

# Encouraging the Quality of Higher Education in Indonesia: The Importance of Doctoral Education for Lecturers

Dhanar Intan Surya Saputra <sup>a,1,\*</sup>, Widya Tri Purnomo <sup>a,2</sup>, Raflyan Akhyar Ramadhan <sup>a,3</sup>, Ikhwan Fahrialselofianto <sup>a,4</sup>, Dinar Mustofa <sup>a,5</sup>

<sup>a</sup> Department of Informatics, Faculty of Computer Science, Universitas Amikom Purwokerto, Indonesia

<sup>1</sup> dhanarsaputra@amikompurwokerto.ac.id; <sup>2</sup> 21sa1115@mhs.amikompurwokerto.ac.id; <sup>3</sup> rafly.akhyar22@gmail.com;

<sup>4</sup> ikhwan.fahrial725@gmail.com; <sup>5</sup> dinar.mustofa@amikompurwokerto.ac.id

\* Corresponding Author

## ABSTRACT

Higher education plays a crucial role in advancing Indonesia's progress. As key providers of quality education, lecturers are vital in shaping competent graduates and competitive educational institutions. Enhancing lecturers' professionalism and higher education quality is achieved through postgraduate doctoral education. This article delves into the significant role of doctoral studies for lecturers in Indonesia and its impact on improving higher education quality. Analyzing reliable secondary data, it highlights the increasing participation of lecturers in doctoral education. Doctoral graduates demonstrate enhanced academic competence, research skills, and contributions to science and technology. Their profound knowledge enables them to deliver more pertinent, current, and evidence-based teaching, while also fueling innovation and research. Nonetheless, challenges persist, such as budget constraints and limited suitable study programs and funding. Consequently, strategic efforts, including increased financial support, relevant program development, and international collaborations, are essential in ensuring the success of Doctoral education for lecturers. Implementing these measures can boost lecturer participation, thereby positively influencing higher education quality and fostering a highly skilled workforce in Indonesia.

## KEYWORDS

Higher education;  
Lecturers;  
Doctoral education;  
Indonesia;  
Quality improvement.



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## 1. Introduction

Higher education has a strategic role in driving the progress of a country, including Indonesia. As part of the higher education system, lecturers are crucial in providing quality education to the next generation. The superior quality of lecturers directly impacts the quality of graduates and a competitive society. However, significant challenges face the world of education in Indonesia. Based on data and reports from various sources, several aspects of the quality of higher education in this country still require serious attention. Some of the problems encountered include the lack of uniform teaching standards [1], [2], [3], the lack of research and scientific publications that have an impact [4], [5], [6] and the lack of ability of lecturers to adapt to scientific developments and technology [7], [8], [9].

The importance of further education, especially the Doctoral degree (S3), for lecturers in Indonesia is crucial to be discussed. Further education provides opportunities for lecturers to hone their academic abilities, deepen knowledge in specific fields, and develop in-depth research skills [10], [11], [12]. Lecturers with a doctoral degree are more competent in conducting research and contributing to innovation and scientific development in Indonesia. In addition, further education also plays a role in opening lecturers' access to international academic networks. By joining doctoral programs abroad or through collaboration with foreign universities, lecturers can engage in global research and gain greater insight into the latest trends and changes in their field of knowledge. This has positively impacted updating curriculum and teaching on their campuses, as well as helping present an international perspective on education in Indonesia.

However, while the importance of continuing education for lecturers has been recognized, many challenges remain to be overcome. Some of these include budget constraints, difficulties in finding

scholarships or funding support, and time constraints due to teaching and administrative assignments [13], [14], [15]. Therefore, cooperation between the government, higher education institutions and the private sector is needed to create a conducive environment for lecturers to pursue doctoral education. In improving the quality of higher education in Indonesia, this scientific article aims to dig deeper into the importance of continuing doctoral education for lecturers. Through a deeper understanding of the benefits and obstacles encountered, this article can provide a comprehensive view of how postgraduate doctoral education can promote the quality of higher education in Indonesia and support the development of superior and competitive human resources.

## 2. Method

This article uses a secondary data analysis approach, which includes statistical data and reports from various reliable sources relevant to the importance of continuing doctoral education for lecturers in Indonesia.

