OPEN ACCESS
Jurnal Ilmiah Ilmu Terapan Universitas Jambi
Vol. 8 No. 2. December 2024, pp. 732-745 DOI. 10.22437/jiituj.v8i2.37023
Research Article

INSTRUCTIONAL LEADERSHIP AND TEACHER SELF-EFFICACY ON JOB SATISFACTION: THE MEDIATING EFFECT OF SCHOOL CLIMATE IN INDONESIAN ISLAMIC SENIOR HIGH SCHOOLS

Ahmad Ridwan[1,*], Robi Hendra[2], Francisco D. Guillén-Gámez[3], Muhammad Fauzan[2], Turki Mesfer Alqahtani[4], Lalu Nurul Yaqin[5], Mohd Afifi Bahurudin Setambah[6]

[1] Departement of Educational Management, Universitas Islam Negeri Sulthan Thaha Saifuddin Jambi, Indonesia
[2] Faculty of Teaching Training and Education, Universitas Jambi, Jambi, Indonesia
[3] Department of Didactics and School Organization, Faculty of Education Sciences, Universidad de Malaga, Malaga, Spain
[4] eLearning Center, Faculty of Education, Jazan University, Saudi Arabia
[5] Faculty of Art and Social Sciences, Universiti Brunei Darussalam, Bandar Seri Begawan, Brunei Darussalam
[6] Faculty of Human Development, Sultan Idris Education University, Malaysia
Corresponding author email: ahmadridwan@uinjambi.ac.id

Article Info
Recieved: Jul 25, 2024
Revised: Sep 02, 2024
Accepted: Oct 01, 2024
OnlineVersion: Oct 11, 2024

Abstract
This study explores the impact of instructional leadership and teacher self-efficacy on job satisfaction among teachers in Indonesian Islamic Senior High Schools (Madrasah Aliyah), focusing on the mediating role of school climate. Instructional leadership plays a crucial role in shaping a positive school environment, which can enhance teacher job satisfaction by providing necessary guidance, resources, and support. A mixed-method approach was employed, with data collected from 219 teachers using validated survey instruments. The Content Validity Index (CVI) was used to ensure instrument reliability. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess relationships between variables and the mediating effect of school climate. The results show that instructional leadership significantly impacts both school climate and teacher job satisfaction, with path coefficient values of .463 and .818, respectively. However, school climate did not significantly mediate the relationship between instructional leadership and job satisfaction. Teacher self-efficacy, while positively influencing school climate ($p < .05$), did not have a substantial direct effect on job satisfaction (ß = -0.058). This research provides fresh insights into the nuanced interplay between leadership, teacher self-efficacy, and job satisfaction in the context of Islamic schools. The findings highlight school climate's indirect yet pivotal role in educational leadership dynamics. By integrating these variables, the study offers practical recommendations for improving leadership strategies and enhancing teacher well-being in faith-based educational settings.

Keywords: Instructional Leadership, Job satisfaction, PLS-SEM, School Climate, Teacher Self-Efficacy

INTRODUCTION

Instructional leadership is integral to enhancing teaching practices (Liu & Hallinger, 2018; Apeadido, Opoku-Mensah, & Mensah, 2024; Baah, Konovalov, & Tenzin, 2024; Zakiyah, Boonma, & Collado, 2024), while teacher self-efficacy pertains to teachers' belief in addressing educational challenges (Kusuma, 2020; Skaalvik, 2020; Xiyun et al., 2022; Sari, Omeiza, & Mwakifuna, 2023). School climate, considered the collective perception of the work environment, is a critical mediator in the relationships (Sutiyatno et al., 2022; Selenius & Ginner Hau, 2023). The interaction between instructional leadership and teacher self-efficacy regarding job satisfaction has been extensively documented (Fathi et al., 2021; Putra et al., 2024). The prior study also investigated the influence of organizational culture and commitment on the interplay of instructional leadership, teacher self-efficacy, and school climate (Bektiarso, 2022; Szabó et al., 2022). The impact of the COVID-19 pandemic on teacher self-efficacy and workload is considered necessary, providing contemporary relevance (Szabó et al., 2022; Asrial et al., 2023; Koutská, 2023). Despite extensive research on these topics, there remains a significant gap in the context of Indonesian *Madrasah Aliyah*, particularly regarding the specific aspects of instructional leadership, self-efficacy, and the mediating role of school climate, which have not been thoroughly explored (Suwarni, 2021; Raman et al., 2022; Koutska, 2023).

Therefore, this study seeks to add to the discourse by examining these dynamics within the context of Indonesian Senior High Schools (*Madrasah Aliyah*), integrating findings from prior empirical studies to enhance understanding of the educational sector's internal dynamics (Zona & Taufik, 2019). Path analysis is employed to explore the causal relationships between the involved variables (Alzoraiki et al., 2023; Purwanto & Sulaiman, 2023; Fitriana & Waswa, 2024), allowing for a detailed examination of the factors contributing to teachers' job satisfaction. This research contributes to the field by bridging these gaps, offering insights for improving educational quality and teacher performance in *Madrasah Aliyah* environment. The findings are expected to provide strategic recommendations for academic leaders and policymakers, aiding in creating interventions to support teacher development and fostering a positive work environment to enhance educational performance.

This study addresses a gap in the current research by focusing on the unique context of Indonesian *Madrasah Aliyah*, specifically how instructional leadership, teacher self-efficacy, and school climate influence teacher job satisfaction. While much research has explored these dynamics in general educational settings, little is known about how they operate within *Madrasah Aliyah*, which has distinct cultural, religious, and organizational characteristics. These schools combine general and Islamic education, which may shape the relationships between these key variables differently. Understanding the specific interactions between educational strategies and the religious framework in *Madrasah Aliyah* is crucial for developing tailored approaches that respect their distinctive ethos. This gap in the literature highlights the need for focused studies that address the complexities within these Islamic secondary schools. By applying path analysis to examine these factors in *Madrasah Aliyah*, this study aims to provide fresh insights and practical recommendations tailored to their specific needs, contributing to a better understanding of improving teacher performance and educational quality in this unique setting.

LITERATURE REVIEW

Theoretically, instructional leadership, teacher self-efficacy, and school climate are interrelated factors that significantly influence job satisfaction, as supported by several foundational frameworks. Grounded in transformational leadership theory, instructional leadership enhances job satisfaction by fostering a positive, supportive environment that promotes professional growth and a shared vision for success (Liu & Hallinger, 2018; Asamoah et al., 2024). Teacher self-efficacy, rooted in Bandura's social cognitive theory, affects job satisfaction by impacting teachers' confidence to manage classroom challenges and achieve desired educational outcomes (Xiyun et al., 2022). Additionally, the social-ecological theory posits that school climate a combination of organizational culture, interpersonal relationships, and the overall work environment mediates the relationship between leadership and self-efficacy, creating a context that either enhances or detracts from job satisfaction (Selenius & Ginner Hau, 2023). Together, these theoretical frameworks suggest that a supportive school climate, effective leadership, and robust teacher self-efficacy create an environment conducive to higher job satisfaction among teachers.

