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Authentic leadership for teacher's academic optimism

Moderating effect of training comprehensiveness

Authentic
leadership

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Abstract

Purpose – This study aims to analyse the impact of authentic leadership (AL) on academic optimism (AO) through the mediating role of affective commitment (AC). As this study also examines the moderating role of training comprehensiveness (TC) in strengthening the relation between AC and AO.

Design/methodology/approach – Data were collected from school teachers and their immediate principal and were further analysed through confirmatory factor analysis and hierarchical regression analysis.

Findings – Data analysis provided significant support to the hypotheses presented in the study. AC partially mediated the link between AL and AO, and TC moderated the linkage between AC and AO significantly.

Originality/value – This study provides novel basis to improve the overall functioning of schools and teachers' performance. It provides ways to improve the overall AO in Indian schools.

Keywords Commitment, Authentic leadership, Teacher, Training comprehensiveness, India, Academic optimism

Paper type Research paper

Introduction

The effectiveness of schools forms the foundation of a nation's socioeconomic development. Many scholars have focused on those factors that affect schools' overall performance (Chin, 2004; Woolley *et al.*, 2011). However, in an era of ambiguity regarding roles and goals in developing nations such as India, schools tend to remain dependent on the efficiency of their teachers to meet their goals. Teachers' roles with respect to their students' achievements are often considered as the primary influencing factor (Varghese, 1996; Kingdon, 2007). In India, schools established under the "sarva sikhsha abhiyan" (education for all) and "district primary education programmes" have risen dramatically in an attempt to provide additional human capital for the nation (Kingdon and Muzammil, 2013; Sulochana and Raman, 2013). The Indian Government has taken considerable efforts to raise investments to a higher percentage of gross domestic product, yet the efficiency and overall performance of these schools are still far below expectations (Chin, 2004; Priya, 2013; Srivastava and Dhar, 2015a). Higher rates of absenteeism, low teacher commitment and poor motivation to teach are factors that worsen the situation (Glewwe *et al.*, 2010; Rana and Das, 2004). Because the primary school is the fundamental element governing the overall development of educational systems in developing nations, there is a need to identify those ethical and perceptual



dilemmas or factors that are hindering teachers from performing with higher efficacy and commitment (Priya, 2013).

Teachers' beliefs have a great effect on schools' performance and students' development (Wu *et al.*, 2013). According to Hoy *et al.* (2006), a teacher is optimistic when he or she has a higher level of efficacy, trusts his or her students and parents and receives support towards achieving academic excellence. Combining these three major determinants, Hoy *et al.* (2008) suggested "academic optimism" (AO) as an integrated term that shapes students' performance and their learning attitude. AO is based on these three interwoven constructs (academic emphasis, collective efficacy and faculty trust) and calls for ethical and value-based leadership of principals such as authentic leadership (AL) to help and support teachers' effectiveness (Mascall and Leithwood, 2010). Since its inception, scholars have examined multiple individual and school-based psychological factors (such as anxiety, organisational support and stress) that influence AO to a different extent among teaching professionals (Boonen *et al.*, 2014; Moghari *et al.*, 2011; Hoy *et al.*, 2006). The literature lacks the effect of leadership with teachers' commitment and perception for human resource (HR) programmes on AO (Mascall *et al.*, 2008). In addition, because previous studies have differed from the Indian scenario (Iran, Turkey and Uganda) in terms of culture and customs, examining AO in Indian schol context is still vital because of its overall impact on the educational system (Moghari *et al.*, 2011; Eren, 2012). Thus, to bridge this gap, the primary aim of this study is to examine the effect of leadership and commitment on AO.

Mascall *et al.* (2008) and Papademetriou (2012) claimed that effective leadership can stimulate students' achievement through teachers' AO based on their emotional states, commitment and beliefs. The extent to which moral-based leadership can motivate teachers reflects – in part – the amount of influence leadership has on improving students' learning. Many researchers have substantiated different leadership styles such as transformational leadership, charismatic leadership and ethical leadership to resolve the work-related issues of teachers in schools (Brown *et al.*, 2005; Runhaar *et al.*, 2010; Sagnak, 2010; Dumay and Galand, 2012). However, AL is considered as a requirement within the present scenario as it helps to tackle major social issues; it incorporates the advantageous features of ethical and transformational leadership and also promotes the complete "knowledge of self and others" to influence followers' outcomes (Walumbwa *et al.*, 2008; p. 94). The AL theory is based on the leader's true belief in genuine and value-based actions (Walumbwa *et al.*, 2008; Begley, 2007) and emphasises on the use of ethical and moral means to use resources and do the right thing. Through such attributes, AL can instil an environment of trust, commitment and higher efficacy at work among their followers (Bird *et al.*, 2013; Leroy *et al.*, 2012). In an educational context, principal's AL can increase teachers' commitment towards their students, their team and their school (Begley, 2006) and lower down the rate of teacher absenteeism. Scholars have highlighted the teachers' low commitment to teach in Indian schools, specifically rural ones; thus, principals' authentic and unbiased efforts have become very important (Glewwe *et al.*, 2010; Priya, 2013).

Positive perceptions for institutional human resource (HR) policies have a vital role in encouraging effective participation by teachers to resolve the practical issues of the school. Training comprehensiveness (TC) is also considered as an individual perception for HR strategies (training) Such perception for training is relevant for task accomplishment and performance improvement and is linked to the performance and

provides support to resolve real-life issues (Srivastava and Dhar, 2015a). Although the perceptions of training and other programmes are significant, very few scholars have focused on the perceptions of TC and its independent relation to different work outcomes (Ehrhardt *et al.*, 2011). As a positive attitude is the root to organisational success and individual perception influence behaviour because it interacts with the environment (Hoy *et al.*, 2006), we assume that the interaction between affective commitment (AC) and TC can influence AO.

Thus, this study through an integrated model attempts to examine the effect of AL on AO via the mediating role of AC and the moderating role of perception of TC in government-affiliated primary school teachers in India.

Theoretical foundation

Authentic leadership

Nowadays, the AL style is considered to be the most genuine, positive, transparent and ethical kind of leadership in organisations and specifically in educational institutions (Duignan, 2014). AL represents personal thoughts, motives and intentions clearly and openly, remains highly focused on meeting challenges on an ethical basis, enables individuals to share information, make decisions (Watson, 2013) and accept opinions from others (Begley, 2006). Walumbwa *et al.* (2008, p. 94) developed and tested a theory-based measure of AL using five separate samples obtained from China, Kenya and the USA and defined AL as:

[...] pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information and relational transparency on the part of leaders working with the followers, fostering positive self-development.

