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Original Research Article

Professional Growth, Institutional Support, and Educator Engagement: Testing the Job Demands–Resources Model in Higher Education

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Abstract: Increasing stress is imposed on teachers in higher educations as they have much to do, they are now subject to evaluation of their performance and the manner in which they deliver their teaching is shifting rapidly. Professional development and institutional support are also highly regarded in such a case to ensure that teachers remain active and healthy. Through the lens of Job Demands-Resources (JD-R) model, the subject of this study is the importance of professional growth as an essential work resource to increase the educator engagement and reduce the negative outcomes of the work stress. The educators in higher education institutions were recruited using a cross-sectional survey and Structural Equation Modeling (SEM). These findings indicate that the effect of professional growth on the level of engagement of teachers is big and positive whereas the effect of stress at work on the level of engagement of teachers is big and negative. Institutional support has been found to be a good predictor of professional growth and moderation analysis indicates that professional growth mitigates the harmful impacts of workplace stress on engagement. The study augments the JD-R model in the field of higher education and puts forth evidence-based suggestions on faculty growth and administrative policies aimed at ensuring teacher retention in demanding academic environments.

Keywords: professional development, teacher involvement, institutional support, workplace stress, Job Demands-Resources model, higher education.

INTRODUCTION

The pressure experienced by the global system of higher education is on the rise due to the increasing student expectations, performance-based discrimination regimes, technology revolution, and accountability in the administration. Even though these pressures can be used to enhance the performance of the institutions, they are likely to involve a lot of psychological and professional stress of the teachers. This has contributed to the emergence of small engagement, emotional exhaustion, and decreasing dedication as acute in the school workplaces.

The positive and satisfying state of work characterized by energy, commitment and engagement that is important in the quality of instruction, innovation and sustainability of the institution is crucial in the teaching process. Teachers who are involved are more motivated, resolute and professionally dedicated and those have direct effects on student learning achievement and organizational performance. However, being able to continue the activity in the conditions of high-pressure academics is not a personal skill, but it depends on the availability of organizational resources.

Professional development has been regarded as a cornerstone of academic practice comprising the opportunities of lifelong learning, the selectiveness of cooperating with others, self-containment, and favourable feedback. Besides the acquisition of skills, professional development helps in the sense of competence, purpose, and career advancement which are essential in the environment that is challenging to keep up with in order to stay motivated. Despite the importance it has been proved to have, very minimal empirical data exists on how to research the concept of professional growth as a theoretical job resource, particularly in higher education.

Job Demands-Resources (JD-R) model is the model that works well in the understanding of how work characteristics contribute to the performance and satisfaction of workers. According to the model, job demands (stress and workload) are energy consuming and lead to disengagement and job resources (professional development and institutional support) are sources of motivation and reduce the negative impact. Systematic application of the JD-R model in higher education, especially the emphasis on the professional development as one of the key resources, is not yet well-evolved, even though the JD-R model has been widely applied in the organizational psychology.

To address this void, this study is an empirical experiment of a model based on JD-R, in which the influence of professional development and institutional support on educator engagement is experimented, and the moderating value of workplace stress is also taken into account. This way, the study makes contributions to the theoretical and practical knowledge regarding the problem of higher education workplace settings.

2.Literature Review

Recent literature has renewed the need to place professional development and institutional encouragement as essential resources to maintain educator engagement and alleviate burnout in institutions of higher learning. Research based on the JD-R model continues to emphasize the role of job and individual resources in personal protection, including the self-care and resilience factors against growing job demands (Civil, 2025); (Kasim, 2025). Work fulfilment and professional motivation are improved with the help of institutional support, such as leadership and collegial networks (Samsuri, 2025). However, emotional labor and empathic concern, although important predictors of teacher exhaustion and disengagement (Zhai, 2025), are not the sole predictors of disengagement and exhaustion in this instance.

Interventions like faculty development, in specific case, medical and allied health education, can demonstrate an increase in well-being when organizational policies focus on digital competence, leadership, and balanced workloads (Sreedharan, 2025). (Keskin, 2025) On the same note, cross-cultural studies indicate that engagement and satisfaction level are highly dependent on the teaching styles and perceived organizational mattering (Shahrokhi, 2025).

