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Transformational leadership's impact on organisational citizenship: mediating roles of organisational learning and affective commitment

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Abstract: The purpose of the research is to understand the serial mediation effect of organisational learning culture (OLC) and affective commitment (AC) on the relationship between transformational leadership (TL) and organisational citizenship behaviour (OCB). The research was conducted among the 443 employees in the selected IT companies. The snowball sampling technique was adopted to collect the responses from the target population. Our study's outcome indicates that OLC and AC individually and serially mediate the relationship between TL and OCB. However, in both cases, it is only partial mediation. TL has a significant direct positive effect on OCB and a significant indirect impact on OCB through OLC and AC. Enhancing OCB can be achieved by managers through the cultivation of TL. This positive effect can be reinforced by emphasising organisational learning and increasing AC.

Keywords: transformational leadership; affective commitment; organisational learning culture; OLC; organisational citizenship behaviour; OCB; information technology.

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1 Introduction

The IT sector operates as a knowledge-based industry characterised by a hierarchical structure and a culture focused on achieving results. This approach allows the sector to effectively navigate and adapt to the swift technological changes occurring within the industry. In this business context, leadership plays a significant role in the organisation's success and sustainability. Leaders are expected to fulfil the needs of their followers and direct them to accomplish a shared vision (Afsar and Umrani, 2019). To create an atmosphere suitable for optimistic or adaptive changes through an efficient process, companies that are prepared to anticipate fundamental transformations must have transformational leadership (TL) (Jiatong et al., 2022). Transformational leaders encourage their followers to exhibit more effort and contribution to accomplishing organisational goals by creating commitment and loyalty towards the organisation (Khan et al., 2020). Further, the results of earlier studies indicate that TL has a significant influence on organisational learning, employee commitment, and the organisational citizenship behaviour (OCB) of the employees (Jiatong et al., 2022; Shao et al., 2022). This research aims to develop and examine the model that connects TL and OCB through the serial mediating role of organisational learning culture (OLC) and affective commitment (AC). An increasing corpus of research indicates that OLC and AC can mediate the linkages between TL and OCB.

Further, earlier studies indicate that TL significantly influences organisational learning, employee commitment, and OCB (Jiatong et al., 2022; Shao et al., 2022).

Although TL is crucial in promoting OCB, the precise mechanisms by which this happens are still not well understood. More specifically, how AC and organisational learning modulate this relationship is not well understood. More investigation is required to clarify these mediating mechanisms to better guide leadership practices and organisational development initiatives.

This research aims to develop and examine the model that connects TL and OCB through the serial mediating role of OLC and AC. An increasing corpus of research indicates that OLC and AC can mediate the linkages between TL and OCB.

The research question probed to be answered through this research is

RQ1 What connection exists between TL and OCB?

RQ2 How can AC and organisational learning individually and serially mediate the link between OCB and TL?

Following the introduction, the remainder of the paper is organised as follows: theoretical framework and literature review resulting in hypothesis development and conceptual framework, then followed by research process and methodology with sample and procedures; and further, data analysis and findings. The next section comprises discussions and conclusions.

2 Theoretical framework

Social exchange theory (SET) attempts to predict the social behaviour of people as the result of an exchange process of potential benefits and risks of their social relationships. This research is grounded in SET, which explains the connection among the four

variables of the study, namely TL, OLC, AC, and OCB. SET, following Blau (1964), is the most pertinent theoretical framework to explain the cause-and-effect relationship between TL and OCB. TL is one of the critical antecedents of OLC because transformational leaders play a crucial role in establishing a learning climate in the organisation. TL widens the thought process of employees and facilitates positive organisational outcomes (Xie, 2019). Transformational leaders follow a participative leadership style that encourages employees to acquire new knowledge and skills (Imran et al., 2016). Further, according to SET, it is elicited that TL positively affects employees' positive attitudinal consequences such as job satisfaction and AC (Judge and Piccolo, 2004), which has a significant relationship with extra-role behaviour like OCB (Ilies et al., 2007; Korsgaard et al., 2010).