Their study highlighted the influence that cultural context can have on the evaluation of AL.

Leaders who lead with authenticity have a complete sense of self-awareness and belief in relational transparency regarding their followers (Begley, 2006). Authenticity was aligned with leadership to overcome the limitations of other leadership theories. Using the well-known expression of Socrates, “know thyself” in respect of authenticity, it provides light for those who believe in a leadership style with morals and ethics (Gardner *et al.*, 2011). Researchers have frequently attempted to define this concept and have provided a variety of meanings for this term, but the main concept still remains unclear. Initially incepted as authenticity in the organisation, researchers attributed it to the individual aspects in their later studies (Srivastava and Jaiswal 2015b). They emphasised that it is a leader’s trueness that encourages value-based leadership derived from clear self-concept and real-life experiences (Duignan, 2014). The more leaders are aware of themselves, the more they motivate their followers to utilise their unidentified skills and encourage them to be leaders themselves (Peterson *et al.*, 2012). Avolio *et al.* (2004) explained the components of a leader’s authentic behaviour as confidence, hopefulness, resilience, optimism, morality, ethical future orientation and their inclination towards the development of their associates as future leaders. AL plays a significant role in reducing several negative practices and enabling employees and leaders to work together towards the overall effectiveness and success of the organisation (Duignan, 2014; Begley, 2006).

AL is different from other forms of leadership in the following manners. First, it is closely linked with other value-laden leadership styles that gain a follower's trust and commitment, that is, ethical leadership (Brown *et al.*, 2005) and transformational leadership (Avolio *et al.*, 2004). Second, it allows leaders to remain self-aware and understands others with a strong base of ethics and values that are not theorised in other leadership styles. Third, AL acts as a better predictor of professional excellence, effective performance, organisational citizenship behaviour, commitment and other organisational domains (Srivastava and Jaiswal, 2015b). Such leaders often display a passion for their purpose, practice their values consistently and lead with their hearts and heads. They establish long-term, meaningful relationships and have the self-discipline to get results (Walumbwa *et al.*, 2008; Leroy *et al.*, 2012; Townsend, 2011; Hansen *et al.*, 2013; Hechanova and Cementina-Olpoc, 2013).

Academic optimism

AO is a contemporary construct formed by the combination of collective efficacy and faculty trust in students and parents with the academic emphasis on cognitive, affective and behavioural approaches (Hoy *et al.*, 2008). AO is deeply grounded in humanistic psychology and is theoretically based on Bandura's (2001) social cognitive theory (SCT) and self-efficacy theory (SET), Seligman's (2011) study of learned optimism and Hoy's (1990) work on culture and climate. Bandura's (1977) SCT argues that human behaviour is a result of internal experience and external influencing factors. It revolves around the process of knowledge acquisition or learning and is directly correlated to the observation of models of behaviour, cognition, other personal factors and environmental influences (Pajares, 2009). The self-efficacy theory is grounded in the SCT and focuses on the roles of observational learning and social experience in the development of personality. SET explains that one's ability to perform depends on one's belief to perform and succeed. Seligman's (2011) theory of learned optimism explains that optimism can generate achievers and good health. In contrast to learned helplessness, this theory specifies that optimism can be learned. It suggests that positive behaviours can sideline the negative effects of the environment and can stimulate individuals to perform well. All of these theories centre on the notion that individual behaviours can be framed in accordance with environmental factors and internal motivation. These theories provide a base to believe that individual positive tendency can influence their behaviour. Because teachers are a role model for students, optimism in their behaviour can encourage students to perform better (Srivastava and Dhar, 2016b). A higher degree of self-efficacy can lead them to trust others' (parents and students) abilities and motivate them. In short, teachers' AO helps them to provide an environment of trust and optimism based on benevolence, reliability, competence, honesty and openness (Goddard *et al.*, 2001); it encourages student cooperation in the smooth functioning of the school and raises their confidence in their own ability to resolve difficulties and to respond to failure with resiliency and perseverance (Boonen *et al.*, 2014).

Hypotheses formulation

Authentic leadership and affective commitment

Of all the discussed and revisited topics of research in psychology and social sciences, commitment holds a dominant position in the ranking (Lambert *et al.*, 2013; Güleriyüz *et al.*, 2008). The concept of AC measures the psychological and emotional attachment of

an employee towards his or her organisation (Joo, 2010) with the intention to retain the employee in the organisation, independently accepting its goals, roles and values (Srivastava and Dhar, 2016a). This is the most influencing factor that ensures the sustainability of an employee in the organisation (Chew and Chan, 2008) along with motivating them to use their best abilities and talents for organisational effectiveness. It facilitates the identification of an individual within a group or organisation and creates an emotional bond between them (Joo, 2010), which encourages subordinates to look beyond their personal interests and work for the organisational interests as a whole (Chiaburu *et al.*, 2011). Leadership merged with authenticity stimulates the commitment levels of subordinates and encourages them to follow their leaders with trust and confidence (Peterson *et al.*, 2012). Such behavioural attributes channelled towards ethics and values fosters an environment of trust among employees and creates an optimistic purview among the social groups within an organisation (Lambert *et al.*, 2013). As such, the individual behaviour encouraged by the social groups and their beliefs indicates an automatic acceptance of the organisation as their own; efforts and performance are improved in return for the care and support provided by the organisation. As proven by Chew and Chan (2008), commitment is the most desired outcome in the organisational context for increasing creative performance and innovation. AL can play a significant role in encouraging employees' commitment by increasing virtue (Rego *et al.*, 2013), internal motivation and self-esteem (Ilies *et al.*, 2005) and by motivating them to be leaders themselves (Peterson *et al.*, 2012). Thus, we posit that:

H1. Authentic leadership has a significant relationship with organisational commitment.

Affective commitment and academic optimism

Initially incepted as a construct for enabling students' achievement in schools in the West, AO has been among the rising research topics in the fields of education, psychology and management (Hoy, 2012; Srivastava and Jaiswal, 2015b). Extending positive psychology in the organisational context, this construct allows teachers to have a positive belief about themselves and their students, and thus helps them to cultivate an environment of trust, honesty and openness (Boonen *et al.*, 2014; Hoy *et al.*, 2006). Commitment has been considered as a stimulating antecedent to AO (Kurz, 2006; Srivastava and Jaiswal 2015b). Previous studies have revealed that employees who are more committed to an organisation and provide a positive work performance are more optimistic in their behaviour and have higher efficacy levels (Srivastava and Jaiswal 2015b; Srivastava and Dhar 2016a). They are believed to be more stable and act as a catalyst by stimulating an injection of positivism into the organisational culture and climate, thus creating an environment of trust and confidence (Wu *et al.*, 2013). Employees not only trust their leaders but also acquire a stronger belief when facing difficult situations. Thus, to create an environment that stimulates AO, the AC of teachers towards their schools is critical (Hoy *et al.*, 2006). In this regard, we posit that:

H2. Affective commitment has a significant relationship with academic optimism.

