

EFFECTS OF TRANSFORMATIONAL LEADERSHIP ON EMPLOYEE PERFORMANCE IN PAKISTAN: THE MEDIATING EFFECT OF EMPLOYEE LEARNING

MUHAMMAD HAMAYUN^{1*}, MARIA SIDDIQUE² AND TUFAIL NAWAZ³

¹Department of Management Sciences and Commerce, Bacha Khan University Charsadda, 24420 Charsadda, Pakistan. ²Department of Management Sciences, Foundation University, School of Science and Technology, Rawalpindi Campus, 46000 Rawalpindi, Pakistan. ³Institute of Business Administration, Gomal University, 29111 Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan.

*Corresponding author: drhamayun@bkuc.edu.pk

<http://doi.org/10.46754/jbsd.2025.03.004>

Received: 19 September 2024 Revised: 8 December 2024 Accepted: 8 January 2025 Published: 15 March 2025

Abstract: Leadership is one key element that ensures an organisation's success. Better transformational leadership is one proposed way to improve the learning and performance of any workforce. Therefore, this study aims to empirically analyse the relation between transformational leadership and employee performance as well as confirming the mediating role of employee learning. Data were taken from employees of different universities in the Hazara region; the above-mentioned variables were subject to correlation and mediation analysis. It was found that transformational leadership positively affects employee performance and employee learning positively affects employee performance mediating the relation between the previous two variables. This research can be used by professionals to improve their employees' performance by tuning their leadership and learning policy.

Keywords: Transformational leadership, employee performance, employee learning, educational institutions, organisation's success.

Introduction

The need for highly qualified professionals is rising in Pakistan and abroad as the 2020s progress. Numerous governmental policies, as well as the situation around the world, are hurting the Pakistani economy (Sadiq *et al.*, 2021).

In current difficult circumstances, there is an increasing demand for competent people who can bridge this gap. Opportunities and difficulties within Pakistan's economy have arisen, necessitating a variety of talents and credentials from its citizens in order for them to properly contribute to the nation's development (Safdar & Idrees, 2021).

Leadership is one key element that ensures an organisation's success. Senge (2017) asserts that leadership is a crucial component of an organisation employee's effectiveness. Particular focus is placed on

educational leadership, whereby those in educational institutions have a substantial and important role in determining the course of society.

As a result, educational institutions require capable and competent leaders. Managing these organisations in the complex, worldwide context requires effective leadership (Bryman, 2013).

Because of the shift in workplace norms brought about by technological advancement, there is a need for highly competent workers who can accept and effect real change (Warraich & Ameen, 2011). The workforce of today is preoccupied with finding competent, skilled workers who can adjust to the demands of the workplace. A peculiar circumstance, nevertheless, is that graduates of universities and colleges are regrettably unfamiliar with such a scenario. As a result, they are not able to

adapt what they have learned in the classroom to actual workplace settings.

The dependent variable, employee job performance, is meant to be highly correlated with transformational leadership, which is represented as the independent variable. This leadership approach is also seen to have a strong connection to employee learning (Sousa & Rocha, 2019). Employee learning (EL) is suggested to be the study's mediator variable. Performance of employees and employee learning are positively correlated (Hameed & Waheed, 2011).

The purpose of this study is to examine the impact of transformational leadership (TL) on academic staff performance and the production of graduates from Pakistani universities who are highly trained and competent to meet the needs of business.

Leadership, as per Chemers (2014), is a process that motivates followers to meet objectives. Birasnav (2014) discovered that leadership has a significant impact on whether an organisation succeeds. Transformational leadership and transactional leadership are the two basic categories of leadership behaviours (Shields, 2011).

This research will take into account the elements of transformational leadership style. The transformational leadership paradigm was first developed by Bass (1985). Charismatic leadership is another name for transformational leadership. Transformational leadership fosters an emotional bond between a leader and their employees, as per Bass and Avolio (1997).