3 Literature review and hypothesis development

3.1 TL and OCB

TL is a process wherein a leader adopts an idealised role model, inspires colleagues to engage in creative behaviours, provides support and guidance, and provides motivating stimuli to help employees achieve common objectives (Afsar and Umrani, 2019; Bass and Avolio, 1995). According to Organ (1988), the term OCB refers to "the behaviour that is discretionary, not directly or explicitly recognised by the formal reward system and that in the aggregate promotes the effective functioning of the organisation." OCB has been measured as a positive workplace behaviour that supports individuals, groups, and organisations (Ilies et al., 2007; Koopman et al., 2016; Kim, 2012; Organ, 1988). Leadership, predominantly TL, is estimated to impact OCB confidently because this form of leadership impacts employees to attain performance 'beyond expectations' (Bass, 1985; Purvanova et al., 2006). Hence, it is stated that all behaviours directed beyond superior performance signify OCB. There is an overall consensus that TL can inspire employees to transcend narrow self-interest in acquiring the shared task (Khaola and Coldwell, 2019), which could lead to exceptional performance of the organisation. It is reasonable to assume that a traditional employee can voluntarily engage in OCB to return to good leadership when discussing SET. Research indicates that employees who align with their supervisors' leadership philosophies are more prone to respond consistently to the guidance they have received.

An effective transformational leader may raise moral consciousness and understanding among followers and inspire them to put the greater good, such as the expanded role of OCB, ahead of their personal goals and interests (Zhang et al., 2020). Moreover, achieving extraordinary role performance like OCB requires TL. Previous research has stated that TL can motivate employees to put the organisation's exceptional performance ahead of their own personal interests to achieve a common goal (Khaola and Rambe, 2021). TL will impact the growth of OCB since it may encourage individuals to perform better and pique their interest in OCB. Therefore, previous empirical research studies found positive associations between TL and OCB. Meanwhile, such associations have been established in individual experiential studies (Carter et al., 2014; Danish et al., 2014; Hackett et al., 2018; Khaola and Rambe, 2021). Drawing from the previously established theory and evidence, the following hypothesis can be accepted:

H1 TL is positively related to OCB.

3.2 The mediating role of OLC

Organisational learning has become increasingly important due to the transformation of businesses from resource-based to knowledge-based perspectives (Chuang, 2004). Liao and Wu (2010) assert that organisational agility stems from organisational learning in a volatile corporate environment. Organisations that can learn more quickly than their competitors may be able to gain a lasting competitive advantage, according to Gong et al. (2009). On the other hand, organisational learning processes that are gradual and ongoing always benefit the company's people resources and reputation. In organisational learning, leaders bear the ultimate responsibility (Jäckli and Meier, 2020). Bass and Avolio (1993) state that knowledge and learning culture are the keys to gaining a competitive edge in a high-tech workplace. TL is the most excellent way to achieve both. According to Barling et al. (2000), TL also helps employees become more intelligent, which fosters creativity and learning. Brandi and Elkjaer (2011) determined that socialisation, one of TL's basic tenets, impacts OL. TL nurtures learning by letting employees take risks and investigate novel thoughts (Senge, 1996). TL gives freedom or allows the employee to create a novel, which helps the organisation enhance productivity. Henceforth, this builds a climate in which knowledge creation, allotting, and utilisation become the foremost ones, prominent to learning growth at the organisational level.

TL is considered a significant catalyst for forming a suitable climate for nurturing organisational learning through promoting intellectual stimulation, inspirational motivation, and self-confidence among organisation members (Noruzy et al., 2013). According to Ha et al. (2019), TLs form groups and offer them direction and energy for processes of change and organisational learning. Wiewiora et al. (2020) established in their study that a culture of empowerment is one of the significant mechanisms linking the individual, group, and organisational levels of learning. Where TL behaviours are displayed at all levels of the organisation, nurturing a learning culture. A close association between TL and organisational learning has occurred in different studies. TL has a noteworthy positive effect on OL (Ha et al., 2019; Khan et al., 2020).

The learning culture established in the organisation by transformational leaders provides opportunities for the employees to develop their skills and abilities, increasing their citizenship behaviour in the organisation (Nazeri et al., 2020). In their study, Islam et al. (2016) found that increasing the OLC enhances the probability of employees demonstrating OCB. Further, OLC develops OCB by establishing a shared vision and common values among the employees, making them feel accomplished as part of the organisation (Salas-Vallina et al., 2017). The results of existing theoretical literature support that OLC is positively related to OCB (Islam et al., 2016; Salas-Vallina et al., 2017).

