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Abstract

Purpose – This study aims to develop the scale for perception of training comprehensiveness and attempts to examine the influence of perception of training comprehensiveness on role behaviour: teachers' efficacy as a mediator and job autonomy as a moderator.

Design/methodology/approach – Through the steps for a generation, refinement, purification and validation of the scale, the measures of training comprehensiveness are defined, followed by an exploratory factor analysis. In all, 961 primary school teachers and 323 principals participated in the study. Teachers rated their perception of training comprehensiveness, self-efficacy and job autonomy, while principals rated the role behaviour of teachers, to avoid self-reporting biases.

Findings – Regression analysis showed that training comprehensiveness affects teachers' self-efficacy, higher teachers' efficacy increases the teachers' role behaviour, training comprehensiveness indirectly influences role behaviour and job autonomy moderated the channel of teachers' efficacy and role behaviour. These results indicated that in primary schools specifically in rural areas of India, individual perception of training, skill development and human resource development practice induces teachers' role behaviour via raising their efficacy to combat with adverse situations. Job autonomy on an independent basis moderates the positive relationship between self-efficacy and role behaviour.

Practical implications – This study also provides various practical and research-based implications.

Originality/value – The scale for training comprehensiveness has been developed, and its impact on behavioural attributes like efficacy and role behaviour is examined for a sample of teachers.

Keywords Autonomy, Efficacy, Organisational citizenship behaviour, Role behaviour, Training comprehensiveness

Paper type Research paper

Introduction

Like developed nations, the Indian Government is also working to provide training to teachers to develop their teaching skills and overall work performance (Gambhir *et al.*, 2013). By determining the training needs of teachers via committees and their recommendations, the government is trying to deliver updated graduation curriculums with micro-training schemes. Even though the investment in these training programmes constitutes a larger percentage of gross domestic product, the results still lie far behind the expectations (Kingdon and Muzammil, 2013). It has been found that in Indian primary schools funded by the government, teachers possess poor teaching skills, are negligent, do not put in enough efforts to make students learn and indulge in absenteeism, resulting in low classroom standards (Srivastava and Dhar, 2015a). This raises the following questions:

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Q1. Are the current group of teachers being trained properly?

Q2. Are the present levels of training adequate to increase the existing level of teachers' competence?

Q3. Does teachers' perception of training influence their role behaviour (RB) of teaching?

As the current standard of education imparted in primary schools of India, specifically government-affiliated schools, is low as compared to other nations, there is an indication that the training provided is either not adequate or is perceived to be insufficient, irrelevant or ineffective by the teachers and requires re-evaluation to improve their perceptions (Afridi, 2011; Kidwai *et al.*, 2013).

Employees' perception of training has gained the attention of many scholars in the past decade (Ehrhardt *et al.*, 2011; Sell *et al.*, 2009; Sung and Choi, 2014). Such perceptions constitute a significant part of human resource development (HRD) practices (Snell and Dean, 1992) and influence employee behavioural outcomes in different organisational settings (Paul and Anantharaman, 2004; Whitener, 2001). Perception of training comprehensiveness (a belief that defines the extensiveness of training programmes) is one of the dominant characteristic of training and is often considered a "high commitment" human resource practice. When perceived to be comprehensive, training can not only increase the employee tendency to work with higher commitment and efficacy but can also reduce absenteeism and employee turnover (Ehrhardt *et al.*, 2011; Sharma and Dhar, 2015). Even in developing countries like India, perception of training comprehensiveness holds vital significance for employee's post-training success (Paul and Anantharaman, 2004).

Prior to this study, the measure provided by Snell and Dean (1992) for perception of training comprehensiveness paved the way for many behavioural studies in psychology and social sciences. However, few questioned the reliability and validity of this scale in different organisations. Ehrhardt *et al.* (2011) indicated that there was a need to understand how employees perceived HRD practices like training in different cultures, while others emphasised the necessity for broader perspectives to measure the comprehensiveness of training (Paul and Anantharaman, 2004). Although comprehensive training is the best way to adapt to changes (Sell *et al.*, 2009; Sung and Choi, 2014), yet what should be included in training to make it comprehensive still remains unclear (Ehrhardt *et al.*, 2011). Thus, the primary aim of this study is to fill this gap through developing the construct of perception of training comprehensiveness and determine its various aspects that can ensure attainment of expected RB.

With respect to teachers' role in schools, Belogolovsky and Somech (2010) argued that teachers should exhibit in-role and citizenship behaviours simultaneously. Both behaviours are important and fundamental to a school's success and students' achievement (Hoy *et al.*, 2006). Studies assert that while individual behaviour is a result of individual perception, teachers' behaviour is also dependent on how they perceive their institutional practices. They reciprocate positively when they see that the organisation shows genuine concern towards them (through beneficial human resource practices) by exhibiting positive outlook and being more productive (RB) (Cook *et al.*, 2013). Based on this theory, we propose that comprehensive training can influence the teachers' RB. In other words, when a teacher perceives training as supportive for

professional growth and helpful for skill development and resolving real-life situations, they would exhibit effectual RB.

However, the role of self-efficacy in encouraging RB is significant, as self-efficacy is the cognitive process that enables actual performance. Higher self-efficacy encourages the transformation of perception into reality (Ehrhardt *et al.*, 2011). In an organisation, the way employees perceive their practices and policies develops their belief in the self. Individuals judge them based on the environment they exist in (Bandura, 1977). Thus, when HR practices are sensed as availing higher growth opportunities in their institution, individual self-efficacy levels increase and this encourages positive work behaviour (Benson, 2006). In the education sector, significance of human resource practices in schools on student's achievement has been well-documented; yet, very few studies analysed the interlinking role of self-efficacy in this process. Thus, based on social exchange and self-efficacy theories, we propose that teachers' sense of efficacy can mediate the link between perception of training comprehensiveness and RB in the Indian context.