Instructional Leadership, School Climate, and Satisfaction

Instructional leadership, defined as practices that enhance the quality of the learning process (Jeffri & Hamid, 2022; Yohanie et al., 2023; Rachmawati et al., 2024), involves decision-making focusing on curriculum and student learning outcomes (Veletić & Olsen, 2021). Teacher job satisfaction encompasses teachers' happiness or contentment with their work, including the environment, professional support, and recognition (Rachmawati & Suyatno, 2021). Further, school climate is the collective perception of school members about their work environment, covering interpersonal relationships, organizational structure, and facilities (Yusoff & Ismail, 2021). The instructional leadership role in shaping a positive school climate, which influences teacher self-efficacy and student performance, has been well-documented (Lestari et al., 2019; Raman et al., 2022). Direct relationships between instructional leadership and teacher and student achievement have also been reported (Dutta & Sahney, 2022). Similarly, teacher job satisfaction has been linked to instructional leadership and school climate, which correlates with their work commitment and performance in the classroom (Fathi et al., 2021; Putriningsih, Suwintari & Widada, 2023). Studies have shown that effective instructional leadership can cultivate a positive school climate and boost teacher job satisfaction (Ipong, 2020; Rafiq & Gul, 2023). A positive school climate is also associated with improved school performance. To extend the prior information provided by prior studies, we proposed three hypotheses on the roles of instructional leadership regarding school climate and teacher satisfaction:

H1: Instructional leadership influences school climate.
H2: Instructional leadership affects job satisfaction.
H3: School climate mediates the influence of instructional leadership on job satisfaction.

Self-Efficacy, School Climate, and Satisfaction

Teacher self-efficacy, conceptualized as teachers' belief in their capacity to execute the necessary teaching tasks to attain specific educational goals, is linked to positive educational outcomes (Klassen & Chiu, 2010; Kasalak & Dağyar, 2020). Aldridge and Fraser (2016) demonstrated a positive correlation between a supportive school climate and teacher self-efficacy. Further, Shaukat et al. (2019) asserted that teacher characteristics, including self-efficacy, are instrumental in determining job satisfaction. Teacher job satisfaction is associated with the fulfillment and positive emotions derived from their professional role, with studies indicating that self-efficacy significantly affects this satisfaction (Hassan & Ibourk, 2021). Liu et al., (2023) identify a composite influence of job resources, demands, and self-efficacy on job satisfaction in STEM fields.

School climate, encompassing the collective perceptions regarding the school's work environment, influences various aspects such as safety, relationships, and organizational structure. Instructional leadership's impact on school climate is well-established (Yusoff & Ismail, 2021), with further evidence suggesting that it positively affects teacher self-efficacy and the overall school environment (Jalapang & Raman, 2020; Jeffri & Hamid, 2022). Teacher self-efficacy (Rusmiati, 2022) is crucial for enhancing teacher job satisfaction (Dağlı & Kalkan, 2021). Dutta and Sahney (2016) highlight that school climate mediates the effects of instructional leadership on teacher performance and student achievement. The mediating role of school climate in the relationship between instructional leadership and various school performance aspects is reinforced (Ipong, 2020; Veletić & Olsen, 2021). The hypotheses posited in this context are:

H4: Self-efficacy influences school climate.
H5: Self-efficacy impacts job satisfaction.
H6: School climate affects teacher satisfaction
H7: School climate mediates the relationship between teacher self-efficacy and teacher satisfaction.

RESEARCH METHOD

Quantitative survey study was used in the current study. Survey is a research methodology employed to gather information or data from a population, generally using questionnaires or interviews. Surveys are constructed to collect opinions, behaviors, attitudes, or factual data from participants. We adopted a survey instrument consisting of 54 relevant items, including demographic questions. The development was based on a well-established research framework in the literature, drawing on foundational works (Webster & Watson, 2002; Windle, 2011; Williams et al., 2021). To align with the study's objectives, the instrument included items adapted from prior research, Job Satisfaction (Liu et

al., 2021), Instructional Leadership (Liu et al., 2021), 17 items on Teacher Efficacy (Sharma et al., 2012), and School Climate (Johnson et al., 2007). Responses were collected using a five-point Likert scale, in line with established protocols (Drumm et al., 2022). Two proficient translators translated The instrument into Indonesian to ensure linguistic precision. Content and design validation involved expert reviews from five authorities and discussions with two focus groups comprising Indonesian *Madrasah Aliyah* teachers, mirroring the primary survey population. We used the Content Validity Index (CVI) to adhere to the standards (Habibi et al., 2021). The results, benchmarked against criteria (Habibi et al., 2021), indicated that all items surpassed the CVI threshold of .8, verifying their validity and reliability.

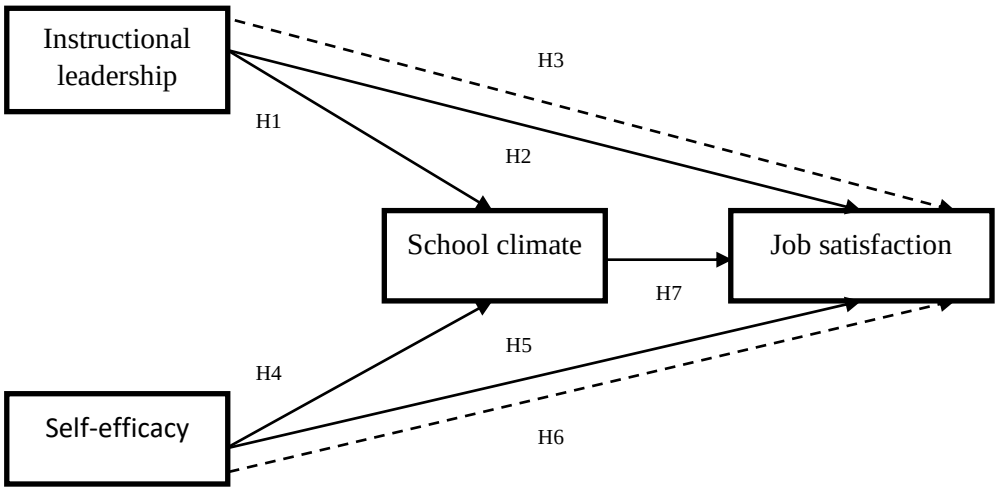

Figure 1. Proposed model

The study population represents all relevant units or individuals, known as units of analysis, which could include people, institutions, or objects. This population serves as the basis for generalization and includes entities with specific characteristics and quantities (Hair et al., 2022). This research's population consisted of more than 2000 Indonesian teachers in one Indonesian province. Quota sampling was implemented to measure the respondents based on demographic information, such as gender, educational degree. The sample size was determined using GPower software, which recommended a sample of 210 respondents to achieve a statistical power of .95. A total of 219 respondents completed the survey, with a slight majority being women (52.97%) and men making up 47.03%. Most respondents held a bachelor's degree (75.34%), followed by those with a master's degree (16.44%) and a doctoral degree (8.22%). This distribution reflects a high level of education among the participants and a balanced gender representation, providing valuable insight into the demographic characteristics of this and similar surveys.