According to Kim and Park (2019), transformational leaders influence the OCB of employees by increasing their positive motivation and emotion, wherein OLC acts as a connector between TL and OCB to develop employees' motivation at the workplace. OLC could play an essential role in the bonding between TL and OCB because TL has a noteworthy positive bond with OLC, and OLC has a significant positive connection with OCB (Islam et al., 2016). The results of previous studies support that OLC mediates the

relationship between TL and individual and organisational results (Ojha et al., 2018; Salas-Vallina et al., 2017). Therefore, based on the above arguments, it is posited that:

H2a TL is positively related to OLC.

H2b OLC is positively related to OCB.

3.3 The mediating role of AC

According to Peng et al. (2020), TL significantly influences the AC of the employees within their organisation. Research has demonstrated that TL directly improves AC (Sahu et al., 2018). Developing employees' sincere interest in work-related tasks and goals; utilising psychological empowerment strategies; bolstering their confidence in their group's ability to perform and complete work-related tasks; organising tasks to be engaging and varied; and fostering a supportive and encouraging work environment (Korek et al., 2010; Yücel et al., 2020). Affective organisational commitment is significantly influenced by TL (Sahu et al., 2018).

Transformational leaders establish a connection with their followers by employing personalised concern to address individual needs, going beyond mere financial transactions. This approach fosters prolonged organisational tenure and robust commitment. This association between the leader and followers was identified in a study conducted by Nazir and Islam in 2017. As it is connected to an individual's intrinsic motivation, affective organisational commitment is more closely associated with the organisation and employees' related results than normative or continuance commitment, which is linked to a sense of responsibility or pressure (Kim and Beehr, 2018).

OCB affects schedules executed by employees that go above their official work necessities and exert a substantial influence on the inclusive performance of the organisation (Ahmad et al., 2020). Previous research has demonstrated an association between AC and OCB (Khaola and Rambe, 2021; Khaskheli et al., 2020). Employees with a profound emotional connection with their firms display a higher level of OCB. Henceforth, this occurrence can be acknowledged as employees who retain AC toward their firm are inclined to have an intensified sense of accountability regarding their co-workers and the firm. Hence, employees are likelier to exceed their official work responsibilities and participate in OCB (Ahmad et al., 2020). AC also upturns workers' readiness to make individual sacrifices for the firm, such as additional work hours, accepting extra duties, or assisting co-workers with their jobs (Ribeiro et al., 2022). Such behaviour adds to the complete efficiency of the firm (Raza and Khan, 2022). Also, employees who are satisfied with their tasks are inclined to contribute to accomplishments that stimulate the complete success of the firm, even if such activities are not required. Hence, based on the above discussions, the subsequent hypotheses are proposed:

H3a TL is positively related to AC.

H3b AC is positively related to OCB.

3.4 Serial mediation of OLC and AC

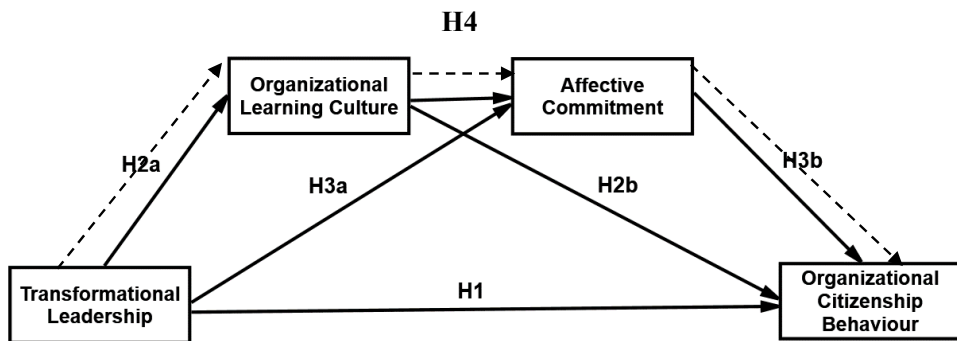
The culture of affective organisational commitment is intimately linked to leaders' transformational actions as learning support (Mwesigwa et al., 2020). According to Peng