Autonomy to work freely and independently is also of vital influence. This is because the responsibility without adequate autonomy cannot enable effective attainment of objectives. Higher autonomy (the freedom to make decisions) at work increases the chance of positive work behaviour (Nouhi and Razmjoo, 2015). Increased autonomy at work can also moderate the link between employees' self-belief and their actual performance (Jaiswal and Dhar, 2015; Runhaar *et al.*, 2013). Interacting with employee commitment, involvement and efficacy of employees and job autonomy (JA) can strengthen or weaken individual behaviour (Barrick and Mount, 1993). Lack of autonomy to use available resources can not only hamper performance but can also wane the efficacy to carry out desired RB . To expand this theory, we assume that the moderating role of JA strengthens or weakens the effect of teachers' sense of efficacy on their RB.

Thus, this study, through an integrated model, attempts to analyse the effect of perception for training comprehensiveness on the teachers' RB through the mediating role of teachers' sense of efficacy and the moderating role of JA. To fulfil its research objectives, the study considered government-affiliated primary school teachers as a sample. Further, an attempt has been made to address the call of previous studies to develop the construct of perceptions for training comprehensiveness.

Theoretical framework

Training comprehensiveness: construct and measurement

In educational institutions, training is considered the most suitable option to motivate teachers (Goodson, 2002; Priya, 2013). When teachers perceive their institution as providing comprehensive training and skill development programmes, they tend to stay more committed and accept organisational roles and goals effectively. Snell and Dean (1992) identified the importance of training comprehensiveness as an HRD practice and stressed on including well-structured programmes with frequent and extended training sessions for ensuring skill acquirement and transfer of a broader range of skills (Dhar 2015b; Ehrhardt *et al.*, 2011). They emphasised on increased investment in training to achieve higher productivity and better return on investment (Dhar, 2015a). Training comprehensiveness, being a characteristic of training (Snell and Dean, 1992), refers to employees' impression of the extensiveness of training opportunities provided by their

organisation (Ehrhardt *et al.*, 2011), forms the basis for healthy employer-employee relations and enables positive reciprocation from employees in the form of willing participation from teachers in decision-making processes (Balkin and Richebé, 2007). According to the social exchange theory, teachers' perception of training comprehensiveness represents the institutional intention to reward their contribution (Cook *et al.*, 2013). It reflects individual tendency to judge institutional facilities for training and development and demonstrates what employees feel regarding the training provided, knowledge and skill they perceive to have gained, perceived effectiveness of strategies used and usefulness of the overall training tenure (Srivastava and Dhar, 2015b). Scholars have proposed perception of training comprehensiveness as a "high commitment" human resource practice (Paul and Anantharaman, 2004) and considered it as a major determinant of employee behaviour and commitment. However, such perceptions may differ from person-to-person based on their ability to *evaluate, select and reciprocate* (Brown, 1979). Training comprehensiveness examines the larger scope of "attitudes for training", a practice to develop skill and talent playing a key role in meeting the need for skilled human capital (Balkin and Richebé, 2007; Bressoux *et al.*, 2009; Garg *et al.*, 2015). Moreover, it is instrumental in attaining the desired unwritten reciprocal attitudes and behaviours (Sell *et al.*, 2009) and encouraging beyond "call of the duty" behaviours. Though, a few studies suggested that this construct needs further exploration and broader explanation so as to enable employees meet the requirements of a dynamic work environment (Whitener, 2001). As studies have shown the impact of training on employees' overall RB like absenteeism, stress, productivity and performance, we expect that perception of training comprehensiveness also influences the teachers' RB.

Role behaviour

Teachers' RB is often considered as a significant predictor of students' achievement and overall success of schools (Belogolovsky and Somech, 2010; Srivastava and Dhar, 2015a). It is their RB – a series of behaviours expected by others from an individual in a certain position (Huang and You, 2011) – that encourages students to learn and aim high for a brighter future. Scholars have considered RB as a part of interaction mechanism in an organisation (Crant, 2000) and categorised it into:

- in-role behaviour (IRB), i.e. an employee's core task behaviour that includes obligations related to their job description and role expectations; and
- organisational citizenship behaviour (OCB), i.e. behaviour that does not form a part of the formal reward system but is targeted towards organisational effectiveness.

OCB is further subdivided into OCB (O), behaviour intended to benefit the organisation in general, and OCB (I), behaviours that provide an immediate advantage to certain specific individuals while indirectly benefitting the organisation (Williams and Anderson, 1991). Organisation-oriented OCB (OCBO) includes adherence to informal rules meant to ensure the obeying of task-related orders like to inform before being absent (Morrison, 1994). On the other hand, individual-oriented OCB (OCBI) includes activities like helping absent colleagues complete their pending work, assisting co-workers, etc. (Organ, 1988).

Teachers in changing educational environment are needed to perform IRB, OCBI and OCBO simultaneously, as their jobs are more human in nature and require spontaneity to handle difficult situations in the classroom (Zeinabadi and Salehi, 2011). Handling mischievous students and managing disputes are some of the difficult situations that a teacher needs to handle. Limiting themselves to in-role activities does not help teachers achieve the goal of providing quality education (Runhaar *et al.*, 2013). Scholars have given various models to emphasise the significance of training among teachers (Harris and Sass, 2011; Ross and Gray, 2006). However, very few examined what impact the attitudes for training have on the teachers' performance.