The data analysis used the PLS-SEM approach through SmartPLS 3.3.3, involving a comprehensive two-stage process (Hair et al., 2022; Citrawan et al, 2024; Jumabaeva et al., 2024; Talan et al., 2024). In stage 1, the focus was on evaluating the measurement model, which is critical for ensuring that the study's constructs are reliable and valid. Construct reliability was assessed through internal consistency measures such as Cronbach's alpha and composite reliability. Validity was evaluated through convergent validity and discriminant validity. In stage 2, the structural model was assessed to explore the hypothesized relationships between the exogenous and endogenous variables that involved testing the direct effects between variables, calculated with path coefficients. The significance of these path coefficients was determined using bootstrapping techniques to ensure robust estimates. Additionally, fundamental model fit indices, such as the coefficient of determination (R^2), were examined to assess the model's explanatory power. This rigorous two-step approach, recommended by scholars like Habibi et al. (2022), Hair et al. (2022), and Pramana et al. (2022), ensures a comprehensive evaluation of the research model.

RESULTS AND DISCUSSION

The construct's reliability and validity were assessed through internal reliability, convergent validity, and discriminant validity (Habibi et 2021). Ling et al. (2017) underscored the necessity for indicator loadings to exceed .700, the benchmark. SPSS was utilized to analyze data distribution. Meanwhile, SmartPLS 4 facilitated PLS calculations, identifying several indicators with loadings above

.700. Ringle et al. (2015) applied Internal Correlation Reliability (ICR) for consistency, with values ranging from 0 to 1. Cronbach's Alpha, Rho_A, and composite reliability values above .700 are excellent for internal consistency assessment (Hair et al., 2022). Table 1 exhibits ICR values surpassing .700. Cronbach's alpha values for variables were between .964 and .992, while Rho_A ranged from .985 to .988. Convergent validity was confirmed through AVE, with all variables exceeding the .500 threshold (Dash & Paul, 2021; Sarstedt et al., 2022). The study embraced reliability indicators for measuring latent variables alongside an external load analysis for each indicator. Loadings of .700 suggest that the construct explains over 70% of an indicator's variance (Sarstedt et al., 2022; Habibi et al., 2023; Mo et al., 2024) TE10, TE17, SC11, and SC15. Items failing to meet the standards were not included in subsequent testing.

The data presents an analysis of four key variables: job satisfaction, instructional leadership, school climate, and teacher efficacy, measured using multiple items. Each variable's construct reliability and validity were assessed through Composite Reliability (CR), Average Variance Extracted (AVE), mean scores, Variance Inflation Factor (VIF), and factor loadings. For job satisfaction, the CR value of .981 and AVE of .883 demonstrate strong internal consistency and good convergent validity. The mean scores, ranging from 3.703 to 3.744, indicate a relatively high level of job satisfaction among respondents. However, several items show high VIF values (e.g., JS6 at 3.150 and JS8 at 3.137), which might suggest multicollinearity issues that could affect the reliability of these measurements. Instructional leadership also shows high reliability, with a CR of .985 and AVE of .894. Mean scores range from 3.716 to 3.744, indicating positive perceptions of leadership practices. Like job satisfaction, some instructional leadership items have high VIF values (e.g., IL6 at 3.277), which may require further examination for multicollinearity.

The school climate and teacher efficacy variables also reveal essential findings. The school climate shows a CR of .975 and an AVE of .729, suggesting reasonable construct validity but slightly lower convergent validity than the other variables. The mean scores for school climate items range from 2.539 to 3.849, with some variability across different aspects of the climate, such as student engagement, safety, and professional support. Teacher efficacy shows strong reliability, with a CR of .978 and AVE of .831, but there are notable concerns regarding individual item loadings. While most items have strong loadings (e.g., TE7 at .951), some items, such as TE5 (.425) and TE3 (.745), display lower values, which could indicate problematic items that do not align well with the construct. Additionally, several items have very high VIF values (e.g., TE12 at 6.763), suggesting possible redundancy or multicollinearity. Addressing these issues will be crucial for improving the accuracy and interpretability of the measurement model and ensuring robust findings in any subsequent analysis.

Table 1. Mean, CR, AVE, Loading, and VIF

Variable	Item	CR	AVE	Mean	VIF	Load
Job satisfaction	JS1	.981	.883	3.731	2.226	.887
	JS2			3.753	1.808	.938
	JS3			3.703	2.001	.957
	JS4			3.703	2,.632	.932
	JS5			3.735	2.674	.957
	JS6			3.721	3.150	.930
	Sat7			3.721	3.254	.948
	JS8			3.744	3.137	.968
Instructional leadership	IL1	.985	.894	3.708	2.279	.897
	IL2			3.726	1.624	.957
	IL3			3.731	2.073	.951
	IL4			3.735	2.306	.969
	IL5			3.717	2.471	.922
	IL6			3.721	3.277	.945
	IL7			3.744	3.021	.963
	IL8			3.740	3.001	.979
	IL9			3.716	2.013	.922
School climate	SC1	.975	.729	3.703	1.602	.819
	SC2			3.644	2.118	.903

Variable	Item	CR	AVE	Mean	VIF	Load
	SC3			3.607	2.472	.884
	SC4			3.475	1.717	.911
	SC5			3.548	1.487	.888
	SC6			3.703	1.990	.912
	SC7			3.776	2.350	.899
	SC8			3.849	2.186	.886
	SC9			3.785	1.951	.891
	SC10			3.731	2.053	.885
	SC11			2.539	3.457	.821
	SC12			3.676	3.120	.734
	SC13			3.721	2.315	.832
	SC14			3.731	3.379	.714
	SC15			3.740	3.748	.759
	TE1			3.694	3.480	.922
	TE2			3.703	3.404	.794
	TE3			3.699	3.430	.745
	TE4			3.735	3.831	.799
	TE5			3.735	1.602	.425
	TE6			3.685	2.040	.768
Teacher efficacy	TE7	.978	.831	3.726	1.821	.951
	TE8			3.735	1.751	.886
	TE9			3.744	2.016	.911
	TE10			3.735	1.178	.912
	TE11			3.393	1.429	.955
	TE12			3.507	6.763	.934
	TE13			3.384	3.923	.946
	TE14			3.425	2.092	.898

The discriminant validity test is designed to ascertain the distinctiveness of theoretically unrelated constructs (Sarstedt et al., 2022). In our analysis, the heterotrait-monotrait ratio (HTMT) was the criterion of choice. Research suggests that discriminant validity is deemed adequate when the HTMT value is below the threshold of .900 (Afthanorhan et al., 2020; Roemer et al., 2021). The HTMT values identified in our study ranged from .569 to .889. These results indicate no concerns regarding discriminant validity within the measurement model, affirming the reliability of the survey methodology implemented in this research. Based on the results from the collected data, it is possible to conclude that the research instruments employed exhibit adequate discriminant validity. The study reveals that all HTMT values (Table 2) are below the threshold of .900, indicating a satisfactory level of discriminant validity (Sarstedt et al., 2022).