### 2.1. Data Collection

Secondary data was collected from various sources [16], including but not limited to scientific publications such as scientific articles, journals, and relevant conference papers that discuss the importance of continuing doctoral education for lecturers and its role in improving the quality of higher education. Data from educational surveys or similar articles that related institutions or organizations have carried out can provide insight into the public's and lecturers' views on the role of postgraduate continuing education in the context of higher education in Indonesia.

### 2.2. Data Analysis

The secondary data collected was analyzed using a descriptive analysis approach to present the essential characteristics of the data so that the information contained in the data can be better understood [17], [18]. Statistical data were analyzed to identify relevant trends, comparisons, and patterns regarding lecturer participation in postgraduate education in Indonesia. In addition, the scientific literature is studied to understand the arguments and findings from previous articles related to the topic.

### 2.3. Data Validity

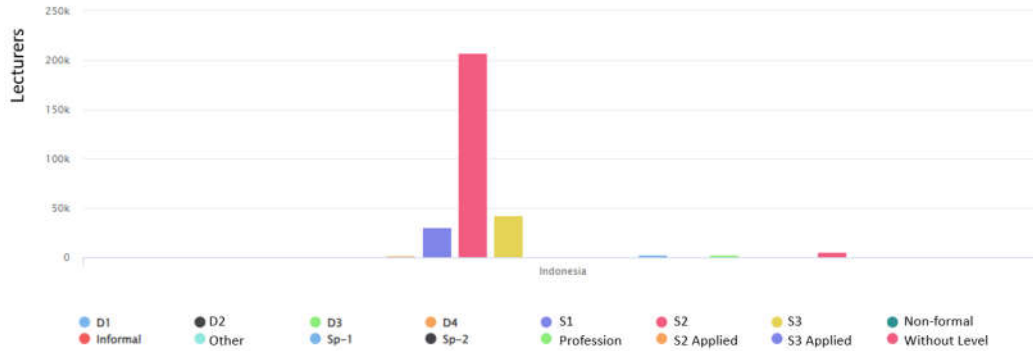
In the analysis stage, the validity of the secondary data is ensured by verifying and comparing information from various reliable sources. Inconsistent or questionable data can be identified and avoided to avoid bias in the findings [19], [20]. This article can provide a more comprehensive picture of the importance of continuing doctoral education for lecturers in Indonesia without involving direct participants. The analysis of this article can support and strengthen the findings and provide a valuable contribution to the understanding of how postgraduate education plays a role in improving the quality of higher education and the professionalism of lecturers in Indonesia.

## 3. Results and Discussion

Doctoral education is vital in improving the quality of higher education in Indonesia. From the results of a series of activities that have been carried out, lecturers with doctoral degrees tend to be more qualified and professional in carrying out their academic tasks. Lecturers' positive perceptions of the importance of continuing doctoral education are essential in improving the quality of human resources, which are the main pillars of the higher education system. The importance of continuing doctoral education for lecturers in Indonesia is to improve the quality of higher education and their professionalism. The increased participation rate shows the awareness and enthusiasm of lecturers to improve their academic competence through further education.

### 3.1. Lecturer Perceptions of the Importance of Doctoral Degree

The participation rate of lecturers in continuing doctoral education in Indonesia has shown an increasing trend in recent years, both at home and abroad. Although the number of lecturers with Doctoral degrees is 42,825, it is still relatively low compared to lecturers with Master's degrees, 207,586, Figure 1.



**Fig. 1.** Graph of Active Lecturers Based on Highest Education Level [21]

Most lecturers in Indonesia positively perceive the importance of continuing doctoral education. They realize that a doctoral degree allows them to deepen their academic knowledge and skills, increase their research capacity, and develop better critical abilities. Moreover, lecturers with Doctoral degrees feel more confident and competent in contributing more meaningfully to developing science and higher education in Indonesia.

However, challenges remain in encouraging lecturer participation in Doctoral education. Some challenges include budget constraints, the availability of study programs that match the lecturers' interests and scientific fields, and difficulties in finding scholarship opportunities or funding support. Therefore, the role of the government and higher education institutions in providing incentives and financial support for lecturers who are interested in pursuing Doctoral education is crucial.