et al. (2020), TL positively and significantly impacts organisational commitment. The beneficial effects of transformational leaders on various organisational outcomes, such as work performance, commitment to the organisation, and OCB, have been thoroughly confirmed by past TL researchers (Puni et al., 2018). According to Buil et al. (2019), transformational leaders, for example, inspire staff members to identify with the objectives and passions of the organisation, which in turn motivates them to go beyond their expectations. Mathieu and Zajac (1990) proposed that “organisational commitment can be improved through certain organisational characteristics.” Lim (2003) established an association between sub-constructs of learning organisation and AC in their research. Joo and Lim (2009) also recognised a noteworthy relationship between OLC and AC. Meanwhile, Islam et al. (2013) proved that OLC boosts employees’ emotional attachment to the firm. In particular, TL is a critical factor in nurturing employees’ citizenship behaviour in diverse organisational circumstances (e.g., Carter et al., 2014; Khalili, 2017). Therefore, it is hypothesised that:

H4 OLC and AC serially mediate the association between TL and OCB.

Figure 1 represents the conceptual model of our research.

Figure 1 A conceptual model



4 Research process and methodology

4.1 Sample and procedures

Employees of the top five Indian IT firms – Tata Consultancy Services (TCS), Infosys, HCL Technologies, Wipro Limited, and LTIMindtree Ltd. – were the subjects of this study. Ranked by Forbes India (2023) based on market capitalisation. The snowball sampling approach was used to collect samples from the population. The questionnaire form in Google Forms was shared with the IT employees through social media platforms: Facebook, X (Twitter), and WhatsApp. The responses from the companies mentioned above were only considered for the research. We got 467 responses, of which 24 contained invalid, illogical, incomplete, and outlier reactions; hence, it was removed, and the final sample size of the research is 443: four constructs and a total of 21 items used in the questionnaire. Hair et al. (2014) recommended that ten times the items are sufficient for the sample size, so the required sample size is 210, less than the actual sample size.

4.2 Measures

- *TL*: TL was evaluated using a multifactor leadership questionnaire (Bass and Avolio, 1995) with four dimensions and eight items. The sample items included “my supervisor pushes me to think outside the box” and “my supervisor articulates a compelling vision for the future.” The scale’s Cronbach’s alpha was 0.92.
- *OLC*: Marsick and Watkins (1997) developed the scale of an item to measure OLC. The present study used the same seven-item scale with a reliability of 0.84. A sample item includes “in my organisation, whenever people state their view, they also ask what others think.”
- *AC scale*: Gellatly et al. (2006) reduced the eight-item AC scale created by Allen and Meyer (1996) to just three items. The Likert five-point scale represents 1 for strongly disagree and 5 for strongly agree. The participants were asked to rate their level of agreement with the listed statements. “I feel a strong sense of belonging to my organisation” was one example item. The study also adopted the same three-item scale.
- *OCB scale*: OCB was measured using a three-item scale developed by Podsakoff et al. (2000). A sample item included “helped co-worker learn new skills or shared job knowledge.” They use a scale of 1 for never and a 5 for everyday. The Cronbach alpha of the scale is 0.832.

4.3 Common method bias, multi-collinearity, and normality

The CMB is validated using Harman’s single-factor test, as Podsakoff et al. (2012) suggested. Additionally, exploratory factor analysis and principal component analysis were used to analyse all of the research’s data points. Four constructs with eigenvalues greater than one were extracted, with a cumulative variance of 68.213%, and the first factor of the scale explained the variance of 23.073% (less than 50%). CMB is, therefore, absent from the current study. The multiple regression analysis used the variance inflation factor (VIF) to analyse the data’s multi-collinearity. The tolerance values range between 0.543 and 0.742 (less than 1). However, the VIF values of all the study’s independent variables fall between 1.348 and 1.841 (less than 3), demonstrating the lack of multi-collinearity problems in the data. The skewness values of the items lie between -0.47 and 0.725 (less than 1), and the kurtosis values vary between 0.06 and 2.757 (less than 3.0), which confirms the normality of the scale used in the study.