Table 2. HTMT

Variables	Instructional Leadership	Job Satisfaction	School Climate
Job Satisfaction	.881		
School Climate	.843	.855	
Teacher Self-Efficacy	.875	.764	.861

Structural Model

To estimate the structural model, this study implemented PLS bootstrapping with a selection of 5000 samples. PLS-SEM framework recommends bootstrapping as a method involving random subsample selection from the original dataset, with replacement, to assess statistical significance (Sarstedt et al., 2022). Before examining the structural model, Hair et al., (2022) advocated presenting model fit indices. The model's adequacy was evaluated using the Standardized Root Mean Square Residual (SRMR), with the model expected to stay within the threshold of .08. The analysis further encompassed an inspection of geodesic distances and Euclidean squares. As reported in Table 3, the

findings show the SRMR to be well below the .080 cut-off. Additionally, the d_ULS and d_G values were .687 and .316, respectively, signifying exemplary model performance.

Table 3. Model Fit

Criteria	Saturated	Estimated
SRMR	.062	.062
d_ULS	3.839	3.839
d_G	7.074	7.074
Chi-Square	5802.075	5802.075
NFI	.727	.727

The significance of relationships was assessed using the bootstrapping technique. A statistical significance level was established at 5%, considering the path coefficient (β), t-value, and p-value outlined by Hair et al. (2022). Hypothesis testing via bootstrapping in SmartPLS 4 revealed that instructional leadership exerts a positive and significant effect on school climate (H1, β = .462) and job satisfaction (H2, β = .818). However, the indirect influence on job satisfaction through school climate is not significant (H3). Teacher self-efficacy is shown to impact school climate positively (H4, β = .530), yet it does not directly affect job satisfaction (H5) (Table 4 and Figure 2). School climate is found to have a positive, albeit non-significant, association with job satisfaction (H6). Moreover, the sequential relationship involving teacher self-efficacy, school climate, and job satisfaction (H7) does not exhibit substantial statistical significance. This analysis, conducted at a 5% significance level and adhering to the methodologies, offers insights into the dynamics of leadership and self-efficacy in shaping the work environment and satisfaction within educational contexts.

Table 4. Structural model; path coefficient (β), p-value, significance

H	Path	β	p-value	Sig.
H1	Instructional Leadership -> School Climate	.462	.000	Yes
H2	Instructional Leadership -> Job Satisfaction	.818	.000	Yes
H3	Instructional Leadership -> School Climate -> Job Satisfaction	.097	.097	No
H4	Teacher Self-Efficacy -> School Climate	.530	.000	Yes
H5	Teacher Self-Efficacy -> Job Satisfaction	-.058	.523	No
H6	School Climate -> Job Satisfaction	.210	.066	No
H7	Teacher Self-Efficacy -> School Climate -> Job Satisfaction	.111	.058	No

In the research domain utilizing PLS-SEM, model assessment through R^2, f^2, and Q^2 testing is essential to ascertain the model's efficacy and validity. The R^2 analysis, indicative of the model's predictive accuracy, yields significant results with values of .929 for Job Satisfaction and .917 for School Climate. The findings align with prior studies (Hair et al., 2022), denoting that the model explains most of the variance for these dependent variables, confirming its high predictive capacity. Further scrutiny of the model's specific effects through f^2 delineates the pronounced influence of select independent variables. Notably, statistically significant hypotheses such as H1, H2, and H4 reveal considerable effects on the dependent variables.For example, Instructional Leadership affectts Job Satisfaction (H2), exhibiting the most substantial f^2 value of 1.586, signaling a solid impact.

In contrast, although not statistically significant, the relatively lower f2 values for H5 and H6 point to a more tempered effect on the dependent variables. Lastly, the model's predictive validity is reinforced by impressive Q^2 values for Job Satisfaction (.919) and School Climate (.912), inferring the model's adeptness at out-of-sample prediction. This analytical appraisal demonstrates that the model is adept at elucidating observed phenomena and forecasting unobserved data with remarkable precision.

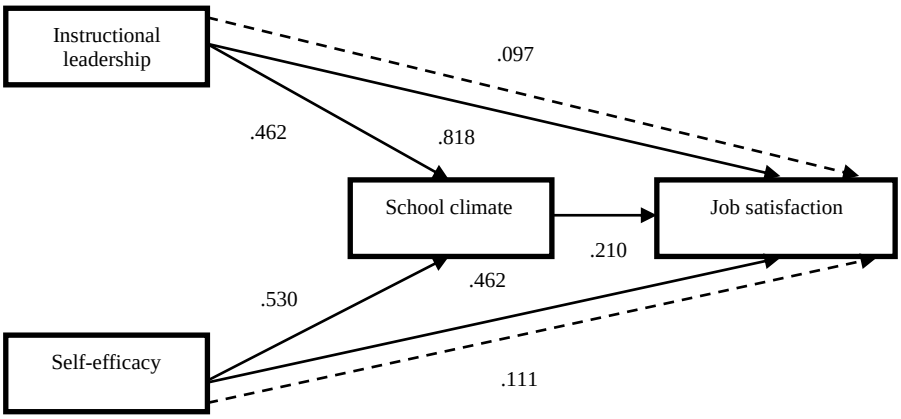

Figure 2. Structural model hypothesis

Instructional leadership has a significant influence on school climate, which is in line with the findings of prior research, which showed a positive relationship between instructional leadership and school culture (Liu & Hallinger, 2018). This suggests that the role of instructional leaders is critical not just in setting educational standards and goals but in nurturing an environment that fosters academic excellence. Other studies also support this view, emphasizing the importance of instructional leadership in shaping school climate (Yusoff & Ismail, 2021; Siraj et al., 2022), thereby indicating that the leadership's commitment to instructional quality is a crucial determinant in the overall atmosphere and ethos of the school. Jefri and Hamid (2022) underscore this relationship, suggesting that effective instructional leadership permeates all facets of school life, from classroom teaching practices to student engagement and teacher morale. Prior studies (Skaalvik, 2020; Nurabadi et al., 2021; Setiyani, Baharin, & Jesse, 2023) confirm the role of instructional leadership in strengthening school climate, advocating for a strategic approach that integrates pedagogical leadership with organizational management to optimize learning outcomes. The finding provides empirical backing to the theoretical frameworks that advocate for a strong instructional leadership model as an essential component of school improvement strategies.

