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**RESEARCH PAPER**

## Examining the Impact of Knowledge-Oriented Leadership on Organizational Performance: A Case Study of Higher Education Commission Institutions

<sup>1</sup>Shahid Ul Islam, <sup>2</sup>Prof. Dr. Syed Umar Farooq\* and <sup>3</sup>Prof. Dr. Naseer Ud Din

1. PhD Scholar, Department of Management Science Abasyn University Peshawar, KP, Pakistan
2. VC Abasyn University Peshawar, KP, Pakistan
3. Pro Vice Chancellor KUST Kohat, KP, Pakistan

\*Corresponding Author: gomalian1997@gmail.com

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**ABSTRACT**

This study investigates the impact of knowledge-oriented leadership (KOL) on the performance of Higher Education Institutions (HEIs) under the Higher Education Commission. HEIs are pivotal for economic and educational advancement. Fostering Key Opinion Leaders (KOL) boosts motivation, engagement, and responsibility among knowledge workers. The research employs a positivist approach with quantitative methods and limited to a one-year cross-sectional time period to explore the relationship between KOLs and organizational effectiveness. Using Smart PLS-SEM 4 software, data from 640 participants were analyzed to assess the mediating effects of knowledge worker motivation, engagement, and responsibility. Findings indicate a strong positive correlation between KOL and organizational performance, influenced by the motivation, engagement, and accountability of knowledge workers. On the basis of findings and conclusion following recommendations were made. Prioritize knowledge-oriented leadership (KOL) to enhance HEI performance. Implement strategies to develop and support Key Opinion Leaders (KOL) within HEIs. Leverage theoretical and practical insights to guide leadership practices in HEIs.

**KEYWORDS** Engagement and Responsibility, Higher Education Commission Institutions (HEIS), Knowledge Worker Motivation, Knowledge-Oriented Leadership (KOL), Organizational Performance

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**Introduction**

The complex relationship between leadership practices and organizational outcomes has received much attention in the rapidly changing higher education scene in Pakistan. The central focus of this discussion is the idea of Knowledge-Oriented Leadership (KOL), which is a comprehensive strategy that highlights the development and application of knowledge inside educational institutions (Rehman & Iqbal, 2020). This research thesis explores the intricate and ever-changing relationship between Knowledge-Oriented Leadership and organizational performance, specifically examining the mediating mechanisms that support their connection. This study aims to investigate the ways in which Key Opinion Leaders (KOL) influence and improve organizational performance in Pakistan's higher education sector. By doing so, it seeks to provide a comprehensive understanding of how effective leadership practices can shape the educational landscape.

Higher education institutions (HEIs) have a crucial impact on a country's economic progress and societal improvement by fostering innovation through knowledge-driven leadership (Naqshbandi & Jasimuddin, 2018). Hence, the importance of organizational sustainability has greatly increased, especially in the age of globalization (Bashar et al., 2022). Nevertheless, even while the significance of Key

Opinion Leaders (KOL) in Higher Education Institutions (HEIs) has been acknowledged (Sahibzada et al., 2023), there is still a clear deficiency in the academic literature that requires attention.

Recent research has emphasized the crucial function of Key Opinion Leaders (KOL) in promoting organizational performance, as demonstrated by Rehman and Iqbal (2020). However, the significance of KOLs in improving organizational performance, especially in universities, is sometimes disregarded, as noted by Sahibzada et al. (2023). Despite the available research indicating that KOL experiences have a considerable positive impact on satisfaction among knowledge workers, resulting in increased organizational performance and productivity (Naqshbandi & Jasimuddin, 2018), this oversight continues to exist.

Knowledge-intensive firms depend on knowledge-oriented leadership to sustain competitiveness and improve operational sustainability (Bati & Ekowati, 2024). Nevertheless, due to the swift progress of technology, the utilization of non-parametric tests has declined (Muniroh et al., 2024), prompting the need to reassess their effectiveness in contemporary research settings.

This study seeks to address the gaps in existing literature by investigating the influence of Key Opinion Leaders (KOL) on the performance of institutions under the Higher Education Commission. This research aims to offer significant insights that help guide leadership practices and improve the efficacy of Higher Education Institutions (HEIs) in Pakistan.

## **Research Methodology**

### **Research Design**

This study adopts a positivist stance and utilizes a quantitative methodology to investigate the predictive relationship between knowledge-oriented leadership (KOL), motivation, engagement, responsibility, and organizational performance within Higher Education Institutions (HEIs).

### **Sampling Technique**

A convenient sampling technique is employed to collect responses from a total of 640 participants, focusing on universities in Pakistan.