### 3.2. Benefits of Doctoral Education for Teaching Quality

Lecturers who have completed doctoral studies tend to reach higher academic positions, such as senior lecturers, heads of study programs, or even faculty deans. The doctoral degree encourages the promotion and recognition of lecturers' scientific and academic contributions [22], [23]. Lecturers who have completed their Doctoral studies can make a more meaningful contribution to the literary world. They act as leaders and movers in curriculum development and research in their institutions. Improving the quality of teaching also has an impact on the formation of a qualified next generation ready to face future challenges.

In addition, lecturers who have completed their doctoral studies have also shown improved teaching quality. With more profound knowledge and better research skills, lecturers can provide more relevant, challenging, and evidence-based teaching. This impacts enhancing the quality of learning and student learning outcomes. They can better integrate the latest discoveries in their field of knowledge into curricula and teaching materials. In addition, enhanced research abilities help lecturers use evidence-based learning approaches, positively impacting teaching effectiveness and student learning outcomes [24], [25].

The quality of teaching is an essential aspect of improving the quality of education. Through continuing doctoral education, lecturers can deepen their knowledge and keep abreast of the latest developments in their scientific fields. Lecturers who continue to develop themselves positively impact students because the teaching provided becomes more relevant, up-to-date, and attractive.

### 3.3. Doctoral Education Contribution to Research, Scientific Publication, and Innovation

Lecturers with a Doctoral degrees are more productive in researching and publishing scientific articles in leading journals. Doctoral education gives lecturers access to more advanced knowledge and research methods, which helps improve the quality of the research they carry out. The contribution of lecturers in scientific publications impacts the reputation of institutions and countries regarding research excellence. Lecturers' contributions to research and scientific publications help advance science and technology in Indonesia. Lecturers who are actively involved in research have the potential to provide solutions to various problems faced by society and industry [26], [27], [28].

Lecturers who have completed doctoral studies have a significant role in developing research and innovation in higher education. They are more active in researching and publishing scientific articles in leading journals. In addition, a doctoral degree opens access to international research networks, which means that lecturers have the opportunity to collaborate with researchers from various countries and engage in research projects on a global scale [29], [30], [31].

In addition, the contribution of postgraduate education in research and innovation is significant for advancing science and technology in Indonesia. Lecturers actively involved in research and scientific publications help improve the reputation of universities and the country. Collaboration with international researchers also opens up opportunities to share the latest knowledge and technology and broaden academic horizons.

Even though the participation of lecturers in Doctoral education has increased, challenges still exist in achieving a more optimal level of involvement. Other efforts from the government and higher education institutions are needed to increase financial support and incentives for lecturers who are interested in pursuing further education. In addition, collaboration with universities and international institutions also needs to be improved to provide more comprehensive access for lecturers to develop themselves and contribute to global research.

Overall, the results show that postgraduate education is essential in improving the quality of higher education in Indonesia and empowering lecturers as qualified and internationally competitive academic staff. Overall, this article emphasizes that postgraduate education plays an essential role in promoting the quality of higher education in Indonesia and increasing the professionalism of lecturers. By creating an environment that supports and encourages the participation of lecturers in continuing doctoral education, it is hoped that higher education in Indonesia will continue to develop and contribute to the development of a more advanced and competitive nation at the global level.

#### 4. Conclusion

Overall, this research reveals the importance of continuing doctoral education for lecturers in Indonesia in promoting the quality of higher education and professionalism. Lecturers who have taken advanced doctoral studies have shown increased academic competence, research abilities, and contributions to the development of science and technology. With more profound knowledge, they provide more relevant and evidence-based teaching and serve as prime movers in innovation and research. Although there are still challenges and obstacles in encouraging lecturer participation in further education, strategic steps such as increasing financial support, developing relevant study programs, and international collaboration can increase the effectiveness of postgraduate doctoral education and strengthen the role of lecturers in improving the quality of higher education in Indonesia.

