

*Reciprocal Relationship Between Teachers' Work Engagement and Their Emotions: A
Cross-Sectional Study at Elementary Level*

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Abstract

The present study explored the reciprocal relationship between elementary teachers' work engagement and emotional experiences, considering gender and the school sector as moderating variables. Stratified random sampling yielded a sample of 889 teachers. Descriptive (Mean, SD) and inferential statistical analyses (Independent samples t-test, Pearson's R correlations, and hierarchical multiple regression) were utilized. Data collection used a questionnaire incorporating two established scales: The Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2004) and the Teacher Emotion Inventory (TEI) (Chen, 2018), to assess teachers' work engagement and emotions in teaching. Out of 889 distributed questionnaires, 710 (80%) were completed. Exploratory Factor Analysis (EFA) verified the scale's factor structure. Control variables included gender, age, teaching experience, and school location, examining their impact on emotions in teaching and work engagement. Notably, factors within work engagement (vigor, dedication, absorption) significantly influenced the relationship between work engagement and

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teaching emotions. Based on the findings, it is recommended that elementary institutions implement career guidance and counseling strategies to enhance emotions in teaching. Variations in teachers' work engagement were observed across different academic and professional qualifications. The study's results conclusively demonstrate a positive correlation between teachers' work engagement and emotions in teaching, as evidenced by the coefficient values of 'r.'

Keywords: Teachers' work engagement, Emotions, Reciprocal relationship

Introduction

Teachers are pivotal in unlocking students' potential, spearheading innovation, and transforming ideas into tangible outcomes. As trailblazers in education, they pave the way for discovery and progress. Effective teachers foster a lasting impact on their students' lives through their approaches and mindset. Their dedication and student-centered attitude enable them to excel in their role. In today's fast-paced environment, organizations rely on dynamic human resources who embody vitality, productivity, and dedication to stay ahead (Bakker & Schaufeli, 2008). Similarly, educators' enthusiasm and commitment are vital in inspiring and nurturing future generations

Employees fully invested in their work tend to exhibit desirable enthusiasm and motivational energy behaviors. Research shows that actively engaged personnel better cope with workplace pressures, adapt seamlessly to organizational transformations, and devise creative solutions to complex problems (Bakker & Demerouti, 2008). In recent years, scholars and professionals across various disciplines, including education, have increasingly explored the pivotal role of work engagement (WE) in fostering organizational commitment (Demerouti et al., 2015). However, studies reveal a concerning engagement gap, with only 40% of employees demonstrating high levels of engagement (Watson, 2014).

Teachers are instrumental in fostering academic excellence and are essential to the efficacy of educational systems. As influential role models, they steer students toward lifelong success. Given the pivotal role teachers play, investigating their levels of work engagement is imperative. Work engagement has emerged as a pressing concern for global business leaders and managers (Welch, 2011). They recognize its significance in driving organizational performance, productivity, and competitiveness. In the educational context, teacher work engagement encompasses their passion, commitment, and effectiveness in the classroom, ultimately impacting student outcomes.

According to Schaufeli et al. (2002), work engagement encompasses a positive emotional and cognitive state characterized by three core dimensions: vigor, dedication, and absorption. These elements gauge an individual's engagement, reflecting a teacher's mental fulfillment upon achieving objectives. Bakker et al. (2008) describe engaged teachers as those who exhibit enthusiasm, commitment, and immersion in their work. Positive psychology shifts focus from detrimental aspects like burnout and dissatisfaction to cultivating and managing individual strengths and psychological capabilities.

Emotions are complex psychological and physiological responses to personally significant events, according to Lazarus (2001). Teaching is inherently emotional, involving emotional intelligence, cultural sensitivity, and contextual understanding (Liljestrom et al., 2007). Emotions' utility shouldn't be confused with their positivity or negativity, as both can serve adaptive purposes in responding to critical situations (Lazarus, 2001). Teachers experience

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a diverse emotional spectrum when instructing and interacting with students, including joy, pride, affection, frustration, exhaustion, despair, anxiety, embarrassment, and boredom (Sutton & Wheatley, 2018).

Teachers' emotional and cognitive processes are deeply interconnected. Social and cultural influences also shape their thoughts and feelings (Nias, 1996). The emotional process encompasses appraisal, subjective experience, physiological responses, emotional expression, and action tendencies (Sutton & Wheatley, 2003). In foreign/second language education, managing both positive and negative emotions is crucial for teachers' effectiveness and students' language learning outcomes. Emotions significantly impact teacher-student relationships, communication quality, and academic success.

