Jurnal Progress: Wahana Kreativitas dan Intelektualitas
Vol. 13, No. 2 Desember 2025, Page 143 - 158
p-ISSN: : 2338-6878 e-ISSN: -DOI: 10.31942/pgrs.v13i2.14314

The Impact of Boss Phubbing on Teacher Self-Efficacy and Well-Being in Coastal Schools During the Digital Era

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Abstrak
Penelitian ini bertujuan untuk menganalisis dampak boss phubbing terhadap self-efficacy guru dan teacher wellbeing di sekolah-sekolah daerah pesisir dalam konteks manajemen pendidikan di era digital. Data dikumpulkan melalui survei cross-sectional pada guru-guru di sekolah pesisir dengan jumlah sampel sebanyak 206 responden. Data dianalisis menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) dengan software Jamovi 2.6.23. Hasil menunjukkan bahwa boss phubbing tidak berpengaruh langsung terhadap teacher wellbeing, tetapi berdampak negatif terhadap self-efficacy guru, yang selanjutnya berperan signifikan dalam meningkatkan kesejahteraan guru. Temuan ini menekankan pentingnya self-efficacy guru sebagai mediator dalam mengurangi dampak negatif perilaku atasan terhadap kesejahteraan guru di era digital. Implikasi praktisnya adalah perlunya manajemen sekolah memperhatikan perilaku digital atasan dan mendorong penguatan self-efficacy guru untuk meningkatkan kualitas kerja dan kesejahteraan guru. Keterbatasan penelitian meliputi desain cross-sectional dan sampel yang terbatas pada sekolah di wilayah pesisir, sehingga penelitian lanjutan disarankan menggunakan desain longitudinal dan mempertimbangkan variabel moderasi tambahan seperti dukungan sosial dan budaya organisasi.

Kata kunci: Boss Phubbing; Teacher Self-Efficacy; Teacher Wellbeing; Manajemen Pendidikan.

Abstract
This study aims to analyze the impact of boss phubbing on teachers' self-efficacy and teacher wellbeing in coastal-area schools within the context of digital-era educational management. Data were collected through a cross-sectional survey of teachers in coastal schools with a total sample of 206 respondents. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with Jamovi 2.6.23 software. The findings indicate that boss phubbing does not directly affect teacher wellbeing but has a negative impact on teachers' self-efficacy, which in turn plays a significant role in enhancing teacher wellbeing. These results highlight the importance of teachers' self-efficacy as a mediator in reducing the negative effects of supervisors' digital behavior on teacher wellbeing in the digital era. Practical implications suggest that school management should pay attention to leaders' digital behavior and foster teachers' self-efficacy to improve work quality and teacher wellbeing. The limitations of this study include its cross-sectional design and the sample being limited to coastal-area schools; therefore, future research is recommended to employ longitudinal designs and consider additional moderating variables such as social support and organizational culture.

Keywords: Boss Phubbing; Teacher Self-Efficacy; Teacher Wellbeing; Educational Management.

Received: 2025-08-28 Accepted: 2025-12-02 Published: 2025-12-15

INTRODUCTION

The transformation of the education sector in the digital era has reshaped social interactions, especially communication patterns between school leaders and teachers (Nurhalimatussadiyah et al., 2025), (Marpuah et al., 2025). Communication is no longer merely a medium for exchanging information but a foundation for collaboration, trust, and effective leadership. However, a growing concern in school environments is the emergence of boss phubbing a condition where school principals or supervisors pay more attention to their digital devices than to teachers during face-to-face interactions. Previous findings (Cunningham et al., 2023) (Irfan Hadi Yuda, 2024) show that phubbing can negatively affect individuals' physical, psychological, and social well-being, suggesting potentially harmful consequences in educational contexts as well.

Boss phubbing reflects a deeper managerial issue in schools, particularly when principals fail to provide adequate direction, supervision, and emotional support. Such behavior can weaken teacher–leader relationships, disrupt communication, diminish work motivation, and reduce the overall quality of the teaching–learning process. Effective educational management requires leaders who communicate openly, demonstrate attentiveness, and foster a supportive work climate conditions that become increasingly crucial in the digital era.