Affective commitment as a mediator

As a multi-dimensional construct, an employee's AC mutually impacts individual factors such as job satisfaction and self-efficacy and fosters positive organisational

factors such as transparent HR policies, leader member exchange, a congenial working environment and safety and security in the work place (Meyer *et al.*, 1993; Duffy *et al.*, 2011). AC does not drive organisational success alone but affects the interdependent variables simultaneously along with influencing the outlook of employees towards themselves and their organisation (Srivastava and Dhar, 2016b). Commitment links indirectly related factors and redefines their relationship along with stimulating one through the impact on the other. Past studies have revealed that commitment is an obvious outcome of moral-based leadership (Lambert *et al.*, 2013; Peterson *et al.*, 2012). Internal commitment of authentic leaders to influence an employee's performance induces the employee's AC at work (Peterson *et al.*, 2012). When an authentic leader exercises his or her true belief in real-life situations, it induces employees' trust. Such trust encourages individual efficacy to perform effectively and motivates them to execute their tasks in an effective manner (Srivastava and Dhar, 2016). In this line, studies have shown that teachers' higher commitment influences students' performance. Such sense of commitment positively affects their efficacy in executing the assigned tasks (Boonen *et al.*, 2014; Hoy *et al.*, 2006). Smith and Hoy (2007) also mention that it is the teachers' commitment that enables them to trust their students and allows them to teach effectively, sidelining the effect of the students' socioeconomic status. The relationship between AL and commitment is well documented, whereas the link between commitment and AO has gained the interest of few scholars (Lambert *et al.*, 2013; Peterson *et al.*, 2012; Boonen *et al.*, 2014; Hoy *et al.*, 2006), although only a few studies have examined the extent to which AC affects the relation between AL and AO. Based on the previous literature that argues the mediating role of commitment between independent factors (Lapointe *et al.*, 2013), we presume that AC can mediate the relationship between AL and AO. Thus, we posit that:

H3. Affective commitment mediates the linkage between authentic leadership and academic optimism.

Training comprehensiveness as moderator

TC refers to employees' perception of opportunities for training and development (T and D) within the organisation (Snell and Dean, 1992). It examines employee perceptions of the most significant tools of HR development (HRD), that is, T and D provided by the organisation. Studies have emphasised that employees tend to formulate positive thoughts about an organisation when they perceive the organisation as caring and supportive to their needs (Takeuchi *et al.*, 2007). Reciprocating for the growth opportunities enabled by the organisation, employees develop optimism in their work attitude and work for the overall effectiveness and efficiency of the organisation (Gibney *et al.*, 2009). In concordance with the findings of the social exchange theory, scholars have emphasised that an employee's perception of caring and supportive T and D not only fosters reciprocal internal support, improving organisational success, but also lowers their tendency to leave the organisation (Srivastava and Dhar, 2015a; Yadapadithaya and Stewart, 2003). They perceive the provision of training as a basis for organisational support towards their contribution and the development of a healthy employee–employer relationship (Balkin and Richebé, 2007). However, an individual's reciprocation of another's behaviour is directly proportional to the perceived intensity of treatment received in the exchange relationship. In accordance with differences

in thought processes and personality, employee perceptions of organisational development opportunities differ from person to person (Maurer and Lippstreu, 2008).

TC is one of the perceptions of an individual which contributes to his or her judgement of whether the training fulfils his or her job-related needs (Srivastava and Dhar, 2015a). Ehrhardt *et al.* (2011) supporting the affect theory of social exchange wrote that the perception of TC can lead to employee commitment among product development team members. Extending this notion, we propose that this individual-level perception of TC can also have an independent effect. Continuing this line of emphasising physical well-being to induce effective performance, Van Petegem *et al.* (2007) specified that individual perceptions of HRD practices can have a moderating effect on individual behavioural outcomes. Thus, based on their results and supporting the propositions of Homan's social exchange theory (1961), we assume that when perceptions of TC are positive, teachers' commitment to executing AO, that is, collective efficacy, academic emphasis and relational trust, would be higher. On the other hand, if the individuals perceive training as less comprehensive, the positive effect of commitment to perform AO would also decrease:

- H4.* Training comprehensiveness moderates the impact of affective commitment on academic optimism.

Method

Sample and procedures

The presumed model was examined through empirical analysis in two major steps. First, we approached 173 schools (government-affiliated) from rural-based regions of North India for the study, out of which 142 consented their participation. To ensure that the data remained truly representative, a stratified sampling technique was used. Using the individual details provided by each of the 142 schools, different strata were formed based on their homogeneity among age, gender, experience and zones. All the participants were assured of their confidentiality of responses and that only aggregated results would be reported. Second, after discussing the objective and purpose of the survey, we distributed paper-based questionnaires and return envelopes to 710 teachers and their immediate 142 principals. Teachers were asked to rate the AL of their principal, their own level of AC and their perception of TC, whereas principals were asked to assess the AO of five teachers from their own school. To maintain confidentiality, each of the survey forms were coded with unique numbers, and a separate list was prepared to identify which code belonged to which respondent. In total, 646 (91 per cent) responses from teachers and 664 (93.6 per cent) responses from 129 principals were received after subsequent reminders to the principals, leading to a higher response rate for our survey, which were then screened for outliers and missing data. Finally, 623 valid questionnaires from teachers and 620 complete questionnaires from 124 principals were used for further analysis.

The questionnaires were first converted into Hindi with the help of bilingual experts and then retranslated into English, maintaining the quality of conversion via back translation to facilitate better understanding of the respondents (Munday, 2013). The majority of the teachers were female (74.9 per cent) with an average age of 31.7 years. They had at least a graduate degree and had worked in their schools for 7.4 years on average. On the other hand, their principals were mostly male and were having an average age of 43.6 years. They had a working tenure of approximately 15.3 years [Appendix (B)].

Ethics

All the ethical guidelines were followed while collecting the data. Respondents were ensured about the confidentiality and anonymity of responses and that only aggregated response would be used for the study.

