# EXPLORING THE DYNAMICS OF WORK SATISFACTION AND INNOVATION AMONG YOUNG LECTURERS IN POST-PANDEMIC INDONESIA

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### **ABSTRACT**

Introduction/Main Objectives: This study purposes to investigate the complex relationship among work autonomy, work crafting, work satisfaction, and innovative work behaviour. Background Problems: How autonomy, crafting, and work satisfaction relate and, more collectively, affect young lecturers' innovative work behaviours within the shifting educational circumstances in Indonesia is a major concern. **Novelty:** This research has groundbreaking importance because it applies the self-determination theory to this particular academic context of Indonesia. It emphasises the impact of cultural variations on the motivation and behaviour of young lecturers. It offers an innovative perspective on how young lecturers may be innovative and adaptable in the face of pedagogical and technical changes that are occurring at a fast rate. Research Methods: The study uses a mixed method approach in which 382 young lecturers from state universities in Indonesia participate in surveys, in-depth interviews, and participatory observations. By using structural equation modelling (SEM) by Lisrel and systematically coded by NVIVO, it becomes possible to analyse the complex interrelationships between the variables. **Finding/Result:** Work crafting on work satisfaction and work satisfaction on innovative behaviour has a significant positive impact. In contrast, work autonomy has no significant influence on lecturer work satisfaction. Excessive autonomy and interference without assistance will lower lecturer work satisfaction. In a dynamic educational environment, encouraging young lecturers to use creative teaching techniques and having institutional support can boost their creativity. Conclusion: What is brought into sharp focus through this study is the balance of autonomy with adequate support for young lecturers in a world that is rapidly developing in terms of digital education. Thus, pressure exists in universities to ensure young lecturers enjoy convenience in their work and support them to ensure they obtain the institutional support and work tools required in the digital era.

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### **INTRODUCTION**

The global higher education sector faces unprecedented adaptation challenges in the postpandemic era. Post-pandemic, there is the "new normal" phenomenon that forces universities and other educational institutions to adjust quickly in order to adapt to change. On the other hand, universities must face the problems referred to as VUCA (volatility, uncertainty, complexity and ambiguity) in this situation. University performance is affected by rapid change, continuous uncertainty, increasing complexity, ambiguity (Millar et al., 2018). These rapid changes emphasise the need for innovation in universities to maintain their competitiveness. Indeed, these conditions accelerate universities' adaptation to the "new normal" (Patiro et al., 2022; Raja et al., 2020; Saether, 2019).

Innovation is becoming increasingly important in higher education, especially in digital learning and new standards of distance education techniques. Young lecturers are critical to establishing and promoting an innovative workplace culture as they are the key academic decision-makers (Hosseini & Shirazi, 2021). However, lecturers often struggle to maintain their innovative spirit due to difficulties adjusting to new teaching techniques and digital technologies, especially in a highly competitive academic atmosphere (Mushtaha et al., 2022).

According to several academic publications, young teachers often struggle to stay motivated to innovate in a rigorous academic environment (Amanda et al., 2021). Their inventive endeavours are often hindered by the diverse demands of teaching, research, and administrative tasks, leaving them with little time and money (Fok et al., 2019). Moreover, introducing advanced technologies such as Advanced Learning Technologies (ALTs) and processes such as peer assessment emphasise the need for young lecturers to adapt and innovate their teaching

methods (Topping, 1998; Creswell & Creswell, 2022).

Under these conditions, young lecturers need substantial institutional support to meet the challenges of developing creative work habits, as emphasised by Lv et al. (2021) and San and Guo (2022). This support can take many forms, including easy access to training, professional skills development, extensive research resources, collaboration opportunities with colleagues, and recognition for innovations (Xu & Suntrayuth, 2022; Yasmin, 2022). This is particularly important as strong institutional support is essential to foster innovation among young lecturers and for the advancement of higher education institutions (Lee et al., 2022; Pahlevan et al., 2021).

Expanding on these ideas, Kurniawan et al.'s (2021) research explores the concepts of equity and engagement in the context of government employees who exhibit different patterns of behaviour to other employee groups. The research highlights that, like government employees who are often in a 'comfort zone' and face challenges in developing competencies, young lecturers need institutional support to foster and encourage innovative work behaviours (Kurniawan et al., 2021).

This perspective enriches the understanding that internal personal traits and institutional dynamics can significantly influence innovative behaviour in higher education settings, thus offering a unique perspective that differs from previous research in this field. According to the self-determination theory, people face a variety of motivational issues ranging from controlled features to autonomous features when trying to create and think creatively (Zhang et al., 2021; Saether, 2019). Attractive motives, such as work autonomy, work crafting, and work satisfaction, can stimulate individual creativity and inventive task-solving behaviours (Saether, 2019).

According to previous empirical research, high levels of work autonomy have been shown to increase young lecturers' intrinsic incentives to innovate (Suhandiah, 2023).

However, they often work under time and budget constraints that prevent them from being creative (Ahmad et al., 2023). Therefore, for the best innovation, the management of work autonomy should be good and balanced (Qi et al., 2021; Fok et al., 2019). Thanks to work autonomy, young lecturers have the freedom and duty to explore new ideas in teaching, research, and community service (Karatepe et al., 2023). In addition, effective work can influence young lecturers' innovative work behaviour. Young lecturers can structure and plan different work activities by using work crafting to better suit their interests and areas of competence (Rudolph et al., 2022; Demerouti & Peeters, 2021).

Work crafting includes work content, relationships with colleagues, and work impresssions (Pradana & Suhariadi, 2020). Young lecturers who work creatively are more motivated and committed to bringing change and innovation (Tang et al., 2019). They take their work more seriously and work to achieve goals creatively (Jiang et al., 2022). However, young lecturers face various barriers to implementation, including a lack of time, funding, and institutional support from their universities (Feldhammer-Kahr, 2021).

Strong engagement can also encourage young lecturers to engage in innovative work practices. They tend to be more motivated to develop and implement new ideas in their work when they are highly engaged (Moreno et al., 2022; Kosec et al., 2023; Mazzetti et al., 2023). Intense work satisfaction turns workplace obstacles into opportunities to grow as innovators (Amabile & Kramer, 2023; Voordt & Jensen, 2023). In summary, young lecturers' positive impressions of the challenge to continuously innovate in their profession are strongly influenced by their level

of work satisfaction (Kowalski et al., 2022; Hartner-Tiefenthaler, 2023).

In the literature, the question of what most influences innovative work behaviour is still debated (Hartner-Tiefenthaler, 2023; Kowalski et al., 2022; Ahmad et al., 2023; Raja et al., 2020; Shin & Jeung, 2019; Kosec et al., 2023; Mazzettiet al., 2023). There is still no evidence for this, especially regarding the innovative behaviour of young lecturers. Researchers are faced with a dilemma as this suggests a gap in knowledge about the variables that influence innovative behaviour, especially in young lecturers. To analyse the relationship between work autonomy, work crafting, work satisfaction, and innovative work behaviour, a more comprehendsive and in-depth investigation is needed.

The initial concept in this study is the proposal of a model to understand the notion of work autonomy as the degree of independence and accountability in task execution. We will look at work crafting as a proactive method of changing work tasks to achieve goals. Meanwhile, measuring work satisfaction will reveal intrinsic drive and emotional ties to the position. In this context, we offer a new idea to conduct an in-depth investigation through the stages of the study. Firstly, conducting a quantitative study, followed by a qualitative study to deepen the hypothesis findings. The research problem will be answered through the conclusion of the integration of quantitative and qualitative studies. The findings are expected to develop and put into practice creative ideas to improve young lecturers' understanding of innovative behaviour.

### LITERATURE REVIEW

### 1. Self-determination Theory

The self-determination theory (SDT), developed by Deci and Ryan (1985), offers a comprehensive framework for understanding interactions, intrinsic and extrinsic incentives, and their impact

on individual behaviour, as taught in recent research (Zhang et al., 2021; Saether, 2019). At the core of this theory are three basic psychological needs: autonomy, competence, and individual engagement. Autonomy refers to the control or agency individuals feel over their actions, competence encompasses a sense of efficacy and skill, and connectedness indicates a feeling of connectedness with others.

In the context of this study, SDT is used to explain the motivational factors that drive young lecturers to innovate in a competitive academic landscape (Hosseini & Shirazi, 2021;Mushtaha, 2022). For example, autonomy in SDT is very similar to work autonomy in academic settings, which refers to the level of decision-making authority and independence lecturers experience. When lecturers feel greater autonomy, they will be more intrinsically motivated to explore and implement new teaching methodologies and research approaches, as evidenced by recent studies (Suhandiah, 2023; Karatepe et al., 2023).

### 2. Work Autonomy and Work Satisfaction

In exploring the concept of work autonomy in a professional context, autonomy is defined as the degree of independence and personal control one has over oneself (Karatepe et al., 2023). This autonomy allows professionals to determine methods and schedules for completing their tasks, which, in theory, fosters an environment that supports innovation. However, the relationship between work autonomy and its impact on innovative behaviour requires in-depth research. While autonomy can enhance creativity and work initiative, its impact may vary depending on individual and organisational factors such as the nature of the job, the supportive workplace environment, and employee attributes.