4.4 Demographic profile of the samples

Table 1 denotes the demographic summary of the samples. Of 443 samples, 52.1% are men, the rest (47.9%) are women, and 40.4% are aged up to 30 years. The majority (56.7%) of them are undergraduates. Over one-third (38.1%) have up to 5 years of total work experience in the IT industry, and a significant proportion (48.5%) are working at entry-level positions. From the descriptive of the research variables, it is identified that sampled employees have better perception towards all four variables namely TL (4.05, 0.670), OLC (3.99, 0.889), AC (3.98, 0.831), and OCB (4.06, 0.865) with a mean score of more than 3.98 (i.e., scale range between 1 and 5), and SD values also lesser than 0

1.0 which indicates less variance among the sampled employees with regards to the research variables.

Table 1 Demographic profile of the samples

<i>Particulars</i>	<i>Frequency</i>	<i>Percent</i>
Gender		
Men	231	52.1
Women	212	47.9
Age category		
Up to 30 years	179	40.4
31–40 years	151	34.1
41–50 years	74	16.7
Above 50 years	39	8.8
Qualification		
Undergraduate	251	56.7
Postgraduate	192	43.3
Work experience		
Up to 5 years	169	38.1
5–10 years	112	25.3
11–15 years	88	19.9
More than 15 years	74	16.7
Position		
Entry level	215	48.5
Middle level	132	29.8
Senior level	96	21.7
Total	443	100.0

5 Results

5.1 Outer model

The outcome of the outer model assessment is summarised in Table 2. The confirmatory factor analysis measured the mean, standard deviation, factor loading, and squared multiple correlations (SMC) of all the items used in the scale. It also includes CR, α , and AVE. The SMC values range between 0.491 and 0.757 (which is more than 0.33), and the factor loadings of the items range from 0.700 to 0.895 (more than 0.5), showing a reasonable level of model fit (Chin et al., 1997). The internal consistency measure (α) ranges from 0.825 to 0.936, the AVE scores are between 0.581 and 0.683, and the CR values of the constructs range from 0.825 to 0.933 [greater than 0.7 (Nunnally and Bernstein, 1994)]. As a result, the measurement model results confirm the reliability and convergent validity of the scales utilised in the study (Chin et al., 1997; Hair et al., 2014).

Table 2 Results of the outer model assessment

<i>Item code</i>	<i>Mean</i>	<i>SD</i>	<i>Factor loading</i>	<i>SMC</i>	<i>CR</i>	<i>α</i>	<i>AVE</i>
TL1	4.02	0.844	0.811	0.657	0.936	0.917	0.581
TL2	3.99	0.811	0.785	0.617			
TL3	4.03	0.829	0.774	0.600			
TL4	4.02	0.832	0.781	0.609			
TL5	4.05	0.840	0.804	0.646			
TL6	4.16	0.798	0.700	0.491			
TL7	4.23	0.842	0.732	0.536			
TL8	4.04	0.816	0.706	0.498			
OLC1	3.97	1.080	0.806	0.650	0.915	0.925	0.637
OLC2	4.01	1.052	0.792	0.627			
OLC3	3.96	1.083	0.792	0.628			
OLC4	3.97	1.047	0.825	0.680			
OLC5	4.01	1.051	0.789	0.622			
OLC6	3.97	1.101	0.806	0.650			
OLC7	4.03	1.093	0.777	0.604			
AC1	3.97	1.030	0.841	0.708	0.825	0.866	0.683
AC2	3.98	0.969	0.829	0.684			
AC3	3.99	0.978	0.812	0.657			
OCB1	4.05	0.988	0.851	0.605	0.855	0.832	0.664
OCB2	4.10	0.955	0.895	0.630			
OCB3	4.03	0.987	0.876	0.757			

Notes: Composite reliability – CR, Cronbach alpha – α , and average variance extracted – AVE, standard deviation – SD, SMC – squared multiple correlation, TL – transformational leadership, and OLC – O.