Teacher self-efficacy defined as teachers' beliefs in their capability to influence student learning outcomes (Tereshchuk et al., 2021) (Liu et al., 2022) is strongly shaped by leadership practices. Supportive, inclusive, and communicative leaders are known to enhance teachers' confidence and psychological readiness (Li et al., 2022), (Baser et al., 2017), (Anhar et al., 2024) (Arrosyad & Syanjaya, 2023). When teachers feel ignored or undervalued due to boss phubbing, their motivation, job satisfaction, emotional stability, and sense of professional purpose can deteriorate. This, in turn, may hinder their overall wellbeing and classroom effectiveness.

Although many studies have examined phubbing in non-educational work environments, discussions of boss phubbing within school settings remain limited. However, previous studies have not examined this issue within the educational management context of coastal schools, where teachers often face unique challenges such as limited access to technology, insufficient policy support, and resource constraints. These contextual realities may intensify the negative effects of boss phubbing on teachers' morale, self-efficacy, and wellbeing yet empirical evidence in such settings is still scarce.

Given these gaps, this study aims to investigate the impact of boss phubbing on teacher self-efficacy and teacher wellbeing, specifically in coastal-area secondary schools that frequently encounter geographical barriers and limited resources. Using Structural Equation Modeling (SEM), this research seeks to explore the interrelationships among these variables and provide strategic recommendations for improving educational management practices in the digital era. Ultimately, the findings are expected to support the development of more humanistic digital leadership approaches to foster healthier, more supportive school environments.

RESEARCH METHODS

This study employed a quantitative, cross-sectional survey design to examine the effects of boss phubbing on teacher self-efficacy and teacher wellbeing in coastal secondary schools. The design was chosen to capture teachers' perceptions and experiences at a single point in time and to analyze the structural relationships among the variables using a predictive modeling approach.

Participants and Sampling Technique

The population of the study consisted of teachers working in secondary schools located in coastal regions. A total of 206 teachers participated in the study. The sample was selected using purposive sampling, targeting teachers who: (1) worked in coastal-area schools, (2) had direct interaction with school leaders, and (3) had been employed at their current school for at least one year.

This sampling strategy ensured that participants had sufficient experience to assess leadership communication patterns and their associated effects.

Data Collection Procedures

Data were collected using an online and paper-based questionnaire distributed through school administrators. Participation was voluntary, and respondents were informed about the confidentiality of their responses. The data collection process was completed over a period of approximately four weeks. Only fully completed questionnaires were included in the final analysis.

Instrumentation

A validated questionnaire was used, consisting of three main scales adopted from previous studies: **Boss Phubbing Scale**; 9 items, 4-point Likert scale ("not at all" to "very much"), Measures the extent to which school principals engage in phubbing behavior. **Teacher Self-Efficacy Scale;** 13 Tems, 4-point Likert scale ("not at all" to "very much"), Assesses teachers' confidence in their ability to influence student learning outcomes. **Teacher Wellbeing Scale;** 13 tems (5 items on work wellbeing, 8 items on career wellbeing), 4-point Likert scale ("strongly disagree" to "strongly agree"), Measures teachers' psychological, professional, and career wellbeing.

All instruments have been previously validated and demonstrated reliable psychometric properties in earlier studies.

