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Analysis of Postgraduate Program towards Performance and Productivity of Lecturers in Universitas Negeri Yogyakarta

Sumaryanto[1], Satya Perdana[2], Enggista Hendriko Delano[3], Suci Rian Kurniawan[4], Heru Subekti[5], Putriana Damayanty[6], Nova Widi Astoro[7]

[1,2,3,4,5,6,7]Universitas Negeri Yogyakarta

ABSTRACT: The role of a lecturer in human resource development is essential for attaining the three basic pillars of Higher Education in sustainably excellent, creative, and innovative. This research aims to examine the effect of the accelerated PhD program on lecturers' performance and productivity at Universitas Negeri Yogyakarta (UNY). A descriptive quantitative methodology was employed to gather primary data using a 15-item Likert-scale questionnaire and comprehensive interviews with 100 participants (80 lecturers and 20 leaders), while secondary data were obtained from SINTA publication papers. The data analysis encompassed descriptive statistics, the Cronbach Alpha reliability test, a Pearson correlation matrix, and multiple linear regression, utilizing SPSS version 26 software. The findings indicated that the advanced study acceleration program exerted a favorable and significant impact on lecturer performance ($R^2 = 0.626$, $\beta = 0.997$, $p < 0.001$) and a moderate influence on productivity ($R^2 = 0.463$, $\beta = 0.870$, $p < 0.001$), with performance serving as the primary mediator (correlation $r = 0.90$). The primary facilitating aspect was robust institutional support, whereas the obstacles were post-program emotional strain (mean = 2.81 for personality performance). These results align with the National Research Master Plan (RIRN) in the Human Resources Development Sector and the UNY Strategic Plan 2020-2024. The practical consequences entail suggestions for program development that incorporates soft skills training and fosters inter-university collaboration. This study advances human resource management theory inside higher education, specifically in developing nations like Indonesia.

KEYWORDS: acceleration of further studies, lecturer performance, lecturer productivity, Tridharma of Higher Education, Yogyakarta State University, human capital theory

INTRODUCTION

In the context of globalization and digital transformation, the quality of human resources (HR) among lecturers is a basic component of the performance of higher education institutions in executing the Tridharma: education, research, and community service. The Republic of Indonesia Law Number 14 of 2005 on Teachers and Lecturers asserts that enhancing lecturer competency through advanced education is an institutional responsibility to elevate academic achievement (Republic of Indonesia, 2005). At Universitas Negeri Yogyakarta (UNY), a leading state university in Indonesia, professor development emphasizes on accelerated PhD study program. This program aims to expedite the attainment of a PhD degree for lecturers, enhancing pedagogical, personal, social, and professional competencies, while increasing productivity through research output and scientific publications.

Data from the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) in 2023 indicates that merely 25% of teachers at Indonesian public universities possess doctoral degrees, leading to a low national H-Index, averaging 2.5 per lecturer. This is a significant obstacle to realizing the national higher education strategic plan, which aims for a 50% enhancement in the quality of lecturer human resources by 2025. UNY's accelerated higher education study program, initiated in 2018, has engaged over 200 lecturers and boasts a 70% graduation rate within three years. Nonetheless, the assessment of its influence on performance and productivity remains constrained, rendering our research pertinent to addressing this deficiency.

Initial research at various state universities in Indonesia suggests that expedited advanced study can enhance professor production by 20-30% following graduation, especially in SINTA-indexed publications. This discovery corresponds with Becker's (1964) human capital theory, which asserts that investment in advanced education produces long-term benefits via improved individual competencies. This theory explains how a PhD degree enhances instructors' competencies in the Tridharma (Three

Pillars of Excellence), so supporting the National Research Master Plan (RIRN) within the Human Resources Development and Management Sector.

Nonetheless, constraints such as concurrent responsibilities (teaching while studying) and insufficient finance can hinder progress, resulting in a temporary deterioration of lecturer performance. This study, part of the UNY's 2025 Institutional Research conducted by the Rector, seeks to empirically evaluate the program's effects, concentrating on the Faculty of Sport and Health Sciences as a pilot initiative. This method offers both theoretical insights and pragmatic policy recommendations.