Hypotheses formulation

Training comprehensiveness and teachers' sense of self-efficacy

Teachers' self-efficacy (TSE) refers to their perception of their own ability to accomplish tasks and handle difficult situations in schools (Tschannen-Moran and Woolfolk Hoy, 2001). TSE fundamentally rests on Bandura's (1977) self-efficacy theory and is defined as self-perceptions of how well a teacher can cope with situations as they arise (Bandura, 2006). Teachers' sense of self-efficacy enables them to make a difference in students' learning and perform with higher enthusiasm and commitment and improves their instructional behaviour (Meristo and Eisenschmidt, 2014). Bandura (2006) emphasised that individuals are more self-organising, proactive, self-regulating and self-reflecting when they have higher efficacy. He showed that based on the *level* (the quantity of tasks a person can do), *strength* (the extent to which an individual believes oneself to have the ability to perform each task) and *generality* (the extent to which the desired outcomes of one's self-efficacy can be generalised to other situations), belief in one's efficacy allows oneself to identify effective solutions to dynamic problems. Thus, teachers' efficacy demonstrates trust in their own ability to perform a number of tasks with inner strength to achieve and represent confidence in different situations (Poom-Valickis, 2007). Tschannen-Moran and Woolfolk Hoy (2001) categorised teachers' efficacy based on their instructional strategies, classroom management techniques and confidence to involve students' interest in the class.

One's perception for training influences one's commitment and efficacy status (Bartlett, 2001). Employees who perceive their training as comprehensive accept their roles and assignments with higher confidence and view themselves as capable of carrying them out effectively and efficiently (Ehrhardt, 2011). Considering comprehensive training as a form of organisational support, they develop intentions to learn new things and work with higher energy, less stress and enhanced inner ability (efficacy) to face difficult situations (Oplatka, 2009). In a similar way, teachers' perception for training comprehensiveness can be assumed as a predictor of their sense of efficacy. As training enables teachers to develop their skills and motivates them to work towards serving students with higher confidence (Hoy *et al.*, 2006; Snell and Dean, 1992), it can be presumed that perception of training comprehensiveness directly influences their efficacy. Positive perception of training can enable them to develop positive efficacy in them to achieve their goals. Thus, training comprehensiveness may enable them to monitor and regulate their actions with higher efficacy and lead them to accomplish their tasks and interact in classrooms with higher confidence (Meristo and Eisenschmidt, 2014). As training comprehensiveness affects employees' efficacy by raising their commitment towards the organisation, we posit that:

H1. Training comprehensiveness affects teachers' efficacy.

Teachers' efficacy and role behaviour

The teachers' role in a school is very significant for students' achievement, as it includes not only the primary task of teaching but also the extra role tasks of supporting weak students and managing disruptive behaviours of school children (Hoy *et al.*, 2006). In the past, authors have specified self-efficacy as a predominant individual factor affecting individual behavioural outcomes (Gibbs and Powell, 2012). Various studies have shown a strong relation between teachers' efficacy and role outcomes. Poom-Valickis (2007) showed that pre-service teachers with higher self-efficacy beliefs exhibited higher enthusiasm to teach, while Ross and Gray (2006) showed that teachers with low efficacy did not feel well-prepared to teach in classrooms, avoided taking risks of experimentations and escaped from performing their RB. Supporting this fact, Hughes (2012) also emphasised that efficacious teachers were motivated to remain open to new ideas and willingly experimented with novel techniques to meet the demands of their students. Higher efficacy allowed them to stay committed towards the effective teaching behaviour. In the same context, Goddard *et al.* (2004) mentioned that in rural schools, teachers' efficacy becomes more vital, as they handle poverty-stricken students. Due to the students' low socioeconomic status, more confidence is required for the teachers to display their behaviour. They need to make more efforts in encouraging student to study and get educated and then emphasise on effective learning and achievement. Emphasising on the performance of new teachers and their ability to exhibit effective work RB, Somech and Drach-Zahavy (2000) showed that it was low efficacy which hindered their willingness to face the classroom and follow sound teaching practices. Teachers with less experience perceive lower levels of efficacy that ultimately impact their RB (Priya, 2013). They fail to use innovative instructional strategies and handle uncertain behaviour of students. In addition, Hoy and Spero (2005) revealed that teachers felt confident to teach when they had better teaching experience with students. Based on their teaching tasks, situation and experience, they judge their efficacy to perform in the future (Ross and Gray, 2006). The more positively they viewed themselves in performing tasks, the more efficiently they performed in classrooms (Meristo and Eisenschmidt, 2014). Thus, teachers with higher efficacy are more productive and innovative at the same time by performing citizenship behaviour. Moreover, they would handle complex situations independently, struggle hard with their students to make them learn and achieve and less likely refer their students for remedial sessions (Goddard *et al.*, 2004):

H2. Teachers' self-efficacy predicts their role behaviour.

Teachers' efficacy as a mediator

A sense of higher self-efficacy is the result of positive organisational practices (Bandura, 1977). When employees perceive organisational support in the form of comprehensive training, they reciprocate in the form of higher commitment and efficacy (Harris and Sass, 2011). Higher efficacy, in turn, leads to display of optimistic RB (Ross and Gray, 2006). Higher efficacy and confidence enables teachers to face classrooms and manage disruptive student behaviour (Hoy *et al.*, 2006). Teachers' sense of self-efficacy influences productive RB, such as working with higher enthusiasm, accomplishing tasks on time, aiming at making a difference in students' learning and helping them to

achieve more and implementing new and innovative teaching styles (Oplatka, 2009). Further, it lowers the sense of absenteeism and employee turnover, thus encouraging them to perform effectively and efficiently (Tschannen-Moran and Woolfolk Hoy, 2001). Past studies have shown the relationship between attitudes for training like training comprehensiveness with self-efficacy (Pas *et al.*, 2012; Hoy and Spero, 2005). In the same way, studies also proved the linkage between self-efficacy and employee's RB (Gibbs and Powell, 2012; Hughes, 2012; Mittal and Dhar, 2015). However, none of the studies, till date, examined the mediating role of self-efficacy between training comprehensiveness and RB (Zhao *et al.*, 2005) As scholars had in the past shown that in the presence of supportive work policies and training practices, teachers tend to perform well (Hoy *et al.*, 2006), we propose that:

H3. Teachers' efficacy mediates the relationship between training comprehensiveness and role behaviour.

