

DOES TECHNOSTRESS INHIBIT WORK CREATIVITY? THE ROLE OF PSYCHOLOGICAL SAFETY IN WORKING STUDENTS

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Abstract. *This research aims to analyze whether technostress inhibits work creativity, by considering the role of psychological safety in working students. The method used is a quantitative approach with SEM-PLS analysis using data obtained from questionnaires. The results of the measurement model evaluation show that all indicators have outer loading values above 0.5, so that they meet the criteria of convergent validity. In addition, the cross loading values show that each indicator has the highest correlation on its respective construct, which indicates that discriminant validity is fulfilled. Reliability testing also shows that all constructs have Composite Reliability and Cronbach's Alpha values above 0.7, so that they are declared reliable. In the evaluation of the structural model, the R Square value shows that the variables in the model have sufficient explanatory ability, where technostress influences other variables both directly and indirectly. The results of path analysis show that technostress influences job crafting, job crafting influences psychological safety, and technostress also has a direct influence on psychological safety. These findings indicate that although technostress can be a pressure for working students, the existence of psychological safety and the ability to make work adjustments (job crafting) can help maintain work creativity. Thus, this research emphasizes the importance of psychological safety in minimizing the negative impact of technostress on work creativity.*

Keywords: *Job Crafting; Psychological Safety; Technostress; Work Creativity; Working Students*

1. INTRODUCTION

The development of digital technology has brought major changes in the world of education and work. Students who also work (working students) are required to be able to adapt to various digital systems, such as the use of work applications, communication platforms, and online learning systems. Although technology provides convenience and efficiency, intensive use can also cause psychological pressure known as technostress. Technostress appears when individuals feel burdened by technological demands, such as speed of adaptation, system complexity, and excessive information load. This condition has the potential to influence individual performance, including in terms of work creativity. Creativity is an important ability for working students in completing tasks effectively and innovatively. However, pressure due to technology can inhibit creative thinking ability if not managed properly. On the other side, psychological safety becomes an important factor in supporting individual performance. Psychological safety allows a person to feel comfortable to convey ideas, express opinions, and take initiative without fear of negative assessment. In the context of working students, this condition is very needed so that they can still express creativity even though they are in technological pressure. Besides that, the ability of individuals in adjusting their work (job crafting) also plays a role in reducing the impact of technostress. By making adjustments to tasks and ways of working, individuals can create a work environment that is more suitable with their needs. Although the use of technology is increasing, research that examines the relationship between technostress, psychological safety, and work creativity in working students is still limited. Therefore, this research is important to be carried out to provide understanding regarding the role of psychological safety in reducing the impact of technostress on work creativity.

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2. LITERATURE REVIEW

2.1 Technostress

Technostress is a stress condition experienced by individuals due to the use of technology in work or daily activities. Technostress appears when individuals feel burdened by technological demands, such as system complexity, rapid changes, and pressure to always be connected. This condition can reduce performance, productivity, and even work creativity if not managed properly.

2.2 Work Creativity

Work creativity is the ability of individuals to produce new ideas, innovative solutions, and more effective ways of working in completing tasks. Creativity is very important for working students because they are required to be able to balance between academic responsibilities and work. The level of creativity can be influenced by psychological conditions, work environment, and pressure faced by individuals.

2.3 Psychological Safety

Psychological safety is a condition where individuals feel safe psychologically to express opinions, ask questions, and take initiative without fear of criticism or negative consequences. An environment that has high psychological safety will encourage individuals to be more open, confident, and brave to innovate.

2.4 Job Crafting

Job crafting is an effort of individuals in adjusting their work to be more suitable with abilities, interests, and personal needs. Through job crafting, individuals can reduce work pressure, including those coming from the use of technology, and increase comfort and effectiveness in working.

3. RESEARCH METHODS

This research used a quantitative approach to analyze the relationship between technostress, job crafting, psychological safety, and work creativity in working students. The analysis method used was Structural Equation Modeling based on Partial Least Square (SEM-PLS) with the help of SmartPLS software. The population in this research was students who are working, while the sampling technique used was purposive sampling, namely respondents who met the criteria as active students and had jobs. Data was collected through the distribution of questionnaires using a Likert scale 1-5, ranging from strongly disagree to strongly agree. The variables in this research consisted of Technostress (independent), Job Crafting (mediating), Psychological Safety (mediating), and Work Creativity (dependent). Data analysis was carried out in two stages: evaluation of the measurement model (outer model) and evaluation of the structural model (inner model).