Turning to 'work satisfaction', this construct encompasses an individual's emotional response to various work-related aspects and is not limited to the work environment, relationships with coworkers, and income. Based on the SDT, several studies, such as those conducted by Zhang et al. (2021) and Saether (2019), show a positive correlation between work autonomy and work satisfaction. These findings suggest that autonomy contributes to increased professional goals and provisions, mainly due to increased control over work-related tasks. However, this relationship is complex and multifaceted (Negoro & Wibowo, 2021). Referring to this literature review, hypotheses can be proposed:

H1: Workautonomy has a positive effect on work satisfaction.

# 3. Work Crafting and Work Satisfaction

Work crafting, as conceptualised by Rudolph et al. (2022) and Demerouti&Peeters (2021), involves deliberate efforts by individuals to reshape their work, interactions, and perceptions of their roles. This process is designed to align job responsibilities with personal needs, abilities, and aspirations. Rudolph et al. (2022) explain that, work crafting, individuals through can strategically focus on aspects of their jobs that align with their skills and interests, thereby increasing work satisfaction. Specifically, their research reveals how employees who engaged in work crafting reported higher levels of work satisfaction and reduced burnout.

In an academic context, as explored by Song and Jo (2023), young lecturers can significantly benefit from task structuring by tailoring academic tasks to their interests and expertise. This customisation can increase a sense of job belonging and a sense of responsibility. However, their research also warns that excessive work crafting, especially without institutional support, can lead to role ambiguity and work-life balance issues (Oldham & Hackman, 2010). According to Feldhammer-Kahr (2021), there is a positive correlation between work crafting and work

satisfaction in academic settings, given that effective work crafting can create a sense of achievement and personal growth. On the other hand, Tang et al. (2019) provide a more nuanced view, suggesting that while work crafting can increase work satisfaction, it can also lead to unrealistic expectations and job strain if not managed well. Based on these observations, we can propose a hypothesis:

H2: Work crafting has a positive effect on work satisfaction.

# 4. Work Satisfaction and Innovative Work Behaviours

Work satisfaction, which includes factors such as recognition, career development opportunities, and perceptions about one's contribution to the academic institution, critically reveals the level of satisfaction faculty members derive from their professional roles. According to Amabile & Kramer (2023) and Voordt & Jensen (2023), satisfied lecturers tend to exhibit higher levels of intrinsic motivation, which is often reflected in the development of creative ideas and innovative teaching methods. This is further supported by Kowalski et al. (2022) and Hartner-Tiefenthaler (2023) who reveal a clear correlation between work satisfaction and innovative work behaviours, stating that satisfied lecturers are more likely to engage in collaborative efforts, share knowledge, and experiment with new approaches.

However, excessive satisfaction could potentially reduce the drive for continuous improvement or adaptation, as noted in some cases by Tjoa and Arief (2022). Furthermore, Tjoa and Arief (2022) state that. in an environment where satisfaction is mainly driven by external imbalances, such as salary and recognition, intrinsic motivation to innovate may weaken, leading to a decrease in creative ideas. Meanwhile, employees' ability to generate new

creativity is valuable, as organisations need creativity to create new ideas and solutions (Abdillah et al., 2023). Thus, from this literature analysis, we can propose a hypothesis.

H3: Work satisfaction has a positive effect on innovative work behaviour.

### METHOD, DATA, AND ANALYSIS

# 1 Research Design and Context

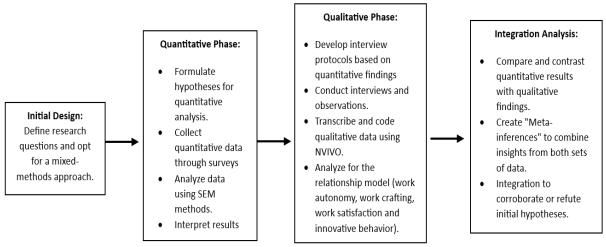
This study used a mixed methods design (see Figure 1), starting with a quantitative investigation into work autonomy, work crafting, work satisfaction, and innovative behaviour among university lecturers in Indonesia's post-pandemic era. The study collected survey data from a sample of 33 public universities (see Table 1) to examine patterns and statistical correlations. The quantitative phase, based on structural equation modelling (SEM) analysis, built an initial understanding of the relationships between the variables of interest.

After that, a qualitative phase added depth and richness to the analysis. Interviews and observations were conducted to explore the practical implications of the statistical findings. The data and information collected were transcribed and coded with NVIVO, and these narratives provided context and nuance that could not be captured through quantitative analysis. Synthesis was conducted using integration analysis, where quantitative patterns were integrated with qualitative findings to present more comprehensive conclusions (Cresswel, 2022).

An amalgamation of data types was analysed to address the complex relationship between work satisfaction and innovation, as detailed in the results section of this study. Through this methodological synergy, this research offers a comprehensive view of how these key factors

influence each other in the context of higher education in Indonesia can be better analysed.

Figure 1. Procedural Diagram of Mixed Methods Study



Sources: Research data (2023)

**Table 1.** The number of respondents by university

Name of University	NoR*	Name of University	NoR*
Universitas Andalas	16	Universitas Negeri Semarang	12
Universitas Bengkulu	9	Universitas Negeri Surabaya	11
Universitas Brawijaya Malang	18	Universitas Negeri Yogyakarta	8
Universitas Halu Oleo	16	Universitas Nusa Cendana	10
Universitas Jember	13	Universitas Pattimura Maluku	12
Universitas Jenderal Soedirman	12	Universitas UPN Veteran Jatim	6
Universitas Khairun	7	Universitas Pendidikan Ganesha	6
Universitas Lampung	15	Universitas Riau	14
Universitas Mataram	13	Universitas Sam Ratulangi	16
Universitas Mulawarman	12	Universitas Sriwijaya	15
Samarinda			
Universitas Negeri Gorontalo	8	Universitas Sultan Ageng Tirtayasa	9
Universitas Negeri Jakarta	13	Universitas Syiah Kuala	18
Universitas Negeri Jambi	8	Universitas Tadulako	12
Universitas Negeri Makassar	10	Universitas Tanjung Pura	10
Universitas Negeri Malang	9	Universitas Terbuka	8
Universitas Negeri Medan	7	Universitas Udayana	18
Universitas Negeri Padang	11	<b>Total research respondents</b>	382

NoR\*: Number of Respondents Source: Research Results (2023)

### 2. Research Participants

In this study, analyses were conducted quantitatively, with data obtained from 382 young lecturers in 33 public universities across Indonesia as respondents. Participant recruitment was conducted through convenience sampling, a method that, despite its weaknesses in capturing the full spectrum of young lecturer demographics, was deemed appropriate given the specific research objectives and limited resources, as corroborated by Etikan et al. (2016).

Table 2, presented above, describes the demographic profile of respondents and groups them based on gender, academic rank, highest educational attainment, and work experience. This comprehensive tabulation underscores this study's commitment to gaining an in-depth understanding of participants' demographic attributes. This report provides insight into the diversity of academic qualifications and rankings among respondents, allowing for a thorough analysis of how these variables potentially impact lecturers' work satisfaction and innovation work behaviour. Additionally, the spread of work experiences across groups underscores the broad spectrum of professional insights, thereby

increasing the validity and richness of this study's findings.

### 3. Data Collection

### **Questionnaire**

The robust data collection protocol followed during the study through questionnaires in Appendix 2 has been validated in a previous study (Alvarado et al., 2016). The questionnaire was designed with the main constructs in mind: work autonomy, work crafting, work satisfaction, and innovative work behaviour. Each construct was operationalised through a number of statements. Participants were asked to indicate their level of agreement with each statement in questionnaire through a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Then, the questionnaire was delivered online; the link to the questionnaire was provided through WhatsApp groups and emails.

To ensure clarity and prevent response bias, instructions were provided in the form of written explanations on the questionnaire form and provisions to contact the researcher if any further clarification was needed. The questionnaire was constructed to include both positive and negative questions to avoid consent bias.

1 to 5 Gender Academic Rank **Education** Above 5 YoE Total YoE\* 8 9 Doctor 1 Instructor 71 45 Master 116 Male 2 21 23 Doctor Assistant Professor Master 22 22 1 5 Doctor 6 Instructor 85 65 150 Master Female 3 13 16 Doctor Assistant Professor Master 1 39 40 164 218 382 YoE: Years of Experience Grand Total

**Table 2.** The Demographics of the Respondents

Source: Research Results (2023)

### In-depth interviews

In-depth interviews were combined with a questionnaire to get richer qualitative data on the phenomena experienced by a purposefully selected group of participants. Semi-structured interviews were used in a way where topics that became important during the stage of the survey could be further explored. These were developed from the conceptual framework to derive as much information as possible from the experiences, motivations, and challenges associated with work autonomy, work crafting, work satisfaction, and innovative work behaviour. The interview question items can be found in Appendix 3 of this paper.

