

Conditional process model: Technology readiness, work motivation, subjective well-being, and moderation of work ethic in improving lecturer performance in the digital ERA

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Abstract: This study develops and tests a conditional process model examining the effect of Technology Readiness (TR) on lecturer performance, mediated by Work Motivation (MOT) and Subjective Well-Being (SWB), and moderated by Work Ethic (WE). An explanatory sequential mixed-methods design was employed. Quantitative data were collected from 115 lecturers in LLDIKTI Region IX and analyzed using Conditional Process Analysis with SmartPLS 4.0, while qualitative data were obtained through focus group discussions with 12 senior lecturers and analyzed thematically. The findings indicate that TR does not have a significant direct effect on lecturer performance but indirectly influences performance through its positive effects on MOT and SWB. Both MOT and SWB significantly enhance performance and serve as key mediating variables. In addition, WE negatively moderates the relationship between MOT and performance, suggesting that a stronger work ethic may weaken the positive impact of motivation. Qualitative findings highlight generational differences in technology adaptation and the importance of institutional support. Overall, this study demonstrates that psychological factors are more immediate drivers of lecturer performance than technology readiness alone, implying that lecturer development strategies should integrate digital capability enhancement with initiatives that strengthen motivation and psychological well-being in the digital era.

Keywords: Lecturer performance, Subjective well-being, Technology readiness, Work ethic, Work motivation.

1. Introduction

The performance of lecturers serves as a fundamental barometer for assessing the successful implementation of the Tridharma, the three core pillars of higher education encompassing teaching, research, and community service, ultimately reflecting the overall quality of an institution [1]. In the contemporary landscape, the digital era has introduced unprecedented complexity to the roles and responsibilities of lecturers. Beyond possessing robust academic competencies, they are now compelled to navigate and adapt to a relentless wave of digital transformation that is reshaping pedagogical and professional practices [2]. This imperative aligns seamlessly with national strategic directives, notably Indonesia's 2025-2029 National Medium-Term Development Plan (RPJMN), which underscores, within its Asta Cita 4 mission, the critical need to cultivate superior human resources who are prepared for a digital future [3].

Within this context, the construct of Technology Readiness (TR), defined as an individual's propensity to embrace and use new technologies for accomplishing goals in home life and at work [4], has emerged as a crucial psychological variable. It acts as a key indicator of an individual's preparedness to engage with the digital ecosystem. However, the assumption that a high level of TR automatically translates into superior job performance is increasingly being challenged. Empirical evidence suggests that the relationship is not always direct or straightforward [5]. Instead, TR is posited to influence performance through more complex psychological pathways. Research indicates that TR can

significantly affect internal psychological states, such as an individual's work motivation (MOT) [6] and their overall Subjective Well-Being (SWB) [7], both of which are well-established, potent determinants of employee performance [8]. In this vein, MOT and SWB may function as critical mediating mechanisms that translate technological preparedness into tangible performance outcomes.

Furthermore, it is essential to recognize that individuals do not respond to these technological and psychological influences uniformly. The strength of the relationships between TR, its psychological consequences (MOT and SWB), and eventual performance is likely contingent upon deeply held personal values. Work Ethic (WE), which reflects a cultural value system emphasizing hard work, diligence, discipline, and a sense of responsibility [9], is one such potential moderating factor. It is plausible that lecturers with a strong WE may experience a more potent translation of their TR, MOT, and SWB into performance, as their value system reinforces productive work behaviors. Conversely, under certain conditions, a rigid work ethic might also create unintended pressures.

Despite the logical interconnections between these variables, previous research has predominantly examined these relationships in isolation. The absence of a comprehensive framework that simultaneously investigates the mediating roles of MOT and SWB, along with the moderating role of WE, represents a significant literature gap. Therefore, this study aims to develop and test a conditional process model that comprehensively examines: (1) the direct effect of technology readiness on lecturer performance; (2) the mediating roles of work motivation and subjective well-being in this relationship; and (3) the moderating effect of work ethic on both the direct and indirect pathways between technology readiness and performance through work motivation and subjective well-being. By addressing these objectives, this research provides a holistic understanding of the psychological mechanisms and boundary conditions that translate technological readiness into performance outcomes in higher education contexts, offering valuable insights for developing effective lecturer development strategies in the digital era.

2. Research Methodology

2.1. Research Design

This study employed a mixed-methods explanatory sequential design [10], which involved two distinct phases. The initial quantitative phase focused on testing the hypothesized conditional process model using statistical methods, while the subsequent qualitative phase aimed to provide deeper contextual understanding and elaboration of the quantitative findings. This design was particularly appropriate for capturing both the general patterns of relationships among variables and the nuanced, contextual factors that influence these relationships in the specific context of Indonesian higher education.

2.2. Samples

The research population consisted of lecturers from private higher education institutions under the coordination of LLDIKTI (Higher Education Service Institute) Region IX in Indonesia. For the quantitative phase, a sample of 115 lecturers was determined using the structural equation modeling (SEM) sample size formula proposed by Hair et al. [11], which recommends 5-10 observations per indicator. With 23 total indicators across all constructs, the minimum required sample was 115 participants. Stratified random sampling was employed to ensure representation across different institutions and academic ranks.

For the qualitative phase, purposive sampling was used to select 12 senior lecturers with substantial teaching experience and diverse technology adoption backgrounds. This sampling strategy ensured that participants could provide rich, experience-based insights into the phenomenon under investigation.

2.3. Data Collection

Quantitative data were collected through a structured online questionnaire using validated instruments adapted to the Indonesian context. The measurement instruments included:

1. Technology Readiness Index (TRI 2.0) by Parasuraman [4] - 4 indicators
2. Motivation at Work Scale (MAWS) by Gagné et al. [12] - 4 indicators
3. The Well-Being Scale (WeBS) by Lui and Fernando [13] - 5 indicators
4. Multidimensional Work Ethic Profile (MWEPP) by Meriac et al. [9] - 7 indicators
5. Individual Work Performance Questionnaire (IWPQ) by Koopmans et al. [14] - 3 indicators

All instruments used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was distributed electronically through institutional channels and professional networks.