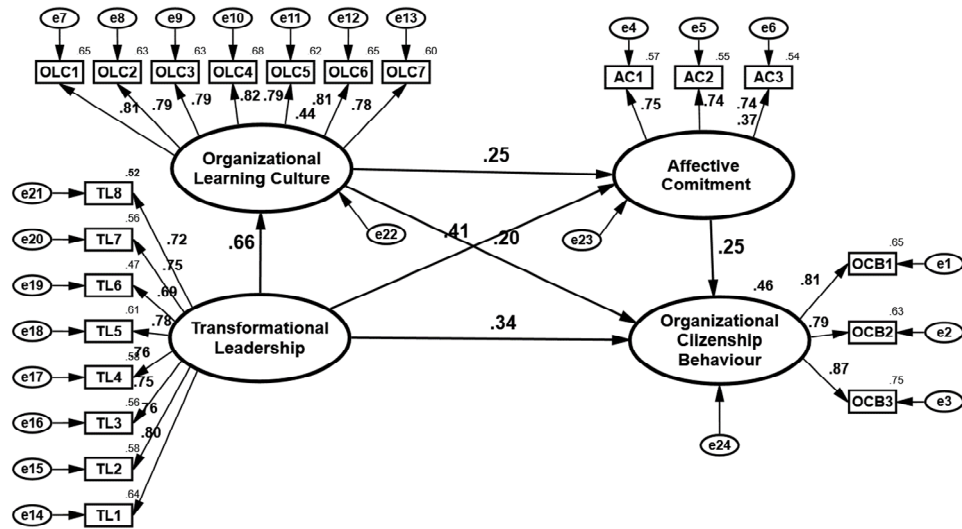
Table 3 Discriminant validity

<i>Construct</i>	<i>OCB</i>	<i>AC</i>	<i>OLC</i>	<i>TL</i>
<i>Fornell-Larcker criterion</i>				
OCB	<i>0.815</i>			
AC	0.477	<i>0.826</i>		
OLC	0.366	0.436	<i>0.798</i>	
TL	0.455	0.488	0.671	<i>0.763</i>
<i>HTMT criterion</i>				
OCB				
AC	0.477			
OLC	0.366	0.436		
TL	0.456	0.488	0.671	

Note: The italic-faced values in diagonal positions represent a square root of AVE values.

The discriminant validity of the scales was evaluated using Fornell and Larcker (1981), and the HTMT criterion and its outcomes are tabulated in Table 3. The square root of AVE in the particular column is used to compare the correlation coefficients between the constructs (diagonal elements in bold). All values in non-diagonal positions are lesser than those in diagonal positions, confirming discriminant validity. All correlation coefficient values between the constructs support the discriminant validity of the scales. As a result, demonstrating the scales' convergent and discriminant validity grants its concept validity. The measurement model fitness indices (Chi-square 359.837, DF 183, CMIN/DF 1.966, RMR 0.031, GFI 0.931, AGFI 0.913, TLI 0.965, CFI 0.970, and NFI 0.940, RMSEA 0.047) demonstrate the goodness of fit with the data.

Figure 2 Inner model



5.2 Inner model assessment

The inner model of the research was assessed using the structural equation modelling (SEM) approach. The unstandardised and standardised regression coefficients of the inner model are offered in Table 4. The results of the inner model proved that TL has a significant direct positive relationship with OCB (B 0.399, β 0.338, t 4.982, $p < 0.001$), (B 0.853, β 0.662, t 12.709, $p < 0.001$), and AC (B 0.467, β 0.408, t 5.727, $p < 0.001$), which supports Hypotheses H1, H2a and H3a at 1% significance level. Similarly, OLC (B 0.184, β 0.201, t 3.218, $p < 0.001$) and AC (B 0.257, β 0.249, t 3.931, $p < 0.001$) have a significant direct positive connection with OCB, which confirms the Hypotheses H2b and H3b at % significance level. The research results confirm the partial mediation of OLC on the association between TL and OCB. Similarly, AC also partially mediates the bonding between TL and OCB. Figure 2 portrays the inner model assessment of the research.

Table 4 Path coefficients of Inner model

<i>Hypothesis</i>	<i>B</i>	<i>B</i>	<i>t value</i>	<i>p-value</i>	<i>Result</i>
TL → OCB	0.399	0.338	4.982	<0.001**	H1 supported
TL → OLC	0.853	0.662	12.709	<0.001**	H2a supported
OLC → OCB	0.184	0.201	3.218	0.001**	H2b supported
TL → AC	0.467	0.408	5.727	<0.001**	H3a supported
AC → OCB	0.257	0.249	3.931	<0.001**	H3b supported

The serial mediation of OLC and AC of the research model on the relationship between TL and was examined using model 6 of Hayes' Process Macro Version 4.2. The serial mediation model was analysed using the bootstrapping approach with 5,000 samples. To test the conceptual model, TL has been included as an independent variable (IV), OCB has been included as a dependent variable (DV), OLC has been included as the first mediator (M1), and AC has been included as a second mediating variable (M2).