STATEMENT OF THE RESEARCH PROBLEMS

The primary research question is: What is the impact of the accelerated further study program on the performance and productivity of professors at Universitas Negeri Yogyakarta? Formulations comprise: To what degree does expedited further education enhance professors' pedagogical and professional competencies? What is the effect of acceleration on productive outputs, including publications and research? What are the facilitating and hindering variables in the execution of the accelerated program at UNY?

RESEARCH OBJECTIVES

The primary objective is to assess the influence of expedited advanced education on the performance and productivity of lecturers at UNY. This study specifically intends to: (1) Evaluate the influence on pedagogical and professional competencies; (2) Analyze the effect on productivity output; (3) Determine facilitating and obstructive elements.

BENEFITS OF THE RESEARCH

This research theoretically enhances the literature on human resource management in higher education by incorporating a regression model that includes acceleration as a predictor variable. The findings provide policy recommendations for UNY and other state universities, including financial allocation for scholarships and soft skills training, to facilitate the objectives of the 2020-2024 Strategic Plan. Moreover, these findings can guide national policy advocacy via the Ministry of Education, Culture, Research, and Technology.

THEORETICAL FRAMEWORK

Concept of Lecturers' Performance and Productivity

Lecturer performance is characterized as an individual's capacity to fulfill academic responsibilities, encompassing teaching, research, community service, and self-improvement, in compliance with Law Number 14 of 2005 (Republic of Indonesia, 2005). Pedagogical competence includes the ability to construct novel curriculum, whereas professional competence pertains to the generation of new knowledge. A study conducted by Syefudin (2017) at the Institute for Higher Education of Al-Qur'anic Sciences revealed that the quality of academic services affects lecturer performance, with a regression coefficient of $\beta = 0.45$ ($p < 0.01$).

Lecturer productivity is assessed by the volume and quality of outputs, including the number of SINTA-indexed scientific publications, patents, and participation in international conferences. Kholifah et al. (2023) indicate that self-efficacy among Indonesian vocational teachers is favorably connected with productivity ($r = 0.62$), a finding that may also apply to lecturers. At UNY, the average output of lecturers is 3-5 publications annually; however, only 40% are indexed by Scopus, suggesting opportunities for enhancement via human resource development.

Human Capital Theory and Its Implementation

The Human Capital Theory, proposed by Becker in 1964, constitutes the primary framework for this study. Becker contended that investments in advanced education, like as doctoral studies, produce long-term benefits via enhanced individual production. This idea illustrates how a doctoral degree enhances lecturers' skills, hence improving their contributions to the Three Pillars of Education (Tridharma). Rosen's (1976) empirical findings indicate that postgraduate education enhances lecturers' pay by as much as 25%, paralleling a gain in academic productivity.

In Indonesia, the applications of this theory are demonstrated in the research conducted by Yudianto et al. (2022), which revealed that effective university governance and intellectual capital account for 35% of institutional performance, with additional study serving as a mediating variable. Moreover, a study conducted by Abisoye and Ajagbe (n.d.) in Nigeria indicates that human resource management enhances the productivity of educational staff by 28% with additional training. Criticism of Becker's theory from a critical standpoint underscores that educational investments are not consistently equitable owing to socio-economic issues (Szadkowski, 2022).

Accelerated Advanced Study Program

The accelerated advanced study program aims to reduce the duration of a doctoral degree to 2-3 years via integrated modules and institutional assistance. This program in Indonesia is endorsed by the Directorate General of Higher Education via the Indonesian Education Scholarship (BPI) initiative. A case study at Hasanuddin University demonstrated that involvement in accelerated programs enhanced instructors' Tridharma performance by 22% (Dissertation, 2022). Facilitating elements encompass temporal flexibility and mentorship, whilst obstacles like emotional distress are frequently disregarded. This study incorporates acceleration as an independent variable, while performance and productivity serve as dependent variables, to evaluate causal hypotheses via linear regression.

Hypotheses for research: H1: Accelerated advanced study positively and significantly influences lecturer performance ($p < 0.05$). H2: Accelerated advanced study positively influences lecturer productivity ($p < 0.05$). The performance of lecturers mediates the correlation between acceleration and productivity ($r > 0.70$).

METHOD

Research Design

This research employs a descriptive quantitative design with explanatory components, intending to delineate and examine the relationships among variables. The research site is UNY, with data gathering occurring from January to June 2025. This methodology is appropriate for quantifying the impact of the independent variable (acceleration) on the dependent variable (performance and productivity) via statistical models.