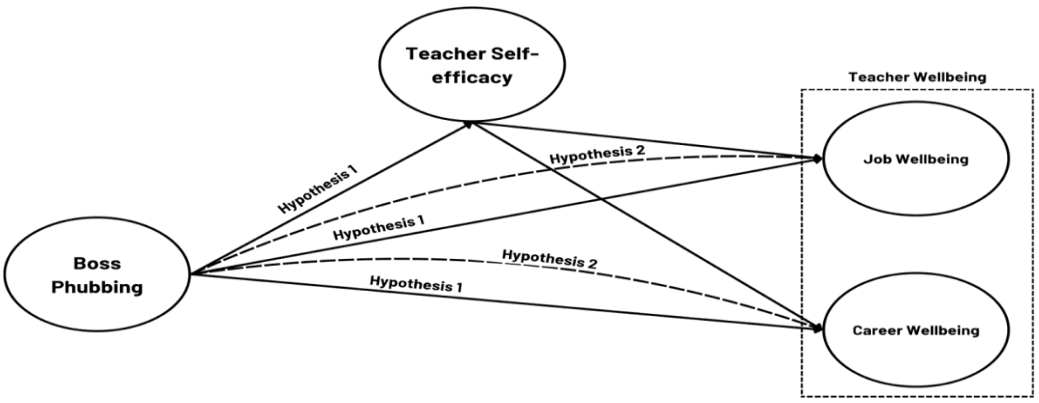

Figure 1. Conceptual Diagram of the Structural Equation Model for the Impact of Boss Phubbing on Teacher Self-Efficacy and Teacher Wellbeing

Data Analysis

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with Jamovi version 2.6.23 for macOS. Jamovi was chosen due to its robust capabilities in SEM and multivariate statistical analysis, allowing for comprehensive evaluation of direct and indirect effects specified in the conceptual model. The analysis included assessment of measurement models (reliability and validity) and structural models (path coefficients and significance testing).

RESULTS AND DISCUSSION

Evaluasi Outer Model

Validitas Konvergen

Initial estimation results indicate that 10 indicators are below the threshold, namely BP4, BP5, BP8, BP9, CW4, TE4, TE5, TE6, TE8, and TE13. Some indicators with outer loading values < 0.40 are considered unsuitable for retention. Additionally, the Average Variance Extracted (AVE) value for the Teacher Self-Efficacy (M) construct did not meet the criteria, so indicators CW4 and TE8 were eliminated.

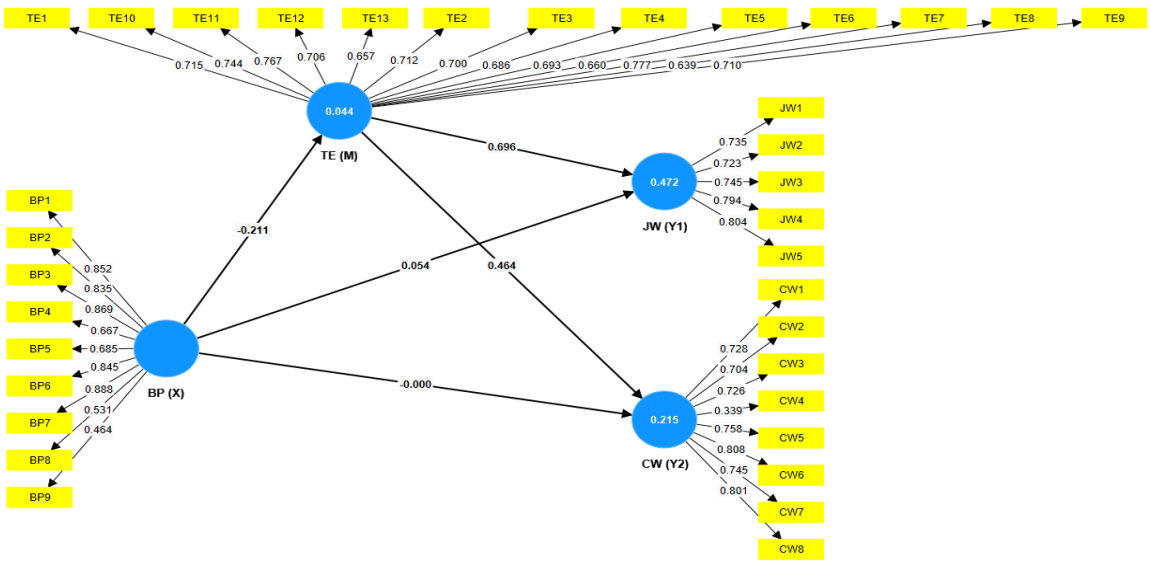

Figure 2. Data Transformation 1

The initial estimation results for the measurement model yielded 10 items whose indicators were below the threshold or in the still-tolerable category, namely indicators BP4, BP5, BP8, BP9, CW4, TE4, TE5, TE6, TE8, and TE13.Based on the previous output results, there are indicators with outer loading values < 0.40, which