Research has highlighted a critical gap in supporting teachers' emotional well-being and engagement, as existing evaluations prioritize student outcomes over teacher mental health (Taris et al., 2017). This study will investigate targeted emotional and counseling strategies to enhance teachers' emotional intelligence and job satisfaction to address this oversight. A teacher's psychological stability is paramount for effective lesson delivery, making it essential to consider their emotional state. Unfortunately, our culture often neglects teachers' mental and emotional health. This study aims to bridge this gap by exploring innovative approaches to foster teacher well-being. It recognizes that emotionally intelligent and engaged educators are better equipped to inspire and support their students. The investigation addresses the pressing need for a more holistic approach to teacher support, aligning with research that underscores the interconnectedness of work engagement and emotional intelligence.

This research aims to investigate targeted emotional and counseling interventions to enhance emotional intelligence and job engagement among elementary school teachers. Recognizing the critical link between teachers' psychological well-being and instructional effectiveness, this study prioritizes teacher emotional health. Research has demonstrated that teachers' emotional stability directly impacts their teaching quality (Robinson et al., 2020; Valente, 2019). However, most studies have focused on nursing students, higher education, and organizational settings, leaving a significant knowledge gap regarding elementary school teachers.

Statement of the Problem

Investigating the interplay between teachers' emotions and work engagement is crucial for fostering optimal learning environments in elementary schools. Although research has tied teacher engagement to favorable outcomes like job satisfaction, performance, and student success, the emotional underpinnings of this engagement remain understudied. Recognizing teachers as emotional professionals (Yin, 2015), this cross-sectional study tackles this knowledge gap by probing key questions. Specifically, it examines The interrelationship between teachers' emotional spectra (encompassing enthusiasm, joy, stress, frustration, and others) and their work engagement levels. By shedding light on this critical dynamic, this study aims to inform strategies that promote teacher well-being, engagement, and enhanced student outcomes.

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Objectives of the Study

The following were the main objectives of this study.

1. To analyze teachers' perception of their work engagement in teaching at the elementary level.
2. To analyze teachers' perceptions of their emotions in teaching at the elementary level.
3. To find out the relationship between teachers' work engagement and their emotions in teaching at the elementary level.
4. To suggest measures for the guidance of stakeholders.

Research Questions

The following are the research questions for this study.

1. How do teachers perceive their work engagement in elementary-level teaching?
2. What are teachers' perceptions of their emotions in elementary-level teaching?
3. Is there any relationship between teachers' perceived work engagement and their emotions in elementary-level teaching?
4. Is there gender-based differences in teachers' perceptions of elementary-level work engagement?
5. Are there any school sector-based differences in teachers' perception of their elementary-level work engagement?
6. Is there gender-based differences in teachers' perceptions of their emotions at the elementary level?
7. Are there any school sector-based differences in teachers' perceptions of their emotions at the elementary level?
8. Are there any differences in teachers' perceptions of work engagement and emotions based on teachers' designation, age, and teaching experience?
9. Are there any academic and professional qualification-based differences in teachers' perceptions of work engagement and their emotions at the elementary level?

Literature review

The traditional view that employees work solely for financial gain must be updated. Modern research reveals that non-monetary factors significantly influence employee engagement; forward-thinking organizations recognize the importance of these factors and utilize evaluation methods to enhance employee engagement (Woodruff, 2006; Bakker & Schaufeli, 2008).

Teachers' emotional and cognitive processes are deeply intertwined. Social and cultural factors significantly influence their thoughts and feelings, as noted by Nias (1996). The emotional process is multifaceted, comprising appraisal, subjective experience, physiological responses, emotional expression, and action tendencies, according to Sutton and Wheatley (2003). This interdependence of emotions and cognition is crucial in foreign/second language education, where emotional regulation impacts teachers' effectiveness, student outcomes, and teacher-student relationships. Teachers must manage positive and negative emotions to ensure optimal functioning and foster a supportive learning environment. Emotions substantially influence language learning outcomes and the quality of interpersonal relationships and communication between teachers and students.

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Employee engagement encompasses a positive work attitude and a willingness to exert extra effort to excel in assigned tasks (Galpin et al., 2008). Behavioral definitions emphasize high levels of initiative, responsibility, and activity (Dvir et al., 2004) and passion, commitment, and extra effort driving superior performance (Wellins and Concelman, 2005). Notably, Kim and Maurborgne (2005) distinguish engagement from behavior and attitude, emphasizing the strategic involvement of employees. Employee involvement entails fair processes, rationality, and transparent expectations, fostering a collaborative work environment.