### **Observation**

To complement the interviews, participant observation was conducted in various classrooms. These observations conducted were systematically in classes led by lecturers from the sample group, with the specific aim of observing firsthand the implementation of innovative teaching methodologies and the dynamics of interaction between lecturers and students. The study's observation protocol, based Kawulich's (2005) methodological guidelines, required detailed note-taking and focused on several key aspects: teaching methodology, lecturer-student interaction, and classroom dynamics.

The collected data were then transcribed and thematically analysed, involving the coding of recurring themes, patterns, and insights aligned with the innovative teaching behaviours of interest. Through this rigorous process, the study synthesised the qualitative data with the survey findings to form a holistic picture of the current state of innovative teaching among young lecturers in Indonesia.

# 4. Data Analysis

### Quantitative Analysis

In the quantitative analysis, we used the SEM approach with the help of Lisrel 8.8 software. This sophisticated statistical approach allows the exploration and confirmation of complex relationships between variables. This method is highly effective in understanding the interactions among constructs such as work autonomy, work crafting, work satisfaction, and innovative work behaviour. It offers a means to validate the theoretical framework proposed in our study. By fitting the proposed model to the empirical data, SEM provides a comprehensive view of the underlying structure of the data (Joreskog & Sorbom, 1996).

The SEM process is executed through different steps, starting with the model specification, which sets out the expected relationships, followed by identification to ensure the model is statistically solvable. The estimation stage involves calculating the best-fit model parameters, followed by evaluating the model fit through indices such as RMSEA and CFI. If necessary, the model is re-specified to improve fit, with the final model fit interpreted to explain the nature and strength of the hypothesised relationships.

### Qualitative Analysis

In the qualitative aspect of our research, we used careful thematic analysis to sift through the transcribed interviews and observations, looking for recurring motifs and narratives that explain the intricacies of innovative teaching post-pandemic. Using NVIVO 14 software to manage our data, we systematically coded the interviews, distilling the essence of the experiences, challenges and support mechanisms reported by the faculty members. These thematic explorations, structured around Bryman's (2012) interview protocol, uncovered the diverse

realities faced by academics, enriching the research narrative with their firsthand accounts. The qualitative findings, deeply interwoven with the quantitative data, present a layered understanding of lecturer behaviour and are crucial in evaluating the practicality of theoretical constructs in Indonesian higher education.

NVIVO's structured approach simplified the organisation and analysis of observational and interview data, enabling the identification and alignment of themes with the study's core concepts: work autonomy, work crafting, work satisfaction, and innovative work behaviour. The analytical rigour provided by NVIVO supported the creation of a nuanced portrait of young lecturers' professional lives, offering comprehensive insights. The integration of this qualitative depth complements the quantitative phase, promising a significant contribution to the educational innovation literature, as evidenced by the carefully crafted tool included in Appendix 3, which operationalises the main constructs of this study.

### 5. Instrument Validation

In developing the research instrument, we carefully utilised 38 indicators across dimensions, which are the thoroughly detailed operational variables in Appendix 1. Drawn from the theoretical framework of the SDT by Gagne et al. (2022), these indicators were carefully selected to capture the essence of motivation and work intention. In addition, empirical insights from Pelikan et al. (2021) inform the adaptation of these indicators to the unique contours of communities, online learning particularly relevant in the post-pandemic educational landscape.

To evaluate the validity and reliability of our instrument, an initial test was conducted with a sample of respondents. This step is crucial to ensure that the instrument measures what it intends to measure consistently and accurately.

Adjustments were made iteratively based on initial feedback, fine-tuning the instrument to achieve precision and reliability.

For the qualitative aspects of our research, we followed the same rigorous standards. The qualitative instruments underwent a validation process involving expert review and piloting to ensure that the questions asked were interpretively relevant (in Appendix 3) and could generate rich and meaningful data related to the professional development needs highlighted by Dubord et al. (2022). This approach was crucial to ensure that the qualitative methods we used reflected the context and were able to capture the different experiences of young lecturers in Indonesia. The strength of this qualitative tool lies in its ability to plumb the depths of academic and practical application, offering a holistic view of the phenomenon under study.

### **RESULT**

### 1. Quantitative Result

# Model Fit Testing

Model fit tests determined how closely the suggested model matched the collected data. In SEM analysis, this stage is crucial since it establishes whether the model accurately illustrates the relationships between variables(see Table 3).

The chi-square was utilised in this investigation to quantify the discrepancy between the observed and model-predicted data. There is a discrepancy between the actual and expected data, as indicated by the minimum-fit function chi-square value of 314.52. However, sample size and degree of freedom should be taken into consideration. The normal theory weighted least squares chi-square value provides additional details regarding the model's fit. The RMSEA (root mean square error of approximation) score of 0.019 indicates a great model fit with the data.

<b>Table 3.</b> Model Fit Testing Results
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Indicator	Critical Value	Estimated Value	Conclusion
Chi-Square	Lower is better	314.52	The model has differences but requires further consideration
RMSEA	< 0.05	0.019	Perfect Fit
CFI	> 0.95	0.96	Perfect Fit
IFI	> 0.95	0.96	Perfect Fit
GFI	> 0.90	0.85	Good Fit
AGFI	> 0.90	0.79	Moderate Fit

Source: Research Results (2023)

When comparing the proposed model to an independent model, the relative fit indices CFI and IFI values indicate how well the suggested model matches. With values of 0.96, both indices show excellent model fit compared to the independent model. The GFI (goodness of fit index) value of 0.85 indicates a good model fit with the observed data. Given the degrees of freedom, the AGFI (adjusted goodness of match index) score of 0.79 suggests a respectable fit. The model suggested in this study fits the data well, according to the goodness of fit test results. The results of fit indices, including RMSEA, CFI, IFI, and GFI, are all favourable. A good model fit means that the variables' connections match the data and that the model's structures accurately describe the studied phenomenon.

### Structural Model Testing

The SEM analysis provided by Lisrel, as illustrated in Figure 2, revealed different relationships between work autonomy, work crafting, and work satisfaction. In particular, the negative regression coefficient of 0.13 for the relationship between work autonomy and work satisfaction implies that an increase in autonomy is associated with a slight decrease in satisfaction. This could be due to the nature of too much autonomy, where a structured environment may

be more conducive to satisfaction among young lecturers.

A different finding on work crafting emerged as a significant enhancer of work satisfaction. With a positive regression coefficient of 0.69, this result underscores the value of aligning job responsibilities with personal interests and expertise, which significantly increases satisfaction levels. This is in line with the findings in Table 4, which highlight the benefits of customised job roles.

Furthermore, positive the regression coefficient of 0.72 between work satisfaction and innovative work behaviour suggests a strong relationship: as lecturers' satisfaction with their jobs increases, so does their propensity to innovate (Yudiatmaja et al., 2023). This is particularly important for younger lecturers, indicating that work satisfaction is a strong predictor of engaging in innovative and creative work practices. The coefficient of determination (R2) test result of 0.89 for the work satisfaction variable indicates a high level of variance explained by its predictors. Meanwhile, the innovative work behaviour model has an R2 of 0.72, indicating that the model's independent variables can explain 72% of the variability in innovative behaviour.

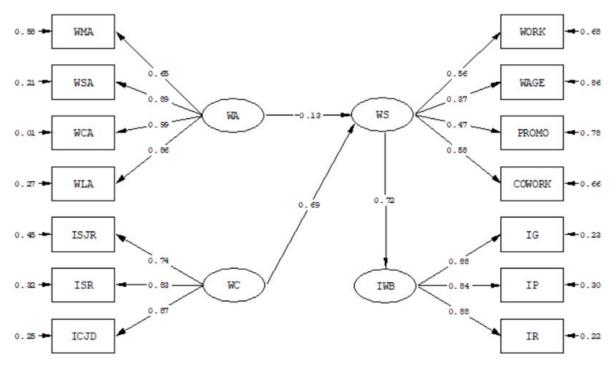


Figure 2. Structural Research Model

Chi-Square=475.74, df=74, P-value=0.00000, RMSEA=0.019

Source: Lisrel Result (2023)

**Table 4.** Results of Hypothesis Testing

No	Hypothesis	Beta Coefficient	$\mathbb{R}^2$	T-Value	Conclusion
1	Work Autonomy → Work Satisfaction	-0.13	0.00	-3.42 Reje	
2	Work Crafting → Work Satisfaction	0.69	0.89	11.09	Accepted
3	Work Satisfaction → Innovative Work Behaviours	0.72	0.72	11.98	Accepted

Source: Research Findings (2023)

Based on Table 4, path coefficients were used in the study to analyse the interrelationships between the variables. These coefficients reveal the significance and direction of the relationship between the independent and dependent variables, often known as beta coefficients. The tvalue is an important metric that determines the statistical significance of the route coefficient. According to conventional wisdom, a relationship is statistically significant if the t-value is more than 1.96, with a 95% confidence level, or if coefficients are significant at the p-value of 0.05 (Pangarso et al., 2022).