4. RESULTS AND DISCUSSION

A. Measurement Model Evaluation (Outer Model)

1. Convergent Validity Test (Outer Loading)

Convergent validity test is carried out to know the ability of indicators in representing the constructs being measured. Convergent validity is assessed based on the outer loading value of each indicator.

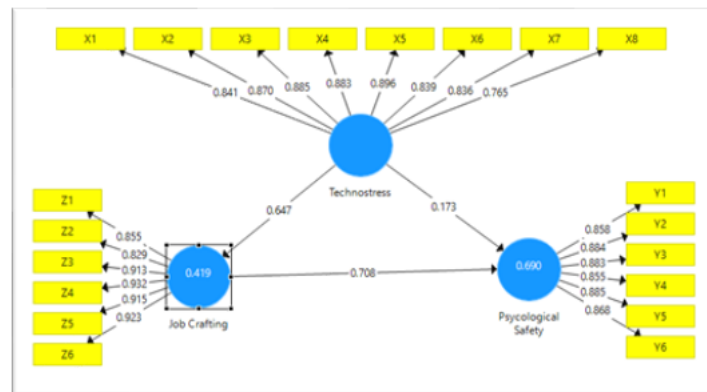


Figure 1. Output Results of Model Measurement (Outer Model)

The test results show that all indicators on technostress, job crafting, psychological safety, and work creativity variables have outer loading values above 0.5. This shows that the indicators used are able to represent the constructs being measured well, so that they meet the criteria of convergent validity.

Outer Loading				
	Job Crafting	Psychological Safety	Technostress	
X1				0.841
X2				0.870
X3				0.885
X4				0.883
X5				0.896
X6				0.839
X7				0.836
X8				0.765
Y1		0.858		
Y2		0.884		
Y3		0.883		
Y4		0.855		
Y5		0.885		
Y6		0.868		
Z1	0.855			
Z2	0.829			
Z3	0.913			
Z4	0.932			
Z5	0.915			
Z6	0.923			

Figure 2. Outer Loading Value

Based on the picture above, all outer loading values from each indicator have values greater than 0.5, which range from 0.765421 to 0.896250. This shows that each indicator on technostress, job crafting, psychological safety, and work creativity constructs has fulfilled the requirements of convergent validity and can be said to be valid.

2. Discriminant Validity Test (Cross Loading)

Discriminant validity test aims to ensure that each construct in the model has a clear difference with other constructs. Testing is carried out by seeing cross loading values, where an indicator is said to have good discriminant validity if it has the highest loading value on the construct it measures compared to other constructs.

Cross Loadings				
	Job Crafting	Psychological Safety	Technostress	
X1	0.605	0.536	0.841	
X2	0.534	0.870	0.870	
X3	0.535	0.508	0.885	
X4	0.584	0.495	0.883	
X5	0.532	0.587	0.896	
X6	0.650	0.800	0.839	
X7	0.524	0.568	0.836	
X8	0.428	0.430	0.765	
Y1	0.702	0.858	0.518	
Y2	0.731	0.884	0.539	
Y3	0.686	0.883	0.567	
Y4	0.728	0.855	0.517	
Y5	0.717	0.885	0.581	
Y6	0.726	0.868	0.583	
Z1	0.855	0.707	0.520	
Z2	0.829	0.729	0.551	
Z3	0.913	0.785	0.621	
Z4	0.932	0.754	0.598	
Z5	0.915	0.701	0.580	
Z6	0.923	0.723	0.597	

Figure 3. Cross Loading Value of Discriminant Validity

Based on the data, the correlation value of each indicator to its respective construct has a value greater than the correlation to other constructs. This shows that all indicators have fulfilled the criteria of discriminant validity, so that each construct in this research can be declared valid.

3. Reliability Test

Reliability test is carried out to assess the internal consistency of indicators in measuring research constructs. Reliability testing uses Composite Reliability and Cronbach's Alpha values.

Validitas dan Reliabilitas Konstruk					
	Cronbach's Alpha	rho_A	Reliabilitas Komposit	Rata-rata Varians Diekstrak (RVE)	
Job Crafting	0.950	0.951	0.960	0.801	0.801
Psychological Safety	0.927	0.927	0.950	0.781	0.781
Technostress	0.946	0.950	0.955	0.728	0.728

Figure 4. Reliability Test Values

Based on the analysis results, all constructs have Composite Reliability and Cronbach's Alpha values above 0.7. This shows that all constructs in this research are declared reliable and feasible to be used in structural model analysis.

B. Structural Model Evaluation (Inner Model)

1. Coefficient of Determination (R Square)

Coefficient of determination (R^2) is used to measure how much the ability of independent variables in explaining dependent variables. Based on the results of SEM-PLS analysis, technostress and job crafting variables are able to explain variation in psychological safety variable in a fairly strong category. This shows that the research model has a good predictive ability, although there are still other factors outside the model that influence psychological safety.