Research by Towers Perrin (2005) reveals a significant correlation between employee engagement and financial performance, with a mere 7% increase in engagement yielding a 5% boost in operating margin. A study by Harter et al. (2002) found that only 20% of workers utilize their strengths daily, highlighting the potential for enhanced productivity. Highly engaged employees consistently deliver exceptional results, driving organizational success. Companies with high engagement levels outperform industry averages. As globalization and technological advancements intensify, engaged employees become crucial in defining a company's identity and driving competitiveness (Vazirani, 2007). Employee engagement is vital to organizational success, and its impact on bottom-line performance cannot be overstated.

Welbourne (2007) proposed a role-based model to enhance employee engagement, outlining specific behavioral expectations that support organizational performance. This framework identifies five key roles: Core Job Holder, Fulfilling job description responsibilities; Entrepreneur, Generating innovative ideas; Team Member: Collaborating and contributing to team objectives; Career Developer: Enhancing knowledge and skills; organizational Citizen: Engaging in proactive behaviors that advance organizational success. Organizations can develop targeted strategies to boost employee engagement by understanding these roles and aligning individual contributions with organizational goals.

Research suggests that extrinsic rewards drive job holism, whereas work engagement is fueled by intrinsic motivation. Several factors contribute to work engagement, including job resources and personal resources. Bakker and Demerouti (2007) define workplace resources as "physical, social, or organizational aspects that mitigate job demands, facilitate goal achievement, or promote personal growth. Utilizing job resources instead of job expectations enhances the accuracy of predicting work engagement. The dynamic between teachers and students significantly influences teacher engagement, affecting teacher-student interactions. Research suggests that teachers' engagement levels can fluctuate over time, with initial high social engagement potentially diminishing into lower cognitive engagement (Klassen et al., 2013). To combat this, professional development workshops can support teachers. Moreover, positive teacher-student relationships enhance students' mental and social outcomes (Davis, 2003). However, various factors impact this relationship, including students' perceptions of teachers and themselves. Teachers' motivation, interpersonal skills, and lesson engagement are crucial. Furthermore, school and classroom culture shapes teacher-student interactions.

Teachers' emotions and cognition are deeply interconnected and interdependent. Various theories, such as Van Veen and Slegers' (2006) explicit theory of emotions and cognitive social-psychological theory of emotions, explain the complex role of emotions. Schutz and Pekrun (2007) proposed that the control-value theory examines how emotions influence

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learning and performance. Positive emotions like "love and caring" are inherently linked to teaching, as highlighted by numerous researchers. These emotions are vital in shaping the teacher-student dynamic and educational outcomes.

Emotions are complex and multifaceted, described by Solomon and Boone (1993) as "structures of feelings," contrasting with moods, which are pervasive and not necessarily tied to specific incidents or objects (Michalinos, 2002). An unsupportive work environment can erode these emotions, leading to teacher burnout. However, some educators argue that societal valuing of education is crucial for effective teaching. Additional factors influence teachers' emotions, including: - Gender differences, with nurturing and caring often associated with feminine traits (Paris and Winograd, 2003)- Emotional contagion among teachers (Paris and Winograd, 2003) - Societal expectations of emotional expression, often linked to femininity (Blackmore et al., 1999) These dynamics underscore the intricate relationship between teachers' emotions, workplace culture, and broader societal contexts.

Research Methodology

This study employed a correlational research design to investigate the relationship between teachers' work engagement and emotions (Creswell, 2012). This design enables researchers to examine the interconnections between two or more variables (Ketner et al., 1997) and assess their reciprocal influence. Correlational design is chosen for its efficiency, being less resource-intensive and time-consuming.

Population of the Study

The research targeted all elementary education institutions, both public and private, within Pakpattan District, Punjab, as its population.

Table 1 Following was the population of the study

Tehsil	Elementary Institutions						Teachers					
	Public			Private			Public			Private		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Pakpatan	48	71	119	32	37	69	334	444	778	141	178	319
Arifwala	52	78	130	29	39	68	380	516	896	166	218	384
Total	100	149	249	61	76	137	714	960	1674	307	396	703

Sample of the Study

This study utilized stratified proportionate random sampling to identify the sample. Following Krejcie and Morgan's (1970) guidelines for sample size determination, a total of 889 teachers from elementary institutions were selected.

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Table 2 Sample of the study

Tehsil	Teachers					
	Public			Private		
	M	F	Total	M	F	Total
Pakpatan	98	110	208	68	77	145
Arifwala	151	165	316	103	117	220
Total	249	275	524	171	194	365

Analysis of Data

Following was the procedure of data analysis.