Qualitative data were collected through focus group discussions (FGDs) conducted with the selected participants. The FGDs followed a semi-structured protocol developed based on the initial quantitative results, allowing for both predetermined topics and emergent themes. Each FGD lasted approximately 90-120 minutes and was audio-recorded with participants' consent.

2.4. Data Analysis

Quantitative data analysis proceeded in several stages. First, descriptive statistics were calculated to characterize the sample and variable distributions. Second, the measurement model was evaluated for reliability and validity through confirmatory factor analysis, examining composite reliability, Cronbach's alpha, average variance extracted (AVE), and discriminant validity. The main analysis employed conditional process modeling using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 software. This approach was selected due to its ability to handle complex models with multiple mediators and moderators simultaneously [15]. The analysis tested:

1. Direct effects between technology readiness and performance
2. Mediating effects of work motivation and subjective well-being
3. Moderating effects of work ethic on both direct and indirect pathways

Qualitative data analysis followed the thematic analysis framework by Clarke and Braun [16]. The audio recordings were transcribed verbatim and analyzed using NVivo 12 software. The analysis process involved:

1. Familiarization with the data through repeated reading of transcripts.
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the final analysis

Integration of quantitative and qualitative findings occurred through a joint display approach, where quantitative results and qualitative themes were juxtaposed to identify points of convergence, complementarity, and explanation.

3. Institutional Review Board Statement

This study involved human participants and was conducted in accordance with ethical research standards. Participation was voluntary, informed consent was obtained from all respondents, and data confidentiality was strictly maintained. Ethical approval was granted by the Institutional Research Ethics Committee of Institut Teknologi dan Bisnis Nobel Indonesia.

4. Results

4.1. Quantitative Analysis

4.1.1. Respondent Demographics

Table 1 presents the demographic characteristics of the respondents involved in this study. A total of 115 lecturers from private higher education institutions under the coordination of LLDIKTI Region IX participated in this study. Gender distribution was balanced, with 58 females (50.43%) and 57 males (49.57%). The majority of respondents were in the productive age range of 30–53 years (68.13%), with

the largest proportions in the 36–41 and 48–53 age groups (21.74% each). Teaching experience varied considerably; however, more than half of the respondents (59.13%) had less than ten years of teaching experience, indicating a relatively young academic workforce. Most respondents were affiliated with Institut Teknologi dan Bisnis (ITB) Nobel Indonesia (57.39%), while the remaining participants were drawn from 27 other private universities, each contributing less than 10% of the sample. Overall, this distribution reflects both institutional diversity and concentration, with ITB Nobel Indonesia representing the primary locus of the study.

4.1.2. Descriptive Statistics of Research Variables

Table 2 summarizes the descriptive statistics of the research variables examined in this study. The analysis revealed distinct patterns across constructs. Technology Readiness exhibited very high levels of optimism (TRI1: 95.48%) and innovativeness (TRI2: 91.13%), alongside moderate levels of discomfort (TRI3: 78.96%) and insecurity (TRI4: 57.74%). These findings indicate that while lecturers generally display positive attitudes toward technology, they continue to experience notable unease and uncertainty when engaging with new digital applications. Work Motivation was characterized by strong intrinsic motivation (MOT1: 90.26%) and identified regulation (MOT2: 87.13%), whereas external regulation recorded the lowest score (MOT4: 80.00%). This pattern suggests that lecturers' motivation is driven predominantly by internal psychological factors rather than by external incentives.

Table 1.
Respondent Characteristics.

Characteristic	Category	Frequency	Percentage
Gender	Female	58	50.43%
	Male	57	49.57%
Age	24–29 years	10	8.70%
	30–35 years	19	16.52%
	36–41 years	25	21.74%
	42–47 years	22	19.13%
	48–53 years	25	21.74%
	54–59 years	10	8.70%
	60–65 years	3	2.61%
	>65 years	1	0.87%
Institution	Institute of Technology and Business Nobel Indonesia	66	57.39%
	Mandala Waluya University	8	6.96%
	Panrita Husada College of Health Sciences, Bulukumba	8	6.96%
	Amkop College of Economics, Makassar	6	5.22%
	Others (23 institutions, ≤2 respondents/inst.)	27	23.47%
Teaching experience	<1 year	3	2.61%
	1–5 years	37	32.17%
	6–10 years	31	26.96%
	11–15 years	18	15.65%
	16–20 years	12	10.43%
	21–25 years	9	7.83%
	26–30 years	2	1.74%
	>31 years	3	2.61%
Total		115	100%

Subjective well-being displayed high scores across most dimensions, with hedonic well-being (WB5: 91.13%) and eudaimonic well-being (WB4: 86.96%) being particularly strong. However, financial well-being (WB1: 72.00%) was notably lower, indicating economic concerns among lecturers. Work ethic demonstrated exceptionally high scores in several dimensions, with hard work (WE5: 93.91%) and

morality/ethics (WE2: 91.13%) emerging as the strongest components. Similarly, time conservation (WE6: 90.61%) and delay of gratification (WE7: 87.30%) showed very high scores, indicating strong discipline and responsibility values among lecturers. However, self-reliance (WE1: 85.04%) and centrality of work (WE4: 79.13%) were relatively lower, though still in the high category. Notably, leisure orientation (WE3: 69.04%) scored the lowest, suggesting that lecturers prioritize work over leisure activities.