One of the most excellent leadership philosophies for motivating employees to engage in constructive in- and extracurricular activities is transformational leadership (TL) (Koze, 2001). TL, as previously said, assists employees to become more creative and imaginative, offer feedback, set high expectations of performance and pay attention

to the requirements of their team members (Bass, 1985). By altering employees' attitudes, beliefs, and values, they also inspire them to perform above and beyond expectations (Maheshwari & Vohra, 2015).

Performance of the employee is measured by both the employee's actions and inactions. Employee performance (EP) includes the amount and quality of production, presence at work, helpfulness and flexibility, and output timeliness.

The findings of Yang (2008) on individual performance indicated that it is impossible to verify an employee's performance. He also claims that if employee success is apparent, firms can use explicit incentives and awards based on each individual's performance (Yang, 2008).

Similarly, Bishop (1987) looked into employee performance and found that employee performance is discriminated against based on acknowledgement and incentive of performance. The success of an organisation's performance and its incentive management system has a significant impact on staff morale and performance (Cherian & Jacob, 2012).

Task performance and contextual performance are the two fundamental components of employee performance (Christian *et al.*, 2011). Task completion is concerned with the steps taken to complete a task and provide the desired result.

Contextual performance describes why employees are successful at what they do, which is supported by their own behaviour and the social and physical environment of the workplace. Task completion includes job-specific duties such as essential duties. Kaydos (2020) found a greater correlation between cognitive capacity and occupational success.

Linking, extending and refining facts, information, knowledge and wisdom is the process of learning (Jonassen, 2013). As the

dependent variable, job-related learning encompasses all aspects that support the development of new skills, knowledge acquisition, and expansion of capacities and competences that enable employees to do their tasks more safely and effectively.

Engestrom (2015) emphasised the importance of knowing the linkages since it leads to a synergistic fit between people and their surroundings, enabling “skilled performance”. As the structure of the profession evolves over time, the information, skills and competences that people possess may become inappropriate, inadequate or even outdated.

As the culmination of analytical thinking, knowledge (Retnawali *et al.*, 2015) enables people to have a better understanding of their professions as well as be aware of performance-enhancing strategies. For instance, learning may help one conceptualise their work and how it relates to other positions within the organisation better. Job-related learning encompasses the capacity to convert declarative information into procedural knowledge from a behavioural standpoint.

Additionally, positive behavioural changes, including acquiring new abilities, are signs of learning connected to one’s profession. Employee learning is the process of enhancing employees’ knowledge and abilities connected to their jobs in order to progressively enhance performance (Noe *et al.*, 2014).

Supporting Theory

The social exchange theory is applied in this study to support the relationship between the variables. According to this theory, people weigh the benefits and drawbacks of their social connections. If the risks outweigh the advantages, they will cut or break off the connection. Even if giving and receiving is a feature of most partnerships, this does not

mean that the transactions are necessarily fair. As per social exchange, how much we rate each social connection’s benefits and drawbacks determines how long we stay in it (Cropanzano & Mitchel, 2005).

Expectations and cost-benefit analysis are essential components of the social exchange system. When comparing benefits and costs, people form a reference baseline, which is typically influenced by past experiences. Interactions at work might sometimes bring up expectations.

There is an “anticipation of exchange” between leadership and workers in working environments. If an individual does not think their contributions are being valued by superiors, their performance may deteriorate.

Transformational Leadership and Employee Performance

One of the best leadership philosophies for motivating employees to engage in constructive in- and extracurricular activities is transformational leadership (Esa & Azam, 2015). Transformational leaders, as previously said, assist employees become much more innovative and imaginative, offer input, set high expectations of performance, and pay attention to the requirements of their team members (Bass, 1985).

Additionally, they “inspire employees to perform above and beyond expectations by changing employees’ mindsets, opinions, and goals” (Rafferty & Griffin, 2004). Transformational leaders can boost staff performance as a result. For instance, transformational leadership was found to positively correlate with team and organisational performance according to Judge and Piccolo’s meta-analysis from 2004. The same conclusion was reached by Piccolo and Colquitt (2006) that this leadership style improves employee performance. Therefore, H1 is proposed as:

H1: There is a direct and significant relation between transformational leadership and employee performance.