The robust correlation between instructional leadership and job satisfaction (β=.818; p<.001) resonates with my understanding of educational dynamics, where effective leadership is often the cornerstone of educator satisfaction. This is echoed by Raman et al. (2022), who articulate the pivotal role of instructional leaders in shaping a positive work environment. The interpretation is bolstered (Bellibaş et al., 2021), who draw a direct line between leadership quality and teacher morale. Zhang et al. (2021) further expand on this by linking a constructive school climate, a byproduct of proficient leadership, with high levels of job satisfaction among teachers. In my assessment, the contributions of (Dutta & Sahney, 2016, 2022; Kalkan et al., 2020) are particularly insightful; they suggest that the presence of strategic and empathetic instructional leadership is essential for fostering a supportive atmosphere that translates into enhanced staff well-being and job satisfaction.

Hypothesis 3, which explores the sequential relationship between instructional leadership, school climate, and job satisfaction, does not reveal a statistically significant connection, and this becomes a fascinating point for further reflection. While researchers (Lestari et al., 2019; Liu et al., 2021; Nurlina et al., 2023) have established a positive relationship between school climate and job satisfaction, the lack of direct evidence linking these elements in sequence with instructional leadership opens up a discussion about the potential nuances and intermediary variables at play. The findings of prior research (Lestari et al., 2019; Liu et al., 2021; Nurlina et al., 2023), which also do not demonstrate a significant direct relationship between these factors, suggest to me that the influence of instructional leadership on job satisfaction, mediated by school climate, may be subject to contextual variables or the presence of other mediating factors that are yet to be fully understood. The dynamics of instructional leadership's effect on school climate and job satisfaction are likely multifaceted. They may be significantly influenced by additional aspects of the school's organizational culture, teacher autonomy, or other dimensions of the educational environment.

Hypothesis 4 assesses the dynamics between teacher self-efficacy and school climate, uncovering a significant positive relationship (β=.530; p<.001). This correlation is underpinned by the scholarly narrative that a teacher's confidence in their instructional abilities profoundly impacts the educational environment (Sharma & Taneja, 2018). Theoretically, other studies suggest that self-

efficacious teachers are more likely to implement innovative teaching practices and foster a supportive and positive school climate (Finch et al., 2023; Zhang et al., 2023; Asrial et al., 2024; Darmatiara et al., 2024). Empirical evidence contributes to this discourse, highlighting the relationship between teacher self-efficacy and a nurturing school climate (Kasalak & Dağyar, 2020; Skaalvik, 2020). Additionally, Žunić-Pavlović & Pavlović (2020) and Xiyun et al. (2022) fortify this perspective, positing that the ripple effects of teacher self-efficacy extend beyond classroom walls to influence broader school cultural dynamics. The current work's aggregate underscores teacher self-belief's pivotal role in shaping an empowering and collaborative educational milieu. This study's insights provide a strong foundation for future research, particularly the integration of qualitative methodologies to investigate the complex and multifaceted dynamics among the critical educational factors examined. Future research can gain a more refined understanding of the effects of these factors by incorporating qualitative approaches, which can reveal more profound insights into their interactions. This will not only enhance the current findings but also provide more comprehensive recommendations for enhancing educational practices and policies, thereby fostering more effective learning environments.

CONCLUSION

This investigation delineates the substantive impact of instructional leadership on school climate and job satisfaction while concurrently acknowledging the influence of teacher self-efficacy solely on school climate, without a substantial effect on job satisfaction. These outcomes underscore the critical function of instructional leadership in cultivating an affirmative work environment and elevating teacher job satisfaction. Nevertheless, the sequential interplay among instructional leadership, school climate, and job satisfaction did not yield statistical significance, suggesting a more intricate web of interactions within the educational milieu. The study's limitations warrant careful consideration. Concentrating on *Madrasah Aliyah* within a specific geographic area may constrain the extrapolation of these results to broader educational settings. Additionally, the scope of variables included in this study might have inadvertently omitted other pertinent factors that could affect the outcomes. While robust, reliance on quantitative methods may only partially capture the nuanced and dynamic relationships between the examined variables. Implications for educational practice and policy derived from this research are substantial. The findings advocate for enhancing instructional leadership competencies demonstrably linked to positive school climates and increased job satisfaction. Secondly, policy initiatives should facilitate ongoing professional development opportunities for school leaders to sustain and enhance their leadership capacities.

ACKNOWLEDGMENTS

We express our sincere gratitude to all individuals and institutions that supported this research, including all universities and the research partners involved in this study. Special thanks are extended to our families for their continuous encouragement and support throughout the research process.

AUTHOR CONTRIBUTIONS

Ahmad Ridwan and Robi Hendra were responsible for conceptualization, methodology, and software development. Muhammad Fauzan, Francisco D. Guillén-Gámez, Mohd Afifi Bahurudin Setambah, Turki Mesfer Alqhatani, and Lalu Nurul Yaqin handled data curation and original draft preparation. Robi Hendra contributed to visualization and investigation. Supervision was provided by Ahmad Ridwan and Francisco D. Guillén-Gámez, while Muhammad Fauzan managed software implementation and validation. All authors contributed to reviewing and editing the manuscript.

CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

REFERENCES

Afthanorhan, A., Awang, Z., & Aimran, N. (2020). An extensive comparison of cb-sem and pls-sem for reliability and validity. *International Journal of Data and Network Science, 4,* 357–364. https://doi.org/10.5267/j.ijdns.2020.9.003.

Aldridge, J. M., & Fraser, B. J. (2016). Teachers' views of their school climate and its relationship with teacher self-efficacy and job satisfaction. *Learning Environments Research, 19*(2). https://doi.org/10.1007/s10984-015-9198-x.

Alzoraiki, M., Ahmad, A. R., Ateeq, A. A., Naji, G. M. A., Almaamari, Q., & Beshr, B. A. H. (2023). Impact of teachers' commitment to the relationship between transformational leadership and sustainable teaching performance. *Sustainability*, *15*(5). https://doi.org/10.3390/su15054620.

Apeadido, S., Opoku-Mensah, D., & Mensah, G. O. (2024). Enhancing science process skills and academic performance in biology: The impact of practical work. *Integrated Science Education Journal*, *5*(1), 34-41. https://doi.org/10.37251/isej.v5i1.854.

Asamoah, Y. D., Appiah-Twumasi, E., Fiave, J. B. K., & Mamudu, D. (2024). Comparative effects of generative learning strategies and 5E strategies on pre-service teachers' achievement of integrated science concepts. *Integrated Science Education Journal*, *5*(3), 125-133. https://doi.org/10.37251/isej.v5i3.1002

Asrial, A., Syahrial, S., Kurniawan, D. A., Aldila, F. T., & Iqbal, M. (2023). Implementation of web-based character assessment on students' character outcomes: A review on perception and gender. *JOTSE: Journal of Technology and Science Education*, *13*(1), 301-328. https://doi.org/10.3926/jotse.1564.

Asrial, A., Syahrial, S., Kurniawan, D. A., Putri, F. I., Perdana, R., Rahmi, R., Susbiyanto, S., & Aldila, F. T. (2024). E-Assessment for character evaluation in elementary schools. *Qubahan Academic Journal*, *4*(3), 806-822. https://doi.org/10.48161/qaj.v4n3a595.