### 2. Qualitative Result

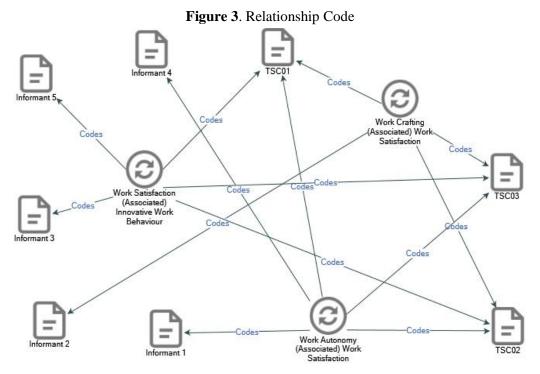
The NVIVO diagram (Figure 3) skilfully illustrates the complexity of the qualitative insights gathered from the in-depth interviews. The diagram maps how thematic codes derived from each participant's dialogue intertwine with the larger conceptual framework. Informant 1's narrative is interwoven with the theme of Autonomy and Work Satisfaction, explaining the potential for autonomy to increase work satisfaction. Meanwhile, Informant 2's narrative offers an alternative perspective on this interaction, which enriches our understanding of

these themes. Informant 3's contribution relates to Innovative Work Behaviour, echoing the sentiment that satisfaction in one's job can foster innovation. Informant 4 provides a diverse perspective, bridging work autonomy, satisfaction, and innovative behaviour, thus providing an integrative insight into these dynamics.

This NVIVO network map succinctly visualises the intricate relationships between informant interviews and the main themes of the study, coupled with observational data from the field transcripts labelled TSC01, TSC02 and TSC03. The map shows how each informant's experiences and observations contribute to our understanding of work autonomy, work crafting, satisfaction work and innovative behaviours. For example, Informant 5's input, related to work autonomy and innovative behaviour, suggests that autonomy may play an important role in driving innovation. Field observations further enriched this narrative, providing an empirical foundation for the thematic constructs. Collectively, these NVIVO-

generated schemas serve as a methodical framework that organises complex qualitative data into a coherent structure, highlighting the diverse relationships inherent to workplace dynamics and providing a clear visualisation of the depth and interconnectedness of the data.

Furthermore, by code references in Appendix 4, insights drawn from Table 5, "Meta-inference: Reinforcement and Confirmation", provide a clear narrative of how certain workplace factors interact. Firstly, while the ability to organise your schedule may seem beneficial, it turns out that without the right support, it can leave employees like Informant 1 feeling alone and stressed. Similarly, Informant 4 shows us that enthusiasm alone is not enough; without the necessary resources, the freedom to make decisions does not always result in satisfaction. On a more positive note, Informant 2's experience shows that when employees have the opportunity to shape their work to suit their interests, their work satisfaction increases.



Source: NVIVO Result (2023)

Table 5. Meta-inferences: Corroboration and Confirmation

### No Hypotheses Representative Evidence H1 Work Autonomy → Work -"...Although I relish the freedom to organise my schedule, I often find Satisfaction myself feeling isolated and overwhelmed due to the lack of adequate support from the university".(*Informant 1*). "...Despite my enthusiasm for integrating technology into lectures, I am often limited by a lack of resources and time".(Informant 4). "Indicate a classroom environment that supports self-expression and perhaps individual initiative, which is an important aspect of work autonomy". (TSC02). H2 Work Crafting → Work "... Tailoring teaching methods and course content to my interests signi-Satisfaction ficantly boosts my engagement and satisfaction with my job". (Informant ".. Through work crafting, I am able to concentrate more on aspects of teaching that I enjoy, which makes me feel more engaged and satisfied". (Informant 2) "To create a memorable learning experience, the lecturer adopted work crafting by organizing the flow of the debate so that all students could be actively involved". (TSC0 3). "... When I feel satisfied and valued, I am more motivated to try new things H3 Work Satisfaction → Innovative Work in my teaching, which I believe can make a positive contribution to my Behaviours students".(*Informant 3*) "... Feeling valued and satisfied with my role naturally drives me to seek and apply innovative teaching practices".(Informant 5). "Deeper insights into the teaching methods used, such as the use of tech**nology in teaching, pedagogical approaches**, and classroom interactions and discussions that stimulate students' critical thinking and creativity, are required". (TSC01).

Notes: TSC  $\rightarrow$  Observation Transcript

Source: NVIVO result (2023)

Finally, there was a clear link between feeling happy at work and being innovative for Informants 3 and 5. They said that when they feel valued and happy with their work, they are more likely to find new and better ways of doing things. This relationship highlights how work satisfaction can be a powerful driver for creativity and innovation in the workplace.

# 3. Merging of both Quantitative and Qualitative Results

The results of the consolidated analysis, shown in Table 6, provide a comparative summary of the findings from the quantitative (QUAN) and qualitative (QUAL) analyses on the effects of work autonomy and work crafting on work satisfaction, and the impact of work satisfaction on innovative work behaviour.

Table 6. Comparative Summary of Quantitative and Qualitative Analysis

No	Hypotheses	QUAN	QUAL	Result	<b>Integrated Conclusion</b>
1	Work Autonomy → Work Satisfaction	✓	✓	Negative	Strongly Supported
2	Work Crafting → Work Satisfaction	✓	✓	Positive	Strongly Supported
3	Work Satisfaction → Innovative Work Behaviours	✓	✓	Positive	Strongly Supported

Source: NVIVO result (2023)

The columns labelled "QUAN" and "QUAL" indicate whether the respective analysis approaches support each hypothesis. integration shows two examples where there is consensus between the two methods: Work crafting positively affects work satisfaction, and work satisfaction facilitates innovative work behaviour, both of which are strongly supported. Although relationship between work the autonomy and work satisfaction discrepancies with the hypotheses, it supported the results of the quantitative analysis, which showed that work crafting had a negative impact on the work satisfaction of young lecturers due to certain conditions they experienced. These findings emphasise the importance of a mixed methods approach in research to achieve a comprehensive understanding of the dynamics under study.

# **DISCUSSION**

# Influence of Work Autonomy on Work Satisfaction

The quantitative phase showed that young lecturers highly value autonomy in their academic role. This autonomy includes the development of course plans, the selection of teaching methods, and the organisation of schedules. The findings indicate that this autonomy is an important factor in fostering creativity and adaptation in teaching methods, especially in the context of preserving distance or hybrid teaching models. The appeal of autonomy without a physical classroom, the freedom to determine working hours, and the utilisation of various online tools initially seemed promising. The findings of this study, in line with concerns raised by Hartner-Tiefenthaler (2023), identify emerging challenges. The lack of informal exchanges and face-to-face interactions in the virtual environment may create a feeling of protectiveness among lecturers.

Building on insights from Woelert et al. (2021), this study further observed that autonomy in academic environments can, in some cases, be quite tedious. Being responsible for creating online content and managing virtual classes, as mentioned in Hansen and Gray's (2018) work, can extend working hours and define the boundaries between professional and personal Compared to the findings of Lee et al. (2022), who reported similar challenges in higher education in other regions, this study provides a unique perspective on the academic context in Indonesia. While autonomy facilitates freedom and innovation, it requires higher levels of accountability and self-discipline, as suggested by Pahlevan et al. (2021). This study supports the idea that universities, in their rapid adaptation to new teaching modalities, may be overlooking the challenges faced by lecturers.

The need for a balanced approach becomes line with Weru's clear. In (2023)recommendations, this study maintains a solid and autonomous supportive integration system. Initiatives such as mentoring programmes, regular virtual meetings, and training sessions can help maintain connectivity and support between lecturers. In conclusion, this research underscores the importance of a balanced approach in the ever-evolving higher education landscape. This research highlights the need for autonomy with adequate system support, in line with broader findings in the field by Aberbach and Christensen (2018).

The quantitative findings above were confirmed at the qualitative analysis stage. Confirmation was based on comprehensive interviews and field observation, revealing that young academics strongly desire autonomy in lesson planning and selection of teaching methods. However, some respondents indicated that excessive autonomy, without adequate support, can lead to challenges, such as

difficulties in managing increased workloads and reduced informal interaction with colleagues. This finding corresponds with a direct statement from Informant 1: "...Although I enjoy the freedom to organise my schedule, I often feel isolated and overwhelmed due to the lack of adequate support from the university...".

This qualitative analysis corroborates the quantitative findings, highlighting the need for a balanced approach between granting autonomy and providing adequate support to young academics. This underscores the importance of a strong support system to fully harness the potential of autonomy to increase work satisfaction and encourage innovative behaviour in an evolving academic environment. The quantitative findings are not contradicted by Informant 4's direct statement: "...Although I am very enthusiastic about integrating technology into my lectures, I am often limited by lack of resources and time...". This finding complements the quantitative analysis, which suggests that while work autonomy has the potential to increase work satisfaction, resource limitations can be a major barrier to the implementation of innovation.