Employee Learning and Employee Performance

Employee learning may be beneficial for both the company and its employees in terms of enhancing their value to their organisation and their desirability in the local and global markets, according to Hameed and Waheed (2011). To draw in and retain the best staff, many businesses use employee learning and growth strategies. Employee performance and employee learning are connected.

Employee learning is crucial for raising productivity and performance. Employee

learning has advantages for both firms and people in terms of performance enhancement through the development of employees' competencies and behaviours (Ibrahim *et al.*, 2017). The results that can be expected from employee learning are made evident by a positive working connection with the leadership. Based on the literature, it is evident that there are relationships between employee learning and employee performance (Elnaga & Imran, 2013). Therefore, H2 is proposed as:

H2: There is a direct and significant relation between employee learning and employee performance.

Transformational Leadership and Employee Learning

In order to promote employee learning, leadership is a crucial factor. Management must give guidance to maintain operations. Organisations now operate outside of their typical business models and frameworks due to the dynamic and chaotic business environment. Organisations are unable to "handle" these changes and management abilities fall short since organisations want all-encompassing approaches. Leadership encourages employees to explore and try new approaches to problem-solving by guiding them out of their comfort zones (Ahmad & Tariq, 2017).

As much as leadership may affect organisational values, it can also affect approaches to thinking, incentives and actions that help employees learning (Popper & Lipshitz, 2000). Transformational leadership is described as "leadership that lifts followers to greater degrees of purpose and morals", whereas successful leadership "frees and empowers followers", (Bass & Riggio, 2006). This implies helping followers develop skills and information so they may become autonomous in their thoughts and behaviour. Therefore, H3 is proposed as:

H3: There is a direct relationship between transformational leadership and employee learning.

Mediating Role of Employee Learning

A variety of elements have an impact on the growth and development of organisations. Employee learning is essential for raising productivity and performance. In order to compete, this places businesses in the best positions possible. As a result, there is a noticeable difference between management that invests in employee training and management that does not invest (Nassazi, 2013).

Jyoti and Dev (2015) emphasised the importance of leaders ensuring that the knowledge and behaviours acquired during learning are applied in the workplace, sustained over time, and generalised to different situations.

Different approaches to each follower suggest that leaders should develop several

forms of communication with their team members at any given time. According to Vermeulen (2017), transformational leaders may significantly and positively influence how effectively their employees are taught new information and abilities. The development of human resources within organisations is directly influenced by the learning of professionals. Therefore, leaders may significantly improve their subordinates' ability to share knowledge.

In short, transformational leaders are critical in ensuring that their team members learn, since this enhances both individual performance and team effectiveness. Therefore, H4 is proposed as:

H4: Employee learning plays a mediating role in the link between transformational leadership and employee performance.

Theoretical Framework

Based on the above given hypothesis we have the following framework.

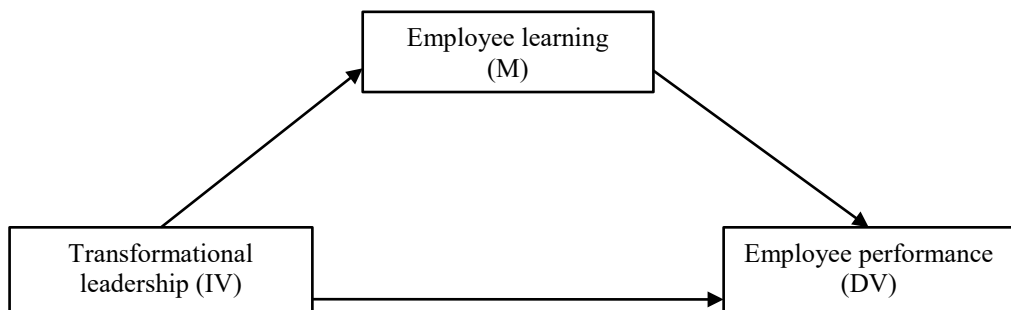


Figure 1: Theoretical framework

- H1** : There is a direct and significant relation between transformational leadership and employee performance.
- H2** : There is a direct and significant relation between employee learning and employee performance.
- H3** : There is a direct relationship between transformational leadership and employee learning.
- H4** : Employee learning plays a mediating role in the link between transformational leadership and employee performance.