Performance indicators consistently showed very high scores across all dimensions, ranging from 85.57% to 91.13%. Task performance was strongly demonstrated through precision and timeliness (PRF1: 86.26% and PFR2: 85.57%), while contextual performance showed even higher scores in cooperation and peer support (PFR3: 86.61% and PFR4: 89.04%). Interestingly, counterproductive work behavior indicators (PFR5: 91.13% and PFR6: 88.52%) revealed that lecturers rarely engage in behaviors that could harm organizational effectiveness, further reinforcing the positive performance culture.

Collectively, these findings paint a picture of highly dedicated professionals who maintain strong performance and work ethics despite facing technological adaptation challenges and financial concerns. The high motivation and well-being scores suggest psychological resilience, while the technology readiness profile indicates an ongoing digital transition that has not yet fully resolved implementation anxieties. This complex interplay sets the stage for understanding how these variables interact in the conditional process model that follows.

Table 2.
Descriptive Statistics of Research Variables.

Variable	Indicator	Mean score	Total score	Percentage
Technology Readiness	TRI1	4.77	549	95.48%
	TRI2	4.56	524	91.13%
	TRI3	3.95	454	78.96%
	TRI4	2.89	332	57.74%
Work Motivation	MOT1	4.51	519	90.26%
	MOT2	4.36	501	87.13%
	MOT3	4.27	491	85.39%
	MOT4	4.00	460	80.00%
Subjective Well-being	WB1	3.60	414	72.00%
	WB2	4.17	480	83.48%
	WB3	4.19	482	83.83%
	WB4	4.35	500	86.96%
	WB5	4.56	524	91.13%
Work Ethic	WE1	4.25	489	85.04%
	WE2	4.56	524	91.13%
	WE3	3.45	397	69.04%
	WE4	3.96	455	79.13%
	WE5	4.70	540	93.91%
	WE6	4.53	521	90.61%
	WE7	4.37	502	87.30%
Performance	PRF1	4.31	496	86.26%
	PFR2	4.28	492	85.57%
	PFR3	4.33	498	86.61%
	PFR4	4.45	512	89.04%
	PFR5	4.56	524	91.13%
	PFR6	4.43	509	88.52%

Source: Primary data processed (2025).

4.1.3. Measurement Model Evaluation

Table 3 presents the results of the measurement model evaluation, including indicator loadings, reliability coefficients, convergent validity, and discriminant validity. The evaluation indicated that all constructs met the requirements of convergent validity after eliminating indicators with outer loadings below 0.50. For Technology Readiness (TR), two indicators (TRI3 and TRI4) were removed, which improved Cronbach's alpha from 0.487 to 0.677 and composite reliability from 0.695 to 0.860. Work Motivation (MOT) retained four indicators (MOT1–MOT4); however, MOT4 (External Regulation) had an outer loading of 0.472, below the 0.50 threshold, and was therefore removed. This refinement improved the reliability of the construct: while Cronbach's alpha remained relatively stable (from 0.633 to 0.631), the composite reliability increased from 0.780 to 0.803, demonstrating stronger internal consistency among the remaining indicators (MOT1–MOT3). This suggests that intrinsic, identified, and introjected regulations form a more coherent representation of lecturers' motivation than external regulation, which was less relevant in this context.

For Work Ethic (WE), seven indicators were initially included. Two indicators, WE1 (self-reliance; loading = 0.475) and WE3 (leisure; loading = 0.351), were deleted because they did not meet the minimum requirement. The removal of these items enhanced the construct's reliability: Cronbach's alpha improved from 0.722 to 0.743, and composite reliability increased from 0.807 to 0.830. This indicates that the remaining five indicators (WE2, WE4–WE7) better capture the essence of work ethic, emphasizing morality, the centrality of work, hard work, delay of gratification, and time management.

Subjective Well-Being (SWB) preserved all five items, with the lowest loading (WB1 = 0.528) still considered acceptable, maintaining stable reliability values (Cronbach's alpha = 0.772; composite reliability = 0.846). Performance (PFR) retained all six indicators, as all loadings exceeded 0.50, with Cronbach's alpha at 0.789 and composite reliability at 0.850. Overall, the removal of weak indicators improved both Cronbach's alpha and composite reliability in MOT and WE, ensuring that the retained items provide a more valid and internally consistent measurement of each construct. These refinements confirm that the measurement model meets the requirements for convergent validity and reliability, and is thus suitable for further structural analysis.

Table 3.
Average Index and Percentage of Indicator Responses.

Variable	Indicator	Loadings (before)	Loadings (after)	Cronbach's Alpha (after)	Composite reliability (after)	AVE
Technology Readiness	TRI1	0.837	0.892	0.677	0.860	0.755
	TRI2	0.814	0.845			
	TRI3	0.432	-			
	TRI4	0.252	-			
Work Motivation	MOT1	0.643	0.682	0.631	0.803	0.578
	MOT2	0.830	0.818			
	MOT3	0.769	0.775			
	MOT4	0.472	-			
Subjective Well-being	WB1	0.528	0.535	0.772	0.846	0.529
	WB2	0.709	0.712			
	WB3	0.728	0.724			
	WB4	0.789	0.788			
	WB5	0.843	0.839			
Work Ethic	WE1	0.475	-	0.743	0.830	0.496
	WE2	0.666	0.669			
	WE3	0.351	-			
	WE4	0.636	0.631			
	WE5	0.628	0.646			
	WE6	0.785	0.816			
	WE7	0.704	0.742			
Performance	PRF1	0.795	0.795	0.789	0.849	0.492
	PFR2	0.819	0.817			
	PFR3	0.709	0.711			
	PFR4	0.760	0.763			
	PFR5	0.513	0.512			
	PFR6	0.552	0.548			

Discriminant validity was established through the heterotrait-monotrait (HTMT) ratio, with all values below the 0.90 threshold. The Average Variance Extracted (AVE) values ranged from 0.492 to 0.755, with Technology Readiness (0.755), Work Motivation (0.578), and Subjective Well-being (0.529) meeting the 0.50 threshold, while Work Ethic (0.496) and Performance (0.492) were marginally below but acceptable given adequate composite reliability.