Measures

AL was measured at the teacher level by a 16-item scale of AL questionnaire given by Walumbwa *et al.* (2008) ($\alpha = 0.938$); AC was measured using a six-item AC scale given by Meyer *et al.* (1993) ($\alpha = 0.927$); AO was measured using a 30-item scale given by Hoy *et al.* (2006) ($\alpha = 0.985$); and TC was evaluated using a three-item scale given by Ehrhardt *et al.* (2011) ($\alpha = 0.958$). All the scales were evaluated on a seven-point Likert scale to avoid the complexities of further analysis.

Controls

Age, gender differences and education have been considered as control variables, as previous studies have justified their impact on individual and organisational variables. Along with this, the work tenure of teachers was also controlled as it can affect their opinions of their leaders and their work environment.

Analytical approach

To evaluate the hypotheses of the presumed model (Figure 1), we first conducted a confirmatory factor analysis (CFA) and examined the model on multiple conventional fit indices, including the root mean square error of approximation (RMSEA), incremental fit indices (CFI), absolute fit indices (such as goodness-of-fit indices, GFI, and adjusted goodness-of-fit indices, AGFI), parsimony fit indices, normed fit indices (NFI) and χ^2 using analysis of moment structures (AMOS)-20.

The presumed hypotheses were tested in three parts:

- (1) main effects ($H1$; $H2$);
- (2) mediation ($H3$); and
- (3) moderation ($H4$) by using statistical package for social sciences (SPSS)-16 computerised statistical software.

The main effect and mediation hypotheses were examined through a hierarchical regression analysis (HRA), whereas the moderation hypothesis was tested via the inclusion of interaction terms. In testing the main effect, first, the control variables (age, education, tenure and gender) were entered, followed by the hypothesised predictor (AL) in the next step. In mediation, the method suggested by Baron and Kenny (1986) to test

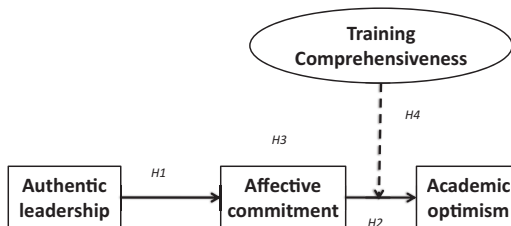


Figure 1.
Hypothesised model

the mediation effect was used. In this method, the independent variable is taken as X , dependent variable as Y and mediator variable as M . Thus, when X significantly influenced Y , X predicted M significantly and M predicts Y in a significant manner; this method suggested a mediation effect of M in linking X to Y . Further, if the consequence of X on Y diminishes to zero with the inclusion of M , then the mediation is known as perfect mediation or complete mediation; whereas if the outcome of X on Y reduces by a non-trivial sum other than zero, then the mediation is known as partial mediation.

Moreover, an updated version of Baron and Kenny (1986) was presented by Kenny *et al.* (1998, p. 260), which established that the significant direct effect of the initial, independent variable X on the outcome Y is no longer essential to establish mediation. Thus, the main effect may be weak or insignificant, whereas the indirect effect may exist (Shrout and Bolger, 2002; Kenny *et al.*, 1998). For this reason, the mediation hypotheses, that is, $H1$, $H2$ and $H3$, were examined through the SPSS process' macro steps provided by Hayes (2012) and executed by steps provided by Cole *et al.* (2008). For moderation, the control variables, independent variable IV , mediator (AC) and moderator (TC), were typed in manually in subsequent steps, whereas the interaction values of mediator and moderator ($AC \times TC$) were entered in the last step (Baron and Kenny, 1986).

Results

Confirmatory factor analysis

Table I represents the correlation estimates and other descriptive details, that is, the mean and standard deviation of the presumed model. The estimates of CFA surpassed the prescribed upper limits of a significant fit: GFI = 0.830, AGFI = 0.808, RMSEA = 0.049, NFI = 0.910 and CFI = 0.944 (i.e. $\chi^2/df < 3$, NFI = 0.90, RMSEA < 0.08 and CFI: higher value indicates better fit) [Appendix (F)], otherwise revealing a good fit of the presumed model (Hair *et al.*, 2006). The non-significant results for ANOVA revealed that the principal's viewpoint for a teacher's AO was independent and was not nested in employee responses ($F = 0.915$, $p = 0.722$).

To examine the convergent validity of the constructs, factor loadings, average variance extract (AVE) and composite reliabilities, were evaluated as shown in Table II. The factor loadings for all the constructs revealed the overall contribution of each factor towards the construct [Appendix (A)]. The loadings for AL significantly ranged from 0.558 to 0.816; whereas the loading indicators for AO, AC and TC were above 0.70 ($p < 0.001$). As shown in Table II, the composite reliability of each construct exceeded the limit of 0.6 (Bagozzi and Yi, 1988); and estimates for the AVE passed the ceiling of 0.5 (Fornell and Larcker, 1981). Thus, the results imply that there exists no issue regarding the convergent validity of the measures of construct in the presumed model. Each of the constructs had a higher internal consistency and reliability as Cronbach's alpha (α) was higher than 0.70 (Nunnally, 1978).

Regarding the discriminant validity, the AVE values of the latent constructs were measured in comparison to the squares of correlation estimates (Table III). Because all the AVE values stand higher than the squared interconstruct correlation values, there exists no issue regarding discriminant validity in this model (Fornell and Larcker, 1981).

Hypothesis testing

Next, we conducted HRA to test the hypothesis while controlling variables for age, education tenure and gender differences. The main effect examination revealed that AL

Table I.
Descriptive analyses
and discriminant
analysis

	Mean (SD)	Correlation								
		1	2	3	4	5	6	7	8	
<i>N</i> = 621										
1. Age	3.24 (0.89)	1.000								
2. Education	2.65 (0.65)	-0.186**	1.000							
3. Gender	1.31 (0.46)	-0.194*	0.006	1.000						
4. Tenure	3.24 (0.87)	-0.952*	0.186*	-0.094**	1.000					
5. Authentic leadership	3.12 (1.27)	-0.004	0.038	0.033	-0.004	1.000				
6. Affective commitment	3.03 (1.46)	0.071	0.021	0.036	0.071	0.447**	1.000			
7. Academic optimism	3.06 (1.54)	0.058	0.033	0.063	0.058*	0.475**	0.701**	1.000		
8. Training comprehensiveness	3.08 (1.68)	0.061	-0.026*	0.032	0.061	0.563**	0.779**	0.787**	1.000	

