

## **Strengthening lecturer competence with the job-embedded professional development (JEPD) model: a solution for dealing with education in the era of 5.0 and the metaverse**

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### **Abstract**

The purpose of this study is to provide references related to the model of lecturers' pedagogic competence development in higher education. Pedagogic competence is fundamental in education. This is because pedagogic competence is one of the important factors in teaching. Pedagogic competence relates to how a lecturer can provide teaching that is not monotonous, fun, creative and meaningful and uses various types of media, especially in the Era of 5.0 and the Metaverse.

**Keywords:** Lecturer, higher education, pedagogical competence, job-embedded professional development, cyberpsychology

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### **Introduction**

The global situation makes life more competitive and opens up opportunities for humans to achieve a better status and level of life (Situmorang, 2021; Situmorang & Salim, 2021). One way is through the education process, which is the capital for humans in maintaining their civilization, which has set humans up for success, and also failed to implement it in everyday life (Cut Fitriani & Usman, 2017). It is undeniable that the education process, lecturers are still the key in the delivery of higher education. This is because the success of education is shaped by the quality of lecturers (Akindutire & Ekundayo, 2012). As a profession that is very close to students and a profession that is always there to develop students' potential, lecturers are considered to need to continue to optimize their performance. The quality of students is the result of a quality education (Hartini, Bhakti, Hartanto, & Ghiffari, 2018), especially in this Era of 5.0 and the Metaverse (Ifdil et al., 2022; Pokhrel & Chhetri, 2021).

This is also stated in Law Number 20 of 2003 concerning the National Education System of Indonesia, Law Number 14 of 2005 concerning Teachers and Lecturers and Government Regulation Number 19 of 2005 concerning National Education Standards stating that lecturers are professional educators (Undang-Undang, 2003). In addition, it is stated that educators are professionals who are responsible for planning and implementing the learning process, assessing learning outcomes, coaching and training as well as conducting research and community service.

Based on this law, lecturers are expected to be able to improve learning in the classroom and create superior students (Hakim, 2015). Learning in the classroom is inseparable from the pedagogic competence

of the lecturer. Lecturers who have pedagogical competence will be able to determine what steps and teaching methods are most appropriate and give meaning to students (Pantić & Wubbels, 2012). However, the Teacher Competency Examination (UKG) 2019 results for the pedagogical field were only 50.43 on average, which is still below the minimum competency standard of 55, while for the province that got the highest score, DI Yogyakarta, which got an average score of 62,99 (Neraca Pendidikan Daerah). This shows that the pedagogic ability of lecturers from year to year still has not experienced a significant increase. Of course, these results indicate that there are still many lecturers who use monotonous learning methods such as lectures. The learning method is less effective if it is used in a class with a large number of students, because some of them will pay less attention to the lecturers' speech, they are less than optimal in supervising students and talking to their own friends. Thus, this pedagogic competence is considered necessary to optimize the teaching ability of lecturers (Ismail, & Ichwan, 2008).

Therefore, the importance of increasing lecturers competence is supported by the times, especially in the digital era that continues to move quickly, they must be able to improve their competencies. One of them is the Job-Embedded Professional Development (JEPD) model. This is similarly reinforced by Pritchard and Marshall (2002) that effective professional development is considered to be the cornerstone of successful school improvement as it builds the capacity of lecturers to address various issues and concerns. The two most common national professional development models are the External Expert Model (EEM) and the JEPD (Strieker et al., 2012).

The authors therefore assume that lecturers' development can use the JEPD model. This has even been proven. Over the last 15 years, the focus of professional development has shifted from relying on external experts who offer one-time workshops to a more JEPD model where learning and implementation are interrelated in the long run. Research on professional learning consistently reveals that for lecturers to properly apply new learning, they need professional development opportunities that incorporate several key factors: (1) ongoing emotional and technical support at the classroom level (2) a forum used to articulate and understand their beliefs, and how those beliefs affect daily practice; and (3) student-focused professional learning (Strieker et al., 2012).

## Method

The research conducted is qualitative research and data collection is carried out with the aim of designing and providing solutions/advocacy. The data collection technique was carried out through a literature study. Literature study was conducted to provide reinforcement to the issues raised in this paper. Research that uses literature studies is supported to be a complete source of information for qualitative research (Savin-Baden & Major, 2013). The instrument used is a documentation study, namely by documenting journals, books, proceedings, or other related documents to develop writing in scientific publications.