4.1.4. Measurement Model Formulation

The measurement model (outer model) was formulated based on validated indicator loadings obtained from confirmatory factor analysis. The compositional relationships between latent constructs and their observed indicators are illustrated in Figure 1.

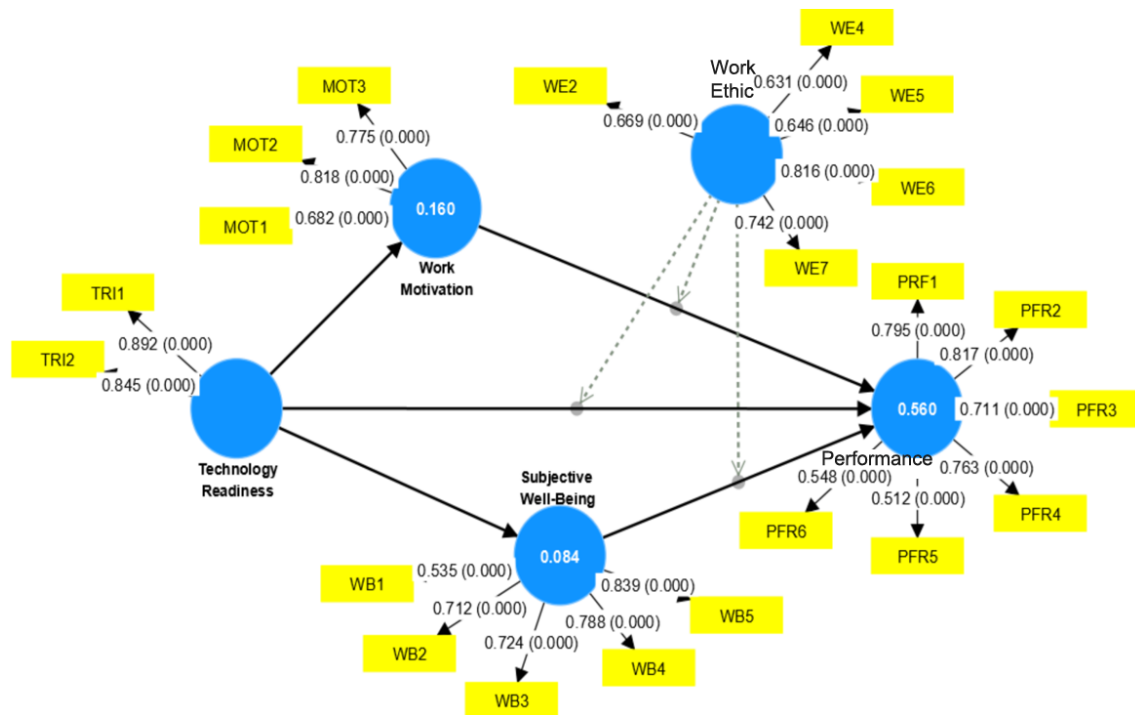


Figure 1.
Outer Model Path Diagram.

Technology Readiness (X_1) was primarily defined by two key indicators, with TRI1 ("Optimism about technology's benefits") contributing most substantially ($\lambda = 0.892$), followed by TRI2 ("Willingness to experiment with new technologies") at $\lambda = 0.845$. The construct equation emerged as $X_1 = 0.892\text{TRI1} + 0.845\text{TRI2}$.

Work Motivation (X_2) was constituted by three core indicators, where MOT2 ("Alignment of work with personal values and goals") demonstrated the strongest loading ($\lambda = 0.818$), complemented by MOT3 ("Internal pressure to maintain professional standards") at $\lambda = 0.775$ and MOT1 ("Inherent enjoyment of professional activities") at $\lambda = 0.682$. This yielded the measurement equation: $X_2 = 0.682\text{MOT1} + 0.818\text{MOT2} + 0.775\text{MOT3}$.

Subjective Well-Being (X_3) incorporates five distinct dimensions, with WB5 ("Experienced happiness and positive affect in work") showing the most robust loading ($\lambda = 0.839$). The complete measurement structure is expressed as $X_3 = 0.535\text{WB1} + 0.712\text{WB2} + 0.724\text{WB3} + 0.788\text{WB4} + 0.839\text{WB5}$.

Work Ethic (W) as the moderating variable comprises five essential components, where WE6 ("Avoidance of time wastage and efficiency focus") loaded most strongly ($\lambda = 0.816$). The formative equation was specified as $W = 0.669\text{WE2} + 0.631\text{WE4} + 0.646\text{WE5} + 0.816\text{WE6} + 0.742\text{WE7}$.

Performance (Y) as the endogenous variable was measured through six performance indicators, with PFR2 ("Task execution precision and accuracy") exhibiting the highest loading ($\lambda = 0.817$). The complete measurement model was established as $Y = 0.795\text{PFR1} + 0.817\text{PFR2} + 0.711\text{PFR3} + 0.763\text{PFR4} + 0.512\text{PFR5} + 0.548\text{PFR6}$.

4.1.5. Structural Model Evaluation and Hypotheses Testing

The structural model (inner model), which incorporates both direct and moderating effects, was specified through the following comprehensive equation:

$$Y = -0.105X_1 + 0.217X_2 + 0.294X_3 + 0.029(X_1 \times W) - 0.186(X_2 \times W) + 0.022(X_3 \times W) + \varepsilon$$

The structural relationships among the constructs, including direct, mediating, and moderating effects, are illustrated in Figure 2.