Note: ** Denotes significance level of 0.01

has a significant positive effect on AC ($B = 0.45, t = 12.42, p < 0.001$), supporting *H1*. Table IV shows the results from the mediation test via the regression model (SPSS PROCESS). As shown, AC directly and significantly influenced AO ($B = 0.61, t = 14.54, p < 0.001$), supporting *H2*. AC acted as a significant mediator as AL indirectly affected AO via the mediation of AC. Thus, *H3* stands supported. This indirect effect was positive ($B = 0.273, p < 0.001$). The two-tailed significance tests revealed that the indirect effect was significant. The bootstrap results favoured the significance, with 99

Serial no.	Construct	ASV	AVE	MSV	Cronbach's α /CR
1	Authentic leadership	0.275	0.503	0.348	0.938/0.941
2	Affective commitment	0.672	0.466	0.658	0.927/0.925
3	Academic optimism	0.474	0.666	0.661	0.985/0.983
4	Training comprehensiveness	0.556	0.868	0.661	0.958/0.952

Notes: AVE represents average variance extracted; MSV represents maximum shared variance; ASV represents average shared variance; CR represents composite reliability; *** denotes significance level of 0.001

Table II.
Overall reliability of the constructs and factor loadings of indicators

No.	Constructs	1	2	3	4
1.	Authentic leadership	0.503			
2.	Affective commitment	0.200***	0.672		
3.	Academic optimism	0.227***	0.491***	0.666	
4.	Training comprehensiveness.	0.317***	0.607***	0.619***	0.868

Notes: The numbers in the cells of diagonal line are the values of AVE with squared correlation values; *** = $p < 0.001$

Table III.
Discriminant validity

Variable	B	SE	t	p
<i>Direct and total effects</i>				
AC regressed on AL	0.45	0.360	12.42	<0.001
AO regressed on AL	0.47	0.354	13.42	<0.001
AO regressed on AC; controlling for AL	0.61	0.310	19.69	<0.001
AO regressed on AL; controlling for AC	0.21	0.310	6.50	<0.001

	Value	SE	LL 99% CI	UL 99% CI	Z	p -value
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Indirect effect and significance using normal distribution

Sobel	0.273	0.260	0.221	0.330	10.98	<0.001
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	M	SE	LL 99% CI	UL 99% CI
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Bootstrap results for indirect effect

Effect	0.273	0.299	0.215	0.332
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Notes: $N = 621$; unstandardised regression coefficients are reported; bootstrap sample size = 1,000; LL = lower limit; CI = confidence interval; UL = upper limit

Table IV.
Results of hierarchical regression analysis for the hypothesised relationships

per cent confidence interval (CI) around the indirect effect that contained zero (0.215, 0.332). Therefore, *H1*, *H2* and *H3* were supported.

The moderation results (Table V) revealed that the interaction effect of TC and AC on AO is significant and positive ($B = 0.059$, $p < 0.001$). The interaction term was computed through the standardised values of AC and perception of TC. Controlling the demographic variables, it is shown that TC strengthens the link between AC and AO when measured with low AC and high AC (Figure 2). Thus, *H4* stands true. Before regressing it as a moderator, we also tested TC as an independent variable impacting the commitment of teachers. A positive but insignificant result was obtained ($TC \rightarrow AC = 0.18$, $p > 0.001$), which showed that the perception of TC does not have a direct significant relationship with AC, which partially contradicted the findings of Ehrhardt *et al.* (2011).

The R^2 value shown in Table IV continuously improved significantly with each addition of IVs and interaction terms depicting an accumulated incremental impact over AO. To detect a common method bias (CMB) due to the one-time self-reporting technique adopted for data collection, the Harmon one-factor test was conducted. The result was 45.16 per cent (approximately 45 per cent), which surpassed the maximum limit of 50 per cent as an indication of the CMB in the model (Podsakoff and Organ 1986). Thus, there exist no concerns regarding common method biases in the presumed model.

Discussion

As a successful scenario in one country might not be successful in another country or region, we targeted Indian primary schools and examined what factors influenced teachers' AO in an Indian context. Our study intended to analyse the impact of AL over AO through the mediating role of AC and perception of TC as a moderator. The mean

Dependent variable →	Academic optimism	
	Step 1	Step 2
<i>Control variable</i>		
Age	0.010	0.006
Tenure	-0.009	-0.004
Education	-0.063	-0.064
Gender	-0.005	-0.014
<i>Mediator</i>		
Affective commitment (AC)	0.216***	0.197***
<i>Moderator</i>		
Training comprehensiveness (TC)	0.596***	0.585***
<i>Interaction</i>		
TC × AC		0.059*
<i>F</i> -value	206.978***	138.90***
R^2	0.642	0.645
Adjusted R^2	0.638	0.640
Change R^2	0.121	0.003

Table V.
Regression results
for moderation/
interaction effect:

Notes: *** p -value < 0.001; ** p -value < 0.01; * p -value < 0.05

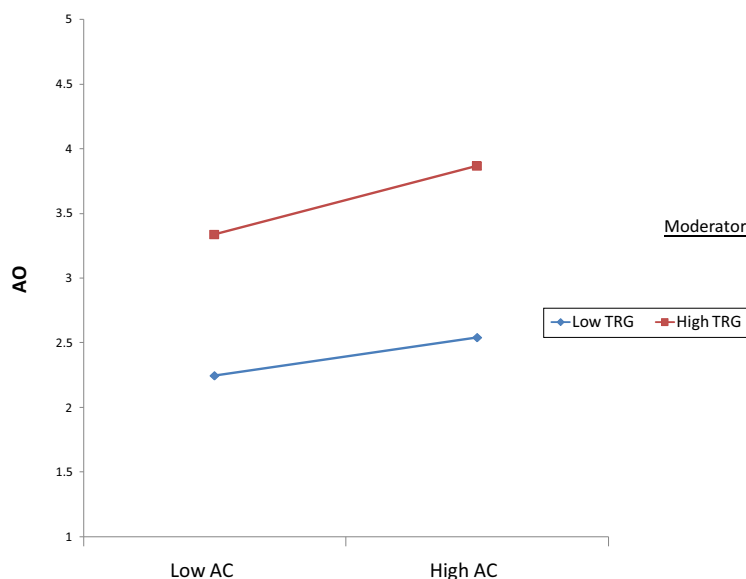


Figure 2.
Moderating effect of
TC on the
relationship between
AL and AO

scores indicated that the teachers' sense of AO in Indian primary schools was low, specifically at the level of collective efficacy (mean = 2.97, $\sigma = 0.49$). Consistent with the findings of Hoy *et al.* (2008) and Srivastava and Jaiswal (2015b), it was found that the teaching staff members in schools, specifically in government primary schools, need a push to increase their collective sense of efficacy, trust in students and parents and academic emphasis to attain academic excellency at work. As specified in the SCT, behaviours are the results of the replication of the actions of others; authenticity in leader/principals was hypothesised to inspire optimistic behaviour by their teachers.