are statistically not suitable for retention. Additionally, the AVE value for the TE (M) construct indicates a need for improvement by removing some indicators that have a low contribution to it. Therefore, the researcher performed a data transformation process by eliminating indicators CW4 and TE8. After the transformation was performed, the latest output results were obtained, showing better model quality.

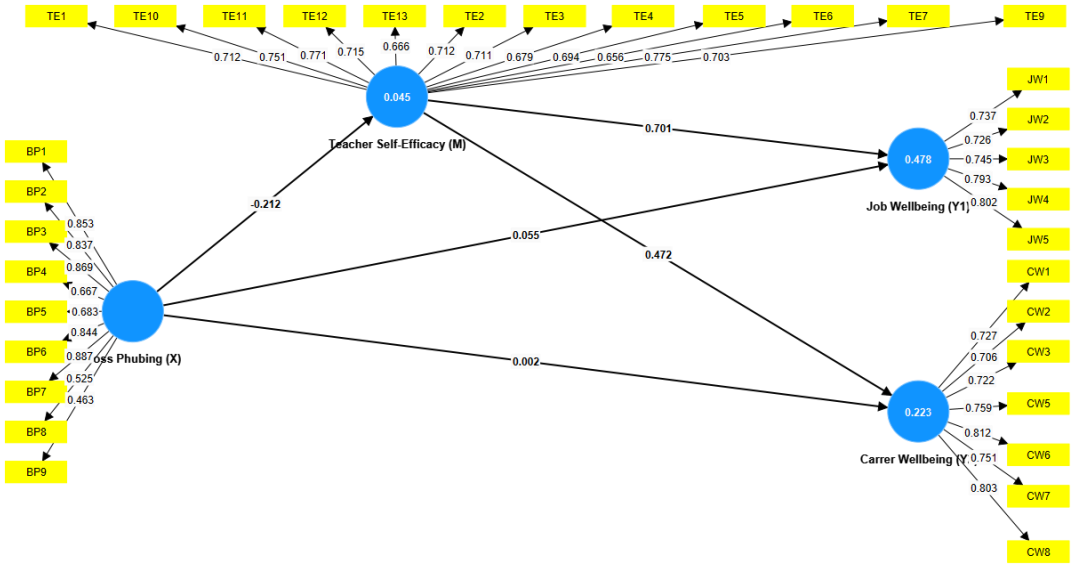

Figure 3. Data Transformation 2

After data transformation, the latest AVE results were obtained as shown in Table 1.

Table 1. Convergent Validity Results

	Average variance extracted (AVE)
Boss Phubing (X)	0.565
Carrer Wellbeing (Y2)	0.570
Job Wellbeing (Y1)	0.579
Teacher Self-Efficacy (M)	0.508

All AVE values are above the 0.50 threshold, indicating that each construct is able to explain more than 50% of the variance in its indicators. Thus, all constructs have met the criteria for convergent validity, as they have adequate outer loading values and an AVE value > 0.50. The removal of the problematic indicators CW4 and TE8 (outer loading < 0.40) in this study proved to improve convergent validity, as well as bring the AVE value above 0.50 for all constructs—indicating that the constructs are able to explain more than 50% of their indicator variance.

The currently valid AVE values (≥ 0.50) prove that constructs such as boss phubbing, career wellbeing, job wellbeing, and teacher self-efficacy now meet the criteria for convergent international validity.