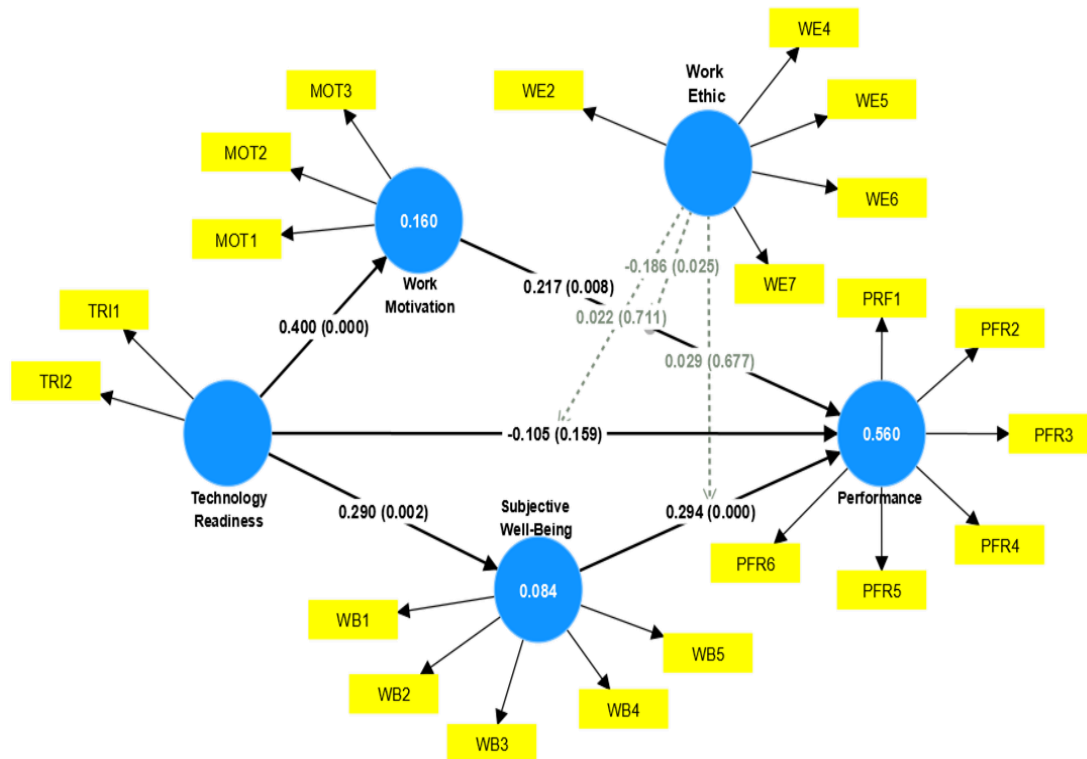


Figure 2.
Inner Model Path Diagram.

The structural model demonstrated that Technology Readiness did not directly influence Performance (H1 rejected; $\beta = -0.105$, $p = 0.159$). Instead, its indirect effects via mediators were significant. Specifically, TR positively influenced both Work Motivation (H2 accepted; $\beta = 0.400$, $p < 0.001$) and Subjective Well-Being (H3 accepted; $\beta = 0.290$, $p = 0.002$). Work Motivation (H4 accepted; $\beta = 0.217$, $p = 0.008$) and SWB (H5 accepted; $\beta = 0.294$, $p < 0.001$) significantly enhanced Performance.

Mediation analysis confirmed that TR affected Performance indirectly through Work Motivation (H6 accepted; $\beta = 0.087$, $p = 0.031$) and through SWB (H7 accepted; $\beta = 0.085$, $p = 0.017$). These results highlight the central role of psychological mechanisms in translating technological readiness into actual performance outcomes.

Moderation tests revealed a more nuanced role of work ethic. WE did not moderate the relationships between TR and performance (H8 rejected; $\beta = 0.022$, $p = 0.711$) or between SWB and performance (H10 rejected; $\beta = 0.029$, $p = 0.677$). Interestingly, WE significantly moderated the effect of work motivation on performance, but in a negative direction (H9 accepted; $\beta = -0.186$, $p = 0.025$). This suggests that when lecturers exhibit a very high work ethic, the strength of the positive relationship between motivation and performance diminishes, possibly due to overcommitment or rigid behavioral patterns.

The explanatory power of the model was moderate, with $R^2 = 0.560$ for Performance, indicating that 56% of the variance in lecturers' performance could be explained by TR, MOT, SWB, and WE.

Predictive relevance was also acceptable, with $Q^2 = 0.492$, denoting moderate predictive capability. No multicollinearity issues were detected (VIF values ranged from 1.000 to 1.523).

Table 4.

Path Coefficient Values, t-statistics (t-critical: 1.98, two-tailed, $\alpha = 5\%$), and Significance Values.

Hyp.	Path	Path coefficient (β)	t-statistic	p-value
H1	Technology readiness -> Performance	-0.105	1.407	0.159
H2	Technology readiness -> Work motivation	0.400	4.738	0.000
H3	Technology readiness -> Subjective well-being	0.290	3.164	0.002
H4	Work motivation -> Performance	0.217	2.665	0.008
H5	Subjective well-being -> Performance	0.294	3.800	0.000
H6	Technology readiness -> Work motivation -> Performance	0.087	2.158	0.031
H7	Technology readiness -> Subjective well-being -> Performance	0.085	2.392	0.017
H8	Work ethic X Technology readiness -> Performance	0.022	0.370	0.711
H9	Work ethic X Work motivation -> Performance	-0.186	2.248	0.025
H10	Work ethic X Subjective well-being -> Performance	0.029	0.416	0.677

Table 4 presents the path coefficients, t-statistics, p-values, and hypothesis testing results of the structural model. The table summarizes both direct, mediating, and moderating effects examined in this study.