Job autonomy as a moderator

Among teachers, autonomy at work is the key to effective teaching (Runhaar *et al.*, 2013). Teachers with a higher sense of autonomy generally also have higher levels of self-esteem. They teach well and encourage students to achieve and succeed (Nouhi and Razmjoo, 2015). With greater power in professional decision-making, teachers feel motivated to work with higher commitment, motivation, creativity and interest (Jungert and Koestner, 2015). Autonomy refers to a situation in which individuals perform or execute their duties freely, without being managed and controlled by someone else (Park and Searcy, 2012). JA explains the extent to which an employee is independent to make decisions, without any external pressures, and implements them freely (Runhaar *et al.*, 2013). Finn (2001) suggests that autonomy is related to one's responsibility, decision-making and practice of being in control. Operationally, JA represents the pace with which one completes their job, the extent to which he/she can make decisions related to their job, the discretion to execute their work and the order in which they carry out tasks (Baillien *et al.*, 2011). When employees perform their roles independently and without any pressure, they sense a higher level of autonomy (Jaiswal and Dhar, 2015). Jungert and Koestner (2015) argued that individual autonomy was significant to attain professionalism. In this line, Park and Searcy (2012) mentioned that JA is a result of one's need of personal independence and freedom to make decisions in an organisational structure. A few scholars suggested that the level of JA moderated the influence of efficacy on employees' overall RB, such as OCB (Park and Searcy, 2012; Runhaar *et al.*, 2013). Low autonomy prevents employees from proper utilisation of necessary resources to display RB in an effective manner (Nouhi and Razmjoo, 2015). Thus, it can be inferred that teachers' efficacy to perform would decrease in a restricted work environment, which would lead to a display of automated work behaviour by them, forcing them to perform merely as information providers. The trait activation theory also asserts that personal and contextual characteristics impact individual behaviour in an independent manner (DeRue *et al.*, 2011). An environmental factor like JA independently influences the relationship between self-efficacy and individual RB. Consequently, on the basis of the discussion above, we hypothesise that teachers' JA can moderate the link between teachers' sense of efficacy and their RB. With higher autonomy in decision-making, setting priorities and attaining goals, teachers' efficacy

for exhibiting RB would be higher. On the other hand, individual efficacy to display RB would be lower with lesser JA:

H4. Job autonomy moderates the relationship between teachers' efficacy and role behaviour.

Research method

Context of the study

The present status of teachers' education in India is a result of the various recommendations provided by the commissions on education (Kidwai *et al.*, 2013; Priya, 2013). The reports submitted by the Kothari Commission (1966) to the National Curriculum Framework (2005) provided the basis for structuring of teachers' training. Further, the emergence of the Right of Children to Free and Compulsory Education Act (2009) increased the training exercises of teachers significantly. Broad policies and legal frameworks are laid down by the Indian Government at both national and state levels. These policies aim at providing training to prepare teachers for school and enhancing the capacity of existing teachers. These reports have consistently highlighted the need for improving the standard of teachers' training, ensuring adequate pupil-teacher ratio and enabling teachers to fulfil students' changing needs. However, the actual situation needs behavioural reforms (Srivastava and Dhar, 2015a). Even though the rural primary school teachers receive training programmes to update their skills and knowledge, they still perceive these training programmes pessimistically, as represented by the low mean score for training comprehensiveness (Table I). They still find themselves far away from "professional development" or "continuing professional development" (Kidwai *et al.*, 2013). Unlike teachers of western countries, they lack adequate awareness and information regarding the different kinds of training programmes available and, hence, are unable to understand and differentiate between their own training needs (Kingdon and Muzammil, 2013). They categorise their training needs based on social recommendations and draw their training motives on the basis of frequency of training availed and amount of time spent rather than actual professional development (Priya, 2013). Due to these reasons, the majority of the sample group had similar training needs and gave similar statements regarding their perception of training comprehensiveness (Afridi, 2011; Kidwai *et al.*, 2013).

		Correlation							
$N = 708$	Mean (SD)	1	2	3	4	5	6	7	8
Age	2.45 (1.04)	1	0.098**	0.077*	0.065	−0.002	0.070	0.025	0.037
Education	1.26 (0.44)		1	−0.063	0.000	−0.059	−0.045	−0.054	−0.081*
Gender	2.40 (0.57)			1	0.108**	−0.003	−0.022	0.006	−0.017
Tenure	2.05 (0.89)				1	0.005	−0.011	0.019	0.001
Training comprehensiveness	2.55 (1.24)					1	0.511**	0.476**	0.490**
Teachers' self-efficacy	2.41 (1.27)						1	0.818**	0.853**
Role behaviour	2.10 (1.02)							1	0.871**
Job autonomy	2.45 (1.29)								1

Table I.
Descriptive and correlation analysis

Note: *Denotes significance level of 0.05 and **denotes significance level of 0.01

Sample selection and data collection

We followed two major steps to evaluate the above hypothesised model. Data were collected from primary schools situated in rural areas of northeastern regions of India. Responses from teachers having teaching experience of six months and above were considered. The principals' responses regarding teachers' behaviour were also collected. In the first step, 375 primary schools were approached, out of which 323 school principals gave written consent confirming their participation in the study. Further, details regarding teachers' experience, age and other demographics (as provided by schools) were analysed. Stratified sampling technique enables broader representation of the population; thus, strata were formed based on gender (male and female). Finally, 961 teachers and 323 principals constituted the sample for our study, giving a dyad ratio of 3:1.

In the second step, paper questionnaires were distributed among 961 teachers and 323 principals. Each questionnaire was converted into Hindi (local language) before distributing and then re-translated into English after getting the responses. Help of bilingual experts was taken for both rounds of translation. Questionnaires were given to teachers to rate their perception of training comprehensiveness, levels of efficacy and JA at work. Each principal was given three paper questionnaires to assess the actual RB of three teachers under them. All respondents were given coded envelopes to return their responses and assured of anonymity and confidentiality of their responses. A representative personally collected the responses from each school.