To verify the effect of the various factors required for increasing the level of AO, we proposed AL as a tentative way out in the Indian school scenario. Consistent with our expectations, regression results provided that AL, even in Indian primary schools, can instil AO among teachers. Supporting Mascall *et al.* (2008), we suggested that effective leadership can stimulate students' achievements through their teachers' AO based on their emotional states, commitment and beliefs. Similarly, supporting Walumbwa *et al.* (2008), we extended that cultural context also influences the level of AL. Moreover, in consistency with Srivastava and Dhar (2016b) and Kulophas *et al.* (2015), it reflects that the extent to which moral-based leadership can motivate teachers' AO in part reflects the degree of influence leadership has on improving students' learning.

In uniformity with H2, the results revealed that AL affects teachers' AC in a positive and significant manner. This finding supported the findings of a positive direct relationship between AL and AC as shown in Peterson *et al.* (2012) and Srivastava and Jaiswal (2015b). It showed relatively low strength between the constructs than shown in Kliuchnikov (2011) but higher than the findings in Emuwa (2013). Further regression results showed that AC affects teachers' sense of AO positively, supporting H3. Earlier studies on AO considered it a tool to stimulate students' achievements and schools' effectiveness (Hoy *et al.*, 2006), whereas our study proved AO as the outcome of AC. It

illustrated that teachers who sense an emotional bondage (AC) with their institution exhibit AO and work to give their best for their students and school. This contradicted the findings of Kurz (2006, p. 154) who showed that “teacher factors are not connected to teachers’ sense of academic optimism”, whereas this study showed a direct relationship between a teacher’s AC and AO.

Consistent with our assumption, the results provided that AC has a mediating effect between AL and AO. This finding showed that an authentic principal leader can have an indirect effect on teachers’ AO through raising their AC. In other words, if the leader is authentic and trustworthy, teachers would sense higher commitment and then higher efficacy to teach; would trust their students and parents; and would have more confidence to make a difference in their students’ learning. Because AC is predominant among Indian employees and an emotional bond works better when encouraging their performance and efficiency, we opted to use it for our study.

In consistency with the hypotheses, we proved the moderating impact of TC on AC and AO. From positive and significant results, we inferred that a positive perception of teachers towards the comprehensiveness of training programmes strengthens the link between AC and AO. Supporting Srivastava and Dhar (2015a) and Ehrhardt *et al.* (2011), we proved that positive perception for TC can influence, although indirectly, employees’ behaviours. They showed the perception for training as a dominant vehicle to drive the attitudes of employees towards skill development and post-training performance through which teachers trust their students’ views and performance and increase academic success by promoting collective efficacy. When they regard their training sessions as useful, facilitate new skills and learning and stay committed to their teaching tasks and co-curricular activities, they are encouraged to display more AO. In other words, when teachers perceive their training as comprehensive, their commitment to raise AO increases, whereas when they perceive the training negatively, their commitment to execute AO declines.

The results of the correlation also proved that the variables AL, AC, AO and TC are closely and significantly interrelated. The correlation results for AL and other attributes were all below 0.6, which resembled a moderate correlation among the factors. This estimate clarified that respondents clearly differentiated the measures and responded diligently. For low correlation, a possible reason can be that principals in Indian primary “sarkari” (government) schools do not act as a leader. They function as an employee trying to accomplish a task and are not allowed to exhibit leadership qualities, which is urgently needed to induce the AO and AC of their employees. Also, the results due to transferring the teachers as per their facilitation, personal leave as per their requirement and financial and emotional support from the heads reveal a positive connection of AL with AC and AO. However, in cases where factors such as the lack of assistance when needed, misunderstandings and interpersonal conflicts were prevalent, the resultant correlation was low. The R^2 values and CFA results also confirmed that the hypothesised model exhibits sustainability in other similar culture-based schools in other countries. Thus, the results reveal that AC, AL and perception of TC are three factors that interact to influence and stimulate AO.

Thus, to summarise our study, AL can indirectly influence AO through the significant mediating effect of AC. Further, TC perception when interacts with AC can strengthen the link between AC and AO.

Implications for practice and research

This study provides some theoretical and practical contributions. First, it contributes to the multi-component construct of the AL theory (Walumbwa *et al.*, 2008). AL has a broad and rich theoretical base and impacts the follower's performance in several ways, yet fewer studies have been conducted on its role regarding teachers and schools. Our findings clarified the conceptual and theoretical underpinnings of AL (Walumbwa *et al.*, 2008, 2010) in an Indian school context. It verified that a principal's provisions for an open and non-defensive authentic way of interaction with one's environment can induce optimism and commitment among teachers, specifically in an Indian context. On practical grounds, it suggests that the four dimensions of AL should be developed by the school principals through counselling and effective training sessions. The principals should be encouraged to make decisions independently without any external influence.

Second, the study adds to the contemporary construct of AO, extending its theory by proposing and empirically verifying AL as an antecedent of positive work behaviour in Indian primary schools. Expanding the work of previous researches, we attempted to define the principal's leadership based on authentic grounds and analyse its impact on AO (Townsend, 2011). The strong bond between AL and AO is significant as it provides insight into how being true to one's self may result in positive individual perceptions of others and a higher level of collective efficacy and trust among the followers in the Indian context. Thus, in this context, it suggests that principals should try to motivate each of their teachers to view his or her role from a broader viewpoint, instead of from the job description perspective. To do this, the principal should put efforts to clarify the relevance of each individual's role and contributions to the school's success and performance. Leaders can evaluate their own weaknesses and strengths and motivate their teachers to assess themselves to increase the scope for improvements and the development of optimism. This can be done by fostering a transparent and open environment and by providing opportunities for self-awareness among the teachers and principals. Sincere, open and transparent relations through leading by example can evidence the principal's true self to the teachers and students. The study also extends previous studies in the West, considering AO as the outcome of AC rather than considering it as an influencing factor of other organisational attributes. Next, it opens new avenues for behavioural research in relation to AO and encourages researchers to replicate this study in different countries and in various settings.