Table 5 Serial mediation effects of OLC and AC on the relationship between TL and OCB

<i>Path</i>	<i>B</i>	β	<i>SE</i>	<i>t</i>	<i>p</i>	<i>LL 95% CI</i>	<i>UL 95% CI</i>
Total effect of TL → OCB	0.665	0.516	0.053	12.634	<0.001**	0.562	0.769
Direct effect of TL → OCB	0.338	0.262	0.067	5.018	<0.001**	0.206	0.470
<i>Indirect effect(s) of TL on OCB</i>							
TL → OLC → OCB	0.190	0.148	0.051			0.091	0.290
TL → AC → OCB	0.091	0.071	0.023			0.049	0.139
TL → OLC → AC → OCB	0.046	0.035	0.017			0.016	0.082

Notes: ** significant at $p < 0.001$; all the direct and indirect pathways are significant (95% confidence interval does not cross zero).

The outcomes of serial mediation analysis are summarised in Table 5. The total effect of TL on OCB (B 0.665, β 0.516, 95% CI = 0.562 to 0.769, $p < 0.001$) was noteworthy. Similarly, the direct effect of TL on OCB (B 0.338, β 0.262, 95% CI = 0.206 to 0.470, $p < 0.001$) was also significant. Further, it is found that TL has a significant positive indirect effect on OCB through the first mediator OLC (B 0.190, β 0.148, 95% CI = 0.091 to 0.290). In addition to that, it is also identified that TL has a significant positive indirect effect on OCB through the second mediator AC (B 0.091, β 0.071, 95% CI = 0.049 to 0.139). Finally, the total indirect effect of TL on OCB through the serial mediation of OLC and AC (B 0.046, β 0.035, 95% CI = 0.016 to 0.082) was also significant. Therefore, we accept hypothesis H4 at a 1% level of significance.

5.3 Results synthesis

Examining the potential mediating roles of OLC and AC on the relationship between TL and OCB is the primary goal of this study. The assessment of an inner model indicates

that TL has a strong direct positive relationship with OCB. According to Boerner et al. (2008), followers in TL are encouraged to engage in extra-role performance behaviour (OCB) because they identify with the leaders. The results of other studies (Carter et al., 2014; Hackett et al., 2018; Khalili, 2017; Khaola and Rambe, 2021; Lee et al., 2018; Wang et al., 2005) further support the strong correlation between TL and OCB. The main objective of this research is to investigate the prospective mediating effects of OLC and AC on the connection between TL and OCB. The assessment of an inner model indicates that TL has a strong direct positive relationship with OCB. In TL, the followers identify themselves with the leaders, encouraging them to exhibit extra-role performance behaviour/OCB (Boerner et al., 2008).

6 Discussion

The capacity for learning and development within an organisation is significantly increased by TL, which is typified by intellectual stimulation, idealistic influence, personalised consideration, and inspirational motivation. Transformational leaders create an atmosphere in which sharing knowledge and ongoing learning become part of the culture of the company. A crucial mediator in this dynamic is organisational learning, which makes it easier for employees to absorb and apply new information. This, in turn, improves their capacity to perform above and above the requirements of their jobs, promoting OCB. This learning-centric strategy fosters a sense of community and shared purpose by providing employees with the essential skills and information while also coordinating their progress with company goals.

AC, or a worker's sense of emotional connection and affiliation with the company, is also quite important. Employees who work under transformational leaders are inspired and motivated, which fortifies their emotional ties to the company. Employees are encouraged to go above and beyond their assigned responsibilities and take on optional activities that advance the organisation because of this increased sense of commitment. Essentially, TL fosters strong emotional ties between people and the organisation, which in turn strengthens organisational cultures that promote learning and contribute to OCB indirectly. This all-encompassing strategy not only promotes corporate success but also increases employee retention and happiness, starting a positive feedback loop that leads to high performance and ongoing growth.