### **Data Collection**

Data is collected using a structured questionnaire designed to measure knowledge-oriented leadership, motivation, engagement, responsibility, and organizational performance.

### **Data Analysis**

The collected data is analyzed using Smart PLS-SEM 4 software, employing both descriptive and inferential statistical analyses to establish predictive relationships among the variables.

### **Limitations**

This study is limited to a one-year cross-sectional time period.

**Results and Discussion**

The predicted path coefficient among the predictors’ magnitude, sign, and statistical significance was determined by hypothesis testing. A more significant path coefficient indicates a more significant relationship between the constructs and the projected variables. Risher and Hair (2017) found that the significance of the p-value for each path is fundamental. The researcher should use p-value thresholds ( $p < 0.05, 0.01, 0.001$ ) to examine the significance of the path coefficients estimate, as well as the relevance of the supposed correlations. The study concludes each hypothesis based on the significance of the p-value and set criteria of the coefficient estimation. The p-values, hypotheses inferred, and confidence level with each estimate is shown in Figure 1 and table 1.

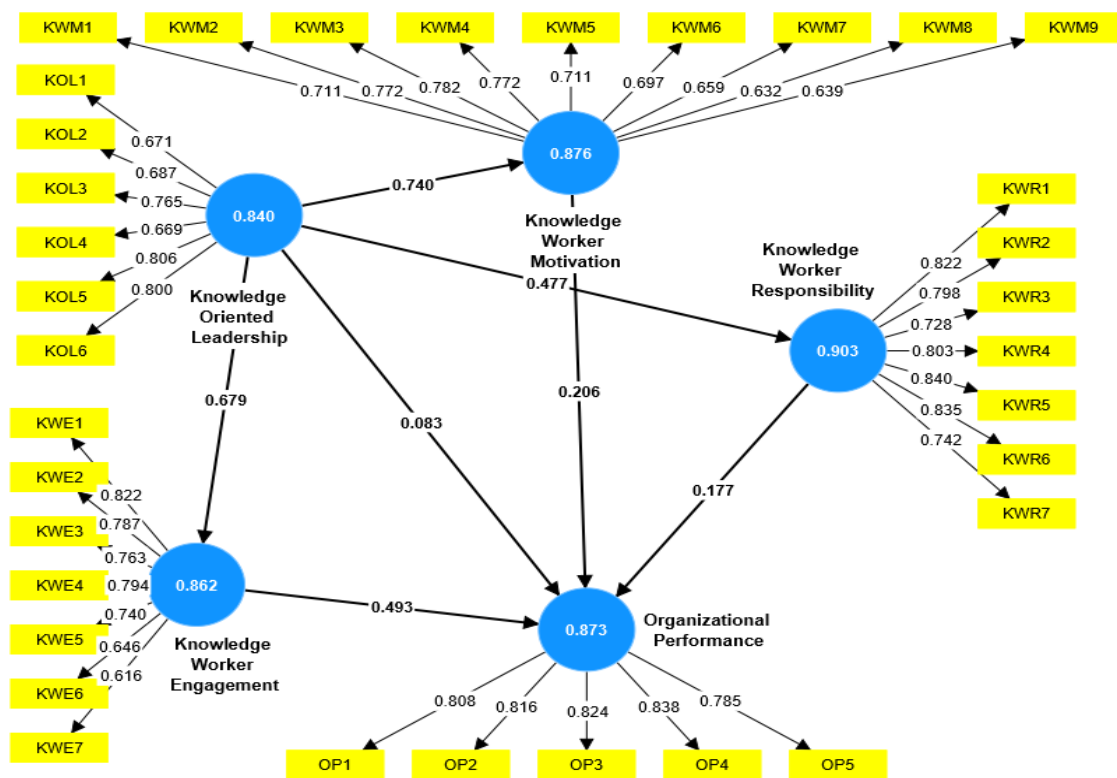


Figure 1: Path Analysis and Standardized Estimates

Table 1  
Path Coefficient Standardized Estimates

Path Coefficient Description	Path Coefficient Value
Knowledge-Oriented Leadership -> Knowledge Worker Engagement	0.70
Knowledge-Oriented Leadership -> Knowledge Worker Motivation	0.80
Knowledge-Oriented Leadership -> Knowledge Worker Responsibility	0.50
Knowledge-Oriented Leadership -> Organizational Performance	0.10
Knowledge Worker Engagement -> Organizational Performance	0.65
Knowledge Worker Motivation -> Organizational Performance	0.30

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Knowledge Worker Responsibility -> Organizational Performance 0.25