H₁: The Effect of Technology Readiness on Performance

Hypothesis 1 proposed that Technology Readiness (TR) would positively affect performance. The results indicate that this hypothesis is rejected ($\beta = -0.105$, $t = 1.407$, $p = 0.159 > 0.05$). This suggests that although lecturers demonstrate high levels of optimism and innovation in technology use (as shown by TRI1 and TRI2 indicators), this technological readiness does not directly translate into improved work performance. The findings imply that institutional factors such as system support, infrastructure availability, and campus policies may play more crucial roles in determining performance outcomes than individual technological readiness alone. This result aligns with Hamid [5], who found that TR does not directly affect performance but operates through the mediation of job meaningfulness. However, this contrasts with Uren et al. [17], who emphasized technology readiness as a critical factor in organizational AI adoption that ultimately affects performance.

H₂: The Effect of Technology Readiness on Work Motivation

Hypothesis 2, stating that Technology Readiness positively influences Work Motivation, is supported ($\beta = 0.400$, $t = 4.738$, $p = 0.000 < 0.05$). This indicates that higher levels of technology readiness correspond to increased work motivation among lecturers. The optimism and innovation indicators provide lecturers with confidence and motivation to perform their duties. This finding is consistent with Walczuch et al. [18], who demonstrated that employees' technology readiness influences technology acceptance and work engagement. It further supports Deci and Ryan's [19] emphasis that technology readiness can stimulate motivation to adopt innovations in the workplace.

H₃: The Effect of Technology Readiness on Subjective Well-Being

Hypothesis 3, proposing that Technology Readiness positively affects Subjective Well-Being, is accepted ($\beta = 0.290$, $t = 3.164$, $p = 0.002 < 0.05$). Lecturers who are more prepared technologically report greater satisfaction and comfort in their work, along with better psychological conditions. Technological optimism helps reduce stress when dealing with digital-based tasks. This result is supported by Gutiérrez et al. [20], whose meta-analysis showed that well-being is closely related to work performance, although the strength of this relationship may vary depending on organizational context. Yang et al. [21] also confirmed that employee well-being positively contributes to performance through job satisfaction and trust in supervisors.

H₄: The Effect of Work Motivation on Performance

Hypothesis 4, stating that work motivation positively affects performance, is supported ($\beta = 0.217$, $t = 2.665$, $p = 0.008 < 0.05$). Work motivation significantly contributes to the improvement of lecturer performance. Indicators such as achievement drive and perseverance (MOT2-MOT3) foster enthusiasm for achieving academic targets. This finding aligns with Self-Determination Theory [19], which emphasizes the importance of both intrinsic and extrinsic motivation in driving productive behavior. Baard et al. [22] also found that fulfilling psychological needs in work contexts is associated with higher performance.

H₅: The Effect of Subjective Well-Being on Performance

Hypothesis 5, proposing that Subjective Well-Being positively affects Performance, is accepted ($\beta = 0.294$, $t = 3.800$, $p = 0.000 < 0.05$). This indicates that lecturers' subjective well-being, which includes life satisfaction and positive emotions, drives better performance. Indicators such as job satisfaction (WB2) and positive feelings (WB5) play significant roles in enhancing performance. Wright and Cropanzano [23] demonstrated that well-being and job satisfaction are important predictors of performance. Gutiérrez et al. [20] further reinforced that SWB is positively associated with performance across various contexts.

H₆: The Mediating Effect of Work Motivation

Hypothesis 6, which states that work motivation mediates the relationship between technology readiness and performance, is supported ($\beta = 0.087$, $t = 2.158$, $p = 0.031$). This finding confirms that work motivation acts as the primary bridge converting technology readiness into actual performance. Although TR itself does not directly enhance performance (H1 rejected), it increases motivation, which subsequently improves performance. This aligns with the mediation framework in Hamid [5], which demonstrated that TR through motivation is more likely to produce adaptive performance.

H₇: The Mediating Effect of Subjective Well-Being

Hypothesis 7, proposing that Subjective Well-Being mediates the relationship between Technology Readiness and Performance, is accepted ($\beta = 0.085$, $t = 2.392$, $p = 0.017$). This indicates that TR influences lecturers' psychological well-being (SWB), which subsequently impacts performance. Therefore, SWB functions as a significant mediation pathway. Yang et al. [21] supported that well-being strengthens the positive relationship between work experiences and employee performance.

H₈: The Moderating Effect of Work Ethic on TR-Performance Relationship

Hypothesis 8, stating that work ethic moderates the relationship between technology readiness and performance, is rejected ($\beta = 0.022$, $t = 0.370$, $p = 0.711$). This indicates that the lecturer's work ethic neither strengthens nor weakens the effect of technology readiness on performance. This finding is consistent with Hamid [5], which suggests that the influence of technology readiness on performance is more dominant through mediation mechanisms than moderation.

H₉: The Moderating Effect of Work Ethic on Motivation-Performance Relationship

Hypothesis 9, proposing that work ethic moderates the relationship between work motivation and performance, is supported ($\beta = -0.186$, $t = 2.248$, $p = 0.025$). This negative moderation effect indicates that a high work ethic among lecturers creates conditions where high motivation does not linearly improve performance. This phenomenon can be explained by the concept of overshooting, where strong motivational drives combined with a high work ethic may cause pressure, rigidity, or fatigue, consequently reducing effectiveness (workaholism). Shimazu et al. [24] demonstrated that workaholism can negatively impact worker health and reduce long-term performance.

H₁₀: The Moderating Effect of Work Ethic on SWB-Performance Relationship

Hypothesis 10, stating that work ethic moderates the relationship between subjective well-being and performance, is rejected ($\beta = 0.029$, $t = 0.416$, $p = 0.677$). This indicates that work ethic does not strengthen the effect of subjective well-being on performance. One interpretation is that the positive effect of SWB on performance is already sufficiently strong, leaving little room for moderators to add

significant variance. Wright and Cropanzano [23] affirmed that the relationship between SWB and performance is quite consistent across contexts, with minimal moderator influence.