Baah, R., Konovalov, O., & Tenzin, S. (2024). Effectiveness of e-assessment in science learning: Improving the quality and efficiency of assessment in the digital era. *Integrated Science Education Journal*, *5*(2), 74-81. https://doi.org/10.37251/isej.v5i2.960.

Bektiarso, S. (2022). The role of organizational commitment in mediating the relationship between competence and organizational culture with teacher performance. *Quality - Access to Success*, *23*(191), 164–175. https://doi.org/10.47750/QAS/23.191.19.

Bellibas, M. S., Gumus, S., & Liu, Y. (2021). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School Effectiveness and School Improvement*, *32*(3), 387–412. https://doi.org/10.1080/09243453.2020.1858119.

Citrawan, I. W., Widana, I. W., Sumandya., I. W., Widana, I. N. S., Mukminin, A., Arief, H., Razak, R. A., Hadiana, D., & Meter, W. (2024). Special education teachers' ability in literacy and numeracy assessments based on local wisdom. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, *8*(1), 145-157. https://doi.org/10.22437/jiituj.v8i1.32608.

Dagli, E., & Kalkan, F. (2021). The relationship between empowering leadership behaviors of school principals and teachers' self-efficacy perceptions and job satisfaction levels. *Egitim ve Bilim*, *46*(208), 105-123. https://doi.org/10.15390/EB.2021.10083.

Darmatiara, D., Pratama, W. A., Susbiyanto, S., & Chaw-Yangon, E. P. C.-Y. (2024). Identification of students' responses towards stem-based physics learning videos on momentum and impulse materials. *EduFisika: Jurnal Pendidikan Fisika*, *9*(2), 173-181. https://doi.org/10.59052/edufisika.v9i2.24927.

Dash, G., & Paul, J. (2021). CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting. *Technological Forecasting and Social Change*, *173*, 1-11. https://doi.org/10.1016/j.techfore.2021.121092.

Drumm, S., Bradley, C., & Moriarty, F. (2022). 'More of an art than a science'? The development, design and mechanics of the Delphi Technique. *Research in Social and Administrative Pharmacy*, *18*(1), 2230-2236. https://doi.org/10.1016/j.sapharm.2021.06.027.

Dutta, V., & Sahney, S. (2016). School leadership and its impact on student achievement: The mediating role of school climate and teacher job satisfaction. *International Journal of Educational Management*, *30*(6), 941-958. https://doi.org/10.1108/IJEM-12-2014-0170.

Dutta, V., & Sahney, S. (2022). Relation of principal instructional leadership, school climate, teacher job performance and student achievement. *Journal of Educational Administration*, *60*(2), 148-166. https://doi.org/10.1108/JEA-01-2021-0010.

Else-Quest, N. M., & Hyde, J. S. (2016). Special section: intersectionality research and feminist psychology intersectionality in quantitative psychological research: ii. methods and techniques. *Psychology of Women Quarterly*, *40*(3). https://doi.org/10.1177/0361684316647953.

Emin Turkoglu, M., Cansoy, R., & Parlar, H. (2017). Examining relationship between teachers' self-efficacy and job satisfaction. *Universal Journal of Educational Research*, *5*(5). https://doi.org/10.13189/ujer.2017.050509.

Fathi, J., Ahmadnejad, M., & Salehi, M. (2021). An investigation of the relationship among principal instructional leadership, collective teacher efficacy and teacher job satisfaction: A structural equation modeling approach. *Journal of School Administration, 9*(2). https://doi.org/10.34785/J010.2021.014.

Finch, J. E., Akhavein, K., Patwardhan, I., & Clark, C. A. C. (2023). Teachers' self-efficacy and perceptions of school climate are uniquely associated with students' externalizing and internalizing behavior problems. *Journal of Applied Developmental Psychology, 85*. https://doi.org/10.1016/j.appdev.2023.101512.

Fitriana, H., & Waswa, A. N. (2024). The influence of a realistic mathematics education approach on students' mathematical problem solving ability. *Interval: Indonesian Journal of Mathematical Education, 2*(1), 29-35. https://doi.org/10.37251/ijome.v2i1.979.

Habibi, A., Mailizar, M., Yaqin, L. N., Alqahtani, T. M., Abrar, M., Hamuddin, B., & Failasofah, F. (2024). Unlocking English proficiency: Youtube's impact on speaking skills among indonesian university students. *Journal of Technology and Science Education, 14*(1), 142-157. https://doi.org/10.3926/jotse.2485.

Habibi, A., Riady, Y., Alqahtani, T. M., Muhaimin, M., Albelbisi, N. A., Jaya, A., & Yaqin, L. N. (2023). Drivers affecting Indonesian pre-service teachers' intention to use m-learning: Structural equation modeling at three universities. *E-Learning and Digital Media, 20*(6), 519-538. https://doi.org/10.1177/20427530221118775.

Habibi, A., Yaakob, M. F. M., & Sofwan, M. (2022). Student use of digital libraries during COVID-19: Structural equation modelling in Indonesian and Malaysian contexts. *The Electronic Library, 40*(4), 472-485. https://doi.org/10.1108/EL-12-2021-0212.

Habibi, A., Yaakob, M. F. M., Mukminin, A., Muhaimin, M., Prasojo, L. D., Yusop, F. D., & Muzakkir, M. (2021). Teachers' digital technology access to motivation, skills and use: a structural equation modeling study. *Aslib Journal of Information Management, 73*(4), 543-559. https://doi.org/10.1108/AJIM-11-2020-0382.

Hair, J., & Alamer, A. (2022). Partial least squares structural equation modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics, 1*(3), 100027. https://doi.org/10.1016/j.rmal.2022.100027.

Hassan, O., & Ibourk, A. (2021). Burnout, self-efficacy and job satisfaction among primary school teachers in Morocco. *Social Sciences and Humanities Open, 4*(1). https://doi.org/10.1016/j.ssaho.2021.100148.

Hertzog, M. A. (2008). The content validity index: are you sure you know what's being reported? critique and recommendations. *Research in Nursing & Health, 31*(4). https://doi.org/10.1002/nur.20147.

Ipong, D. (2020). The role of instructional leadership on school quality through school climate as a mediator. *Talent Development & Excellence, 12*(3), 1142-1159. https://doi.org/10.1108/IJEM-07-2023-0323.

Koutska, I. (2023). Educational technology 'introduced' by the COVID-19 pandemic. *Innoeduca. International Journal of Technology and Educational Innovation, 9*(2), 115–133. https://doi.org/10.24310/innoeduca.2023.v9i2.15481.

Jalapang, I., & Raman, A. (2020). Effect of instructional leadership, principal efficacy, teacher efficacy and school climate on students' academic achievements. *Academic Journal of Interdisciplinary Studies, 9*(3). https://doi.org/10.36941/ajis-2020-0043.

