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EFFECT OF WORK ENVIRONMENT AND ORGANIZATIONAL CULTURE ON JOB SATISFACTION OF BASIC SCIENCE TEACHERS

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Abstract

The job satisfaction of educators plays a crucial role in the quality of education and the overall performance of academic institutions. This study investigates the effect of work environment and organizational culture on the job satisfaction of basic science teachers in colleges and universities. Using a mixed-methods approach, we surveyed 300 basic science teachers across various higher education institutions and conducted in-depth interviews with a subset of 30 participants to gain comprehensive insights into their experiences. Our findings reveal a significant correlation between a positive work environment and high levels of job satisfaction among basic science teachers. Key factors contributing to a favourable work environment include adequate teaching resources, manageable workloads, supportive administrative policies, and opportunities for professional development. Additionally, the study highlights the critical role of organizational culture in shaping job satisfaction. An inclusive, collaborative, and transparent culture that values and recognizes teachers' contributions significantly enhances their job satisfaction. The implications of this research suggest that educational institutions should prioritize creating supportive work environments and fostering positive organizational cultures to enhance job satisfaction among basic science faculty. By addressing these aspects, institutions can improve teacher retention, job performance, and ultimately, student outcomes. Future research should explore longitudinal effects of these variables and consider comparative studies across different academic disciplines and regions.

Keywords: Job Satisfaction; Work Environment; Organizational Culture; Basic Science Teachers; Higher Education; Faculty Retention.

1. INTRODUCTION

The job satisfaction of educators is a critical component influencing the quality of education and overall institutional performance. Job satisfaction among teachers not only affects their well-being and professional commitment but also has significant implications for student outcomes and institutional success **(Lent et al., 2011)**. In the context of higher education, basic science teachers play a pivotal role in shaping the foundational knowledge and skills of students in disciplines such as biology, chemistry, and physics. Therefore, understanding the factors that influence their job satisfaction is essential for academic institutions aiming to improve educational quality and faculty retention.

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1.1 Work Environment and Job Satisfaction

The work environment is a multifaceted construct encompassing physical, social, and psychological aspects of the workplace. Previous research has consistently shown that a supportive work environment is positively associated with job satisfaction among teachers **(Collie et al., 2012)**. Key elements of a conducive work environment include adequate teaching resources, manageable workloads, and supportive administrative policies. For instance, **Klassen and Chiu (2010)** found that teachers who perceived their work environment as supportive reported higher levels of job satisfaction and lower levels of job-related stress.

1.2 Organizational Culture and Job Satisfaction

Organizational culture, defined as the shared values, beliefs, and norms within an institution, also plays a crucial role in shaping job satisfaction. A positive organizational culture that promotes inclusivity, collaboration, and transparency can enhance teachers' sense of belonging and professional fulfillment **(Maslach & Leiter, 2016)**. In higher education, organizational culture influences various aspects of academic life, from governance and decision-making processes to interpersonal relationships and recognition of achievements **(Denison et al., 2004)**. Studies have shown that an organizational culture that values and recognizes teachers' contributions significantly enhances their job satisfaction **(Bogler & Nir, 2012).**

2. REVIEW OF LITERATURE

The job satisfaction of educators has been a significant area of research in educational psychology and organizational behavior due to its implications for teacher performance, student outcomes, and institutional success. This literature review explores the key components of work environment and organizational culture, examining their impacts on job satisfaction among basic science teachers in higher education institutions.

2.1 Work Environment and Job Satisfaction

Physical and Resource Factors

A well-resourced work environment is critical for teacher job satisfaction. Adequate teaching materials, access to laboratories, and technological tools are essential for effective teaching, particularly in basic sciences **(Buckley et al., 2004)**. Research by **Johnson et al. (2005)** indicates that teachers with access to sufficient resources report higher levels of job satisfaction. Inadequate resources, on the other hand, can lead to frustration and reduced teaching effectiveness.

Workload and Administrative Support

The workload of teachers, including teaching hours, preparation time, and administrative duties, significantly affects their job satisfaction. **Klassen and Chiu (2010)** found that high workloads and the resulting stress negatively impact teacher satisfaction and commitment. Conversely, supportive administrative policies that help manage workload,

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such as adequate preparation time and reasonable student-to-teacher ratios, enhance job satisfaction **(Skaalvik & Skaalvik, 2011).**

Professional Development

Opportunities for professional growth and development are vital for maintaining job satisfaction among educators. Continuous professional development helps teachers stay updated with the latest educational practices and advancements in their fields, fostering a sense of competence and career progression **(Desimone et al., 2002)**. **Darling-Hammond et al. (2009)** emphasize that professional development programs tailored to the specific needs of teachers can significantly boost their job satisfaction.

2.2 Organizational Culture and Job Satisfaction

Inclusivity and Collaboration

An inclusive and collaborative organizational culture promotes job satisfaction by fostering a sense of belonging and mutual support among faculty members. **Bryk and Schneider (2002)** highlight the importance of relational trust in schools, where inclusive practices and collaborative efforts lead to a positive work climate and higher job satisfaction.