His finding is consistent with the guidelines of (Wijayanto et al., 2024), where outer loadings < 0.70 should be eliminated if their removal improves AVE and composite reliability. (Listiana et al., 2025) also stated that reflective indicators must be examined iteratively for the measurement model to be valid and reliable.

Additionally, research by (Castillo et al., 2025) indicates that evaluating the quality of reflective measurement models relies not only on AVE but also on confirmatory composite analysis as part of a per-construct validation approach. Studies in the context of article data by (Khamkokkrund & Chaipichit, 2025) emphasize the importance of transparency in reporting changes to measurement models, such as the removal of indicators based on statistical criteria.

Therefore, the indicator elimination step in this study not only improves the model's statistics but is also in line with best methodological practices in modern PLS SEM. Furthermore, the article by (Lupión-Cobos et al., 2023) suggests evaluating the simplification of the measurement model by removing weak indicators to achieve a more efficient and statistically significant model. (Saito et al., 2020) emphasize the importance of purified models for generating reliable structural relationship estimates within PLS SEM. Practical findings by (Wijayanto et al., 2024) indicate that AVE ≥ 0.50 and a clean indicator structure can strengthen the interpretation of findings in similar banking analyses and quantitative research.

Reliability

Reliability testing is conducted using Cronbach's Alpha and Composite Reliability values (rho_A and rho_C). The results are presented in Table 2, which shows that the internal consistency of the research instrument is in the satisfactory category.

Table 2. Reliability Test Results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Boss Phubing (X)	0.904	0.941	0.918
Carrer Wellbeing (Y2)	0.878	0.892	0.903
Job Wellbeing (Y1)	0.819	0.825	0.873
Teacher Self-Efficacy (M)	0.912	0.914	0.925

Reliability testing was conducted by examining the values of Cronbach's Alpha and Composite Reliability (rho_A and rho_C). Based on the output, all constructs showed Cronbach's Alpha values above 0.70, specifically 0.904 for boss phubbing, 0.878 for career wellbeing, 0.819 for job wellbeing, and 0.912 for teacher self-efficacy. Similarly, the composite reliability values (both rho_A and rho_C) exceeded the 0.70 threshold. Thus, it can be concluded that the four constructs demonstrate high internal consistency, and the indicators forming each construct are reliable and suitable for use in the subsequent testing phase.

The outer model testing further confirmed that all constructs met the criteria for reliability and validity (convergent and discriminant validity), enabling the analysis to proceed to the inner model stage. The inner model testing aims to evaluate the direct and indirect relationships among constructs based on the path coefficients, t-statistics/p-values, and the coefficient of determination (R^2).

Therefore, the inner model analysis is used to determine the extent of influence of each latent variable within the research model and to test the previously formulated hypotheses. Overall, the reliability testing results show that all constructs—Boss Phubbing, Career Wellbeing, Job Wellbeing, and Teacher Self-Efficacy—possess Cronbach's Alpha and Composite Reliability values above 0.70, indicating strong internal consistency and the model's readiness for inner model evaluation.

The reliability results, which show Cronbach's Alpha and Composite Reliability values above 0.70 for all constructs, indicate that the measurement instrument used in this study has strong internal consistency. This finding aligns with the recommendations of (Sari et al., 2025), who emphasize that reliability values above 0.70 reflect stable and dependable indicators in measuring their respective constructs.

High reliability reinforces confidence that the variations among indicators accurately represent the underlying theoretical concepts.

In addition, the fulfillment of convergent and discriminant validity criteria suggests that the indicators are not only consistent but also accurate in reflecting their intended constructs. This is consistent with the methodological recommendations of (Sari et al., 2025), (Rehman et al., 2023), who argue that a comprehensive evaluation of the measurement model (outer model) is essential before interpreting structural relationships. In PLS SEM, the structural model can only be meaningfully assessed when the measurement model is proven valid.