Material and Methods

The theoretical research framework and associated hypotheses have been developed using the literature to illustrate the connections amongst independent and dependent variables. This proposed framework is composed of one independent variable, “transformational leadership” and a dependent variable, “employee performance” as well as a mediating variable, “employee learning”. The framework and assumptions are described in detail below.

Population

In this research, the target population was the employees of universities in the Hazara region. From each university, a sample of 19% of the whole population was taken in accordance with the model presented by Krejcie and Morgan (1970). Proper Proportion sampling was implemented for equal representation. A total of 360 questionnaires were used of which 358 were correctly filled, giving a response rate of 99.4% (Table 1).

Table 1: Population size and sampling size

Universities	Population	Sample Size
Hazara University	800	152
Abbottabad University	343	65
Haripur University	742	141
Total	1885	358

Krejcie and Morgan (1970) formula of sampling used in the sampling size.

Instrumentation

This study explains the effect of transformational leadership (TL) on employee performance (EP) amongst employees in educational institutes, with employee learning (EL) serving as a mediating factor. Due to the scarcity of existing literature on this specific area of research, this study employed an

research, this study employed an empirical approach to elucidate the important characteristics. Whereas previous work on this topic is minimal, an empirical approach is much more successful than using anecdotal findings (Miah *et al.*, 2017). The empirical study's queries are detailed in the appendix.

Table 2: Variable scales

Variable	References
Employee job performance	Williams and Anderson (1991)
Transformational leadership	Carles <i>et al.</i> (2000)
Employee learning	Coetzer (2007)

Demographics

Table 3: Frequency distribution of demographics

Demographic	Response	Frequencies	Percentages (%)
Gender	Male	233	65.9
	Female	125	34.1
Age (Year)	20-30	215	60.6
	30-40	143	39.4
Education	BA/BSc/BS	209	58.8
	MS/PhD	149	41.2

Analytical Approach

After the data was collected it was analysed through the IBM SPSS version 26 software. Descriptive Statistics for the demographics were analysed. The reliability of each item in the questionnaire was checked using Chronbach's alpha analysis. In order to determine whether a significant relation existed among the variables, correlation analysis was used. After the relation was established, linear regression analysis was used to check the magnitude of each relation. In order to check the mediator's effect in the

check the mediator's effect in the relationship, Preacher and Hayes Macros were used.

Results

Reliability

Chronbach's alpha analysis was done for each variable to check their reliability. r to be reliable, a variable must have Chronbach's alpha value of more than 0.6. (Hair *et al.*, 2003) The analysis found that each of the variables was reliable and their reliability indices are given in Table 4.

Table 4: Reliability analysis of scales

Scale	Items	Chronbach Alpha
TL	7	.800
EL	4	.811
EP	10	.870

Correlation Analysis

In order to check the existence of a significant relation among the variables, Pearson's correlation analysis was used. In order to be positively connected the correlation coefficient must have a value greater than zero. This positive value implies a positive relation

implies a positive relation whereas a negative value implies a negative relation. If the coefficient is equal to zero, it implies there is no relation among the variables. Table 5 lists the relationship between transformational leadership, employee learning, and employee performance.