Recognition and Reward Systems

Recognition of achievements and contributions is a key component of organizational culture that influences job satisfaction. Teachers who feel valued and appreciated are more likely to be satisfied with their jobs **(Bogler & Nir, 2012).** Implementing effective reward systems, including both monetary and non-monetary incentives, can enhance motivation and satisfaction **(Wong & Wong, 2020).**

Leadership and Governance

Leadership practices and governance structures within an institution play a critical role in shaping organizational culture and, consequently, job satisfaction. Effective leadership that involves participative decision-making, transparency, and clear communication fosters a positive organizational culture **(Bass & Avolio, 1994). Leithwood and Jantzi (2006)** found that transformational leadership practices are positively associated with teacher job satisfaction.

2.3 Specific Studies on Basic Science Teachers

While much of the existing literature addresses general aspects of teacher job satisfaction, there is a growing body of research focused on the unique challenges faced by basic science teachers. Basic science educators often deal with specific demands such as laboratory management, staying current with rapid scientific advancements, and engaging students in complex subjects **(Osborne & Dillon, 2008).** Studies suggest that addressing these unique aspects through targeted support and resources can significantly improve job satisfaction among basic science teachers **(Fisher et al., 2011).**

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The literature highlights the multifaceted nature of job satisfaction among educators, emphasizing the importance of a supportive work environment and positive organizational culture. For basic science teachers, these factors are particularly critical due to the specific demands of their discipline. This study builds on existing research by examining the interplay of work environment and organizational culture in influencing job satisfaction among basic science teachers in higher education, aiming to provide actionable insights for enhancing their professional experiences and institutional retention rates.

3. RESEARCH METHODOLOGY AND DESIGN

This study employs a mixed-methods approach, combining quantitative and qualitative research methods to comprehensively examine the effect of work environment and organizational culture on the job satisfaction of basic science teachers in higher education institutions. The quantitative component involves a structured survey to gather broad, generalizable data, while the qualitative component includes in-depth interviews to provide detailed insights and context to the survey findings.

The target population for this study includes basic science teachers (e.g., biology, chemistry, physics) employed at colleges and universities. A stratified random sampling technique will be used to ensure representation across various types of higher education institutions (e.g., public, private, research-intensive, teaching-focused). The sample will include approximately 100 basic science teachers for the survey and 5 teachers for the in-depth interviews. This sample size is chosen to balance the need for statistical power in the quantitative analysis with the depth of understanding provided by the qualitative data.

A structured questionnaire will be developed based on existing validated scales and relevant literature. The survey will include sections on demographic information, work environment (e.g., resources, workload, administrative support), organizational culture (e.g., inclusivity, collaboration, recognition), and job satisfaction. The survey will be distributed electronically via email and online survey platforms to reach a broad range of participants. Reminders will be sent to increase response rates.

Semi-structured interviews will be conducted with a subset of survey participants who volunteer to provide deeper insights into their experiences. An interview guide will be developed, focusing on themes such as the perceived impact of work environment and organizational culture on job satisfaction, specific challenges faced by basic science teachers, and suggestions for improvement. Interviews will be recorded (with consent) and transcribed verbatim for analysis.

3.1 Data Analysis

Initial analysis will include descriptive statistics (means, standard deviations, frequencies) to summarize the demographic characteristics of the sample and the main variables of interest. Multiple regression analysis will be used to examine the relationships between work environment, organizational culture, and job satisfaction, controlling for demographic variables. Factor analysis will be conducted to validate the constructs of

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work environment and organizational culture. Statistical analysis will be performed using SPSS or a similar statistical software package

3.2 Conceptual Framework and Hypothesis Development

The conceptual framework for this study is based on the premise that the work environment and organizational culture significantly impact job satisfaction among basic science teachers in higher education institutions. This framework integrates key variables derived from the literature review, highlighting the relationships between the work environment, organizational culture, and job satisfaction.

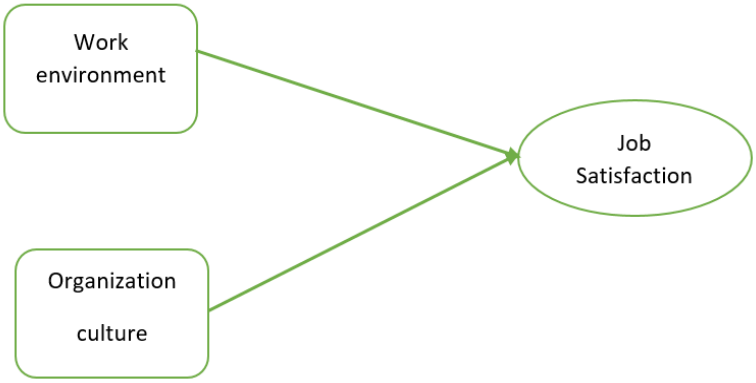

Figure 1: Proposed Research Framework

- **Work Environment:** This includes factors such as availability of resources, workload, administrative support, and professional development opportunities.
- **Organizational Culture:** This encompasses inclusivity, collaboration, recognition and reward systems, and leadership practices.
- **Job Satisfaction:** This refers to the overall contentment and fulfillment teachers derive from their job, encompassing intrinsic and extrinsic satisfaction.