At the very least, concrete steps are needed from the government and higher education institutions to increase financial support for lecturers who are interested in pursuing Doctoral education. Scholarship programs and other funding schemes must be more actively provided so that quality lecturers can participate in Doctoral programs according to their interests and scientific fields. Higher education institutions must develop study programs that are relevant to the development of science and technology. Doctoral programs that suit the interests and needs of lecturers will strengthen their motivation to continue further education and contribute to the development of quality curricula and research at the institution. International collaboration must be increased so lecturers have more comprehensive access to the latest knowledge and scientific results globally. Cooperation with universities and international institutions will enable lecturers to participate in scientific exchange programs, seminars, and conferences, opening up insights and opportunities to research internationally. Finally, higher education institutions must provide lecturers with ongoing career coaching and development. Training in quality research and participation in academic and professional activities should be encouraged to strengthen the skills and competence of lecturers in contributing to the development of science and technology in Indonesia.

It is hoped that the participation of lecturers in Doctoral education will increase and positively impact the quality of higher education and advancing science in Indonesia. Moreover, lecturers who have completed their Doctoral studies will become agents of change who are competitive at the global level and make a real contribution to developing quality human resources.

### Acknowledgment

We want to express our sincere gratitude to the Research and Community Service Institute (LPPM) of Universitas Amikom Purwokerto for their support and assistance throughout the preparation and completion of this journal article. Their valuable contributions and encouragement have been instrumental in making this research possible.

### Funding

This project was generously funded by the Research and Community Service Institute (LPPM) of Universitas Amikom Purwokerto through the Amikom Mitra Masyarakat (AMM) program in 2023. The authors would like to extend their heartfelt appreciation and gratitude to LPPM for their valuable financial support, which was crucial in making this research possible. Their commitment to advancing research and community engagement has been instrumental in the success of this project.

### Conflict of Interest

We expressly state that no conflict of interest exists. This is important to emphasize the integrity of the writing and impartiality in the research process and the preparation of scientific articles.

### References

- [1] I. F. Astuti, "Desentralisasi Perguruan Tinggi Daerah Untuk Perbaikan Daya Saing di Tingkat Nasional," *J. Inform. Mulawarman*, vol. 6, no. 1, pp. 16–28, 2011.