Third and most importantly, it provides a major theoretical extension of the perception of TC and responds to the recent calls for more exploration of the link between perception for training initiatives offered by organisations' and individuals' subsequent responses to those perceptions (Aguinis and Kraiger, 2009; Ehrhardt *et al.*, 2011). Our findings provide a new insight into the existing theories of training by illustrating that when committed employees have an affirmative outlook towards training initiatives adopted by the employers or the principals, they feel motivated to have a higher degree of collective efficacy and belief on their own capability. This result contradicts previous studies that related TC with commitment of employees (Ehrhardt *et al.*, 2011). A possible explanation for this unexpected result could be differences in the sample group. The perception of TC may hold an incentive for product development team members' commitment; however, it does not have any direct effect on the commitment level of teaching professionals. So, it might be possible that the effect TC has on product development teams may not be the same with regard to teachers

depending on their work style and training needs. On theoretical grounds, this study extends the deprivation–satiation proposition of social exchange introduced by [Homans \(1961\)](#), which states that when a particular reward is given more often, it becomes less valuable for further motivation and commitment. Similarly, as teachers in schools receive training as a reward more often than is necessary, their perception tends to become negative. Thus, it lessens the training’s influence on encouraging teachers’ commitment in a direct manner. Further, through highlighting the moderating role of TC, this study enlarges the findings of [Van Petegem et al. \(2007\)](#) and signifies that a positive individual perception of the completeness of training initiatives can strengthen teachers’ AO not through commitment but with commitment. Practically, it suggests that training facilities should be promoted by revealing their relevance to the teachers’ development and their overall performance. Rather than providing a paid holiday to them, training programmes should be framed in such a manner that they provide complete satisfaction among teachers, thus allowing effective implementation of training skills in real-life situations. Fourth, our study in support of previous studies exhibits the multi-dimensional role of commitment and clarifies its impact on AO in Indian schools.

We also show that in a world where change is constant, it is important for leaders to stay true to themselves and encourage their followers/employees to stay committed to the organisation. Although the relation between AL and commitment has already been confirmed by previous researches ([Leroy et al., 2012](#); [Peterson et al., 2012](#)), each study differed in context and circumstances of our study. Therefore, it can be inferred that authentic school principals who consider self-awareness as an instrument for group achievement can attain AO and, at the same time, can facilitate the creation of committed followers. Thus, it can be derived that by fostering AC at work through T and D sessions, counselling and seminars, teachers can be encouraged to have a bond with the school and perform their real role of “gurus” (teachers). However, researchers are encouraged to analyse this connection by involving job satisfaction, motivation and other HR tools as mediators in future studies.

Limitations and directions for future research

This study has several limitations. First, our study explores how AL can stimulate primary school teachers’ commitment and ultimately their AO. This study paves a new way for educational researchers to examine the influence of AL on other schools and individually related factors that might influence the schools’ overall performance. Second, our study is confined to primary schools in the northern regions of India, and therefore, its findings cannot be generalised to other areas of the country. Future studies can apply this model to other regions and cultures. Third, time was a major constraint in accessing a broader range of responses and ethnicity because the responses were primarily collected from female teachers. Personal contact with the respondents would have increased participation and would have benefitted the results. Fourth, in the absence of an opportunity to replicate the discussion undertaken for the study, the responses could have been affected by uncontrollable environmental factors. Next, we conducted a cross-sectional analysis at a particular point of time, which may have caused a common method bias in our self-reported data. Finally, we attempted to consider each aspect while interpreting the data; therefore, certain interpretations might

remain unexplored. Further, a study analysing AL and AO in connection with other individual and organisational variables could be made.

Conclusion

To conclude, we would quote a statement by Phillip II of Macedonia, "An army of deer led by a lion is more feared than an army of lions lead by a deer". Through this study, we put forth that if the principal is authentic in his or her leadership and stays true to self and others, he or she may lead the whole educational system effectively. An authentic leader can play a vital role towards stimulating AO through employees AC towards their school. Based on the results of regression analysis, we infer that by introducing an AL style in the primary schools of India, teachers can not only attain AO at a higher level but also support the sustainable development of our socioeconomic scenario based on ethics. The study also indicates that an employee's perception for TC can strengthen the commitment of employees and increase AO. This will increase the collective efficacy. Considering the limitations of the study, our study exhibits better prospects when looking at the various aspects of AO and AL.

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(A) Copy of the questionnaire

Sr. No.	Particulars	Mean	Standard deviation	Factor loadings	t-value
1.	Affective Commitment				
1.1	I am not really attached to my supervisor (R)	3.0741	1.72486	0.882	25.320***
1.2	I feel proud to work with my supervisor	3.0757	1.75308	0.801	22.378***
1.3	I feel a sense of respect for my supervisor	3.0676	1.78848	0.835	23.056***
1.4	My supervisor means a lot to me	3.0145	1.83200	0.781	21.673***
1.5	I appreciate my supervisor	3.1079	1.89216	0.782	21.699***
1.6	I feel little admiration for my supervisor (R)	3.0338	1.81316	0.837	23.668***
2.	Academic Optimism:				
2.1	Collective Sense of Self-Efficacy Item				
2.1.1	Teachers in this school are able to get through to the most difficult students	2.9678	1.71772	0.833	28.955***
2.1.2	Teachers here are confident they will be able to motivate their students.	2.9114	1.69826	0.911	38.373***
2.1.3	If a child doesn't want to learn teachers here give up. (R)	3.0306	1.82652	0.827	30.173***
2.1.4	Teachers here don't have the skills needed to produce meaningful results. (R)	3.0370	1.75800	0.784	27.022***
2.1.5	Teachers in this school believe that every child can learn.	2.9388	1.75503	0.846	31.731***
2.1.6	These students come to school ready to learn.	2.9758	1.73328	0.842	31.385***
2.1.7	Home life provides so many advantages that students are bound to learn.	3.0177	1.73986	0.764	25.790***
2.1.8	Students here just aren't motivated to learn. (R)	2.9646	1.73541	0.822	29.811***
2.1.9	Teachers in this school do not have the skills to deal with student disciplinary problems. (R)	3.0048	1.77482	0.765	25.847***
2.1.10	The opportunities in this community help ensure that these students will learn	3.0048	1.79739	0.807	28.631***
2.1.11	Learning is more difficult at this school because students are worried about their safety.	2.9308	1.72833	0.786	27.256***
2.1.12	Drug and alcohol abuse in the community make learning difficult for students here. (R)	3.0870	1.73452	0.775	26.465***
2.2	Faculty Trust in Student and Parents Items				
2.2.1	Teachers in this school trust their students.	3.0258	1.80661	0.728	23.673***
2.2.2	Teachers in this school trust the parents.	3.0242	1.76280	0.785	27.120***
2.2.3	Students in this school care about each other.	3.0177	1.75555	0.786	27.247***
2.2.4	Parents in this school are reliable in their commitments.	3.0258	1.73929	0.814	29.213***
2.2.5	Students in this school can be counted upon to do their work.	3.1111	1.76221	0.807	28.682***
2.2.6	Teachers can count upon parental support.	3.0644	1.76864	0.815	29.333***
2.2.7	Teachers here believe that students are competent learners.	3.0998	1.77246	0.785	27.192***
2.2.8	8. Teachers think that most of the parents do a good job.	3.0467	1.79140	0.795	26.325***
2.2.9	Teachers can believe what parents tell them.	3.0805	1.77708	0.849	32.061***
2.2.10	Students here are secretive. (R)	3.0531	1.75942	0.802	28.338***
2.3	Academic Emphasis Items				
2.3.1	The school sets high standards for performance.	3.1063	1.80008	0.834	30.752***
2.3.2	Students respect others who get good grades.	3.0419	1.75743	0.857	36.928***
2.3.3	Students seek extra work so they can get good grades.	3.0902	1.75377	0.854	32.520***
2.3.4	Academic achievement is recognized and acknowledged by the school.	3.0403	1.73670	0.867	38.748***
2.3.5	Students try hard to improve on previous work.	3.0161	1.71795	0.885	35.491***
2.3.6	The learning environment is orderly and orderly.	3.0725	1.67993	0.868	40.294***
2.3.7	The students in this school can achieve the goals that have been set for them	3.0306	1.77910	0.903	37.490***