Table 5: Correlation between variables

	TL	EL	EP
TL	1	.833**	.746**
EL	.833**	1	.874**
EP	.746**	.874**	1

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

Regression Analysis

Pearson's Correlation Analysis established that the connection among the variables was positive and significant. However, it did not give us the magnitude of each relation and how

relation and how much effect one variable has on the other. In order to overcome this shortcoming, linear regression analysis was used to show how much change in one variable cause change in the other.

Table 6: Relation between transformational leadership and employee performance

Employee Performance				
Predictor	B	R ²	T	Significance
TL	0.702	0.556	20.578	0.000

The results of the linear regression analysis of TL and EP are shown in Table 6. Here TL is used as the independent variable while EP is the dependent variable. A *p* value of 0.000 shows the results are highly significant. R² is equal to 0.556 which means that a 100% change in TL causes a 55.6% change in EP. This is in line with the first hypothesis, hence, the hypothesis is accepted.

The results of the linear regression analysis of EL and EP are shown in Table 7. Here EL is used as the independent variable, while EP is the dependent variable. A *p* value of 0.000 shows the results are highly significant. R² is equal to 0.763 which means that a 100% change in EL causes a 76.3% change in EP. This is in line with the second hypothesis, hence, the hypothesis is accepted.

Table 7: Relation between employee learning and employee performance

Employee Performance				
Predictor	B	R ²	T	Significance
EL	0.839	0.763	33.024	0.000

Mediation Analysis

In order to assess the mediation effect of EL on the relation between TL and EP, the process macros developed by Preacher and Hayes (2004) were used. This tool creates random samples from the given data and then checks

then, checks each of these generated samples for mediating effect. This technique is known as the bootstrapping technique (Shrout & Bolger, 2002). Using Model 4, the function of EL in mediating TL and EP was examined.

Table 8: Path analysis

Effect	Path	B	T	P	SE	LLCI	ULCI
Direct Effect	TL → EL	.7022	20.5781	0.000	0.0341	0.6351	0.7693
	TL → EP	.3692	12.3960	0.000	0.0298	0.3106	0.4278
	EL → EP	.5461	17.2651	0.000	0.0316	0.4839	0.6084
Indirect Effect	TL → EP	0.3835	242.25	0.000	0.0524	0.2445	0.4449

The Mediation analysis results are shown in Table 8. A *p* value of 0.000 across all the paths implies that the results are highly significant for each path. EL's effect on EP is equal to 0.5461. While the direct effect of TL on EP is equal to 0.3692. This shows that TL causes a change of 36% in EP in the absence of EL.

However, a look at the indirect effect of TL on EP gives a B value equal to 0.3835. This implies that in the presence of EL, the effect of TL on EP rises to 38%, implying that EL significantly mediates the relation between TL and EP. As a result, the third hypothesis of this research is also accepted.

Discussions

For colleges in Pakistan, it was discovered that there is a significant direct connection between transformative leadership and employee performance. The results of this study revealed that transformational university executives actively participate in employee training and development by imparting knowledge to their staff members and recent graduates. Transformational leaders exhibit leadership qualities, particularly in mental activation,

where they question preconceived notions, take precautions, solicit feedback from followers, and encourage subordinates to be dedicated and equipped with cutting-edge methods so that graduates are competitive in the industry.

These results share some parallels with a study by Hameed and Waheed (2011), which emphasised the need for employees to put the abilities and behaviours they had learned and honed throughout learning to work in order to increase job performance. Additionally, supporting the link between transformative leadership and employee learning is work by Vermuelen *et al.* (2017). They claim that managers might have a favourable impact on how effectively their staff members transmit knowledge.

Conclusions

This research confirms the work of previous researchers which have pointed to the relation between employee learning and employee performance. Employee learning is a tool which when properly used can be the instrument for development of employees and their capabilities. Employees with better skills and the ability to tackle new problems in their fields are able to transfer their skills to their

students, which translates to a better workforce in the future and development for the nation.