R Square		
	R Square	Adjusted R Square
Job Crafting	0.419	0.413
Psychological Safety	0.690	0.684

Figure 5. R^2 Test Results

Based on the analysis results, the R Square value on psychological safety variable is 0.631466, which means independent variables are able to explain variation of psychological safety by 63.1%, while the remaining 36.9% is explained by other factors outside this research model. This value shows that the research model has a fairly good prediction ability in explaining the relationship between variables.

C. Hypothesis Testing and Discussion

1. Effect of Technostress on Job Crafting (H1)

The results of SEM-PLS testing show that technostress has a positive influence on job crafting with a coefficient value of 0.646945. This positive relationship indicates that the higher the level of technostress experienced, then the greater the tendency of individuals to make adjustments to their work.

Kriteria Seleksi Model					
	BC (Bollen's Informasi Kriteria)	BC (Kriteria Informasi Model Total)	BC (Bollen's Informasi Kriteria)	BC (Bollen's Informasi Kriteria)	BC (Kriteria Informasi Model Total)
Job Crafting	-17.762	-17.762	-17.762	-17.762	-17.762
Psychological Safety	-173.385	-173.385	-173.385	-173.385	-173.385

Figure 6. Hypothesis Test Results

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Based on the analysis results, model selection criteria such as AIC, AICu, AICc, BIC, HQ, and HQc are used to determine the level of model suitability. Psychological Safety variable has smaller values (more negative) compared to Job Crafting, such as AIC value of -113.350 compared to -51.768, as well as BIC value of -105.505 compared to -46.538. This shows that the model on Psychological Safety variable has better prediction quality and is more efficient in explaining research data.

2. Effect of Job Crafting on Psychological Safety (H2)

The analysis results show that job crafting has a positive influence on psychological safety with a coefficient value of 0.707946. This shows that the higher the ability of individuals in adjusting their work, then the higher also the psychological safety felt.

Job crafting allows individuals to create work conditions that are more comfortable and suitable with their needs, so that it increases confidence in conveying ideas and participating in work environment. Therefore, the second hypothesis (H2) is declared accepted.

3. Effect of Technostress on Psychological Safety (H3)

The test results show that technostress has a direct influence on psychological safety with a value of 0.173464. Although the influence is relatively smaller compared to other relationships, this still shows the existence of relationship between technostress and psychological safety.

Pressure due to the use of technology can influence psychological condition of individuals, however the impact is not too large because there are other factors such as individual adaptation ability. Thus, the third hypothesis (H3) is declared accepted.

4. Indirect Effect of Technostress on Psychological Safety through Job Crafting (H4)

Based on the analysis results, technostress has an indirect influence on psychological safety through job crafting with a value of 0.458002. This shows that job crafting plays a role as a mediating variable in the relationship between technostress and psychological safety.

With the existence of job crafting, individuals are able to manage technological pressure into something more positive, so that it can increase psychological safety. Therefore, the fourth hypothesis (H4) is declared accepted.

• General Discussion

Overall, the research results show that technostress has an influence on job crafting and psychological safety. Although technostress can become a source of pressure, individuals tend to make work adjustments (job crafting) as a form of adaptation to technological demands.

Job crafting that is carried out effectively is able to increase psychological safety, so that individuals feel safer and more comfortable in expressing ideas, giving opinions, and participating in work environment. This shows that individual adaptation ability has an important role in managing the impact of technostress.

Besides that, the research results also show that the model has a fairly good predictive ability, so that the relationship between variables in this research can be explained quite strongly. Thus, psychological safety becomes an important factor in maintaining work creativity of working students, although they are under pressure due to the use of technology.

CONCLUSION

Based on the research results, it can be concluded that technostress has an influence on job crafting and psychological safety in working students. Technostress has a positive influence on job crafting, which shows that pressure due to the use of technology can encourage individuals to make work adjustments as a form of adaptation to digital-based work demands.

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Next, job crafting is proven to have a positive influence on psychological safety. This shows that the ability of individuals in adjusting work can increase psychological safety, so that individuals are more confident in conveying ideas and participating in work environment.

Technostress also has a direct influence on psychological safety, however the indirect influence through job crafting is greater, so that job crafting plays a role as a mediating variable in the relationship.

Besides that, the R Square value of 0.631466 shows that the research model has a fairly strong predictive ability in explaining psychological safety. Overall, this research shows that psychological safety has an important role in helping working students to remain feeling safe and comfortable, so that they can maintain work creativity although they are under technological pressure.

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