# Influence of Work Crafting on Work Satisfaction

Based on quantitative analysis, the concept of work crafting has emerged as a fundamental practice in an ever-evolving academic landscape characterised by rapid technological advances and customisable teaching methodologies. As noted by Demerouti and Peeters (2021), work crafting involves more than simply adapting to change. It also includes employees' proactive efforts to shape and redefine their job roles to align with students' evolving skills, interests, and needs.

Crafting for them could mean utilising digital technologies to develop abstract concepts,

as described by Michael et al. (2020), who explore the integration of virtual reality and augmented reality in the classroom. It could involve interdisciplinary collaboration, such as history lecturers working with technologists to offer digital narrative learning about historical events, a concept supported by Peñalba et al.'s (2020) findings. This alternative can be a feedback loop where student input is actively gathered and incorporated, thus increasing the relevance of and engagement in the course, as suggested by Hui et al. (2021).

However, lecturers are not solely responsible for fostering an environment conducive to work. The role of the university is also crucial. Institutions can create environment that supports the work process by providing the necessary technological tools, facilitating interactions between disciplines, and creating spaces for continuous feedback, as stated by Michael et al. (2020). This approach allows teachers to adapt and lead in academic innovation, as discussed by Dan (2020).

The quantitative findings were further confirmed through qualitative analysis. In-depth interviews with informants revealed that young academics highly value the ability to customise their work to suit personal interests and competencies, which significantly increases their work satisfaction. This finding is consistent with Informant 2's direct statement: "... Through work crafting, I can concentrate more on the aspects of teaching that I enjoy, which makes me feel more engaged and satisfied...". This finding confirms the importance of work crafting as a tool to increase work satisfaction, which supports the quantitative results of this study. Informant 3's statement reinforces this finding, "...Institutional support is crucial in the exploration of new teaching methodologies, encouraging me to innovate beyond traditional boundaries...".

This discussion highlights the importance of providing young academics with opportunities to customise their tasks and roles, which not only increases work satisfaction but also has the potential to encourage innovation in teaching. This finding was stated directly by Informant 2, who said: "...customising teaching methods and course content to my interests significantly increased my engagement and satisfaction with my work...". This statement indicates that the freedom to tailor aspects of work to personal preferences can increase motivation and work satisfaction, in line with the quantitative findings.

# **Influence of Work Satisfaction on Innovative Work Behaviour**

The quantitative analysis stage showed that work satisfaction emerged as an important element influencing the capacity to innovate within the academic framework. The correlation between work satisfaction and innovative work behaviour capabilities highlights that lecturers are more likely to take risks and champion innovative ideas when their work environment is satisfying.

According to Klaic et al. (2020), universities can benefit greatly by intensifying efforts to improve employee satisfaction. However, to expand on this discussion, research conducted by Pahlevan et al. (2021) explains that these efforts should include more than just conventional efforts. They suggest that universities need to provide comprehensive professional development opportunities and establish strong mentoring programmes. These initiatives, coupled with recognition and rewards for innovative efforts, can encourage faculty creativity. The impact of this strategy is multifaceted. As explored by Lee et al. (2022), it can lead to the adoption of teaching methodologies by stimulating interdisciplinary collaboration and then offering good academic

implementation that can enrich innovative ideas (Khan et al., 2021).

The quantitative findings were further validated at the qualitative analysis stage, based on the experiences of the academics interviewed, suggesting that work satisfaction goes beyond fulfilling basic needs but also includes feeling valued and supported in the exploration of new teaching methods. This fact was stated directly by Informant 3: "... When I feel satisfied and valued, I am more motivated to try new things in teaching, which I believe can make a positive contribution to my students...". This observation suggests that the internal drive to innovate often stems from high levels of work satisfaction, which reinforces the quantitative finding that there is a positive correlation between work satisfaction and innovative work behaviour. This conclusion is further reinforced by Informant 5's statement: "... .Feeling valued and satisfied with my role naturally encourages me to seek out and implement innovative teaching practices, ...". It can thus be believed that the positive relationship between work satisfaction and innovative work behaviour identified in the quantitative analysis is not contradicted by the qualitative findings.

# IMPLICATIONS AND LIMITATIONS OF THE STUDY

### **Research Implications**

The findings from our research provide nuanced theoretical and practical implications for the academic sector. Theoretically, while SDT suggests that work autonomy is a motivational driver, our research shows that in the Indonesian academic context, citing a cautionary note from Hartner-Tiefenthaler, autonomy can sometimes feel overwhelming if there are no appropriate support structures in place. This complements Gagne and Deci (2005) call to further examine the realisation of autonomy, as excessive autonomy without adequate support may not always be

beneficial, an observation also supported by Lee et al. (2022) and Woelert et al. (2021). Moreover, our study is in line with Wrzesniewski and Dutton's (2001) theory of work role adjustment, as seen in the increased work satisfaction of a lecturer in Yogyakarta who adapted his teaching to the diversity of students. The influence of cultural dimensions, in line with Hofstede's (1980), is also evident, underlining how cultural context can shape perceptions of autonomy and work crafting, a concept further explored by Weru (2023).

Practically, this research suggests that a balance between autonomy and structured support is crucial. Amidst the digital shift in education, lecturers must remain agile and technologically proficient, which requires institutional strategies that encourage innovation and support. Educational institutions are, therefore, tasked with equipping young faculty with the tools and guidance necessary to navigate the complexities of digital education, ensuring their adaptability and growth. By fostering an environment that blends support with autonomy, educational outcomes can be improved, benefiting not only the lecturers but also the students in this digitally transformed landscape.

# **Limitation of Study**

The limitations of this study, while highlighting the complex relationships between work autonomy, work crafting, work satisfaction, and innovative work behaviours among young Indonesian lecturers, must be acknowledged in order to understand its contributions and implications. Firstly, the sampling of this study may not encapsulate the diversity of young lecturers across Indonesia, thus limiting the generalisability of the results. Secondly, although this study used a mixed methods approach, the depth of qualitative exploration could have been expanded to capture more of the nuanced

experiences and perceptions that characterise the professional landscape of lecturers.

While the quantitative data provided a strong basis for understanding general trends, the qualitative data in uncovering the more sensitive aspects of the lecturers' experiences could not be examined in depth. This means that potentially influential variables impacting work satisfaction and innovative behaviour may not have been fully revealed. In addition, the evolving nature of technology and pedagogy requires that these findings be seen as a snapshot of an ongoing development. This study calls for more in-depth research in the future, using quantitative and qualitative methodologies in a balanced manner, to investigate the dynamic interplay of factors affecting young lecturers' professional lives in the face of digital transformation.

### **CONCLUSION**

Departing from the evolving educational paradigm, this study seeks to dissect the interplay between work autonomy, work crafting, and work satisfaction and their collective influence on the innovative behaviour of young Indonesian lecturers. The digital age, paired with the disruptive impact of the pandemic, has pushed higher education into uncharted territory where traditional principles of autonomy must be reevaluated. The findings of this study reveal a nuanced landscape: autonomy, while valued for the flexibility it provides in pedagogy and research, poses challenges for young academics in the face of multiple responsibilities.

The study illuminates the need for a delicate balance between granting autonomy and providing structured support, especially as teaching, research, and community service become increasingly intertwined in the fabric of academic roles. A significant insight was the revelation that cooperation is not only beneficial but also essential for faculty empowerment in a

rapidly changing education sector. When faculty members align their professional activities with intrinsic competencies and interests, their work satisfaction increases, which in turn fuels their willingness to engage in innovative and creative endeavours.

Moreover, this study underscores the strong link between satisfaction and innovation: satisfied lecturers are a harbinger of creativity, challenging the status quo and pioneering new methodologies. Thus, institutions that prioritise the development of such satisfaction, especially by encouraging the creation of work, will foster a culture of innovation. This research contributes to the academic discourse by contextualising these findings in the unique Indonesian context, highlighting the potential of a new wave of dynamic, inventive educators. This research underscores a call to action for higher education institutions: to understand and nurture these dynamics, thereby laying the groundwork for a generation of proactive and imaginative lecturers ready to navigate and shape the future of academia.