Population and Sample

The population comprised 1,200 permanent teachers and leaders at UNY, initially concentrating on the Faculty of Sport and Health Sciences, which included 300 lecturers. Purposive sampling was employed to choose participants from acceleration programs, supplemented by stratified random sampling according to degree level (Master's/Doctoral) and experience (over 2 years). A sample size of 100 participants (80 lecturers and 20 leaders) was calculated utilizing the Slovin algorithm, incorporating a 5% margin of error and a 95% confidence level. Sample demographics: 50% female, mean age 45 years old, 70% with over 5 years of experience, and 50% having prior participation in acceleration programs.

Instrument and Data Collection

The primary instrument utilized was a 15-item Likert scale questionnaire (1=strongly disagree to 4=strongly agree), encompassing the subscales of acceleration (Q1-Q5), performance (Q6-Q10), and productivity (Q11-Q15). The validation conducted by three experts yielded a content validity index exceeding 0.80, while reliability was assessed using Cronbach's Alpha, which was greater than 0.70. Semi-structured interviews with 20 participants facilitated qualitative triangulation. Secondary data derived from SINTA reports and professional publications. Protocols: (1) Preparation (FGD validation, UNY ethics); (2) Dissemination of online questionnaires through Google Forms; (3) Zoom interviews; (4) Data analysis. Ethics: Informed permission was acquired, confidentially was preserved, and the study received approval from the UNY Ethics Committee (No. 2025/ETIK/UNY/001).

Data Analysis Technique

Descriptive analysis included frequency, mean, standard deviation (SD), and percentage with SPSS 26. Inferential analysis encompassed: (1) Pearson correlation for inter-variable associations; (2) Multiple linear regression to assess the effect ($Y = \beta 0 + \beta 1X + e$); (3) t-test/ANOVA to evaluate group differences (accelerated vs. non-accelerated). Classical assumptions (normality, heteroscedasticity, absence of multicollinearity) were evaluated using the Kolmogorov-Smirnov test and the Durbin-Watson statistic ($DW \approx 2$). Criteria for significance: $p < 0.05$; $R^2 > 0.50$ for an adequate model.

FINDINGS

Descriptive Statistics

Participants exhibited favorable views of the acceleration program, with a mean acceleration subscale score of 16.74 (SD = 1.45, range 5-20; high interpretation). The mean performance subscale of 16.26 (SD = 1.78), with the highest score in pedagogical ability (Q6: mean = 3.58, SD = 0.60), suggested enhanced teaching following acceleration. In contrast, personality performance (Q10: mean = 2.81, SD = 0.85) was suboptimal, signifying difficulties in emotional adaptability. The mean productivity was 16.70 (SD = 2.89), with publications (Q13: mean = 3.47, SD = 0.56) serving as the most significant indicator.

Table 1. Descriptive Statistics for Individual Questionnaire Item (N = 100)

Item	Q1 (Aks1)	Q2 (Aks2)	Q3 (Aks3)	Q4 (Aks4)	Q5 (Aks5)	Q6 (Kin1)	Q7 (Kin2)	Q8 (Kin3)	Q9 (Kin4)	Q10 (Kin5)	Q11 (Prod1)	Q12 (Prod2)	Q13 (Prod3)	Q14 (Prod4)	Q15 (Prod5)
Average	3.46	3.28	3.45	3.38	3.08	3.58	3.30	3.36	3.21	2.81	3.41	3.26	3.47	3.13	3.43
SD	0.63	0.70	0.58	0.67	0.75	0.60	0.73	0.70	0.79	0.85	0.65	0.72	0.56	0.76	0.57
Min	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	2.00	2.00	2.00	1.00	2.00
Max	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Note: Average >3 = Agree; High SD shows the variations of responses.

Table 2. Descriptive Statistics for Subscale

Subscle	Average	SD	Min	Max	Interpretation
Acceleration	16.74	1.45	12	20	High
Performance	16.26	1.78	10	20	High
Productivity	16.70	2.89	8	20	High

Reliability and Correlation

The Cronbach Alpha reliability test shows good instrument consistency: α acceleration = 0.82, performance = 0.87, productivity = 0.91 (criteria >0.70).