Furthermore, as highlighted by (Herro et al., 2017), (Wijayanto et al., 2024), a well specified and purified measurement model increases the accuracy and stability of structural path estimates. The present study adheres to these principles by ensuring the optimal quality of each construct prior to conducting structural model analysis.

(Lupión-Cobos et al., 2023) also stress the importance of methodological transparency in reporting reliability and validity testing procedures, including justification for chosen thresholds. By presenting strong reliability values and clearly describing the steps taken, this study enhances the credibility and replicability of its measurement model.

Overall, the findings on reliability and validity provide a strong methodological foundation for progressing to the inner model analysis. The robust measurement model ensures that the interpretation of the effects of boss phubbing, career wellbeing, job wellbeing, and teacher self-efficacy within the structural model will be theoretically grounded and empirically reliable.

Inner Model Evaluation

Path Coefficient

The value of the path coefficient indicates the hypothesized relationship between constructs within the structural model. The path coefficient value ranges from -1 to +1, where a value approaching ±1 indicates a strong positive or negative relationship, while a value approaching 0 indicates a weak relationship. In the path

coefficient analysis, the significance of the relationship is evaluated through a bootstrapping procedure using 5000 subsamples. This procedure yields t-statistics and p-values that determine the statistical significance of the path coefficients.

Table 3. Coefficient Test Results

Hubungan	Original sample (O)	T statistics (|O/STDEV|)	P values
Boss Phubing (X) -> Carrer Wellbeing (Y2)	0.002	0.023	**0.982**
Boss Phubing (X) -> Job Wellbeing (Y1)	0.055	0.816	**0.414**
Boss Phubing (X) -> Teacher Self-Efficacy (M)	-0.212	2.425	0.015
Teacher Self-Efficacy (M) -> Carrer Wellbeing (Y2)	0.472	9.288	0.000
Teacher Self-Efficacy (M) -> Job Wellbeing (Y1)	0.701	18.934	0.000

The analysis results show that boss phubbing has no direct influence on teachers' career wellbeing or job wellbeing. This is indicated by the coefficient value of 0.002 with a p-value of 0.982 for the relationship between boss phubbing and career wellbeing, and a coefficient value of 0.055 with a p-value of 0.414 for the relationship between boss phubbing and job wellbeing. Since both p-values are greater than 0.05, it can be concluded that supervisors' phubbing behavior does not directly affect teachers' career or job wellbeing.

However, different results were found for the relationship between boss phubbing and teacher self-efficacy. The coefficient value of −0.212 with a p-value of 0.015 (< 0.05) indicates a significant negative effect, meaning that the higher the intensity of boss phubbing, the lower the teachers' confidence in their professional abilities.

Furthermore, teacher self-efficacy was found to have a significant positive influence on both types of wellbeing. For career wellbeing, the coefficient value was 0.472 with a p-value of 0.000, indicating that higher self-efficacy leads to higher career wellbeing. Likewise, for job wellbeing, the coefficient value of 0.701 with a p-value of 0.000 shows a very strong influence. Thus, teacher self-efficacy plays an important role in improving both career and job wellbeing.

Overall, the results confirm that: Boss phubbing does not directly affect career wellbeing or job wellbeing; Boss phubbing has a significant negative effect on teacher self-efficacy; Teacher self-efficacy has a significant positive effect on both career wellbeing and job wellbeing.

The findings demonstrate that while boss phubbing does not directly influence teachers' wellbeing outcomes, it significantly reduces teacher self-efficacy. This pattern suggests that the negative consequences of supervisor phubbing behavior may not immediately manifest in career or job wellbeing, but instead operate through psychological mechanisms, specifically the undermining of teachers' confidence in their own professional competence.

The significant negative relationship between boss phubbing and teacher self-efficacy aligns with prior studies indicating that supervisory inattention, disrespectful communication, and technology-driven interruptions can weaken employees' perceived competence and emotional stability (Chowdhury, 2018), (Li et al., 2022). Phubbing behavior may signal a lack of appreciation or support, which diminishes teachers' belief in their ability to perform effectively.