Jeffri, A. I., & A. Hamid, A. H. (2022). The relationship between 21st-century instructional leadership and teachers' self-efficacy. *International Journal of Academic Research in Business and Social Sciences, 12*(9). https://doi.org/10.6007/ijarbss/v12-i9/14569.

Johnson, B., Stevens, J. J., & Zvoch, K. (2007). Teachers' perceptions of school climate: A validity study of scores from the revised school level environment questionnaire. *Educational and Psychological Measurement, 67*(5), 1-10. https://doi.org/10.1177/0013164406299102.

Jumabaeva, C., Afacan Adanir, G., Sartova, K., & Muhametjanova, G. (2024). Kyrgyz Students' Acceptance of QR Code Use in Organic Chemistry Course. *Innoeduca. International Journal of Technology and Educational Innovation, 10*(1), 166–183. https://doi.org/10.24310/ijtei.101.2024.17747.

Kalkan, U., Altinay Aksal, F., Altinay Gazi, Z., Atasoy, R., & Dagli, G. (2020). The relationship between school administrators' leadership styles, school culture, and organizational image. *SAGE Open*, *10*(1). https://doi.org/10.1177/2158244020902081.

Kasalak, G., & Dagyar, M. (2020). The relationship between teacher self-efficacy and teacher job satisfaction: A meta-analysis of the teaching and learning international survey (talis). *Educational Sciences: Theory and Practice*, *20*(3). https://doi.org/10.12738/jestp.2020.3.002.

Klassen, R. M., & Chiu, M. M. (2010). Effects on teachers' self-efficacy and job satisfaction: teacher gender, years of experience, and job stress. *Journal of Educational Psychology*, *102*(3). https://doi.org/10.1037/a0019237.

Koutská, I. (2023). Educational technology 'introduced'by the COVID-19 pandemic. *Innoeduca: international journal of technology and educational innovation*, *9*(2), 115-133. https://doi.org/10.24310/innoeduca.2023.v9i2.15481.

Kusuma, R. S. (2020). Improving students' basic asking skills by using the discovery learning model. *Tekno - Pedagogi : Jurnal Teknologi Pendidikan*, *10*(2), 8-13. https://doi.org/10.22437/teknopedagogi.v10i2.32743.

Lestari, A., Komala, R., & Rusdi, R. (2019). Relationship between school climate and instructional leadership with the biology teachers justice. *Indonesian Journal of Science and Education*, *3*(1). https://doi.org/10.31002/ijose.v3i1.1163.

Ling, M. T., Pang, V., & Thurasamy, R. (2017). The construct validation of Leadership Competency Scale (LCS): Integration of Rasch And PLS-SEM. TPM . *Testing, Psychometrics, Methodology in Applied Psychology*, *24*(2). https://doi.org/10.4473/TPM24.2.6.

Liu, J., Wang, K., Chen, Z., & Pan, Z. (2023). Exploring the contributions of job resources, job demands, and job self-efficacy to STEM teachers' job satisfaction: A commonality analysis. Psychology in the Schools, 60(1). https://doi.org/10.1002/pits.22768.

Liu, S., & Hallinger, P. (2018). Principal instructional leadership, teacher self-efficacy, and teacher professional learning in China: Testing a Mediated-Effects Model. *Educational Administration Quarterly 54*(4). https://doi.org/10.1177/0013161X18769048.

Liu, Y., Bellibas, M. S., & Gumus, S. (2021). The effect of instructional leadership and distributed leadership on teacher self-efficacy and job satisfaction: Mediating roles of supportive school culture and teacher collaboration. *Educational Management Administration and Leadership*, *49*(3), 430–453. https://doi.org/10.1177/1741143220910438.

Mo, N. T., Binh, N. T., Hung, P. H., Cu, H. M., Linh, N. T., & Van Hai, T. (2024). Employee satisfaction, engagement and financial performance in stock brokerage companies. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, *8*(1), 284-299. https://doi.org/10.22437/jiituj.v8i1.32199.

Nurabadi, A., Irianto, J., Bafadal, I., Juharyanto, Gunawan, I., & Adha, M. A. (2021). The effect of instructional, transformational and spiritual leadership on elementary school teachers' performance and students' achievements. *Cakrawala Pendidikan*, *40*(1), 17–31. https://doi.org/10.21831/cp.v40i1.35641.

Nurlina, N., Widayatsih, T., & Lestari, N. D. (2023). The effect of job satisfaction and motivation on the organizational commitment. *JMKSP (Jurnal Manajemen, Kepemimpinan, Dan Supervisi Pendidikan)*, *8*(1). https://doi.org/10.31851/jmksp.v8i1.10029.

Pramana, D., Utami, N. W., & Wiradharma, I. G. B. M. (2022). Evaluasi faktor yang mempengaruhi behavioral intention dan use behavioral pada spada di stmik primakara menggunakan model unified theory of acceptance and use of technology 2 [Evaluation of factors influencing behavioral intention and use behavior on Spada at STMIK Primakara using the unified theory of acceptance and use of technology 2 model]. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, *6*(1), 98-114. https://doi.org/10.22437/jiituj.v6i1.19601.

Putra, R. P., Ramadhanti, A., Setiawati, F. A., Azizah, H. J. A., & Puhka, P. (2024). Do undergraduate physics students studying abroad need optimism? A cross-country case study. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, *8*(1), 90-103. https://doi.org/10.22437/jiituj.v8i1.31880.

Putriningsih, D. P. E., Suwintari, I. G. A. E., & Widada, M. C. P. N. (2023). Location and motivation influence on the decision to visit the Tembeling, Nusa Penida. *Jurnal Ilmiah Ilmu Terapan Universitas Jambi*, *7*(1), 68-74. https://doi.org/10.22437/jiituj.v7i1.26663.

Purwanto, A., & Sulaiman, A. (2023). The role of transformational and transactional leadership on job satisfaction of millennial teachers: A cb-sem amos analysis. *UJoST-Universal Journal of Science and Technology*, *2*(2). https://doi.org/10.11111/ujost.v2i2.114.

Rachmawati, Y., & Suyatno, S. (2021). The effect of principals' competencies on teachers' job satisfaction and work commitment. *Participatory Educational Research, 8*(1). https://doi.org/10.17275/per.21.21.8.1.

Rafiq & Dr. Fariha Gul. (2023). Impact of instructional leadership on school culture and climate for school improvement. MAIRAJ, 1(1). https://doi.org/10.58760/mairaj.v1i1.4.

Raman, A., Thannimalai, R., & Jalapang, I. A. (2022). An empirical study on instructional leadership, school climate and teacher efficacy. *Journal of Pedagogy and Education Science, 1*(02), 47–62. https://doi.org/10.56741/jpes.v1i02.76.

Ringle, C. M., Wende, S., & Becker, J. M. (2015). *Smart PLS 3. In SmartPLS GmbH*, http://www.smartpls.com.

Rachmawati, E., Kurniawan, B., Arkew, H. W., & Singh, A. (2024). Development of Web-Based Geography Learning Media for High School Students. *Journal Evaluation in Education (JEE)*, *5*(1), 34-41. https://doi.org/10.37251/jee.v5i1.824.