(continued)

2.3.8	Teachers in this school believe that their students have the ability to achieve academically.	3.0467	1.71786	0.908	35.456***
3. Perceived Training Comprehensiveness					
3.1	I receive many hours of training as a team member	3.0805	1.81391	0.947	31.855***
3.2	Training for team members is formal and structured.	3.0467	1.65083	0.908	29.362***
3.3	As a team member, I attend many different kinds of training.	3.1208	1.79872	0.927	30.222***
4. Authentic Leadership Questionnaire					
4.1 Self-Awareness					
4.1.1	Seeks feedback to improve interactions with others	2.9742	1.75131	0.781	18.607***
4.1.2	Accurately describes how others view his or her capabilities	3.0886	1.78981	0.709	17.014***
4.1.3	Knows when it is time to re-evaluate his or her positions on important issues.	3.0016	1.80724	0.606	14.381***
4.1.4	Analyses relevant data before decisions	3.0837	1.70750	0.671	15.934***
4.2 Relational Transparency					
4.2.1	Encourages everyone to speak their mind.	3.0821	1.79821	0.694	16.685***
4.2.2	Says exactly what he or she means.	3.1224	1.77469	0.694	16.653***
4.2.3	Is willing to admit mistakes when they are made.	3.0354	1.72702	0.558	13.202***
4.2.4	Tells you the hard truth	3.1610	1.70384	0.761	18.419***
4.3 Internalized Moral Perspective					
4.3.1	Displays emotions exactly in line with feelings	3.0918	1.73752	0.797	18.422***
4.3.2	Demonstrates beliefs that are consistent with actions	3.2206	1.79550	0.697	16.612***
4.3.3	Makes decisions based on his/her core beliefs.	3.1369	1.80115	0.655	15.649***
4.3.4	Makes difficult decisions based on high standards of ethical conduct.	3.1900	1.70558	0.678	16.250***
4.3.5	Asks you to take positions that support your core values.	3.1433	1.80601	0.699	16.748***
4.4 Balanced Processing					
4.4.1	Solicits views that challenge his or her deeply held positions	3.2464	1.79214	0.739	17.869***
4.4.2	Listens carefully to different points of view before coming to conclusions.	3.1031	1.78136	0.660	15.793***
4.4.3	Shows he or she understands how specific actions impact others.	3.2061	1.67987	0.816	19.928***

(B) Demographics:

Teacher's details (n=621)	Frequency (s)	Percentage (%)	Details of Principal (n=119)	Frequency (s)	Percentage (%)
Gender			Gender		
Female	465	74.9	Female	70	58.7
Male	156	25.1	Male	49	41.3
Age (in yrs)			Age (in yrs)		
18 – 20	8	1.3	18 – 20	13	10.9
21 – 30	252	40.6	21 – 30	27	22.8
31 – 40	189	30.4	31 – 40	42	35.2
41 – 50	94	15.1	41 – 50	18	15.1
51 – 60	70	11.3	51 – 60	12	10.1
61 & above	8	1.3	61 & above	7	5.9
Education			Education		
Senior School	45	7.2	Senior School	24	20.2
Diploma	202	32.5	Diploma	35	29.4
Graduation	327	52.7	Graduation	48	40.3
Post Graduation	47	7.6	Post Graduation	12	10.1
Tenure			Tenure		
6 months & under	26	4.2	6 months & under	3	2.5
6 – 12 months	96	15.	6 – 12 months	29	24.1
1 – 9 yrs	384	61.8	1 – 9 yrs	45	37.8
10 – 19 yrs	109	17.6	10 – 19 yrs	22	18.8
20 – 29 yrs	6	1.0	20 – 29 yrs	16	13.4
30 yrs & above	0	0.00	30 yrs & above	4	3.4

(continued)

(C) With respect to missing data, as mentioned in the methodology section, only those filled questionnaires were taken into considerations which were completely filled. Hence, those which were partially filled were eliminated.

(D) Means of collecting the sample-

As mentioned in the Sample and data collection section, personal visits were made to 142 government primary schools in Uttar Pradesh, India, after conducting a session with every school principals for making clear the process of the survey on the school teachers. For details, please refer to the Sample and data collection section.

(E) Calculation of Sample size:

Formula for calculating sample size was drawn from the works of Tabachnick & Fidell (2007) which is:

$$N > 50 + 8m$$

where,

N = number of Participants

m = number of IVs

Hence, the sample size required should be:

$$N = 50 + (8 * 55) = 490$$

Hence, accordingly, the sample size should be more than 490, whereas, I have taken a sample of 621.

(F) CFA GOODNESS OF FIT INDICES

Fit indices	Estimates
<i>Chi Square</i>	
Chi square (χ^2)	3368.32
Degree of freedom	1360
<i>Absolute Fit Measures</i>	
Goodness of fit index (GFI)	0.830
Adjusted Goodness of fit index (AGFI)	0.808
Root mean square of error of approximation (RMSEA)	0.049
90 percent confidence interval for RMSEA	(0.047, 0.051)
Root mean square residual (RMR)	0.166
Normed χ^2	2.48
<i>Incremental Fit Indices</i>	
Normed fit index (NFI)	0.910
Comparative fit index (CFI)	0.944
Relative fit index (RFI)	0.901

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