4.2. Qualitative Analysis

Following the quantitative data analysis, qualitative analysis was conducted by examining the results of Focus Group Discussions (FGD) concerning the researched variables: Technology Readiness, Work Motivation, Subjective Well-Being, Work Ethic (as a moderating variable), and Performance. The findings were categorized into five main themes, as presented in Table 5.

Table 5.
Thematic Analysis Results.

Theme	FGD Subthemes & Explanations	Triangulation with Quantitative Results
Technology Readiness (TR)	<ul style="list-style-type: none"> Generational Gap: Younger lecturers adapt more easily to digital applications, while senior lecturers struggle with basic devices. Institutional support: Training and campus facilities are considered determining factors for technology readiness. Adaptation Ease: Technology is perceived to accelerate administrative tasks. 	H1 rejected (TR → Performance not significant), but H2 and H3 accepted (TR → MOT, TR → SWB). FGD results reinforce that TR does not directly affect performance but contributes through motivation and well-being.
Work Motivation (MOT)	<ul style="list-style-type: none"> Intrinsic motivation: stems from dedication, personal satisfaction, and self-actualization. Extrinsic motivation: derived from incentives, awards, and facilities. Technology as a motivation trigger: Technology assists with workload reports and student interactions, thereby boosting work enthusiasm. 	H4 and H6 are accepted (MOT → Performance, TR → MOT → Performance). FGD confirms that motivation grows from a combination of personal factors and technological support, strengthening quantitative results.
Subjective Well-Being (SWB)	<ul style="list-style-type: none"> Stress reduction through technology: lecturers feel assisted and calmer when applications speed up administrative work. Technical obstacles as stressors: Some lecturers mentioned stress when applications error or are not user-friendly. Teaching Satisfaction: Positive interactions with students enhance happiness and life balance. 	H5 and H7 are accepted (SWB → Performance, TR → SWB → Performance). FGD shows SWB as an important mediator: well-being increases when technology supports rather than hinders.
Work Ethic (WE)	<ul style="list-style-type: none"> Discipline and Responsibility Values: The Majority of lecturers emphasize the importance of commitment and integrity in Tridharma. Work Ethic without Digital Competence: A High work ethic does not always lead to performance improvement if not accompanied by digital skills. Work Ethic Strengthens Motivation: Some respondents felt their motivation was more consistent due to strong work ethic support. 	H8 and H10 are rejected, H9 is accepted. This indicates that WE does not moderate TR → Performance nor SWB → Performance, but moderates MOT → Performance. FGD shows that work ethic is effective only when aligned with motivation and digital skills.
Performance (PFR)	<ul style="list-style-type: none"> Performance Improvement through Synergy: Lecturers assess that performance increases when TR, motivation, and SWB work together. Stagnation without Technological Support: Work ethic without digital mastery is considered insufficient to enhance productivity. Performance Success Indicators: Publications, the effectiveness of online teaching, and Tridharma achievement are mentioned as main benchmarks. 	Supports quantitative results that the main significant paths originate from MOT and SWB, while TR only has indirect effects. FGD confirms that optimal performance is achieved through a combination of technological readiness and psychological factors.

Thematic analysis of FGD data with 10 senior lecturers revealed five major themes that provided rich contextual understanding:

- **Technology Readiness (TR):** FGD revealed that the generational gap is a significant issue: younger lecturers quickly adapt to new technologies, while senior lecturers sometimes still struggle with basic devices. Institutional support through training and facility provision becomes a crucial factor for achieving technological readiness. Additionally, respondents mentioned that when technology facilitates administrative tasks, adaptation becomes smoother. These findings align with Fernández et al. [25], who emphasized that digital maturity and institutional readiness significantly influence the effectiveness of digital transformation in higher education. Triangulation with quantitative results shows that TR has no direct effect on performance (H1 rejected) but positively affects motivation (H2 accepted) and subjective well-being (H3 accepted), supporting Hamid [5] that TR operates through mediation mechanisms rather than direct effects.
- **Work Motivation (MOT):** In FGD discussions, intrinsic motivation such as dedication, personal satisfaction, and the desire to provide the best teaching were important drivers. On the other hand, extrinsic motivation, incentives, awards, and facilities were also mentioned as strong driving factors. Several lecturers revealed that technology assisting administrative work (e.g., workload reports) serves as an additional motivation trigger. These findings are consistent with Layek et al. [26], who investigated motivation in educational contexts and found significant effects on performance. The results also support Deci and Ryan's [19] Self-Determination Theory regarding the importance of both intrinsic and extrinsic motivation.
- **Subjective Well-Being (SWB):** FGD uncovered two sides of using technology: when systems work well, lecturers feel reduced workload, which enhances psychological well-being; but when technical disruptions or system errors occur, they become new stressors. Additionally, inner satisfaction in the teaching process was mentioned as a positive form of SWB. These findings are consistent with Chen and Li [27], who examined the relationship between technology use, stress, and well-being among university teachers, finding that effective technology use can reduce work stress and enhance well-being. The results also support Gutiérrez et al. [20], a meta-analysis showing the close relationship between well-being and work performance.
- **Work Ethic (WE):** According to FGD participants, values of discipline, responsibility, and commitment are highly upheld in the campus environment. However, they also acknowledged that work ethic alone is insufficient if not accompanied by technological competence: one can have high ethics, but without mastering technology, performance remains limited. Some lecturers expressed that a work ethic strengthens their motivation to remain unwavering. These findings align with Zhang and Huang [28], who found that work ethic moderates the relationship between motivation and performance under certain conditions.
- **Performance (PFR):** FGD discussions confirmed that the best performance occurs when technological readiness, work motivation, and subjective well-being work synergistically. Lecturers mentioned that without adequate technological support, a high work ethic alone is insufficient to achieve optimal productivity. The most frequently mentioned success indicators were scientific publications, the effectiveness of online teaching, and Tridharma achievement. These findings support Salgado and Moscoso's [29] meta-analysis, confirming psychological well-being as a consistent predictor of performance across professional contexts, and Wright and Cropanzano [23], who demonstrated that well-being and job satisfaction are important performance predictors.