Furthermore, the strong positive influence of teacher self-efficacy on both career and job wellbeing reinforces existing literature that positions self-efficacy as a critical psychological resource for teachers (Lazou et al., 2025) (Sari et al., 2025). Teachers with higher self-efficacy are more resilient, more committed to their career paths, and experience greater satisfaction in their daily work activities. The substantial coefficients in this study highlight the importance of strengthening self-efficacy as a pathway to enhancing overall teacher wellbeing.

These findings also support previous research suggesting a mediating role of self efficacy in workplace relational dynamics (von Knebel et al., 2023), (Liu et al., 2022). Although boss phubbing does not directly reduce wellbeing, its influence becomes apparent when considering the psychological harm it causes. When teachers' sense of competence declines, their wellbeing in both career and job domains is eventually affected.

Overall, the study underscores the significance of relational behaviors—such as digital inattentiveness by supervisors—in shaping teachers' psychological functioning. Promoting supportive, attentive, and respectful communication practices may help mitigate the negative impact of phubbing behavior and strengthen teachers' self-efficacy, thereby improving their wellbeing.

Indirect Effect (Specific Indirect Effect)

The guru's demonstrated contribution to improving career and work well-being is known as self-efficacy. In other words, although boss phubbing does not directly affect the guru's well-being, it has an indirect impact through a decrease in self-efficacy.

Table 4. Results of Specific Indirect Effects Analysis

	Original sample (O)	T statistics (|O/STDEV|)	P values
Boss Phubing (X) -> Teacher Self-Efficacy (M) -> Carrer Wellbeing (Y2)	-0.100	2.305	0.021
Boss Phubing (X) -> Teacher Self-Efficacy (M) -> Job Wellbeing (Y1)	-0.149	2.384	0.017

The results of the specific indirect effects analysis indicate that boss phubbing does not directly affect career well-being and job well-being, but its influence becomes significant through the mediating variable of teacher self-efficacy. In other words, when superiors frequently engage in phubbing (being preoccupied with their phones and ignoring teachers), this lowers teachers' self-efficacy (teachers' belief in their professional abilities). This decrease in self-efficacy then impacted both career and job well-being for teachers. The results of the specific indirect effects analysis showed that boss phubbing did not directly affect career well-being or job well-being but had a significant impact through the mediation of teacher self-efficacy. This means that the intensity of boss phubbing decreased teachers' confidence in their professional abilities, which negatively impacted their career and work well-being. This aligns with previous findings on the mediating role of self-efficacy in the relationship

between supervisor behavior and employee well-being (Ramos et al., 2018), (von Knebel et al., 2023), (Wettstein et al., 2021).

CONCLUSION

This study concludes that boss phubbing does not directly influence teachers' career or job well-being; however, it significantly lowers teacher self-efficacy, which subsequently enhances both dimensions of well-being. These results emphasize that teacher self-efficacy functions as a crucial psychological mechanism linking supervisors' digital behavior with teacher well-being in school settings. The findings also imply the need for school management to implement clear policies on professional digital etiquette to ensure that supervisory interactions remain focused, respectful, and supportive. Establishing guidelines that limit inappropriate phone use during professional activities can help sustain teachers' confidence and foster a positive organizational climate.

In addition, training for school principals should integrate modules on digital communication ethics, relational leadership, and the psychological impacts of leaders' digital behavior. Strengthening these competencies will enable school leaders to model responsible device use, maintain high-quality interpersonal communication, and support teachers' professional confidence. Despite its contributions, this study has limitations, particularly its cross-sectional design and regional scope, which restrict causal interpretations and broader generalization. Future studies are encouraged to employ longitudinal designs, include more diverse samples, and investigate additional moderating or mediating variables such as organizational culture, social support, or workplace stress to deepen the understanding of how supervisor behavior shapes teacher well-being. This research was supported by funding from DIKTI (Direktorat Jenderal Pendidikan Tinggi) in 2025, and the authors express their sincere appreciation for this valuable support.

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