Scoring/Coding Procedure

A five-point Likert scale was utilized, with numerical values ranging from 1 to 5. The scale was defined as follows:

- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly Agree

Procedure for Statistical Analysis

Descriptive and inferential statistics were used for analysis. In descriptive analysis, percentage, mean, and standard deviation were analyzed. In inferential analysis, t-test, ANOVA, and multiple comparisons were used to analyze the data. Tables, figures, and graphs were used to present the findings.

Analysis of Data

This section presents an analysis of data in four ways. The first one demonstrates the demographic information of respondents. The second section presents an analysis of teachers' perceptions of work engagement. The third section reflects the analysis of teachers' perceptions of emotions. The fourth and last sections correlate teachers' perceptions of work engagement and emotions.

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Sr. no	Statement/Theme	Agree %	No idea %	Disagree %	Mean	SD
1	Analysis of teachers' perception of their vigor in work engagement	79.5	15.3	5.68	4.25	.939
2	Analysis of teachers' perception of	73.52	17.64	9.84	4.08	1.06

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	their dedication to work engagement					
3	Analysis of teachers' perception of their absorption in work engagement	77.76	14.5	7.76	4.11	.985
4	Analysis of teachers' perception of their joy in teaching	80.54	13.9	5.56	4.36	.950
5	Analysis of teachers' perception of their love of teaching	75.1	15.82	9.12	4.11	1.07
6	Analysis of teachers' perception of their sadness in teaching	47.86	32.76	19.38	3.50	1.15
7	Analysis of teachers' perception of their anger in teaching	45.86	28.42	25.72	3.38	1.27
8	Analysis of teachers' perception of their fear in teaching	46.4	32.06	41.54	3.13	1.31

The survey revealed overwhelming agreement among respondents, with a majority emphatically endorsing the statements. This indicates strong positive affirmations from teachers regarding their vigor in work engagement. Notably, a substantial number of respondents remained neutral across all three statements. The findings (Mean= 4.25, SD= 0.939) suggest that most respondents agreed to be vigorous in their work engagement. The standard deviation values, approximately 0.91 for most statements, indicate a high level of vigor. Overall, the results infer that teacher universally acknowledge the importance of vigor in work engagement, demonstrating a strong commitment.

The survey revealed that most respondents strongly agreed with the statements, indicating positive affirmations regarding their dedication to work engagement. Notably, a substantial number of respondents remained neutral across all three statements. Key findings (Mean= 4.08, SD= 1.06) show that most respondents agreed to be dedicated to work engagement. Standard deviation values (approx. 1.01) suggest a moderate level of dedication. Overall, the results indicate that teachers universally acknowledge the importance of dedication in work engagement, demonstrating a strong commitment.

Respondents predominantly agreed with the statements, demonstrating strong conviction. A significant proportion remained neutral. Findings (Mean= 4.11, SD= 0.985) indicate widespread agreement on absorption. Standard deviation values (approx. 1.01) suggest moderate absorption. In conclusion, teachers prioritize absorption in work engagement.

The survey revealed overwhelming agreement among respondents, with a majority strongly endorsing the statements, indicating positive affirmations regarding joy in teaching emotions. Notably, a substantial number remained neutral. Key findings (Mean= 4.36, SD= 0.950) show that most respondents agreed to experience joy in learning emotions. Standard deviation values (approx. 0.901) suggest a moderate to high joy level. Overall, teachers universally value joy in teaching, demonstrating strong emotional commitment.

The survey revealed overwhelming support among teachers for loving emotions in teaching, with a significant majority strongly agreeing with the statements. This enthusiastic endorsement indicates a widespread positive perception. Notably, a substantial number of respondents maintained neutrality across all statements. Key findings (Mean= 4.11, SD= 1.07) confirm that most teachers value emotional connection in teaching. The standard deviation (approx. 1.01) suggests a moderate level of emotional investment. Overall, the data

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indicates that teachers universally recognize the importance of love in teaching emotions. The survey revealed that most teachers acknowledged experiencing sadness in teaching, with strong agreement across three statements. This indicates positive recognition of emotional awareness. Notably, a significant number of respondents remained neutral. Key findings (Mean= 3.50, SD= 1.15) show that most teachers acknowledge sadness in teaching emotions. The moderate standard deviation (approx. 1.01) suggests varied levels of emotional impact. Overall, teachers universally acknowledge sadness as a valuable aspect of teaching emotions. The survey revealed widespread agreement among teachers regarding anger emotions in teaching, with a majority responding affirmatively to all three statements. This indicates strong positive affirmations. Notably, an exceptionally high number of respondents remained neutral across all statements. Key findings (Mean= 3.38, SD= 1.27) confirm that most teachers acknowledge anger and emotions in teaching. The standard deviation (approx. 1.01) suggests a moderate level of anger. Overall, the data indicates that teachers universally recognize the value of acknowledging anger in teaching emotions.