In addition to personal, the institutional recognition and access to resources and participatory governance were also structural factors that enhance educator retention and job performance (Rashid, 2025). Wider scans also associate leadership quality and professional identity development with the reduced burnout rates and the increased psychological resilience (Demirbas Keskin, 2025).

Together, these results highlight the unifying strength of the JD-R model that can explain how practitioner development programs and complementary institutional environments promote engagement, especially in the context of the mounting academia pressures.

MATERIALS AND METHODS

Pressure on colleges and universities worldwide has been mounting owing to more demands on the institutions, the growing popularity of the performance-based evaluation system, the technological shift and the responsibility of the administrators. Such pressures are directed towards improving the performance of institutions yet in most cases they assert a lot of pressure on the minds and careers of the teachers. Consequently, the dwindling interest, emotional fatigue, and diminished commitment have become major issues in the learning environment.

A positive satisfying work-related state of teacher engagement, which is characterized by enthusiasm, commitment and engagement is exceptionally pivotal to the areas of teaching quality, innovation and long term well-being of an institution. It has a direct relationship with the motivation and resiliency and commitment to job among the involved teachers, which have direct influence on the learning process of the students and organizational performance. Nevertheless, one needs to be strong in person, not only to stay active in stress-filled learning conditions, yet organization resources must also be offered.

Professional development has been an important aspect of academic activity. It involves the possibility to keep learning, cooperate with other people, be free and get positive feedback. Professional development besides skills development brings about a sense of competence, sense of purpose and career development, which is paramount in ensuring motivation to work in a challenging situation. Although such a significance is attached to it, the research world, especially the academic sector, has a significant lack of empirical research investigating professional development as a hypothetical job resource.

JD-R is a general-scale model that gives a platform on the implications that factors of work have on the wellbeing and engagement of employees. The model states that job demands such as workload and stress decrease the energy level and cause disengagement; job resources such as the professional development and institutional support contribute to a greater motivation and mitigating the adverse effect. JD-R model has been extensively used in organizational psychology but systematic application of the model in the sphere of higher education and, more specifically, the utilization of professional development as a resource has not been the most developed yet.

This research fills this gap by empirically rating a JD-R-constrained model estimating the impact of professional development and institutional support on educator engagement with the mediating role of workplace pressure. Through such a move, the research advances the theory and practice of the working conditions of higher education institutions.

2.1 Research Design

The adopted research design was that of quantitative research design, cross sectional research design on the relationship between professional development, institutional support, workplace stress and educator engagement. The Structural Equation Modeling (SEM) was used to test the proposed relations in the framework of the JD-R.

2.2 Population and Sample

The participants of the study were the educators in the institutions of higher learning in various fields of study. The stratified random sampling method was used to make sure that the individuals at all levels of academics, years of experience and different departments were included. The number of responses that was to be obtained was set at 300 to ensure that the SEM analysis was strong.

2.3 Data Collection Instrument

The self-administered questionnaire was a structured questionnaire that was used to collect data based on the validated scales measured on the five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

- **Professional Development:** engaging in activities oriented to professional development, which help you in advancing your career, working with your peers, teaching on your own, and getting criticism.
- **Institutional support:** Leaders who are enabling, who resource and those who guide in the path of professional learning. Workload and emotional stress, as well as roles, are stressors in the workplace.
- **Teacher involvement:** incentive, professional involvement, enthusiasm and interest in school activities.

We pre-collected data by ethically approving and obtaining informed consent of all the participants.

2.4 Data analysis

Analysis of data was performed in several steps. Firstly, a descriptive statistics and reliability analysis (Cronbachs Alpha) was done to test internal consistency. Second, it contained a confirmatory factor analysis (CFA) in order to prove that the construct was valid. Finally, the structural model was also tested through the assistance of SEM and was comprised of moderation effects.

The 5,000 resamples were also used to bootstrap to identify whether the effects of interaction were significant or not. In order to see the goodness of fit of the model, we used conventional measures (CFI, RMSEA and SRMR).