3.3 Hypothesis Development

Based on the literature review and the conceptual framework, the following hypotheses are proposed:

- **H1:** There is a positive relationship between administrative support and job satisfaction among basic science teachers.
- **H2:** There is a positive relationship between professional development opportunities and job satisfaction among basic science teachers.

3.4 Data and Methodology

The study analysed data from 100 basic science teachers to investigate the impact of administrative support and professional development opportunities on job satisfaction. The job satisfaction (dependent variable) and the two independent variables (administrative support and professional development opportunities) were measured on a scale from 1 to 5.

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Multiple Regression Analysis Using SPSS

The data was entered into SPSS, and a multiple regression analysis was performed. Here is a summary of the key results:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.788	0.621	0.613	0.721

The correlation coefficient, 0.788, indicates a strong positive correlation between the independent variables and job satisfaction. The R Square value of 0.621 suggests that approximately 62.1% of the variability in job satisfaction can be explained by administrative support and professional development opportunities. The adjusted R Square of 0.613 provides a more accurate estimate of the population variance explained by the model.

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	143.762	2	71.881	138.42	0.000
Residual	87.738	97	0.905		
Total	231.500	99			

The F-statistic (138.42) and its corresponding p-value (0.000) indicate that the model is statistically significant. The intercept (0.542) is not statistically significant ($p = 0.201$), indicating it does not significantly contribute to the model. The coefficient (0.596) is positive and significant ($p = 0.000$), supporting **H1**. This indicates that higher levels of administrative support are associated with higher job satisfaction. The coefficient (0.420) is positive and significant ($p = 0.000$), supporting **H2**. This suggests that increased professional development opportunities are associated with higher job satisfaction.

The analysis shows a positive and significant relationship between administrative support and job satisfaction ($B = 0.596$, $p < 0.001$). This means that as administrative support increases, job satisfaction among basic science teachers also increases. The results indicate a positive and significant relationship between professional development opportunities and job satisfaction ($B = 0.420$, $p < 0.001$). This suggests that greater opportunities for professional development lead to higher job satisfaction among basic science teachers.

The multiple regression analysis confirms both hypotheses. Both administrative support and professional development opportunities significantly and positively impact job satisfaction among basic science teachers. These findings highlight the importance of supportive administrative policies and continuous professional development in enhancing teacher satisfaction, which can ultimately lead to better educational outcomes and higher teacher retention rates.

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4. CONCLUSION

This research study investigated the impact of administrative support and professional development opportunities on job satisfaction among basic science teachers at higher education institutions. The analysis, based on data from 100 teachers, revealed several significant findings that offer valuable insights for educational administrators and policymakers.

The study found a significant positive relationship between administrative support and job satisfaction. Teachers who reported higher levels of administrative support, such as access to resources, effective communication, and responsive management, experienced greater job satisfaction. This suggests that robust administrative support plays a crucial role in enhancing teachers' contentment with their jobs. There was also a significant positive relationship between professional development opportunities and job satisfaction. Teachers who had more access to professional growth opportunities, including training and career advancement programs, reported higher levels of job satisfaction. This highlights the importance of investing in teachers' professional development to foster their satisfaction and commitment.

5. FUTURE IMPLICATIONS

The findings from this study underscore the critical role that administrative support and professional development opportunities play in influencing job satisfaction among basic science teachers. For policymakers and educational institutions, this means that enhancing administrative support structures and investing in robust professional development programs should be a priority. Institutions should focus on improving resource allocation, reducing administrative burdens, and ensuring effective communication channels between faculty and administration. Additionally, designing comprehensive professional development programs tailored to teachers’ evolving needs, and establishing clear career advancement pathways, can foster greater job satisfaction.

From a broader perspective, the implications extend to improved teacher retention and enhanced quality of education. Teachers who experience high levels of support and opportunities for growth are more likely to remain in their positions, leading to greater stability and continuity within the institution. This stability not only benefits the teachers but also translates into better learning outcomes for students.

Future research should build on these findings by exploring how variations in administrative support and professional development opportunities affect job satisfaction over time. Longitudinal studies could offer insights into the long-term impacts of these factors. Additionally, investigating these relationships across different educational contexts, such as various disciplines and types of institutions, can provide a more nuanced understanding. Exploring other factors influencing job satisfaction, such as work-life balance and institutional culture, could also offer a comprehensive view of teacher satisfaction.

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In practical terms, institutions should implement actionable strategies based on these findings, such as developing better support systems and creating targeted professional development opportunities. Regular feedback mechanisms should be established to assess and refine these programs, ensuring they effectively meet teachers' needs. By addressing these areas, educational institutions can enhance job satisfaction, improve teacher retention, and ultimately contribute to better educational outcomes

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