## Results and Discussions

### Pedagogic Competence

Pedagogic competence is one type of competence that absolutely needs to be mastered by lecturers. Pedagogic competence is basically the teacher's ability to manage student learning. Pedagogic competence is a distinctive competence, which will distinguish lecturers from other professions and will determine the level of success of the learning process and outcomes of their students. This competency is not obtained suddenly but through continuous and systematic learning efforts, both during the pre-service period (lecturer's candidate education) and during the position, which is supported by the talents, interests and other lecturer potential of each individual concerned. Teaching and pedagogical skills, i.e. the acquisition of the techniques necessary to save time and resources for the more important aspects of their work and knowledge of theoretical principles and research data leading to a wide variety of techniques and strategies that lecturers can choose and develop according to circumstances (Beyer, 2002).

The aspects of lecturers pedagogical competence are as follows (Penyusun, 2011):

1. Mastering the characteristics of students. Lecturers are able to record and use information about the characteristics of students to help the learning process. These characteristics are related to

aspects of physical, intellectual, social, emotional, moral, spiritual, and socio-cultural backgrounds.

2. Mastering learning theory and educational learning principles. Lecturers are able to determine various approaches, strategies, methods, and learning techniques that educate creatively in accordance with lecturer competency standards. Lecturers are able to adjust learning methods according to the characteristics of students and motivate them to learn.
3. Curriculum development. Lecturers are able to develop syllabus according to the most important objectives of the curriculum and use lesson plans according to the objectives and learning environment. They are able to select, compile, and organize learning materials according to the needs of students.
4. Educational learning activities. Lecturers are able to develop and implement a complete educational lesson plan. They are able to carry out learning activities according to the needs of students. They are able to compile and use various learning materials and learning resources according to the characteristics of students. If relevant, lecturers use information and communication technology (ICT) for learning purposes.
5. Development of the potential of students. Lecturers are able to analyze the learning potential of each student and identify the potential development of students through learning programs that support students to actualize their academic potential, personality, and creativity until there is clear evidence that students are actualizing their potential.
6. Communication with students. Lecturers are able to communicate effectively, empathically and politely with students and are enthusiastic and positive. Lecturers are able to provide complete and relevant responses to students' comments or questions.
7. Assessment and Evaluation. Lecturers are able to carry out assessments of learning processes and outcomes on an ongoing basis. They evaluate the effectiveness of the learning process and outcomes and use the information from the assessment and evaluation results to design remedial and enrichment programs. They are able to use the results of assessment analysis in the learning process.

### JEPD Competency Development Model

Over the past 3 decades researchers have presented evidence that traditional forms of professional development are not effective in changing lecturers practices and student learning (Darling-Hammond & Richardson, 2009). So, they can no longer expect teachers to return to class from sit-down workshops, conferences, or any form of training and implement newly learned strategies without the opportunity for follow-up support. Zepeda (2012) agrees, "*Attending professional learning is more than just setting up for professional development to occur on a given day*". This type of professional development is counterproductive to what we know about how lecturers learn.

Lecturers must follow the development of science and technology so as not to be out of date. Therefore, it is necessary to continuously foster and develop efforts to improve lecturer professionalism. Therefore, the JEPD model requires them to always be up to date with various lessons that are able to help students and lecturers themselves to learn on the spot (Cavazos, Linan-Thompson, & Ortiz, 2018). In addition, the JEPD model itself is not in the form of a time-limited session, but it can be carried out continuously and continuously asserts that embedded learning must be relevant to the work needs of adults, text-based work settings and linked to specific student learning outcomes (Croft, Coggshall, Dolan, & Powers, 2010). Zepeda (2012) noted that work-embedded learning occurs more easily when the opportunities for such learning will be efficient and relevant.

Work-embedded learning is rooted in the professional development of research lecturers. According to the National Comprehensive Center for Teacher Development, JEPD for lecturers is defined as school-based or classroom-based learning that is based on everyday teaching practices and is intended to enhance teachers' teaching skills for the purpose of enhancing student learning (Hirsch, 2009). The Mid-Atlantic Comprehensive Center and the National Staff Development Council suggest that work-attached learning can take place in a variety of situations, including in class with current students (real time), in class (away from students), and shortly before or after instruction from students (Croft et al., 2010). This shows that JEPD is meant to be dynamic in its efforts to provide education. For knowledge, practice and learning styles best suited to individuals and settings.