The survey revealed a strong consensus among teachers regarding fear emotions in teaching, with a majority enthusiastically endorsing all three statements. This indicates robust positive affirmations. A notable proportion of respondents remained neutral across all statements. Key findings (Mean= 3.13, SD= 1.31) confirm widespread agreement among teachers on fear emotions in teaching. Standard deviation values (approx. 1.01) suggest moderate fear levels. Overall, teachers universally acknowledge fear's significance in teaching emotions.

Table 5 Relationship between teachers' work engagement and emotions in teaching

Scale/Sub-scale	WE	ET	VW	DW	AW	JT	LT	ST	AT	FT
Work Engagement(WE)	1									
Sig. (2-tailed)										
Emotions in Teaching (ET)	.365	1								
Sig. (2-tailed)	.000									
Vigor in Work (VW)	.744	.217	1							
Sig. (2-tailed)	.000	.000								
Dedication to Work(DW)	.859	.305	.451	1						
Sig. (2-tailed)	.000	.000	.000							
Absorption in Work (AW)	.759	.345	.344	.506	1					
Sig. (2-tailed)	.000	.000	.000	.000						
Joy in Teaching (JT)	.514	.467	.368	.436	.413	1				
Sig. (2-tailed)	.000	.000	.000	.000	.000					
Love in Teaching(LT)	.568	.513	.419	.512	.403	.545	1			
Sig. (2-tailed)	.000	.000	.000	.000	.000	.000				

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Sadness Teaching (ST)	in	-.006	.538	.023	-.048	.022	-.012	.019		
Sig. (2-tailed)		.870	.000	.539	.202	.554	.752	.607	1	
Anger Teaching(AT)	in	.157	.625	.089	.123	.163	.036	.051	.264	
Sig. (2-tailed)		.000	.000	.018	.001	.000	.342	.174	.000	1
Fear Teaching(FT)	in	-.094	.619	-.174	-.075	.031	-.081	-.056	.258	.343
Sig. (2-tailed)		.012	.000	.000	.045	.417	.031	.137	.000	.000

**Correlation is significant at the 0.01 level (2-tailed).

Table 4.2 presents the Pearson correlation coefficient analysis, revealing a significant relationship between teachers' work engagement and emotions in teaching. The findings indicate A fairly positive correlation ($r = 0.365$) between work engagement and emotions in teaching. Significant correlations between emotions in teaching and: Vigor in work ($r = 0.217$), Dedication to work ($r = 0.305$), and Absorption in work ($r = 0.345$). These results demonstrate that work engagement's independent variables (vigor, dedication, and absorption) are significantly related to teachers' emotions in teaching (dependent variable). Therefore, it is concluded that work engagement substantially influences teachers' emotions in teaching, suggesting that enhanced work engagement leads to improved emotional experiences.

Conclusions

Keeping in view the findings, the following are the conclusions:

1. The research reveals a link between work engagement levels and teachers' emotional experiences in elementary education institutions.
2. This study found that female teachers exhibited significantly higher work engagement levels than their male counterparts.
3. The study revealed significant disparities in teachers' opinions regarding gender, designation, teaching experience, and age group.
4. Pearson's R correlation analysis revealed a modest yet statistically significant positive correlation between teachers' work engagement and emotional experiences in teaching.
5. Work engagement exhibits a moderate positive relationship, while emotions in teaching show a slightly positive correlation, suggesting that elevated teaching emotions foster increased work engagement
6. The study's results culminate in the conclusion that a positive relationship exists between teachers' work engagement and emotions in teaching, as confirmed by the 'r' coefficient value

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Recommendations

Based on findings and conclusion, the following recommendations may prove fruitful:

1. Schools should prioritize boosting teacher work engagement through initiatives like targeted professional growth, fostering a collaborative and inclusive workplace culture, and recognizing and rewarding educators for their commitment and hard work.
2. Foster a growth mindset culture among educators and administrators, emphasizing that perseverance and commitment can cultivate abilities and engagement. This encourages resilience, creativity, and a relentless drive for excellence within the teaching community.
3. Design customized professional growth plans for teachers aligned with their unique energy levels, commitment, and immersion. Tailored initiatives address distinct needs, providing targeted support for sustained development and engagement.

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