The data was analyzed in a multi-step manner. The first measure of internal consistency involved the provision of descriptive statistics and reliability analysis (Cronbachs alpha). Second, a confirmatory factor analysis (CFA) was used to establish the construct validity. Finally, SEM was used to examine the structural model with moderating effects. It was bootstrapped with 5,000 resample in order to establish the insignificance of the interaction effects. The quality of the model fit was evaluated by using standard indices (CFI, RMSEA, SRMCR).

2.4.1 Data and Descriptive Statistic Screening.

The dataset had missing values, outliers and normality tests that were taken before the analysis was subjected to inferential analysis. The percentage of non-responses was less than 5 percent of the data, and, thus, they were replaced by the mean, which is a reasonable option according to SEM best practices of low-level missingness. We had to check the value of skewness and kurtosis to ascertain whether the values are normal. Their ranges were all in the reasonable level of +-2 implying that they were not of enormous variations on normality.

All the factors that we took were calculated as descriptive statistics (means, standard deviations, and the correlation between items). The modal scores indicated that the levels of professional development and institutional support that were moderate to high and the levels of work-related stress among people were moderately different. The educator engagement scores were found to have sufficient dispersion which could be further multivariately analyzed.

2.4.2 Reliability Analysis (Internal Consistency)
Internal consistency reliability of individual latent construct was measured through Cronbach alpha (a). In this case the alpha coefficient is calculated as:

$$\alpha = \frac{k}{k-1}\left(1-\frac{\sum\sigma_i^2}{\sigma_T^2}\right)$$

where
k= number of items,
σ_i^2= variance of individual items,
σ_T^2= variance of the total score.

Constructs were all greater than the suggested level of a [?] 0.70 which shows a satisfactorily high reliability.
These findings support high internal consistency and warrants the use of the latent variable modelling.

2.4.3 Confirmatory Factor Analysis (CFA)
Confirmatory Factor Analysis was employed to find out construct validity which can be said to be convergent and discriminant validity. The JD-R model was more desirable than the exploratory factor analysis since JD-R model has solid theoretical basis.

- **Convergent Validity**
  To estimate convergent validity, the following were used:
- Normalized loadings of factors (l).
- Mean Variance Extracted (MVE)
- Composite Reliability (CR)

- **Factor Loadings:**

The standardized loadings of all the observed indicators were statistically significant ($p < 0.001$) and above 0.60 and displayed strong relationships between the observed indicators and their latent constructs.

- **Average Variance Extracted (AVE):**

$$AVE = \frac{\sum\lambda^2}{\sum\lambda^2 + \sum\theta}$$

where λ= standardized factor loading and θ= error variance.
All AVE values exceeded **0.50**, confirming adequate convergent validity.

- **Composite Reliability (CR):**

$$CR = \frac{(\ \sum\lambda)^2}{(\sum\lambda)^2 + \sum\theta}$$

The range of CR was 0.83 to 0.91, which was above the recommended cutoff of 0.70.

- **Discriminant Validity**

The discriminant validity was measured by Fornell-Larcker criterion whereby the square root of AVE of each measure was greater than its relationship with other measures. The same met the requirements of being satisfied in all latent variables which implied that constructs were empirically different.

2.4.4 Structural Equation Modelling (SEM)
Structural Equation Modelling Structural Equation Modeling Structural Equation Modeling (SEM) is a technique of analysis that shows the relationship between variables.

Once the measurement model was validated, hypothesis structural relationships between professional growth, institutional support, workplace stress, and educator engagement were then tested with the use of SEM.

Structural equations that were tested included:

$$EE = \beta_1 PG + \beta_2 WS + \beta_3 (PG \times WS) + \varepsilon$$
$$PG = \beta_4 IS + \varepsilon$$

where:
EE = Educator Engagement
PG = Professional Growth
WS = Workplace Stress
IS = Institutional Support

2.4.5 Moderation Analysis
Structural Equation Modeling Structural Equation Modeling (SEM) Structural Equation Modeling Structural Equation Modeling (SEM) is an analysis technique that is used to reflect the relationship between variables.

Following the validation of the measurement model it was succeeded by testing of hypothesized structural relationships between professional growth, institutional support, workplace stress and educator engagement using SEM.