In total, 744 (77.41 per cent) responses from 248 principals and 721 (75.02 per cent) responses from teachers were received, which were then screened for outliers and missing values. Subsequently, 708 valid responses were received from teachers. These responses along with responses from 236 principals were then finalised for further statistical analysis. As far as responses of the teachers were concerned, the majority of responses received were from female teachers (79.3 per cent) with an average age of 23.1 years and a graduation degree. As for principals, more responses came from female principals (52 per cent) with an average age of 42.8 years and experience of more than 9 years.

Control variables

Age, gender and experience of teachers were considered control variables, as they may have influenced responses so given (Foote and Tang, 2008; Srivastava and Dhar, 2015b).

Measures

The scale for training comprehensiveness was developed using the scale development techniques of Churchill (1979) and scale development and improvement scheme given by Hinkin (1995). The phases in scale development included generation, refinement, purification and validation of scales.

Based on previous literature and related findings, a two-stage preliminary test was held to develop a questionnaire for "perception for training comprehensiveness". In the initial phase of *generation* of items, semi-structured interviews with 68 pre-service school teachers were held to identify the content of perceived training comprehensiveness in schools (recall the last training provided, what value does the training add to your skills, etc.). Data were collected from school teachers of Uttar Pradesh, India. The snowball sampling technique was followed to get touch with

teachers using the contact information provided by the principals and teachers of different schools. Telephonic interviews were conducted with respondents who were not physically present for the interview. Out of 115 respondents, 73 were females, while the rest were males, ranging from 24 to 57 years of age. Content analysis was conducted to analyse the responses. Overall, 26 words were finalised. Next, experts in a psychological test examined and revealed each item's appropriateness and significance towards the construct.

To *refine* the scale, responses were gathered from primary school teachers of Jharkhand region, India. The respondents were asked to recall the best training programme attended by them and rate the 26-item scale on a seven-point scale (1 = strongly disagree to 7 = strongly agree). Out of 560 survey forms distributed, 408 (73 per cent) usable responses were collected, with a majority of responses from female rather than male teachers. Further, following the recommendations of Churchill (1979), an iterative *purification* test was held to develop a parsimonious scale by examining the item to total correlation test. The low correlated items to total estimate were removed, thus resulting in the retention of 19 out of the initial 26 items. Using the Promax oblique rotation method and maximum likelihood technique, exploratory factor analysis was conducted to identify the dimensionality of the attributes of the construct. Kaiser-Myer-Olkin (KMO) test for sampling adequacy and Bartlett's test for sphericity were carried out to identify the appropriateness of the factor analysis. Bartlett's test indicated the appropriateness of the measure (χ^2 = 11110.00, df = 171; p = 0.000) (Tobias and Carlson, 1969). The KMO test indicated the adequacy of the sample (estimate = 0.926, $p < 0.001$), as KMO estimates of above 0.9 are better indicators of sample adequacy (Kaiser, 1974). The combined screen test propounded by Cattell (1966) designated that all the 19 items loaded onto a single factor, thus sidelining the specification for any sub-dimension of the scale "perception for training comprehensiveness" (Table V). The goodness-of-fit test also supported a good fit, as χ^2 = 1,900, df =152; $p < 0.000$.

To *validate* the scale items, new data were collected from 708 school teachers (primary teachers in rural and urban schools) of Uttar Pradesh and Jharkhand, India. Following the interview procedure and filling-up of survey forms based on random sampling, the items were validated for examining the extent of perceived training comprehensiveness in the future. The Cronbach's alpha revealed the reliability of the measures amounting to 0.962.

- *Teachers' efficacy*: Measured using the 24-item Ohio State teacher efficacy scale (OSTES developed by Tschannen-Moran and Woolfolk Hoy (2001). The Cronbach's alpha reliability of this scale is 0.0.988.
- *RB*: Measured using a ten-item scale given by Huang and You (2011). The Cronbach's alpha is 0.974.
- *JA*: Measured using a four-item scale given by Park and Searcy (2012). The Cronbach's alpha is 0.810. All the measures were examined on a seven-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Analytic approach

Before analysing the hypothesised model, the measures for teachers' efficacy, JA and RB were checked for validity, reliability and internal consistency. The model (Figure 1) was

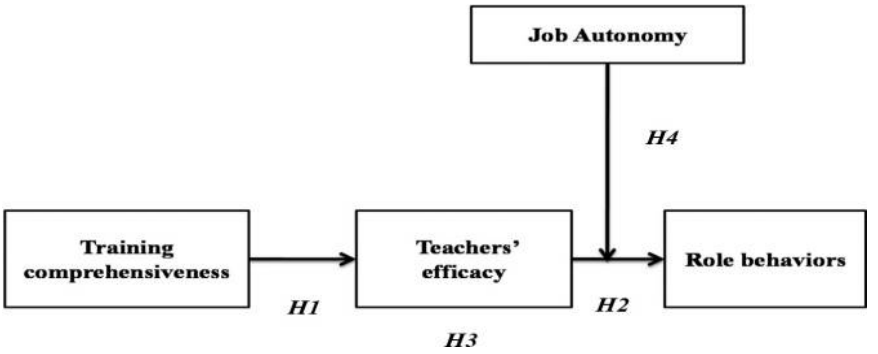

Figure 1.
Hypothesised model

then examined using confirmatory factor analysis (CFA). Various conventional fit indices like chi-square (χ^2), root mean square error of approximation (RMSEA) and incremental fit indices (CFI and NFI) were evaluated using AMOS 20 version.

Next, the hypotheses were evaluated in following three steps:

- main effects, examining the direct relation between variables (*H1* and *H2*);
- mediation effect (*H3*); and
- moderation effect (*H4*).