Furthermore, employee performance assessment can be used as a tool to check whether employee learning is working in a specific workplace or not. As for transformational leadership, it helps the employees' performance by giving them motivation and improving their workplace habits. Transformational leadership coupled with employee learning further improves employee performance as it translates to skills being transferred to workers in a better fashion as well as boosting their morale. And as previously discussed, when employees of educational institutes have a better skill set, so will the students who are learning from them.

Acknowledgements

The authors would like to sincerely thank the Editorial Board and reviewers of the journal for reviewing and providing comments on the article's content.

Conflict of Interest Statement

The authors declare that they have no conflict of interest.

References

- Ahmad Esa, Siti Salwa Abd Mutallib, & Nor Nadhia Nor Azman (2015). Do extra-curricular activities effect student leadership in institutions: Sport? *Asian Social Science*, 11(16), 294-301. <https://doi.org/10.5539/ass.v11n16p294>
- Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, 13(3), 26-40.
- Bass, B. M., & Avolio, B. J. (1997). Concepts of leadership. In Vecchio, R. P. (Ed.) *Leadership: Understanding the dynamics of power and influence in organizations* (pp. 3-22). University of Notre Dame Press. <https://doi.org/10.2307/j.ctvpg85tk>
- Birasnav, M. (2014). Knowledge management and organizational performance in the service industry: The role of transformational leadership beyond the effects of transactional leadership. *Journal of Business Research*, 67(8), 1622-1629. <https://doi.org/10.1016/j.jbusres.2013.09.006>
- Bishop, J. (1987). The recognition and reward of employee performance. *Journal of Labor Economics*, 5(4, Part 2), S36-S56. <https://www.jstor.org/stable/2534910>
- Bryman, A. (2013). *Leadership and organizations (RLE: Organizations)* (1st ed.). Routledge.
- Chemers, M. (2014). *An integrative theory of leadership* (1st ed., p. 216). New York: Psychology Press. <https://doi.org/10.4324/9781315805726>
- Cherian, J., & Jacob, J. (2012). A study of green HR practices and its effective implementation in the organization: A review. *International Journal of Business and Management*, 7(21), 25-25. <http://dx.doi.org/10.5539/ijbm.v7n21p25>
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64(1), 89-136.
- Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of Management*, 31(6), 874-900. <http://dx.doi.org/10.1177/0149206305279602>
- Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. *European Journal of Business and Management*, 5(4), 137-147. <https://ww>

- w.iiste.org/Journals/index.php/EJBM/article/view/4475/4543
- Engeström, Y. (2015). *Learning by expanding*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139814744>
- Fatima Warraich, N., & Ameen, K. (2011). Employability skills of LIS graduates in Pakistan: Needs and expectations. *Library Management*, 32(3), 209-224. <https://doi.org/10.1108/01435121111112916>
- Hair, Jr., Bush, R. P., & Ortinau, D. J. (2003). *Marketing research*. New York: McGraw-Hill Higher Education.
- Hameed, A., & Waheed, A. (2011). Employee development and its effect on employee performance a conceptual framework. *International Journal of Business and Social Science*, 2(13), 224-229. https://www.ijbssnet.com/journals/Vol._2_No._13_Special_Issue_July_2011/26.pdf
- Ibrahim, R., Boerhannoeddin, A., & Bakare, K. K. (2017). The effect of soft skills and training methodology on employee performance. *European Journal of Training and Development*, 41(4), 388-406. <https://eric.ed.gov/?id=EJ1146043>
- Jonassen, D. H. (2013). Evaluating constructivistic learning. In Duffy, T. M., & Jonassen, D. H. (Eds.), *Constructivism and the technology of instruction* (1st ed., pp. 137-148). New York: Routledge. <https://doi.org/10.4324/9780203461976>
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-768. <https://psycnet.apa.org/doi/10.1037/0021-9010.89.5.755>
- Jyoti, J., & Dev, M. (2015). The impact of transformational leadership on employee creativity: The role of learning orientation. *Journal of Asia Business Studies*, 9, 78-98. <https://doi.org/10.1108/JABS-03-2014-0022>
- Kaydos, W. (2020). *Operational performance measurement: Increasing total productivity* (e-Book). Boca Raton: CRC press. <https://doi.org/10.4324/9780367802103>
- Kose, B. W. (2011). Developing a transformative school vision: Lessons from peer-nominated principals. *Education and Urban Society*, 43(2), 119-136. <https://doi.org/10.1177/0013124510380231>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research