2.4.6 Model Fit Indices
According to all the indices, the model was well fitting and this supported the thought that the observed data was well explained by the suggested JD-R-based structural model. We had to apply several goodness-of-fit indices to make sure that the overall model fit was good.

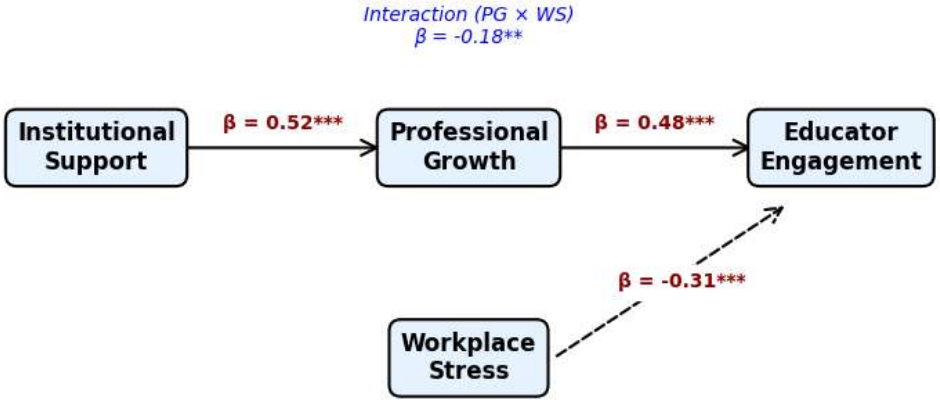
RESULTS

3.1 Measurement Model
Measurement model reflected that it was a reliable and valid model. All the constructs exceeded the suggested internal consistency threshold as well as the factor loading was significant. Convergent and discriminant validity was sufficient to establish the adequate suitability of the measurement model.

3.2 Structural Model
The analysis of the structural model demonstrated that professional development influenced educator engagement significantly in a positive way that is of a considerable importance. The influence of workplace stress on engagement was significant and negative, which can be justified because of the JD-R concept according to which job demands are harmful to motivational performance.

Institutional support was highly predicted to contribute to professional growth and this assumption means that having leaders who are supportive and access to resources contribute to professional growth. Moderation analysis showed that professional growth minimized the adverse impact on engagement caused by stress at work place. More specifically, teachers with greater professional development reflected more engagement even in the presence of high stress conditions. The model in general fitted well and all the relationships which were expected were confirmed.

Fig. Research Framework: Job Demands-Resources Model (Standardized Path Coefficients)



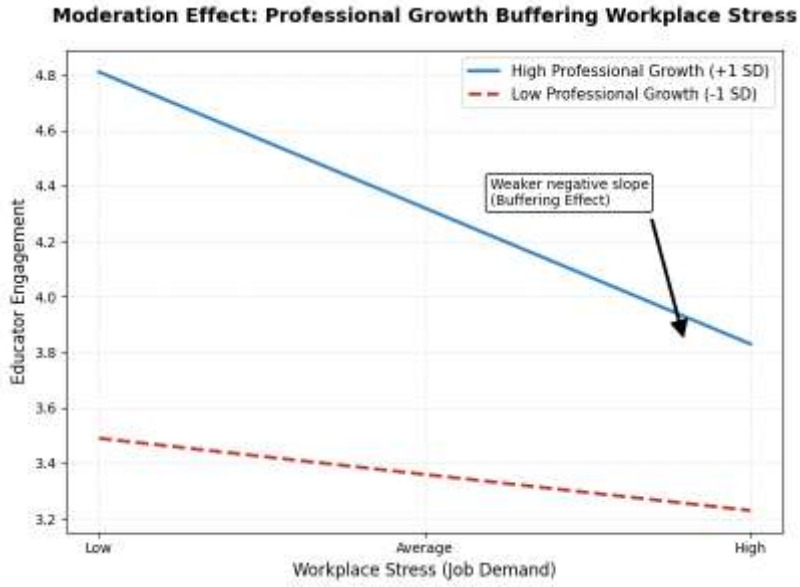


Table 1: Descriptive Statistics and Reliability of Constructs

Construct	Items	Mean	SD	Cronbach's α
Professional Growth (PG)	4	3.78	0.64	0.88
Institutional Support (IS)	3	3.65	0.71	0.85
Workplace Stress (WS)	3	3.42	0.69	0.81
Educator Engagement (EE)	4	3.84	0.62	0.90

Note: All constructs exceeded the recommended reliability threshold ($\alpha \geq 0.70$).