The mediating effect was examined through SPSS PROCESS macro steps provided by Hayes (2012), i.e. direct effect of IV → DV and indirect effect explaining the effect of product of IV → M path (*a*) and M → DV path (*b*) or *ab*. It also calculated normal theory SOBEL test and bootstrapping tests, eliminating the chances of type 1 error. Bootstrapping is considered a better test to validate the indirect effect, as it does not presume the relationship as normal distributed. It also presents a significance test for indirect relation in small samples (Preacher and Hayes, 2004).

The moderating effect of JA was examined through regression analysis by including the control variables at the first step and then the interaction term (TSE × JA) into the equation (Baron and Kenny, 1986). It included the following steps: effect of IV on DV; effect of moderating on DV; and effect of interaction between moderator and IV on DV. One-way analysis of variance (ANOVA) was also conducted to identify the significant difference between the individual-level and group-level responses.

Findings

Descriptive analysis

The descriptive statistic estimates are provided in Table I. The results show that each of the constructs is positively and significantly correlated to each other. Low mean score resembles that teachers perceive training as less comprehensive, have low efficacy to manage complex situations, lack the ability to exhibit RB and have less autonomy to use available resources.

Measurement validation

Four factor measurement models were finalised for further statistical examination. The CFA provides that all factor loadings of the measured variables were above 0.40. The

factor loadings for training comprehensiveness (TC) ranged from 0.656 to 0.838 and in TSE, amounts from 0.834 to 0.922. For RB, loadings lay between 0.814 and 0.947, and for JA, they ranged from 0.904 to 0.955. This ensured that each variable was independent and that each item represents expected factor structures. Moreover, the results represent a reasonable model fit, as χ^2(df) = 3921.39 (1337), Tucker-Lewis index (TLI) = 0.946, confirmatory fit index (CFI) = 0.955 and RMSEA = 0.052, surpassing the satisfactory limit of χ^2/(df) = 2-5, TLI > 0.90, CFI > 0.90 and RMSEA < 0.08 (Holmes-Smith, 2000). Table II shows that all constructs crossed the minimum limit of acceptance of composite reliability, have higher inter-rater reliability (loadings) and have an average variance extracted (AVE) more than 0.50, thus supporting the concept of convergent validity. Similarly, discriminant validity is also supported, as 99 per cent confidence intervals (CIs) for correlations include one (Anderson and Gerbing, 1988), and AVE values for all the constructs in models are higher than their matching squared correlation (Fornell and Larcker, 1981).

Hypothesis testing

The SPSS PROCESS results suggest that training comprehensiveness has a positive and significant influence on TSE (B = 0.511, $p < 0.001$), supporting *H1*. Consistent with our expectation for *H2*, teachers' sense of self-efficacy showed a positive effect on the teachers' RB (B = 0.778, $p < 0.001$).

Further, the simple mediation model (Table III) suggests that training comprehensiveness has an indirect effect on RB. This indirect effect was positive and significant, as (two-tailed significance test assuming the normal theory) Sobel test resulted in $z = 14.06$, $p = 0.000$. The bootstrap result supported the Sobel test without presuming normality in the sample distribution and furthered the result in indirect relation through non-zero 95 per cent CI. Therefore, *H3* is also supported.

Favouring the assumption for *H4*, results showed the moderating role of JA between teachers' efficacy and RB (B = 0.260, $p < 0.001$). The interaction effect of self-efficacy and JA on RB was significant and positive. The form and nature of interaction are plotted on a graph representing the standard deviation equation (Figure 2), i.e. one standard deviation above and one standard deviation below the mean of JA (Aiken and West, 1991) (Table IV).

We also estimated one-way ANOVA to identify the extent to which principals' views towards RB were independent and did not frame a part of employees' responses. The non-significant findings concluded that principals' responses were not nested in employees' responses ($F = 0.915$, $p = 0.722$).

S. No.	Construct	AVE	MSV	CR/Cronbach' α	Discriminant validity 1	2	3	4
1.	Training comprehensiveness	0.574	0.276	0.962/0.962	0.758	0.511**	0.476**	0.490**
2.	Teachers' self-efficacy	0.779	0.707	0.988/0.987		0.882	0.818**	0.853**
3.	Role behaviour	0.787	0.707	0.974/0.971			0.887	0.871**
4.	Job autonomy	0.942	0.666	0.985/0.985				0.970

Table II.
Overall reliability and validity of the constructs

Notes: Values in diagonal represent the squared root estimate of AVE; AVE represents average variance extracted; MSV represents maximum shared variance; CR represents composite reliability; ** denotes significance level of 0.001

Variable	B	SE	T	*p*
Direct and total effects				
TSE regressed on TC	0.511	0.0324	15.79	0.000
Role behaviour regressed on TC	0.476	0.0331	14.37	0.000
Role behaviour regressed on the TSE, controlling for TC	0.778	0.0250	31.06	0.000
Role behaviour regressed on TC, controlling for TSE	0.078	0.0250	3.14	0.001

	Value	SE	LL 95% CI	UL 95% CI	*Z*	*p* value
Indirect effect and significance using the normal distribution						
Sobel	0.397	0.0282	0.741	0.939	14.06	0.000

	M	SE	LL 95% CI	UL 95% CI
Bootstrap results for indirect effect				
Effect	0.397	0.0301	0.336	0.459

Note: $N = 621$; unstandardized regression coefficients are reported; Bootstrap sample size = 1,000; LL = lower limit; CI = confidence interval; UL = upper limit; TSE represents teachers' self-efficacy; TC represents training comprehensiveness

Table III.
Results of simple mediation model regressing teachers' self-efficacy as a mediator

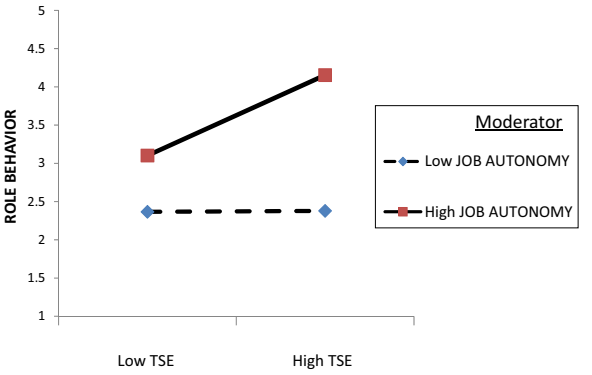

Figure 2.
Figure demonstrating the moderating effect of job autonomy (JA) on role behaviour (RB)