- [2] A. Rosser and A. Joshi, "From user fees to fee free: The politics of realising universal free basic education in Indonesia," *J. Dev. Stud.*, vol. 49, no. 2, pp. 175–189, 2013, doi: <https://doi.org/10.1080/00220388.2012.671473>.
- [3] B. Y. Moeliodihardjo, "Higher education sector in Indonesia," *Jakarta Br. Counc.*, vol. 16, 2014.
- [4] C. Logli, "Higher Education in Indonesia: Contemporary Challenges in Governance, Access, and Quality," in *The Palgrave Handbook of Asia Pacific Higher Education*, C. S. Collins, M. N. N. Lee, J. N. Hawkins, and D. E. Neubauer, Eds. New York: Palgrave Macmillan US, 2016, pp. 561–581. doi: [10.1057/978-1-137-48739-1\\_37](https://doi.org/10.1057/978-1-137-48739-1_37).
- [5] Sukirman and M. K. Kabilan, "Indonesian researchers' scholarly publishing: an activity theory perspective," *High. Educ. Res. Dev.*, pp. 1–18, 2023, doi: <https://doi.org/10.1080/07294360.2023.2209522>.
- [6] Rico Elhando Badri, Susanti, Edi Pranyoto, Arief Gunawan, and Stefanus Rumangkit, "Research Bootcamp dalam Meningkatkan Kemampuan Menulis Artikel Ilmiah," *J-ABDI J. Pengabd. Kpd. Masy.*, vol. 2, no. 3 SE-Articles, pp. 4407–4412, Aug. 2022, doi: [10.53625/jabdi.v2i3.2989](https://doi.org/10.53625/jabdi.v2i3.2989).
- [7] A. T. Usman, I. Wasliman, U. Nurjaman, and F. K. Fatkhullah, "Manajemen Strategis Peningkatan Mutu Dosen Di Perguruan Tinggi Swasta," *Edukasi Islam. J. Pendidik. Islam*, vol. 11, no. 01, 2022, doi: <http://dx.doi.org/10.30868/ei.v11i01.3023>.
- [8] H. Mardiana and others, "Lecturers' adaptability to technological change and its impact on the teaching process," *JPI (Jurnal Pendidik. Indones.)*, vol. 9, no. 2, pp. 275–289, 2020, doi: <https://doi.org/10.23887/jpi-undiksha.v9i2.24595>.
- [9] F. Nurtjahjani, N. Noermijati, D. Hadiwidjojo, and D. W. Irawanto, "Transformational Leadership in Higher Education: (A Study in Indonesian Universities)," in *Proceedings of the 3rd Asia Pacific International Conference of Management and Business Science (AICMBS 2019)*, 2020, pp. 95–101. doi: [10.2991/aebmr.k.200410.015](https://doi.org/10.2991/aebmr.k.200410.015).
- [10] A. Riyono, M. Kanzunnudin, and N. Ma'mun, "Identitas Akademik dan Kapital Manusia Mahasiswa Program Doktor: Kajian Naratif di Perguruan Tinggi Swasta," *Wahana Didakt. J. Ilmu Kependidikan*, vol. 21, no. 1, pp. 41–55, 2023, doi: <https://doi.org/10.31851/wahanadidaktika.v21i1.10196>.
- [11] A. Mursidi and D. Sundiman, "Phenomenon on the Level of Lecturer Education, in Quality of Education and Quality of Graduates," *2014 4th Int. Conf. Educ. Res. Innov. IPEDR*, vol. 81, no. IACSIT Press, pp. 29–34, 2014, doi: [10.7763/IPEDR.2014.V81.5](https://doi.org/10.7763/IPEDR.2014.V81.5).
- [12] Y. Yohamintin, J. Permana, D. Nurdin, and S. Sururi, "The Profile of Continuing Lecturer Professional Competency Conditions in Private Universities," *QALAMUNA J. Pendidikan, Sos. dan Agama*, vol. 15, no. 1 SE-Articles, Mar. 2023, doi: [10.37680/qalamuna.v15i1.2298](https://doi.org/10.37680/qalamuna.v15i1.2298).
- [13] A. Hidayat and E. M. Bayudhigantara, "Pengaruh Manajemen Sumber Daya Manusia Tridharma Perguruan Tinggi Terhadap Peningkatan Mutu Dosen PTS," *J. Educ.*, vol. 6, no. 1, pp. 5070–5086, 2023, doi: <https://doi.org/10.31004/joe.v6i1.3661>.