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Since the constructs show a strong direct and indirect association, and the research proposed hypotheses (H1, H2, H3, H4, H5, H6, and H7) were accepted. The results revealed that there is significant positive effect among KOL, KWE, KWM, KWR and OP. KOL has impact on the OP and the result found that KOL increase the OP with beta value ( $\beta = 0.083, t - value = 2.725, P < 0.05$ ). Moreover, the hypothesis was proposed that KOL has a relationship with KWE, and it is confirmed by the data that KOL has significant positive predictive impact on KWE. In the other words, when KOL increases then it also increases KWE with beta and t-statistics value ( $\beta = 0.679, t - value = 29.159, P < 0.05$ ). Likewise, the study hypothesized that KOL has an association with KWM, and it accepted that KOL has significant positive projective effect on KWM. Such as, KOL has direct influence on KWM and their direct relationship with beta value ( $\beta = 0.740, t - value = 37.172, P < 0.05$ ). Similarly, the study hypothesized that KOL has an effect on the KWR. The study showed that KOL has positive significant effect on the KWR. For example, KOL has direct positive influence on the KWR and when KOL increase it directly increases KWR with beta value ( $\beta = 0.477, t - value = 13.735, P < 0.05$ ). Furthermore, the hypothesis was proposed that KWE has a relationship with OP, and it is confirmed by the statistical results that KWE has significant positive predictive impact on OP. In the other words, when KWE increases then it also increases OP with beta and t-statistics value ( $\beta = 0.493, t - value = 9.648, P < 0.05$ ). Like, the study hypothesized that KWM has an association with OP, and it accepted that KWM has significant positive projective effect on OP. Such as, KWM has direct influence on OP and their direct relationship with beta value ( $\beta = 0.206, t - value = 3.515, P < 0.05$ ). Equivalently, the study hypothesized that KWR has effect on the OP. The study showed that KWR has a positive significant effect on the OP. For example, KWR has direct positive influence on the OP and when KWR increase it directly increases OP with beta value ( $\beta = 0.177, t - value = 7.165, P < 0.05$ ). Lastly, the study also measured total indirect effects for the model and its results revealed that there are also significant total indirect effects in the model with beta value ( $\beta = 0.572, P < 0.05$ ). These results guided us that the study should check the quality criteria and predictive relevance of the model.

**Table 2**  
**Standardized Path Coefficient for the Direct Hypotheses Testing (N=640)**

Constructs	$\beta$	t-statistic	Total Effects	Sig
H1: KOL -> OP	0.083	2.725	0.655	0.006
H2: KOL -> KWE	0.679	29.159	0.679	0.001
H3: KOL -> KWM	0.740	37.172	0.740	0.001
H4: KOL -> KWR	0.477	13.735	0.477	0.001
H5: KWE -> OP	0.493	9.648	0.493	0.001
H6: KWM-> OP	0.206	3.515	0.206	0.001
H7: KWR-> OP	0.177	7.165	0.177	0.001
Total Direct Effects			0.572	0.001

One of the metrics for the inner model's quality is the coefficient of determination (Hair et al., 2014). The coefficient of determination shows exogenous factors' influence on endogenous variables (Hair et al., 2012). Such as, Hair et al. (2012) examined in 204 papers using PLS-SEM and found that  $R^2$  was the primary metric for assessing the inner model. Similarly, Ringle et al. (2022) reviewed information systems research studies that employed PLS-SEM and found that  $R^2$  was used to evaluate the structural model in 105 out of 109 models.  $R^2$  estimates range from 0 to 1, with 0 signifying low explaining variance and 1 signifying high significant explaining variance. The study measured  $R^2$  value for the variance or change in the outcome constructs due to exogenous and

mediating predictors. Such as, KWE can bring 45 per cent change in the OP. Similarly, KWM can bring 54 percent change in the OP and KWE can bring 22 per cent change in the OP. Lastly, the result revealed that the whole model can bring 75 per cent change in the OP. For example, Hair et al. (2011) evaluated that  $R^2$  values in marketing research could be 0.25 (low), 0.50 (medium), or 0.75 (high). In contrast, Wong (2013) suggested that  $R^2$  in business research could be 0.19 (low), 0.33 (medium), or 0.67 (high). The study concluded that all the criteria of the  $R^2$  have been fulfilled by the current research study and complete predicted model brings 75 per cent change in the organizational performance.