Discussion

The primary objective of this was to identify the varied aspects of the perception of training comprehensiveness (construct development) and examine its influence on RB of school teachers. The thorough qualitative and quantitative methodologies used in the study identified 19 items to measure training comprehensiveness. These items are shown in Table V. Previous studies have considered training as a part of integrated HRD practices (Snell and Dean, 1992; Paul and Anantharaman, 2004). However, none to the author's knowledge emphasised on the key factors that frame teachers' perception of training comprehensiveness. The questionnaire developed and validated in the current study identifies what influences teachers to perceive their training and how they identify comprehensiveness of training. Answering the call of previous studies, this

Dependent variable →	Role behaviour Step 1	Step 2	Step 3	Step 4
Control variables				
Age	0.028	−0.034	−0.022	0.017
Tenure	−0.128	−0.026	0.032	0.029
Education	−0.003	0.041	0.041	0.041
Gender	0.019	0.031	0.022	0.020
Independent variable				
Teachers' self-efficacy (TSE)		0.821***	0.278***	0.266***
Moderator				
Job autonomy (JA)			0.636***	0.628***
Interaction				
TSE × JA				0.260*
F-value	716.01	286.96*	416.22**	357.81*
R^2	0.004	0.671	0.781	0.782
Change R^2	0.004	0.667	0.109	0.001

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

Table IV.
Regression results for moderation/ interaction effect

Particulars	Factor loadings	*t*-value
Training comprehensiveness		
I receive trainings regularly/at different intervals	0.750	17.609***
Supervisors clearly explain the agenda/purpose of the training	0.791	18.572***
The training content is relevant, useful and easily understood	0.786	20.304***
My roles and responsibilities are clearly discussed both as a team member and individually	0.777	22.094***
Supervisors avail motivational and interactive training sessions	0.784	20.180***
Supervisors provide targeted and specific training sessions for individual development	0.685	16.663***
Trainers are knowledgeable and demonstrate effective training skills	0.737	18.938***
I get proper supervision to implement the skills learned under training	0.751	19.344***
I receive training based on our practical issues and problems	0.810	20.959***
I get practical knowledge through training to accomplish my work	0.786	18.470***
I receive sufficient resources and equipments (e.g. PowerPoint) for effective training	0.770	19.849***
I learn new skills each time	0.656	16.775***
I receive different styles of training (e.g. games, lectures and seminars)	0.815	21.081***
I receive sufficient hours of training	0.838	19.503***
I can apply training skills in real life situations	0.733	18.673***
My training needs are fulfilled	0.752	19.236***
I get the opportunity to learn, adapt and improve	0.671	17.042***
My performance improves from the training provided	0.795	20.441***
Training provided inspires me to work towards organisational success	0.699	17.956***

Note: ***$p < 0.001$

Table V.
Factor loadings for the perception of training comprehensiveness scale

study elaborated the construct in broader terms, ensuring its reliability and validity on Indian school teachers.

This study further examines the effect of perception of training comprehensiveness on teachers' RB with mediating effects of self-efficacy and moderating role of JA. This research extends the influence of training-related perceptions on consequent individual responses (Aguinis and Kraiger, 2009) by analysing the effect that training comprehensiveness has on teachers' overall work performance and beyond work behaviour (in-role and citizenship behaviours).

Consistent with *H1*, results show that when teachers consider training as comprehensive and perceive it to be helpful for personal and professional development, their efficacy level tends to rise. It enables them to adopt innovative styles to manage classes and make them more interactive. Positive perception of training comprehensiveness allows teachers to value their feedback for self-development and develop an ability to manage disruptive behaviour of students (Sung and Choi, 2014). Such growth-oriented skill-building training and development programmes raise their inner beliefs (efficacy). These beliefs motivate them to attain academic excellence (Hoy *et al.*, 2006). Previous studies have analysed the effect of training comprehensiveness on commitment (Ehrhardt *et al.*, 2011), while few others have examined the effect of attitudes towards training on related employee behaviour (Whitener, 2001; Aguinis and Kraiger, 2009). However, to the best of the author's knowledge, no study has examined the influence of perception of training comprehensiveness on an individual's efficacy status.

Favouring *H2*, results reveal that higher level of efficacy among teachers can enthuse positive RB. This implies that efficacious teachers pay more attention towards students' achievement by managing their RB. Supporting the findings of Goddard *et al.* (2004), results indicate that teachers with higher efficacy and commitment display IRB and OCB simultaneously. Such teachers go an extra mile to support their students and try to perform expected tasks effectively and within time limits (Oplatka, 2009).

Supporting *H3*, results suggest that when teachers perceive training as comprehensive, they sense an increment in their skills and knowledge and aim at attaining professional excellence. Such feeling raises their efficacy towards problem-solving and managing work effectively, thus making them internally strong so as to give more efforts in teaching (Srivastava and Dhar, 2015a). Moreover, increased efficacy motivates them to complete their job-related tasks on time and in an effective manner, thus reducing intentional absenteeism and negligence. Therefore, highlighting the mediating role of self-efficacy, we assert that opportunities for comprehensive training enhance individual IRB, OCBI and OCBO, although in an indirect way. Teachers' engagement with IRB and OCB would facilitate them to aim for higher but attainable working goals and attempt hard to solve related issues.