- [14] M. S. Sumardi, A. Pratama, and R. Putri, "Doctoral Students' Experiences in Writing For Publication: The Case of One Doctoral Program in Jambi University," *Edumaspol J. Pendidik.*, vol. 6, no. 2, pp. 1487–1500, 2022, doi: <https://doi.org/10.33487/edumaspol.v6i2.3927>.
- [15] S. Sjamsoeddin, P. Yusgiantoro, H. J. R. Saragih, and B. S. Soepandji, "The Challenges Of Indonesia Future Defense Capability Advancement," *J. Posit. Sch. Psychol.*, vol. 6, no. 11, pp. 345–352, 2022.
- [16] D. I. S. Saputra, H. R. Hatta, V. Z. Kamila, and S. Wijono, "Multimedia as a tools to improve critical thinking: A systematic literature review," *AIP Conf. Proc.*, vol. 2798, no. 1, p. 20061, Jul. 2023, doi: 10.1063/5.0154906.
- [17] Y. S. Rizvi and A. Nabi, "Transformation of learning from real to virtual: an exploratory-descriptive analysis of issues and challenges," *J. Res. Innov. Teach. Learn.*, vol. 14, no. 1, pp. 5–17, 2021, doi: 10.1108/JRIT-10-2020-0052.
- [18] K. Melhuish, T. Fukawa-Connelly, P. C. Dawkins, C. Woods, and K. Weber, "Collegiate mathematics teaching in proof-based courses: What we now know and what we have yet to learn," *J. Math. Behav.*, vol. 67, p. 100986, 2022, doi: <https://doi.org/10.1016/j.jmathb.2022.100986>.
- [19] R. Rosmiati and M. Satriawan, "The ocean climate phenomenon: the challenges of earth physics lectures in Indonesia," *J. Phys. Conf. Ser.*, vol. 1157, no. 3, p. 32038, 2019, doi: 10.1088/1742-6596/1157/3/032038.
- [20] C. G. Iwu *et al.*, "Entrepreneurship education, curriculum and lecturer-competency as antecedents of student entrepreneurial intention," *Int. J. Manag. Educ.*, vol. 19, no. 1, p. 100295, 2021, doi: <https://doi.org/10.1016/j.ijme.2019.03.007>.
- [21] PDDIKTI Kemdikbud, "Grafik Jumlah Dosen Aktif Berdasarkan Jenjang Pendidikan Tertinggi," *PDDIKTI Kemdikbud*, 2023. <https://pddikti.kemdikbud.go.id/dosen> (accessed Jul. 04, 2023).
- [22] F. Triawan, M. K. Biddinika, S. Hanaoka, and B. A. Budiman, "Promoting Higher Education Abroad Program in Science and Engineering to Indonesian High Schools: Methods, Challenges and Recommendations," *Indones. J. Comput. Eng. Des. (IJoCED); Vol 1 No 1 IJoCEDDO - 10.35806/ijoced.v1i1.33*, Apr. 2019, [Online]. Available: <https://ojs.sampoernauniversity.ac.id/index.php/IJoCED/article/view/33>
- [23] T. M. Akhriza and I. D. Mumpuni, "Quantitative class association rule-based approach to lecturer career promotion recommendation," *Int. J. Inf. Decis. Sci.*, vol. 13, no. 2, pp. 192–217, Jan. 2021, doi: 10.1504/IJIDS.2021.116507.
- [24] H. Hamran and E. A. Agung, "Efektivitas Model Pembelajaran Blended Learning dalam Meningkatkan Hasil Belajar Mahasiswa STKIP Pembangunan Indonesia pada Masa Pandemi Covid-19," *J. Pendidik. dan Konseling*, vol. 4, no. 5 SE-Articles, pp. 6970–6979, Oct. 2022, doi: 10.31004/jpdk.v4i5.7865.
- [25] I. S. Widyahening, G. J. M. G. van der Heijden, F. M. Moy, Y. van der Graaf, S. Sastroasmoro, and A. Bulgiba, "From west to east: experience with adapting a curriculum in evidence-based medicine," *Perspect. Med. Educ.*, vol. 1, no. 5, pp. 249–261, 2012, doi: 10.1007/s40037-012-0029-9.
- [26] Novri Gazali *et al.*, "Dissemination of the Use of Reference Tools in Scientific Writing," *J. Pengabd. dan Pemberdaya. Masy. Indones.*, vol. 1, no. 11 SE-, pp. 443–448, Dec. 2021, doi: 10.59247/jppmi.v1i11.52.
- [27] S. Syaharuddin, M. Mutiani, M. R. N. Handy, E. W. Abbas, and J. Jumriani, "Putting Transformative Learning in Higher Education Based on Linking Capital.," *J. Educ. Learn.*, vol. 16, no. 1, pp. 58–64, 2022, doi: : 10.11591/edulearn.v16i1.20373.
- [28] D. I. S. Saputra, Y. J. Al Sava, Y. Nurfaizal, D. Suhartono, and S. W. Handani, "Implementation of Web-Based System for Pigeon Post Competition in Galaxy Community," *J. Pengabd. dan Pemberdaya. Masy. Indones.*, vol. 1, no. 12, pp. 469–477, 2021.
- [29] Siswanto *et al.*, "The Effects of Leadership Styles on Organizational Innovation in Universities in Indonesia and Malaysia," *J. Behav. Sci.*, vol. 17, no. 2, pp. 90–103, 2022.
- [30] Citra Dewi, Heri Kuswoyo, and Akhyar Ridho, "Assistance of Scientific Work Writing for Lecturers in LLDikti Environment Region 2 (Muhammadiyah University Bangka Belitung)," *J. Pengabd. dan Pemberdaya. Masy. Indones.*, vol. 1, no. 9 SE-, pp. 361–367, Nov. 2021, doi: 10.59247/jppmi.v1i9.42.
- [31] A. I. Hermanu, D. Sari, M. C. Sondari, and M. Dimiyati, "Is it necessary to evaluate university research performance instrument? Evidence from Indonesia," *Cogent Soc. Sci.*, vol. 8, no. 1, p. 2069210, Dec. 2022, doi: 10.1080/23311886.2022.2069210.