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### REFERENCES

- Abdillah, MR., Anita, Rizqa., Nugraha, EA., Suseno, Giri., & Zakaria, NB. (2023). Effect of shared leadership and employees' creativity: meaning at workplace as a mediation. *Journal of Leadership in Organizations*. Vol 5(2), 171 185. DOI:https://doi.org/10.22146/jlo.84309.
- Aberbach, J.D., Christensen, T. (2018). Academic autonomy and freedom under pressure: severely limited, or alive and kicking? *Public Organiz Rev* 18, Vol 18 (1), 487–506. DOI: https://link.springer.com/article/10.1007/s11 115-017-0394-2#citeas.
- Ahmad, I., Gao, Y., Su, F. and Khan, M.K. (2023). Linking ethical leadership to followers' innovative work behaviour in Pakistan: the vital roles of psychological safety and proactive personality. *European Journal of Innovation Management*. 26(3), 755-772. https://doi.org/10.1108/EJIM-11-2020-0464.
- Alvarado, FC., León, MP., Colon, AMO. (2016). Design and validation of a questionnaire to measure research skills: experience with engineering students. *Journal of Technology and Science Education*, vol. 6(3), pp. 219-233. DOI: https://doi.org/10.3926/jotse.227
- Amabile, T. M., & Kramer, S. J. (2023). The progress principle: using small wins to ignite joy, satisfaction, and creativity at work. *Harvard Business Review Press*.
- Amanda Gilbert, Sandi Tait-McCutcheon & Bernadette Knewstubb. (2021). Innovative teaching in higher education: Teachers' perceptions of support and constraint. *Innovations in Education and Teaching International*. 58(2), 123–134. https://doi.org/10.1080/14703297.2020.171 5816.
- Bryman, A. (2012). *Social research methods*. Oxford: Oxford University Press.
- Creswell, John Ward & Creswell, John David. (2022). Research design: qualitative, quantitative, and mixed methods approaches.Six Edtion. Sage
- Dan, Y. (2020). Increasing instructors' teaching innovation: a significant role of leaders in higher education institutions. *Rangsit*

- *Journal of Educational Studies*. Vol 7 (2), 12 23.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behaviours*. New York, NY: Plenum Press.
- Demerouti, E., &Peeters, M. C. (2021). Work crafting: a pathway to new works and careers. In R. Kanfer, G. Chen, & R. D. Pritchard (Eds.), *Workmotivation: Past, present, and future* (pp. 125-152). Routledge.
- Dubord, Gradito M. A., Forest, J., Balčiūnaitė, L. M., Rauen, E., &Jungert, T. (2022). The power of strength-oriented feedback enlightened by self-determination theory: a positive technology-based intervention. *Journal of Happiness Studies*. 23(6), 2827-2848. https://doi.org/10.1007/s10902-022-00524-3.
- Etikan, I., Musa, S. A., &Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5, 1-4. https://doi.org/10.11648/j.ajtas.20160501.11
- Feldhammer-Kahr M, Tulis M, Leen-Thomele E, Dreisiebner S, Macher D, Arendasy M and Paechter M. (2021). It is. Front. Psychol. 12:638898. doi: https://doi.org/10.3389/fpsyg.2021.63889.
- Fok, W. W. T., Wong, H. Y., & Wong, Y. M. (2019). Factors affecting the innovative behaviours of early career academics: evidence from a Chinese university. *International Journal of Innovation and Learning*, 26(2), 220–238.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behaviours*, 26(4), 331-362. doi:10.1002/work.322
- Gagné, M., Parker, S.K., Griffin, M.A. *et al.* (2022). Understanding and shaping the future of work with self-determination theory. *Nat Rev Psychol* 1, 378–392. https://doi.org/10.1038/s44159-022-00056-w.
- Hansen, B.L., & Gray, E. (2018). Creating boundaries within the ubiquitous online classroom. *Journal of Educators Online*. Vol 15 (3), DOI:10.9743/JEO.2018.15.3.2
- Hartner-TiefenthalerM, Mostafa AMS, &Koeszegi ST. (2023). The double-edged

- sword of online access to work tools outside work: The relationship with flexible working, work interrupting nonwork behaviours and work satisfaction. *Front. Public Health* 10:1035989. Doi: https://doi.org/10.3389/fpubh.2022.1035989
- Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. Beverly Hills, CA: Sage Publications.
- Hosseini, Soheila., & Shirazi, ZRH. (2021). Towards teacher innovative work behaviour: A conceptual model. *Cogent Education*, 8(1), 1869364, DOI: https://doi.org/10.1080/2331186X.2020.186 9364.
- Hui, Y.K., Li, C., Qian, S., & Kwok, L. (2021). Enhancing students' engagement by giving ongoing formative feedback in a blended learning setting. *International Journal of Innovation and Learning*. Vol 30 (3), 390 407. DOI:10.1504/ijil.2021.10041575
- Jiang D., Ning L., Liu T, Zhang Y, & Liu, Q. (2022). Work demands-resources, work crafting and work engagement of tobacco retailers. Front. Public Health 10:925668. Doi:
  - https://doi.org/10.3389/fpubh.2022.925668.
- Joreskog, K. G., & Sorbom, D. (1996). *LISREL8: User's reference guide*. Mooresville: Scientific Software.
- Karatepe, O. M., Aleshinloye, K. D., &Ogunnaike, O. O. (2023). The role of Work Autonomy in employee creativity: the mediating role of work satisfaction and the moderating role of leader-member exchange. *Journal of Business Research*, pp. 157, 26–35.
- Kawulich, B. B. (2005). Participant observation as a data collection method. Forum Qualitative Socialforschung Forum: Qualitative Social Research, 6(2). https://doi.org/10.17169/fqs-6.2.466
- Khan, A.J., Bhatti, M.A., Hussain, A., Ahmad, R., & Iqbal, J. (2021). Employee job satisfaction in higher educational institutes: a review of theories. *Journal of South Asian Studies*. Vol 9(3), 257 265. DOI:10.33687/jsas.009.03.3940
- Klaic, A., Burtscher, M.J., & Jonas, K. (2020). Fostering team innovation and learning by means of team-centric transformational

leadership: The role of teamwork quality. Journal of Occupational and Organizational Psychology.

- Kosec, Z., Sekulic, S., Wilson-Gahan, S., Rostohar, K., Tusak, M., & Bon, M. (2022). Correlation between Employee Performance, Well-Being, Work Satisfaction, and Life Satisfaction in Sedentary Works in Slovenian Enterprises. *International journal of environmental research and public health*, 19(16), 10427. https://doi.org/10.3390/ijerph191610427.
- Kowalski, K. B., Aruldoss, A., Gurumurthy, B., &Parayitam, S. (2022). Work-from-Home productivity and work satisfaction: a double-layered moderated mediation model. *Sustainability*, *14*(18), 11179. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su141811179.
- Kurniawan, D. T., Kusnayain, Y. I., Aulisaina, F. I., & Hakim, M. A. R. (2021). Exploring the existence of innovative work behaviour among government employees: have been there?. *Journal of Indonesian Economy and Business*, 36(3), 272-282. https://doi.org/10.22146/jieb.v36i3.1404
- Lee, S., Jung, J., Baek, S., & Lee, S. (2022). The relationship between career decision-making self-efficacy, career preparation behaviour and career decision difficulties among South Korean college students. *Sustainability*, 14(21), 14384. https://doi.org/10.3390/su142114384.
- Lv Y, Chen Y, Sha Y, Wang J, An L, Chen T, Huang X, Huang Y, & Huang L. (2021). How entrepreneurship education at universities influences entrepreneurial intention: mediating effect based on entrepreneurial competence. *Front. Psychol.* https://doi.org/10.3389/fpsyg.2021.655868.
- Mazzetti, G., Robledo, E., Vignoli, M., Topa, G., Guglielmi, D., & Schaufeli, W. B. (2023). Work engagement: a meta-analysis using the work demands-resources model. *Psychological Reports*, 126(3), 1069–1107. https://doi.org/10.1177/0033294121105198 8.
- Michael, E.O., Yeen-Ju, H.T., & Kian, N.T. (2020). Exploring the use of immersive technology in education to bring abstract theoretical concepts to Life. *Special Issue No.1*. DOI:DOI:10.33093/ijcm.2020.1.x1.7

- Millar, C. C. J. M., Groth, O., & Mahon, J. F. (2018). Management innovation in a VUCA World: challenges and recommendations. *California Management Review*, 61(1), 5–14.
  - https://doi.org/10.1177/0008125618805111.
- Moreno Cunha, A., Marques, C. S., & Santos, G. (2022). Organisational and personal factors that boost innovation: the case of nurses during COVID-19 pandemic based on work demands-resources model. *Sustainability*, *14*(1), 458. MDPI AG. https://dx.doi.org/10.3390/su14010458.
- Mushtaha, E., Dabous, S, Alsyouf, I., Ahmed, A., &Abdraboh, NR. (2022). The challenges and opportunities of online learning and teaching at engineering and theoretical colleges during the pandemic. *Ain Shams Engineering Journal*, 13(6), https://doi.org/10.1016/j.asej.2022.101770
- Negoro, M. C. W., & Wibowo, A. (2021). Empathetic leadership, job satisfaction and intention to leave among millennials in a start-up industry: needs' satisfaction as a mediating variable. *Journal of Indonesian Economy and Business*, 36(2), 136-154. https://doi.org/10.22146/jieb.v36i2.1398
- Oldham, G.R. & Hackman, J.R. (2010). Not what it was and not what it will be: the future of job design research. *Journal of Organizational Behaviour*. 31 (2), 463–479. https://doi.org/10.1002/job.678
- Pahlevan, Sharif, S, Bolt, EET, Ahadzadeh, AS, Turner, JJ, & Sharif Nia, H. (2021). Organisational support and turnover intentions: a moderated mediation approach. *Nurs Open.* 2021; 8: 3606–3615. https://doi.org/10.1002/nop2.911.
- Pangarso, Astadi., Winarno, Alex., Aulia, Pramitha., &Ritonga, DindaAulia. (2022). Exploring the predictor and the consequence of digital organisational culture: a quantitative investigation using sufficient and necessity approach. *Leadership &organisation development journal*. 6(1), 370–385. https://doi.org/10.1108/LODJ-11-2021-0516.
- Patiro, Shine PS., Budiyanti, Hety., Hendarto, KA., &Hendrian. (2022). Panic-buying behaviour during the COVID-19 pandemic in indonesia: a social cognitive theoretical model. *GadjahMada International Journal*