Last but not the least, supporting the findings of Runhaar *et al.* (2013), who posited JA as a moderator between work engagement and OCBI and OCBO; Barrick *et al.* (1993), who proposed JA as a moderator between Big Five personality dimensions and job performance; and Jaiswal and Dhar (2015), who showed a significant interaction effect of JA and human resource practices on employee performance; this study expanded the moderating role of JA. The significant interaction effect of JA and TSE shows that with higher autonomy, teachers will extend their efficacy towards effective role performance. However, when working in a controlled environment, they would sense low efficacy to

perform the RB. Thus, teachers will not perform to teach effectively and would limit themselves to the role of information provider.

Implications for practice and research

This study contributes to the existing literature in the following ways: first, it provides a scale to measure perception for training comprehensiveness. Providing a basis to formulate training programmes, this study would assist educational authorities in restructuring their training programmes to suit the needs of teachers in primary schools. This study developed an extensive analytical instrument that can help test and develop training programmes and enhance teachers' work behaviour and efficacy. Moreover, this scale lends to many an opening to examine hypotheses that relate perception of TC to organisational as well as individual outcomes.

Second, this study assesses the effect of perception of training comprehensiveness on teachers' efficacy. Adequate attempts are required to make teacher training programmes comprehensive. The training should provide exposure to latest teaching techniques, so as to avoid obsolescence of skills among existing teachers (Snell and Dean, 1992). It should broaden the teachers' outlook by enhancing their job-related attitudes (Chiaburu *et al.*, 2014). Granting the ability to learn and implement skills in real-life situations would certainly raise the efficacy of teachers to face unexpected situations. In addition to it, during training sessions, the issues observed should be addressed more often to avoid the kind of discontentment among teachers. The objectives of training should be highlighted in advance to create a positive perception of training among teachers.

Third, the study shows that TC indirectly influences the teachers' role-related activities by affecting their sense of efficacy. Adding to current literature on efficacy, this result strengthens the theoretical basis of social exchange theory, which states that individual perceptions (for training) have an effect on the employer-employee relationship and employee performance (Balkin and Richebé, 2007). The result expands the reciprocation theory and emphasises that positive perception of training would result in positive reciprocation from teachers. Adding to the findings of Ehrhardt *et al.* (2011), perception of TC influenced IRB and OCB in a significant manner, thus providing an empirical explanation of the previous unclear route between perception for HRD practices and employee attitudes. We, therefore, suggest that training should be aimed towards getting the best out of teachers. Proper job analysis should be done before designing the training programme to promote professionalism to this career. Along with this, the spontaneous nature of the teaching profession and uncertain behaviour of students should also be considered while training teachers. More emphasis should be given on technical and human skills to let teachers meet students' changing needs. Innovative styles of training and brainstorming should also be included in training programmes. Such inclusion would encourage teacher participation and influence their perception regarding training comprehensiveness.

This study also extends the concept of RB and explains that teachers' efficacy has a significant influence on a teacher's task performance (IRB) and contextual performance (OCB). Hence, to encourage positive RB in school, an environment should be created to encourage a sense of trust and cooperation. Teachers should be encouraged to support one another, serve the students and take initiatives in co-curricular activities. Moreover, excess paper work should be digitised to reduce unnecessary time consumption, and

informative training should be given on how to utilise computerised resources. Opportunities should be given to the teachers to implement training skills in real-life situations during training itself.

Last but not the least, expanding previous literature, we proved JA as a moderator between teachers' efficacy and RB. This result extended the person situation interaction effect proposed by the trait theory. It shows that a situation (JA) at work, in a significant manner, affects individual trait (TSE) and performance relation. Based on this result, we suggest that in addition to responsibility, autonomy should also be encouraged in schools. Teachers should be given the freedom to decide, set priorities and achieve objectives. The curriculum may be fixed, but teachers should be allowed to teach in the way they see most effective. Allowing them to do so would increase their sense of control over the situation, resulting in exhibition expected RB. In other words, teachers should not be restricted to any specific way of teaching, rather they should be set free to instruct their students and design their lecture plans, under the supervision of their principals. Indian school teachers have been frequently found to have lower autonomy (Gambhir *et al.*, 2013). Due to this, they fail to use their own way of teaching to suit the needs of students. As each student has different physical and mental capabilities and uncertain classroom behaviour, teachers are required to have the autonomy to choose their style of teaching. Higher autonomy to teach would enhance their efficacy to perform IRB and OCB.

Thus, by responding the hypotheses and call of previous researches, this study adds to existing theories regarding the perceptions for HRD practices and its impact on individual RB. The practical worth of this study is represented in the specifications or strategies provided for principals and educational authorities to encourage effective RB in their schools.

Limitations and future scope

Along with valuably adding to existing literature, this study also raises a few questions that can pave the way for future educational research such as: What effect does perception towards other HRD practices have on individual RB and level of efficacy? Does the geographic and demographic diversity have any influence on this relation? What change can be observed in the longitudinal analysis of this model? What are the other practical issues that can be included in this model? How is the comprehensiveness of training defined if the training needs of teachers significantly differ from one another? Moreover, whether the scale for measuring perception of training comprehensiveness is applicable to all sorts of professions? Can events be considered as the reason that triggers the perception of training? Thus laying down these questions, this study motivates other researchers to examine new ways to induce teachers' RB. In contrast to conventional motivators, can psychological factors and intrinsic motivational factors be used to influence the teachers' RB? We also tried to consider related aspects of the constructs in interpreting the data, even though there might be some prospects still to be explored.

Conclusions

Training is an important aspect of human resource practices. However, effective tool to measure training comprehensiveness has not yet been established. This study seeks to develop the construct of perception of training comprehensiveness. Further, in an

integrated model, the study examines the extent to which perception of training comprehensiveness among primary school teachers affects their self-efficacy and RB with the moderating effect of JA. Our results indicated that in the northern regions of India, teachers' perception of training comprehensiveness influenced their sense of self-efficacy. Also, it had an indirect effect on the teachers' RB. JA also moderated the link between self-efficacy and teachers' RB. Providing effective ways to implement the findings in practical situations, this study highlighted several other scopes for future research, as already mentioned above.

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