Table 1. Differences between the Traditional Professional Model and the JEPD Model

Things	Traditional Professional Model	JEPD
Feature	Individual lecturers grade general knowledge, skills, and teaching competencies, and introduce new instruction models or methodologies.	Student learning levels help lecturers with specific teaching problems they face.
Location	Mostly off site.	On site.
Intensity	Single-session or short-session.	Long-term and sustainable.
General format of professional development	Workshops, seminars, conferences.	Study circles, research practitioners, research projects.
Content for this program is professional development	Various knowledge and skills of teachers & counselors must be known and able to do specific problems, new approaches to teaching.	Student thinking and learning (checking student work), teaching problems.
Research related to this model	Joyce & Showers (1995), Loucks-Horsley, Hewson, Love, & Stiles (1998).	Ball & Cohen (1999), Little, Gearheart, Kari, & Kafka (2003).

There are steps that can be taken with the JEPD model in the learning process, including (Cavazos et al., 2018):

1. Development on a specific topic by modeling guided practice in learning.
2. Recorded from the learning model to be reviewed again in the meeting.
3. Class observations are carried out every week from the strategy that the lecturers have just learned.
4. Provide written and oral feedback with other lecturers.
5. Documented with various types of instruments.

So there are several indicators as a measure of success in implementing the JEPD model in learning in the Era of 5.0 and the Metaverse:

Table 2. Indicators and Benchmark Results of the JEPD Model

Indicators	Results
1. Building based on learning goals and objectives and developed throughout the career with the requirements of lecturers certification.	<ol style="list-style-type: none"> <li>a. Develop individual plans by identifying needs and improving students.</li> <li>b. Support the implementation consistently supported by research and practice.</li> <li>c. Completing lecturers certification through continuous learning for educators.</li> </ol>
2. In line with the law, the national education system is equipped with standards for content and student growth.	<ol style="list-style-type: none"> <li>a. Align improvement plans with students' adult content and performance standards to improve student work performance and proficiency.</li> </ol>
3. Involve personnel in improving and identifying learning objectives, designing learning opportunities and evaluating workplace learning and student growth.	<ol style="list-style-type: none"> <li>a. Utilize various types of evidence and data for decision making.</li> <li>b. Design and provide professional learning consistent with data analysis.</li> <li>c. Evaluate and reflect on the effectiveness of professional learning on job performance and student proficiency and growth.</li> <li>d. Support continuous improvement of processes.</li> </ol>
Indicators	Results

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| 4. Facilitating sustainable, collaborative, professional embedded work (JEPD) to participate in communities of practice.                                    | a. Create conditions to support ongoing collaborative, professional engagement in learning work for continuous improvement.  |
|   | b. Engage in professionally embedded work learning to build collective responsibility for job performance and student proficiency and growth.                              |
| 5. Provide continuous learning to support sustaining the transfer of new knowledge and skills to the workplace.   | a. Engage and provide opportunities for feedback and reflection to support the transfer of knowledge and skills into practice as part of continuing professional learning. |
|   | b. Share knowledge, skills and resources gained from professional learning to improve and maintain job performance and student proficiency and growth.                     |
| 6. Provide increased opportunities among stakeholder organizations for collaboration and collective support for the learning of children, youth and adults. | a. Collaborate regularly with education stakeholders and organizations to support professional learning to improve student job performance and proficiency and growth.     |
|   | b. Assign collective responsibility for leadership in supporting professional learning to improve job performance and student proficiency and growth.                      |
| 7. Utilize and utilize the necessary resources for professional continuing learning, ensuring that it is local.   | a. Support the use of resources to maintain continuous professional learning   |
|   | b. Collaborate with stakeholders to identify and provide resources.  |
|   | c. Align resources to support continuing professional learning.  |
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## Conclusions

Based on the literature study discussed above, the JEPD model has the advantages of continuing education and direct evaluation without time limit to help strengthen the pedagogic competence of lecturers in the Era of 5.0 and the Metaverse. This is very useful for the purpose of providing solutions/advocacy so that pedagogic competencies can be continuously developed, so that effective and optimal education can be realized

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