Table 2: Descriptive Statistics and Reliability of Constructs

Fit Index	Recommended Threshold	Obtained Value
CFI (Comparative Fit Index)	≥ 0.90	0.94
RMSEA (Root Mean Square Error of Approximation)	≤ 0.08	0.05
SRMR (Standardized Root Mean Square Residual)	≤ 0.08	0.04

Table 3: Measurement Model Results: Factor Loadings, Composite Reliability, and AVE

Construct	Indicator	Loading	CR	AVE
Professional Growth	PG1	0.81	0.89	0.67
	PG2	0.84		
	PG3	0.79		
	PG4	0.83		
Institutional Support	IS1	0.82	0.87	0.64
	IS2	0.79		
	IS3	0.81		
Workplace Stress	WS1	0.76	0.83	0.62
	WS2	0.81		
	WS3	0.79		
Educator Engagement	EE1	0.85	0.91	0.72
	EE2	0.88		
	EE3	0.83		
	EE4	0.86		

Note: CR = Composite Reliability; AVE = Average Variance Extracted.

Table 4: Discriminant Validity (Fornell–Larcker Criterion)

Construct	PG	IS	WS	EE
Professional Growth (PG)	**0.82**			
Institutional Support (IS)	0.54	**0.80**		
Workplace Stress (WS)	−0.41	−0.38	**0.79**	
Educator Engagement (EE)	0.63	0.57	−0.49	**0.85**

Note: Diagonal values (bold) represent √AVE.

Table 5: Structural Model Results and Hypothesis Testing

Hypothesis	Path	β	t-value	p-value	Result
H1	PG → EE	0.48	7.32	<0.001	Supported
H2	WS → EE	−0.31	5.84	<0.001	Supported
H3	IS → PG	0.52	8.11	<0.001	Supported
H4	PG × WS → EE	−0.18	3.26	0.001	Supported

DISCUSSION

The empirical support of the JD-R model in the present study within the college environment is the fact that professional growth is among the most important job resources. The findings demonstrate that the professional development has not only the positive effect of direct promotion of the engagement of the educator, but also minimizes negative consequences of workplace stress. The results indicate that professional development ought to be viewed as a strategic organizational asset and not an peripheral process.

The significance of the institutional support also demonstrates that the process of professional development is not a solitary phenomenon, and it is subject to the leadership practices, resources distribution, and organizational culture. Colleges and universities which make the effort of investing in faculty development, autonomy and cooperative learning climate are better placed to sustain interest in the high-stress academic environment.

Of interest is the moderation effect that was discovered in this research. It indicates that the maturity of the profession increases the capacity of educators to counter the effects of the stress, which confirms the JD-R hypothesis that job resources are able to protect against the disengagement caused by the stress. There are certain direct implications of this understanding to the policy of faculty workload management and development.

4.1 Implications

In practice, the institutions of higher learning should pay attention to systematized and need-driven professional growth initiatives and enhance empowering leadership behaviors. In order to achieve sustainable outcomes, the use of professional growth initiatives and stress management strategies ought to be included in the policies to enable the engagement.

4.2 Limitations and Future research.

The cross-sectional study design is not able to make causal decisions and also the self-reported data may bring bias in the responses. The longitudinal research designs can be taken into consideration in the future to examine the dynamics of engagement over time and explore more resources, such as peer support and digital competencies, and regard them within the JD-R paradigm.

CONCLUSION

The given paper extends the Job Demands-Resource paradigm to the academic context by showing that the main factors in preserving the engagement of educators in stressful circumstances are the professional growth and organizational support. Offering a strong foundation of evidence-based faculty development and institutional policy solutions to establish strong and active academic communities, the research that empirically defines professional development as incentive and protection resource is a good foundation of the evidence-based research.

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