The outcomes of previous research also confirm the robust association between TL and OCB (Carter et al., 2014; Hackett et al., 2018; Khalili, 2017; Khaola and Rambe, 2021; Lee et al., 2018; Wang et al., 2005). TL is one of the critical antecedents of OCB because transformational leaders play an active role in encouraging employees' attitudes and behaviour in a positive direction in the organisations (Avolio et al., 2004; Carter et al., 2014; Khalili, 2017). It is also found that TL has a noteworthy indirect positive connection with OCB through the mediation of OLC and AC individually and in serial combination. The study's outcome confirms that the OLC mediates the connection between TL and OLC (Kim and Park, 2019). Notably, transformational leaders' positive approach and social exchange attitude influence the learning behaviour, encouraging employees to demonstrate OCB in the organisation.

Transformational leaders motivate employees to participate actively in learning programs (Danish et al., 2014) and encourage them to display civic behaviour (Saoula

et al., 2018). The outcome of the research conducted by Islam et al. (2016) proved that highly talented employees might demonstrate OCB when they receive significant encouragement from their leader to participate more in learning initiatives. Yuwono et al. (2023) found in their study that the role of TL has a crucial constructive effect on the OCB of employees through their AC towards the organisation. Therefore, it is established that the strong social exchange relationships of transformational leaders in the organisation increase the AC of their followers, which is expected to result in their OCB.

Kim (2012) asserts that leaders should monitor their personal development within the context of the relationship exchange between leaders and employees. Employees may feel more a part of the company and be more willing to put collective objectives ahead of their own. Additionally, managers and staff members should communicate with each other honestly and transparently. No studies have been conducted that purportedly postulated and experimentally confirmed the serial mediation of OLC and AC in the TL and OCB connection. When considered together, OLC and AC offer a more effective mechanism through which TL affects OCBs. Overall, the findings indicated that OLC and AC partially mediated (explained) the link between TL and OCB. In other words, OLC and AC serially mediated the connection between TL and OCB.

The results of our research have the following managerial implications in the management domain. The findings of this study will help executives at different levels of IT organisations comprehend how TL, OLC, AC, and OCB interact. By adopting TL practices, managers and practitioners can assist in creating a learning culture inside the organisation. The results confirm that perceptions of leader fairness impact TL's efficacy. Consequently, leaders must treat their staff fairly. If they do this, workers may respond by becoming emotionally invested in the company, which may ultimately lead to OCBs. Firms should adopt the appropriate selection procedures to hire leaders with relevant TL behaviours. Because transformational leaders are perceived as lenient toward their staff, companies may assign supervisors possessing TL abilities. During leaders' hiring and selection process, psychometric test methods can be utilised to determine the leaders' orientation toward transformative leadership. Even though these test methods might be expensive, the long-term advantages, such as AC and participation in OCBs, might significantly exceed the initial expenses. Training incursions can also teach managers to foster AC and develop their TL and fairness abilities.

7 Conclusions

According to our research findings, employees are likely to perceive transformational leaders as fair. This perception is shaped by both the leaders' fairness and TL, contributing to the employees' AC and influencing their organisational citizenship behaviours (OCBs). The current study examined how intermediary mechanisms mediate TL connections to OCBs. The results indicate that the positive connection between TL and OCB was largely serially mediated via OLC and AC. Hopefully, these outcomes will stimulate further study on other factors that act as moderators in the relationship between TL and other extra-role behaviours inside organisations. The current research provides a valuable understanding of how TL influences OCB through the serial mediation of OLC. AC is likely to have the following limitations: firstly, the target respondents of the research are IT employees, and allowing them to do the self-assessment of AC and OCB may lead to bias and affect the reliability of the research results. Therefore, it is better to

involve their leaders or immediate superiors in assessing the AC and OCB of the employees. Secondly, this research is grounded on cross-sectional design, which has limitations; hence, future research could follow longitudinal research design. Thirdly, this research aimed to examine the serial mediation of OLC and AC on the association among TL and OCB, so future research could investigate the mediating role of AC between OLC and OCB by verifying the effects of moderator variables should also be considered for future study.

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