Roemer, E., Schuberth, F., & Henseler, J. (2021). HTMT2–an improved criterion for assessing discriminant validity in structural equation modeling. *Industrial Management and Data Systems, 121*(12). https://doi.org/10.1108/IMDS-02-2021-0082.

Rusmiati, M. (2022). Realistic Mathematics Education (RME) on Student Self-Efficacy. *Journal Evaluation in Education (JEE)*, *3*(3), 97-101. https://doi.org/10.37251/jee.v3i3.265.

Sari, R., Omeiza, I. I., & Mwakifuna, M. A. (2023). The influence of number dice games in improving early childhood mathematical logic in early childhood education. *Interval: Indonesian Journal of Mathematical Education*, *1*(2), 61-66. https://doi.org/10.37251/ijome.v1i2.776.

Sarstedt, M., Radomir, L., Moisescu, O. I., & Ringle, C. M. (2022). Latent class analysis in PLS-SEM: A review and recommendations for future applications. *Journal of Business Research, 138.* https://doi.org/10.1016/j.jbusres.2021.08.051.

Selenius, H., & Ginner Hau, H. (2023). A scoping review on the psychometric properties of the teacher efficacy for inclusive practices (TEIP) scale. *Scandinavian Journal of Educational Research, 68*(4), 792-802. https://doi.org/10.1080/00313831.2023.2185811.

Setiyani, E. N., Baharin, Z. H. Z., & Jesse, S. N. (2023). Development of POE-Based student worksheets (Predict, Observe, And Explain) for students' mathematical representation abilities. *Journal of Educational Technology and Learning Creativity*, *1*(2), 78-87. https://doi.org/10.37251/jetlc.v1i2.792.

Sharma, U., Loreman, T., & Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practices. *Journal of Research in Special Educational Needs, 12*(1). https://doi.org/10.1111/j.1471-3802.2011.01200.x.

Sharma, S., & Taneja, M. (2018). The effect of training on employee performance. *International Journal of Recent Technology and Engineering, 7*(4), 388-381. https://doi.org/10.36555/almana.v4i3.1477.

Shaukat, S., Vishnumolakala, V. R., & Al Bustami, G. (2019). The impact of teachers' characteristics on their self-efficacy and job satisfaction: a perspective from teachers engaging students with disabilities. *Journal of Research in Special Educational Needs, 19(*1). https://doi.org/10.1111/1471-3802.12425.

Siraj, M. A. M. M., Rami, A. A. M., Aziz, N. A. A., & Anuar, M. A. M. (2022). The Relationship Between School Heads' Transformational and Structural Leadership Styles Towards Teachers' Teaching Motivation. *Asian Journal of University Education, 18*(1) 244-255. https://doi.org/10.24191/ajue.v18i1.17193.

Skaalvik, C. (2020). School principal self-efficacy for instructional leadership: relations with engagement, emotional exhaustion and motivation to quit. *Social Psychology of Education, 23*(2), 479–498. https://doi.org/10.1007/s11218-020-09544-4.

Sutiyatno, S., Santoso, K. I., & Susilo, G. (2022). The role of innovation leadership in teacher commitment: a study of organizational culture. *International Journal of Educational Methodology*, *8*(3), 595–607. https://doi.org/10.12973/ijem.8.3.595.

Suwarni, R. (2021). Analysis the process of observing class iv students in thematic learning in primary schools. *Tekno - Pedagogi : Jurnal Teknologi Pendidikan*, *11*(1), 26-32. https://doi.org/10.22437/teknopedagogi.v11i1.32717.

Szabo, E., Korodi, K., Szel, E., & Jagodics, B. (2022). Facing the inevitable: The effects of coronavirus disease pandemic and online teaching on teachers' self-efficacy, workload and job satisfaction. *European Journal of Educational Research, 11*(1), 151–162. https://doi.org/10.12973/eu-jer.11.1.151.

Talan, T., Dogan, Y., & Kalinkara, Y. (2024). Digital natives' mobile learning adoption in terms of utaut-2 model: a structural equation model. *Innoeduca. International Journal of Technology and Educational Innovation, 10*(1), 100–123. https://doi.org/10.24310/ijtei.101.2024.17440.

Veletic, J., & Olsen, R. V. (2021). Developing a shared cluster construct of instructional leadership in TALIS. *Studies in Educational Evaluation, 68*, 1-12. https://doi.org/10.1016/j.stueduc.2020.100942.

Webster, J., & Watson, R. T. (2002). Analyzing the Past to Prepare for the Future: Writing a Literature Review. *MIS Quarterly, 26*(2), 521-533. https://doi.org/10.1.1.104.6570.

Williams, R. I., Clark, L. A., Clark, W. R., & Raffo, D. M. (2021). Re-examining systematic literature review in management research: Additional benefits and execution protocols. *European Management Journal, 39*(4). https://doi.org/10.1016/j.emj.2020.09.007.

Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology, 21*(2). https://doi.org/10.1017/S0959259810000420.

Xiyun, S., Fathi, J., Shirbagi, N., & Mohammaddokht, F. (2022). A structural model of teacher self-efficacy, emotion regulation, and psychological wellbeing among English teachers. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.904151.

Yusoff, M. A., & Ismail, S. N. (2021). Instructional leadership of school leaders and its relationship to the school climate. *International Journal of Education, Psychology and Counseling, 6(*40). https://doi.org/10.35631/ijepc.640021.

Yohanie, D. D., Botchway, G. A., Nkhwalume, A. A., & Arrazaki, M. (2023). Thinking process of mathematics education students in problem solving proof. *Interval: Indonesian Journal of Mathematical Education*, *1*(1), 24-29. https://doi.org/10.37251/ijome.v1i1.611.

Zakiyah, Z., Boonma, K., & Collado, R. (2024). Physics learning innovation: Song and animation-based media as a learning solution for mirrors and lenses for junior high school students. *Journal of Educational Technology and Learning Creativity*, *2*(2), 54-62. https://doi.org/10.37251/jetlc.v2i2.1062.

Zhang, L. J., Fathi, J., & Mohammaddokht, F. (2023). Predicting teaching enjoyment from teachers' perceived school climate, self-efficacy, and psychological wellbeing at work: EFL teachers. *Perceptual and Motor Skills, 130*(5), 2269-2299. https://doi.org/10.1177/00315125231182269.

Zona, F. R., & Taufik, T. (2019). The relationship between interpersonal comunication skills and job satisfaction of social services in the tanah datar districts. *Jurnal Neo Konseling*, *1*(4). https://doi.org/10.24036/00187kons2019.

Zunic-Pavlovic, V. P., & Pavlovic, M. V. (2020). Self-efficacy and job satisfaction of teachers in schools for students with disabilities. *Specijalna Edukacija i Rehabilitacija*, *19*(3). https://doi.org/10.5937/SPECEDREH19-28267.