- activities. *Educational and Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>
- Maheshwari, S., & Vohra, V. (2015). Identifying critical HR practices impacting employee perception and commitment during organizational change. *Journal of Organizational Change Management*, 28(5), 872-894. <https://doi.org/10.1108/JOCM-03-2014-0066>
- Miah, S. J., Vu, H. Q., Gammack, J., & McGrath, M. (2017). A big data analytics method for tourist behaviour analysis. *Information and Management*, 54(6), 771-785. <https://doi.org/10.1016/j.im.2016.11.011>
- Muhammad Safdar & Haroon Idrees (2021). Assessing undergraduate and post graduate students' information literacy skills: Scenario and requirements in Pakistan. *Library Philosophy and Practice (e-journal)*, 1A-33. <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=9384&context=libphilprac>
- Nassazi, A. (2013). *Effects of training on employee performance: Evidence from Uganda*. University of Applied Sciences. <https://core.ac.uk/download/pdf/38098025.pdf>
- Noe, R. A., Clarke, A. D., & Klein, H. J. (2014). Learning in the twenty-first-century workplace. *Annual review of organizational psychology and organizational behavior*, 1(1), 245-275. <http://dx.doi.org/10.1146/annurev-orgpsych-031413-091321>
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, 49(2), 327-340. <https://psycnet.apa.org/doi/10.5465/AMJ.2006.20786079>
- Rafferty, A. E., & Griffin, M. A. (2004). Dimensions of transformational leadership: Conceptual and empirical extensions. *The Leadership Quarterly*, 15(3), 329-354. <https://doi.org/10.1016/j.leaqua.2004.02.009>
- Retnawati, H., Djidu, H., Kartianom, A., & Anazifa, R. D. (2018). Teachers' knowledge about higher-order thinking skills and its learning strategy. *Problems of Education in the 21st Century*, 76(2), 215-230. https://www.scientiasocialis.lt/pec/node/files/pdf/vol76/215-230.Retnawati_Vol.76-2_PEC.pdf
- Sadiq, M., Usman, M., Zamir, A., Shabbir, M. S., & Arif, A. (2021). Nexus between economic growth and foreign private investment: Evidence from Pakistan economy. *Cogent Economics and Finance*, 9(1), Article 1956067. <https://doi.org/10.1080/23322039.2021.1956067>
- Senge, P. M. (2017). The leaders new work: Building learning organizations. In Hooper, A. (Ed.), *Leadership perspectives* (1st ed., pp. 51-67). London: Routledge. <https://doi.org/10.4324/9781315250601>
- Shields, C. M. (2011). Transformative leadership: An introduction. *Counterpoints*, 409, 1-17.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422-445. <https://pubmed.ncbi.nlm.nih.gov/12530702/>

- Sousa, M. J., & Rocha, Á. (2019). Leadership styles and skills developed through game-based learning. *Journal of Business Research*, 94, 360-366. <https://doi.org/10.1016/j.jbusres.2018.01.057>
- Vermeulen, M., Kreijns, K., Van Buuren, H., & Van Acker, F. (2017). The role of transformative leadership, ICT-infrastructure and learning climate in teachers' use of digital learning materials during their classes. *British Journal of Educational Technology*, 48(6), 1427-1440. <https://doi.org/10.1111/bjet.12478>
- Yang, F. H., & Chang, C. C. (2008). Emotional labour, job satisfaction, and organizational commitment amongst clinical nurses: A questionnaire survey. *International Journal of Nursing Studies*, 45(6), 879-887. <https://doi.org/10.1016/j.ijnurstu.2007.02.001>