Furthermore, the study counter adjusted  $R^2$  to know whether this sample size and predictors are enough for the theory generation. Such as, Henseler and Schubert (2020) described that adjusted  $R^2$  values measure the sample size and the number of predictors measurement for the research. Adjusted  $R^2$  values rise as the model has more predictor constructs. Similarly, the adjusted  $R^2$  addresses the issue of complex modeling. Also, the adjusted  $R^2$  values help evaluate several models' quality and model contrasts in various scenarios (Ringle et al., 2022). The adjusted  $R^2$  was 0.46 of the KWE variable, and KWM adjusted value was 0.54, which means about 54% of the fluctuations in OP variables. The findings of the adjusted  $R^2$  are shown in Table 4.9. Moreover, the KWR adjusted  $R^2$  was 0.22, which indicates that OP has changed by 22 per cent. The overall adjusted  $R^2$  has defined that this sample size and the overall model change are statistically significant for the total model. Similarly, this account of change is 75%, and this model has good fluctuation ability for future prediction.

Furthermore, the study measures the  $f^2$  effect size. The  $f^2$  effect size is measured as the endogenous construct when removing or eliminating the exogenous effect from the model. The PLS-SEM method calculates the  $f^2$  values for effect size measurement. The threshold of the construct's  $f^2$  value between 0.02 and 0.14 has a minor influence. If it is between 0.15 and 0.34, it is seen to have a medium effect. If it is more than 0.35, it has a significant effect. A construct does not impact the endogenous construct if its  $f^2$  value is less than 0.02 (Hair et al., 2016). The constructs'  $f^2$  effect sizes are shown in Table (4.9). The results show that KWE has a minor impact on the OP, and KWM has a medium impact on OP, but KWR also has a medium effect on the OP. Ultimately, the whole model has a significantly medium impact on the OP.

The model's out-of-sample prediction capability is shown by the  $Q^2$  value. A model may successfully forecast data not utilized in the model estimate when it is considered to have predictive power or relevance. The  $Q^2$  value is determined by performing a process of the blindfolding procedure. A  $Q^2$  score greater than 0 for an endogenous component indicates the model's predictive relevance for that construct (Hair et al., 2016). As a result, PLS-SEM tested the model's prediction ability, revealing that the complete model has 42 per cent predictive relevance. The  $Q^2$  results from the analysis are shown. The study model may be confidently assumed to have a robust predictive relevance since the values of  $Q^2$  are more well reconstructed according to the data. Finally, the  $Q^2$  values for the endogenous constructs were over zero (0); hence, predictive relevance was established in the study.

## Conclusion

The assessment of knowledge-oriented leadership (KOL) within Higher Education Commission (HEC) institutions reveals its pivotal role in shaping organizational performance (OP). As demonstrated in previous literature, KOL behaviors are integral to enhancing OP, particularly within academic settings. This

underscores the significance of implementing KOL practices to effectively address the competitive challenges faced by HEC institutions. Scholars have consistently emphasized the importance of KOL implementation as a strategic approach to improving the effectiveness and long-term benefits of academic institutions (Rehman & Iqbal, 2020; Sahibzada et al., 2023).

Evaluation of the organizational performance of HEC institutions highlights the critical role played by knowledge worker engagement (KWE) in driving OP. KWE is intricately linked to business performance and exerts a substantial influence on OP and long-term changes in employee working performance. Prior studies underscore the practical significance of KWE in enhancing organizational productivity, fostering creativity, and promoting employee engagement within academic contexts (Abbas & Ali, 2023).

Analyzing the impact of knowledge-oriented leadership (KOL) on organizational performance within HEC institutions reveals a significant positive relationship between the two variables. KOL initiatives are deemed indispensable for improving institutional performance and enhancing organizational profitability. These findings underscore the predictive effect of KOL on OP, emphasizing the importance of contemporary leadership characteristics in driving organizational success (Rehman & Iqbal, 2020; Sahibzada et al., 2023).

Identification of factors mediating the relationship between knowledge-oriented leadership (KOL) and organizational performance sheds light on the crucial role played by knowledge worker motivation (KWM) and responsibility (KWR). Both KWM and KWR serve as vital mediators, significantly enhancing organizational productivity and effectiveness. Scholarly literature underscores the importance of KOL traits as key enablers for augmenting KWM, KWR, and ultimately, organizational performance within academic settings (Cortada, 2009; Viana et al., 2023).

### **Recommendations**

1. The study found that knowledge-oriented leadership (KOL) in HEC institutions is not implemented properly. Therefore, it is recommended that proper Implementation and integration of KOL practices is crucial for addressing challenges and improving effectiveness for long-term benefits.
2. The study found that organizational performance in HEC institutions emphasizes the critical role of knowledge worker engagement (KWE). Therefore, it is recommended that enhancing KWE is vital for improving productivity, creativity, and employee engagement in academic contexts.
3. The study found that analyzing the impact of KOL on organizational performance reveals a significant positive relationship, emphasizing the importance of contemporary leadership. Therefore, it is recommended that Prioritizing KOL initiatives is to enhance institutional performance and profitability.

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