- of Business. Vol 24(1), 25-55, DOI: 10.22146/gamaijb.64578
- Pelikan ER, Korlat S, Reiter J, Holzer J, Mayerhofer M, Schober B, et al. (2021). Distance learning in higher education during COVID-19: The role of basic psychological needs and intrinsic motivation for persistence and procrastination—a multi-country study. *PLoS ONE* 16(10): e0257346. https://doi.org/10.1371/journal.pone.0257346.
- Peñalba, E.H., Samaniego, C.R., & Romero, S.M. (2020). Digital storytelling: a tool for promoting historical understanding among college students. *Research in Learning Technology*. Vol 28 (1), 1-20. DOI:10.25304/rlt.v28.2348
- Pradana, E. R., & Suhariadi, F. (2020). The effect of work crafting on innovative behaviour through mediation work engagement. *Airlangga Journal of Innovation Management*, 1(1), 77–91. https://doi.org/10.20473/ajim.v1i1.19402.
- Pradhan, R. K., Dash, S., & Jena, L. K. (2019). Do HR practices influence work satisfaction? examining the mediating role of employee engagement in indian public sector undertakings. Global Business Review, 20(1), 119–132. https://doi.org/10.1177/0972150917713895.
- Pukkeeree, P., Na-Nan, K., &Wongsuwan, N. (2020). Effect of attainment value and positive thinking as moderators of employee engagement and innovative work behaviour. Journal of Open Innovation: Technology, Market, and Complexity, 6(3), https://doi.org/10.3390/joitmc6030069.
- Qi W, Enhua H, Jiandong S., &HongmeiS .(2021). Double-edged sword effect of high-performance work system on employee well-being—moderating effect of union practice. Front. Psychol. doi: https://doi.org/10.3389/fpsyg.2021.619345.
- Raja U., Haq I. U., De Clercq D., Azeem M. U. (2020). When ethics create misfit: combined effects of despotic leadership and Islamic work ethic on work performance, work satisfaction, and psychological well-being. *International Journal of Psychology*, 55(3), 332–341.
- Rudolph, C. W., Katz, I. M., Lavigne, K. N., &Zacher, H. (2022). Work crafting: a meta-

- analysis and review of theory, research, and future directions. *Journal of Vocational Behaviours*, 133, 103738.
- Saether, E. A. (2019). Motivational antecedents to high-tech R&D employees' innovative work behaviour: Self-determined motivation, person-organisation fit, organisation support of creativity, and pay justice. *The Journal of High Technology Management Research*, 30(2), 1–12.https://doi.org/10.1016/j.hitech.2019.100 350.
- San, C.K., & Guo, H. (2022). Institutional support, social support, and academic performance: mediating role of academic adaptation. *Eur J PsycholEduc* (2022). https://doi.org/10.1007/s10212-022-00657-2.
- Shin, I., &Jeung, C. W. (2019). Uncovering the Turnover intention of proactive employees: the mediating role of work engagement and the moderated mediating role of work autonomy. Int *J Environ Res Public Health*, 16(5), 843. DOI: https://doi.org/10.3390/ijerph16050843.
- Song, L., & Jo, SJ. (2023). How work crafting behaviours influence the innovative behaviour of knowledge workers in the gig economy: based on the organismic integration Psychol. theory. Front. 14:1228881. doihttps://doi.org/10.3389/fpsyg.2023.1228
- Spiegelaere, S., Gyes, G., &Hootegem, G. V. (2014). On the relation of work insecurity, work autonomy, innovative work behaviour and the mediating effect of work engagement. *Creativity and Innovation Management*, 23(3), 318-330.https://doi.org/10.1111/caim.12079.
- Suhandiah, Sri., Suhariadi, Fendy., Yulianti, Praptini., & Abbas, Ansar. (2023). Autonomy and feedback on innovative work behaviour: The role of resilience as a mediating factor in Indonesian Islamic banks. *Cogent Business & Management*, 10(1), 1-17 DOI: https://doi.org/10.1080/23311975.2023.217 8364.
- Tang Y, Shao Y-F, & Chen Y-J .(2019).

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Commitment on Innovative Behaviour: The Perspective of Psychological Capital. *Front. Psychol.* 

- https://doi.org/10.3389/fpsyg.2019.02699.
- Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the work crafting scale. *Journal of Vocational Behaviour*, 80(1), 173-186.
- Tjoa, Y., & Arief, M. (2022). Determinants Of Innovative Work Behaviour: The Role of Job Satisfaction As Mediation And Environmental Dynamism As Moderating Variable. In 5th European International Conference on Industrial Engineering and Operations Management, https://doi.org/10.46254/EU05.20220445.
- Topping, K. J. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, 68(3), 249–276.
- Voordt, T.v.d., & Jensen, P.A. (2023). The impact of healthy workplaces on employee satisfaction, productivity and costs. *Journal of Corporate Real Estate*, 25(1), 29-49. https://doi.org/10.1108/JCRE-03-2021-0012.
- Weru, N. (2023). The Role of Instructor Support and Feedback on the Performance of Online and Distance Learning. *International Journal of Online and Distance Learning*. Vol 4(1). DOI: https://doi.org/10.47604/ijodl.2001
- Woelert, P., Lewis, J.M. & Le, A.T. (2020). Formally Alive yet Practically Complex: An Exploration of Academics' Perceptions of Their Autonomy as Researchers. *High Educ Policy* 34, 1049–1068. https://doi.org/10.1057/s41307-020-00190-1.

- Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a work: Revisioning employees as active crafters of their work. *Academy of Management Review*, 26(2), 179-201. DOI: https://doi.org/10.5465/amr.2001.4378011.
- Xu, Z., &Suntrayuth, S. (2022.) Innovative work behaviour in high-tech enterprises: Chain intermediary effect of psychological safety and knowledge sharing. *Front. Psychol.* 13:1017121. doi: https://doi.org/10.3389/fpsyg.2022.1017121
- Yang, Y., Zhou, Y., Peng, S. and Li, H. (2023). Occupational self-efficacy, work crafting and work satisfaction in newcomer socialisation: a moderated mediation model. *Journal of Managerial Psychology*, 38(2), 131-143. https://doi.org/10.1108/JMP-04-2022-0183
- Yasmin F., Li S.,&Slaninová G. (2022). Exploring the Motivational Factors for International Students to Study in Chinese Higher Education Institutions. *Front Psychol*. 13:938986. Doi: https://doi.org/10.3389/fpsyg.2022.938986.
- Yudiatmaja, W. E., Salomo, R. V., &Prasojo, E. (2023). Fostering Innovative Behaviour of Millennial Public Employee Through Leadership Styles and Organizational Trust. SAGE Open, 13(2). https://doi.org/10.1177/21582440231178545.
- Zhang, S., Liu, X.., & Du, Y. (2021). When and how authoritarian leadership influences employee innovation behaviour in the context of Chinese culture. *Leadership & Organization Development Journal*. 42, 722–734. https://doi.org/10.1108/LODJ-08-2020-0342.