4.3. Integration of Research Findings

This study reveals a complex interplay between technological, psychological, and personal factors in determining lecturer performance. The quantitative analysis demonstrates that Technology Readiness (TR) does not directly enhance performance ($\beta = -0.105$, $p = 0.159$) but operates through psychological mechanisms by significantly boosting Work Motivation ($\beta = 0.400$, $p < 0.001$) and Subjective Well-Being ($\beta = 0.290$, $p = 0.002$). Both Work Motivation ($\beta = 0.217$, $p = 0.008$) and Subjective Well-Being

($\beta = 0.294$, $p < 0.001$) emerge as strong direct predictors of performance, with Subjective Well-Being being the strongest among all independent variables.

The mediation analysis confirms that Work Motivation ($\beta = 0.087$, $p = 0.031$) and Subjective Well-Being ($\beta = 0.085$, $p = 0.017$) serve as significant pathways through which Technology Readiness indirectly influences performance. Work Ethic shows limited moderating effects, only significantly influencing the relationship between Work Motivation and Performance ($\beta = -0.186$, $p = 0.025$), indicating a paradoxical weakening effect where strong work ethics diminish the positive impact of motivation on performance.

Qualitative findings provide crucial context to these statistical relationships. FGD results reveal a generational digital divide, with younger lecturers adapting more readily to digital tools while senior colleagues face fundamental challenges. Institutional support through training and facilities emerges as a critical enabler for effective technology integration. Participants describe technology as a double-edged sword, reducing stress when functioning properly but creating new stressors during technical failures. Work ethic is valued but deemed insufficient without corresponding digital competence, and optimal performance is perceived as requiring synergy between technological readiness, motivation, and psychological well-being.

The integration of quantitative and qualitative evidence presents a coherent narrative: technological factors provide the necessary infrastructure, but psychological factors (motivation and well-being) serve as the primary drivers that translate technological readiness into performance outcomes, with work ethic playing a contingent rather than fundamental role.

5. Conclusion

Based on the analysis and research findings, this study concludes the following regarding its objectives:

1. Direct Effect of Technology Readiness on Performance: Technology Readiness (TR) does not have a significant direct effect on lecturer performance ($\beta = -0.105$; $p = 0.159$). Therefore, the first research objective, which proposed a direct effect of TR on performance, is not supported. This indicates that an individual's technological readiness does not automatically translate into improved performance without other supporting factors.
2. Mediating Roles of Work Motivation and Subjective Well-Being: Technology Readiness has a significant positive effect on both Work Motivation (MOT) ($\beta = 0.400$; $p < 0.001$) and Subjective Well-Being (SWB) ($\beta = 0.290$; $p = 0.002$). In turn, both MOT ($\beta = 0.217$; $p = 0.008$) and SWB ($\beta = 0.294$; $p < 0.001$) are significant direct predictors of performance. Mediation analysis confirms that MOT ($\beta = 0.087$; $p = 0.031$) and SWB ($\beta = 0.085$; $p = 0.017$) serve as significant mediating mechanisms in the relationship between TR and performance. This fulfills the second research objective, demonstrating that TR improves performance indirectly by first enhancing work motivation and psychological well-being.
3. Moderating Effect of Work Ethic: Work Ethic (WE) does not moderate the relationship between TR and performance ($\beta = 0.022$; $p = 0.711$) or between SWB and performance ($\beta = 0.029$; $p = 0.677$). However, WE significantly and negatively moderates the relationship between MOT and performance ($\beta = -0.186$; $p = 0.025$). This addresses the third research objective, revealing the work ethic's complex role as a moderator. Contrary to conventional expectations, a strong work ethic can paradoxically weaken the positive impact of motivation on performance, potentially due to resulting pressure or rigidity.

In summary, the proposed conditional process model effectively explains the mechanisms linking technology readiness to lecturer performance. Lecturer performance in the digital era is driven more by psychological factors (work motivation and subjective well-being) than by technology readiness itself. Consequently, lecturer development strategies should integrate reliable technological support with initiatives that foster intrinsic motivation, psychological well-being, and an adaptive work ethic.

6. Discussion

The non-significant direct effect of Technology Readiness on performance aligns with emerging evidence that technological interventions alone rarely yield expected performance gains without supporting psychological factors. This finding challenges the technological determinism perspective and supports the Job Demands-Resources model, which emphasizes that technological resources only enhance performance when they adequately support psychological needs.

The strong mediating roles of Work Motivation and Subjective Well-Being underscore the importance of psychological mechanisms in the technology-performance relationship. This suggests that digital transformation initiatives must prioritize user psychological experience alongside technical implementation. The stronger effect of Subjective Well-Being compared to Work Motivation highlights the emotional and psychological demands of academic work, where reduced stress and enhanced well-being may be particularly crucial for performance.

The negative moderating effect of work ethic on the motivation-performance relationship presents a significant theoretical contribution. This "over-commitment paradox" suggests that strong work ethics, when combined with high motivation, may lead to resource depletion or excessive self-imposed pressure that diminishes performance returns. This aligns with the conservation of resources theory and highlights the need for sustainable work practices in academic settings.

The integrated findings from both quantitative and qualitative methods provide a comprehensive understanding of the human dimension of digital transformation in higher education. The generational differences in technology adaptation emphasize the need for differentiated support strategies, while the institutional support requirements highlight the organizational responsibility in facilitating successful digital integration.

These findings have important implications for both theory and practice. Theoretically, they contribute to a more nuanced understanding of the human-technology interface in educational contexts. Practically, they provide evidence-based guidance for developing more effective digital transformation strategies that address both technological and human factors simultaneously.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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