond to changes in the education system in this industrial era, it is necessary to change the application of the system in higher education towards digital transformation. "In addition to core competencies, lecturers are also required to have a qualification and supporting competencies which include: agility, innovation, creativity, anticipation, experimentation, open-mindedness, and networking. *Information Technology* (IT) makes a tremendous contribution in terms of disseminating information material to all parts of the world" (Nento, 2018, p.30). IT is a medium and is one of the instruments that is mass and involves thousands and

even billions of people. Just by being in front of a computer or *mobile phone* connected to the internet, a person can connect to the global virtual world to get or disseminate information at one time. In response to this, there are several strategic steps that can be taken by lecturers, namely:

Firstly, lecturers are required to constantly transform and experiment with the latest platforms so as to generate new learning ideas. *Second,* always innovate. Lecturers are required to have the latest innovations and study ideas so that they can show new things to students in the form of new products or services for student learning patterns.   *Third,* lecturers are required to have creativity, so that they can turn an idea or imagination into something new. In this case, lecturers are expected to be able to see things in a new way, find interesting and new patterns, or connect old things and new things so as to create a better product.

Fourth, lecturers should be able to anticipate the turmoil of change in this digital industrial era. So lecturers are expected to have the capacity to anticipate and act quickly in any condition. With this ability to anticipate, lecturers can quickly respond, adapt, and make opportunities to win the turbulent changes in the digital industrial world. *Fifth,* in this industrial era 4.0, lecturers are required to be able to experiment or have the willingness to look for and try something new related to the advancement of digital technology and always put forward the spirit in responding to the development of digital technology. With so many benefits, the use of digitalisation in higher education is not just an option, but an urgent need. In the midst of uncertainty and rapid change, digital transformation can be a strong partner in improving the quality of higher education and helping universities to remain relevant and responsive to the needs of students and society.

Conclusion

In the shift to industry 4.0, the utilisation of digital transformation is a necessity to support lecturers' professionalism. Therefore, it is important for universities to invest in lecturer training, develop policies related to the use of digitalisation, and ensure access that can be used by all academics. One of them is the inevitable implementation of AI in higher education. By using this technology wisely, lecturers

can design a more efficient, effective, and relevant future for higher education in the ever-evolving era of disruption.

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