**Appendix 1. Variable Operationalisation.** 

Variable	Dimension	Indicators		
	Autonomy in work mothods	Independent work method choice.		
	Autonomy in work methods	Optimal technique selection.		
		Continuous improvement initiation.		
Work Autonomy	Autonomy in work	Autonomous work schedule management.		
Work Autonomy (Spiegelaere et al., 2014)	scheduling	Independent workload balance.		
	Autonomy in work oritoria	Autonomous task prioritisation.		
	Autonomy in work criteria	Flexible task planning.		
	Autonomy in work location	Non-traditional setting work.		
	Autonomy in work location	Home-based work.		
		Continuous learning pursuit.		
	Enhancement of structural	Learning resource search.		
	job resources	Work confidence display.		
Work Crafting		Efficient task organisation.		
(Tims et al., 2012; Song &		Skill development pursuit.		
Jo, 2023)	Enhancement of social	Supervisor recognition.		
30, 2023)	resources	Supervisor guidance.		
		Feedback solicitation.		
	Increase in challenging job	Innovative knowledge pursuit.		
	demands.	New idea proposal.		
	definition.	Proactive extra workload.		
		Work invigoration.		
	Vigor	Job confidence display.		
		Eager task commencement.		
Work Satisfaction		Work passion.		
(Shin &Jeung.,	Dedication	Job role inspiration.		
2019;Pradhan et al., 2019)		Work quality pride.		
		Positivity maintenance during intense work.		
	Absorption	Deep task focus.		
		Work immersion.		
Innovative Work Behaviour (Pukkeeree et al., 2020)		Novel solution proposal.		
	Generation of ideas	Trend updates.		
		Collaborative solution.		
	9	Innovative method promotion.		
	Promotion of ideas	Idea endorsement.		
		Innovation discussion engagement.		
		University goal alignment.		
	Realisation of ideas	Innovative practice strategising.		
		Innovative impact evaluation		

Source: Research data (2023)

# **Appendix 2: Survey Instrument**

The level of agreement with the following statements using the scale provided: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree

1. Work Autonomy  1.1 I can decide on work procedures. 1.2 I choose my work techniques. 1.3 I use methods to improve my work. 1.4 I control my work schedule. 1.5 I set my work hours. 1.6 I prioritise my tasks. 1.7 I decide on the task completion time. 1.8 I choose my work location. 1.9 I can work from home.  2. Work Crafting  2.1 I enhance my work professionalism. 2.2 I learn new things at work. 2.3 I fully use my skills. 2.4 I focus easily on tasks. 2.5 I ask for work training. 2.6 Superiors appreciate my work. 2.7 I seek work inspiration. 2.8 I get work feedback. 2.9 I am the first to learn new work methods. 2.10 I initiate tasks 2.11 I take on extra tasks without more incentives.  3. Work Satisfaction 3.1 I am proud of my work achievements. 3.2 I enjoy my job. 3.3 I love my current job. 3.4 My pay matches my duties. 3.5 I am happy with my pay. 3.6 Promotions are based on skills. 3.7 I am content with career opportunities. 3.8 I collaborate well with colleagues. 3.9 Colleagues motivate me  4. Innovative Work Behaviour  4.1 I think of solutions to problems. 4.2 I seek new work methods.	Statements		
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<ul><li>4.1 I think of solutions to problems.</li><li>4.2 I seek new work methods.</li></ul>	3.9	Colleagues motivate me	
4.2 I seek new work methods.	4. Innova	tive Work Behaviour	
	4.1	I think of solutions to problems.	
	4.2	I seek new work methods.	
4.3 I offer solutions to colleagues.	4.3	I offer solutions to colleagues.	
4.4 I support innovative ideas.	4.4	I support innovative ideas.	
4.5 I seek approval for my ideas.	4.5	I seek approval for my ideas.	
4.6 I inspire colleagues with new ideas.	4.6	I inspire colleagues with new ideas.	

I apply innovative ideas beneficially.

I systematically bring new ideas.

4.7

4.8

### **Statements**

4.9 I assess my innovative ideas' value.

# **Appendix 3: Research Interview Form**

The InformantName : University Affiliation: : Date: :

**Method:** : Face-to-Face / By Phone/ By Zoom Meeting Apps

### **Question for Work Autonomy**

- 1 How much freedom do you experience in implementing work procedures and choosing techniques for teaching, research, or community service tasks?
- 2 Among the *Tridarma* of higher education (teaching, research, community service), which do you find to be the most flexible or for which free is available in terms of execution? Please explain.
- 3 Have there been any changes in your work time or location before and after the COVID-19 pandemic, and which conditions do you believe are more conducive to fostering innovation in your work?
- 4 How has the freedom to choose your work methods, time, and location impacted your innovative behaviour in a professional setting?

### **Question for Work Crafting**

- 1 How do you enhance your professionalism as a lecturer?
- 2 What are your views on the role of superiors in encouraging your innovative behaviour in fulfilling the *Tridarma*?
- 3 How much support do you perceive from the university in encouraging you to be more creative in developing teaching methods, especially during the current pandemic?

### **Question for Work Satisfaction**

- 1 What aspects of your achievements in fulfilling the *Tridarma*make you proud?
- 2 What do you enjoy the most in fulfilling the *Tridarma*?
- 3 Are you satisfied with your current earnings as a lecturer? Please explain honestly.
- 4 What are your career advancement opportunities as a lecturer at your university?
- 5 How does work satisfaction impact your innovative behaviourat work?
- 6 What university factors most significantly influence your innovative behaviour at work?

### **Question for Innovative Work Behaviour**

- 1 Do you often create new ideas in your work? Please provide examples.
- 2 How frequently do you seek new work methods, techniques, or instruments?
- 3 How much effort do you put into encouraging your colleagues to be enthusiastic about your innovative ideas?

4 In your observation, has the innovative work behaviour among lecturers improved and become more prevalent than in the past? Please explain.

- 5 What are your suggestions for enhancing innovative behaviour among lecturers in fulfilling the *Tridarma*?
- 6 How significant do you believe the impact of innovative behavior among lecturers is on the future quality of higher education in Indonesia, especially in facing the COVID-19 pandemic and rapid technological advancements?

### **Appendix 4: Code References**

# #1 Work Autonomy → Work Satisfaction

#### Interview

<Files\\Interview\\Informant 1> reference coded [3.34% Coverage]

Reference 1 - 3.34% Coverage

Although I relish the freedom to organise my schedule, I often find myself feeling isolated and overwhelmed due to the lack of adequate support from the university

<Files\\Interview\\Informant 4> - reference coded [2.72% Coverage]

Reference 2 - 2.72% Coverage

Despite my enthusiasm for integrating technology into lectures, I am often limited by a lack of resources and time

# Observation

<Files\\Observasition\\TSC01> - reference coded [3.38% Coverage]

Reference 1 - 3.38% Coverage

To assess lecturers' work autonomy in designing and implementing teaching

<Files\\Observasition\\TSC02> - reference coded [6.40% Coverage]

Reference 2 - 6.40% Coverage

indicate a classroom environment that supports self-expression and perhaps individual initiative, which is an important aspect of work autonomy

 $<\!Files \backslash\!\backslash Observasition \backslash\!\backslash TSC03 \!\!> - \ reference\ coded\ [5.93\%\ Coverage]$ 

Reference 3 - 5.93% Coverage

The lecturer demonstrated a high level of work autonomy by giving students the freedom to explore various perspectives in the debate.

### #2 Work Crafting → Work Satisfaction

### Interview

<Files\\Interview\\Informant 2> - references coded [6.41% Coverage]

Reference 1 - 3.10% Coverage

Tailoring teaching methods and course content to my interests significantly boosts my engagement and satisfaction with my job.

Reference 2 - 3.32% Coverage

Through work crafting, I am able to concentrate more on aspects of teaching that I enjoy, which makes me feel more engaged and satisfied.

#### Observation

<Files\\Observasition\\TSC01>reference coded [8.14% Coverage]

Reference 1 - 8.14% Coverage

Filling the gaps in the front row could be part of "crafting" the student learning experience, for example, by modifying tasks or class structure to optimize student engagement.

<Files\\Observasition\\TSC02> - reference coded [8.15% Coverage]

Reference 2 - 8.15% Coverage

This class selfie may be the result of the lecturer's efforts to build a strong learning community and increase student engagement, a practice that can be considered as work crafting.

<Files\\Observasition\\TSC03> - reference coded [7.28% Coverage]

Reference 3 - 7.28% Coverage

To create a memorable learning experience, the lecturer adopted work crafting by organizing the flow of the debate so that all students could be actively involved

### #3 Work Satisfaction → Innovative Work Behaviours.

### **Interview**

<Files\\Interview\\Informant 3> reference coded [2.67% Coverage]

Reference 1 - 2.67% Coverage

When I feel satisfied and valued, I am more motivated to try new things in my teaching, which I believe can make a positive contribution to my students.

<Files\\Interview\\Informant 5> - reference coded [1.97% Coverage]

Reference 2 - 1.97% Coverage

Feeling valued and satisfied with my role naturally drives me to seek and apply innovative teaching practices.

### Observation

<Files\\Observasition\\TSC01> reference coded [10.60% Coverage]

Reference 1 - 10.60% Coverage

Deeper insights into the teaching methods used, such as the use of technology in teaching, pedagogical approaches, and classroom interactions and discussions that stimulate students' critical thinking and creativity, are required.

<Files\\Observasition\\TSC02> - reference coded [7.61% Coverage]

Reference 2 - 7.61% Coverage

which could be part of innovative work behaviour. The use of social media or digital platforms to engage students could also be another indicator of innovation in teaching.

<Files\\Observasition\\TSC03> - reference coded [8.27% Coverage]

Reference 3 - 8.27% Coverage

The positive energy and happy responses from students also indicate that the teaching method chosen by the lecturer was successful in creating a fun and supportive learning environment.