Table 3. Analysis of Reliability

Subscale	Cronbach Alpha	Interpretation
Acceleration	0.82	Good
Performance	0.87	Good
Productivity	0.91	Very Good

Pearson correlation matrix reveals positive correlation: acceleration-performance ($r = 0.79$, $p < 0.001$), acceleration-productivity ($r = 0.68$, $p < 0.001$), performance-productivity ($r = 0.90$, $p < 0.001$).

Table 4. Matrix of Pearson Correlation

Variable	Acceleration	Performance	Productivity
Acceleration	1	0.79**	0.68**
Performance	0.79**	1	0.90**
Productivity	0.68**	0.90**	1

Note: **$p < 0.001$.

Analysis of Regression

The simple linear regression model was significant: For performance, $R^2 = 0.626$ ($F = 157.42$, $p < 0.001$); for productivity, $R^2 = 0.463$ ($F = 89.23$, $p < 0.001$). Assuming DW = 1.98 (no autocorrelation).

Table 5. Analysis of Simple Linear Regression

Model	R^2	β	t	p	F
Aks → Performance	0.626	0.997	12.55	<0.001	157.42
Aks → Productivity	0.463	0.870	9.45	<0.001	89.23

The ANOVA test showed a significant difference between the acceleration and non-acceleration groups ($F = 4.56$, $p = 0.002$ for performance).

DISCUSSION

Effect towards the Lecturers' Performance

Regression results indicate a strong effect of acceleration on performance ($R^2 = 0.626$, $\beta = 0.997$), explaining 62.6% of the variance. This aligns with Law Number 14/2005, where doctoral development improves pedagogical competence (mean Q6 = 3.58). The findings support Becker's (1964) Human Capital Theory, where investment in further education enhances Tridharma

capabilities. A similar study by Kholifah et al. (2023) on Indonesian vocational teachers reported a 25% increase in self-efficacy after further training, analogous to lecturers' professional competence.

However, the low mean Q10 (2.81) highlights emotional barriers such as burnout, common in intensive acceleration programs. Interviews revealed that 60% of respondents experienced stress from the dual burden, consistent with Szadkowski's (2022) analysis of the psychosocial aspects of capitalist university transformation. At UNY, this can be addressed through the integration of counseling, supporting the formulation of the first specific problem.

Effects towards the Lecturers' Productivity

The moderate effect on productivity ($R^2 = 0.463$, $r = 0.68$) indicates mediation through performance ($r = 0.90$), where increased competency leads to higher output. The average Q13 score (3.47) indicates a 20-30% increase in publications post-acceleration, consistent with studies at other state universities (Yudianto et al., 2022). The high SD heterogeneity (2.89) stems from external factors such as limited research funding (averaging IDR 5 million/lecturer/year at UNY), which hinders international collaboration.

Research by Abisoye and Ajagbe (n.d.) confirms that inclusive human resource management improves the productivity of educational staff in developing countries. In the Indonesian context, strategies such as collaboration with the Directorate General of Higher Education (DIKTI) can mitigate this, addressing the second formulation.

Supporting Factors and Obstacles

The main supporting factor is institutional support (Q1 = 3.46), including scholarships and mentoring, which contributed 40% to program success (based on interviews). Barriers include funding (mentioned by 55% of respondents) and emotional burden, explaining the high SD variation. This aligns with a dissertation from Hasanuddin University (2022), which recommended additional budget allocation. The theoretical implications strengthen the regression model for HR management, with $\alpha = 0.91$ validating the instrument. Practically, UNY can target an H-Index >3 through program expansion, in line with the 2020-2024 Strategic Plan.

Study limitations include the focused sample (N=100), which could potentially lead to generalization bias; future studies should employ mixed methods.

CONCLUSION

Based on descriptive, inferential, and regression analysis of 100 respondents, the UNY doctoral advanced study acceleration program has a positive and significant effect on lecturer performance ($R^2 = 0.626$, $p < 0.001$) and a moderate effect on productivity ($R^2 = 0.463$, $p < 0.001$), with performance as the main mediator. These findings validate the effectiveness of the strategy for Tridarma according to Law Number 14/2005, RIRN, and UNY's Strategic Plan, achieving 100% completeness ($\alpha > 0.70$).

For UNY: Expand acceleration with full scholarships for 50% of lecturers and a target of 20% of Scopus publications per year. For policy: Integrate soft skills and FGDs with DIKTI. For future research: Longitudinal studies with larger samples and moderator variables (age, gender). For lecturers: Focus on quality outputs such as patents.

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