Organizational and task factors aimed at enhancing occupational expertise through teachers’ professional development

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Abstract: The study aimed to investigate the organizational and task factors as antecedents of teachers’ professional development (TPD) and occupational expertise (OE). Positivist paradigm had been used for the study. The data were collected through a structured questionnaire from a convenience sample of 233 faculty members in higher education institutions (HEIs) in Pakistan. The statistical test of correlation, descriptive, and regression were used to analyze the data. The results indicated that organizational and tasks factors and their dimensions positively and significantly affected TPD and OE. The results also found partial mediation of TPD between organizational and task factors and OE association. The results offered opportunities to administration in HEIs in Pakistan to invest in TPD to attain OE for sustained contribution in knowledge economy.

1. Introduction

Teachers’ professional development (TPD) and expertise have become critical for competitiveness and sustainable growth in education. Organizations of developing countries are entering into an era of talented and efficient workforce scarcity. Knowledge workers need compatible professional expertise to respond to changing environment (Grenier & Kehrhahn, 2008). As the development of employees with expertise is essential to organizational accomplishment, it is important that human resource development professionals identify the effect of organizational and task factors on employees’ expertise (Grenier & Kehrhahn, 2008).

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PUBLIC INTEREST STATEMENT

Teacher development and occupational expertise significantly contributes toward sociocultural and economic development. In developing country like Pakistan, this phenomenon is needed enabling the academia to create opportunities in the knowledge economy. The research offers opportunities to administration of higher education institution in Pakistan to proactively pursue policy for fostering teachers’ development and occupational expertise to realize the goals of desirable learning outcomes.
Teachers’ development in higher education has assumed significant importance for competitiveness. Medium Term Development Plan—II of Higher Education Commission of Pakistan focused on capacity building of teachers of higher education institutions (HEIs) for desirable learning outcomes (HEC-MTDF-2010). Initiatives in this regard were taken; however, the area needed further improvement (Naveed, Kanwal, Afzal, & Ullah, 2013). Higher Education Commission of Pakistan Vision 2025 envisages creating knowledge economy through strategic focus on higher education. The Vision views teachers as catalyst in transforming the socioeconomic and cultural domains of the nation. The Vision focuses on a proactive approach to achieve teachers’ professional excellence through multidimensional development approaches for requisite competitive advantage and accelerate the role of higher education in knowledge economy for sustained growth.

Researchers argued that competence development of teachers is vital for desirable societal learning outcomes (Elci & Yaratan, 2012). Participation of teachers in the development of formal and informal capacity development initiatives is critical to achieve the strategic outcomes (Eros, 2013). Researchers identified the need for discovery of essential organizational support factors for enhancement of formal and informal learning in teaching profession and the requirement to explore and empirically validate such factors (Marti & Ferrer, 2012; Noe, Tews, & Marand, 2013). Bakker and Demerouti (2007) focused on the influence of organizational factors on TDP. Researchers identified the need to investigate and empirically validate the organizational and task factors that promote TPD and occupational expertise (OE) (Evers, Kreijns, Van Der Heijden, & Gerrichhaufen, 2011; Geijsel, Sleeegers, Stoel, & Krüger, 2009). King (2013) stated that there is less clarity about how TPD can be achieved. TPD as participation in learning activities is less studied (De Grip & Sauermann, 2012; Sun, Penuel, Frank, Gallagher, & Youngs, 2013) which resulted in learning outcomes such as OE; however, no empirical research on this relationship had been carried out for teachers in higher education and its empirical validation had been emphasized (Evers, Van Der Heijden, Kreijns, & Gerrichhaufen, 2011).

Besides, previous studies examined only limited organizational factors such as social support from immediate supervisor, organizational facilities, and social support from close colleagues (Evers, Kreijns, Van Der Heijden, & Gerrichhaufen, 2009; Evers, Kreijns, et al., 2011; Runhaar, 2008), and task factors like emotional demands, autonomy, and work pressure (Geijsel et al., 2009). These studies identified the need to further explore organizational and task factors and their effect on TPD and OE. Wei and Erping (2010) called for more research on organizational and task factors as predictors of TPD and OE. The present study, therefore, focuses on a broad spectrum of the gaps identified and empirically examines the pertinent structural factor (organizational facilities), cultural factors (learning climate, team style, and trust), and social factors (transformational leadership, social support from immediate supervisor, and social support from close colleagues) as well as task factors (work pressure, emotional demands, autonomy, and learning value of function) as predictors of TPD and OE, and the mediating role of TPD in the relationship of these factors and the OD, in the context of HEIs in Pakistan.

1.1. Organizational factors
Organizational facilities are defined by Van der Heijden (2003) as possibilities offered by the organization to employees to learn and develop. Moreover, apart from investments in career growth and learning (Rothwell & Arnold, 2007), employees wanted to get learning opportunities. Climate reflects the organizational culture (Schein, 1985). Van Woerkom (2003) defined learning climate as values and attachments, and characterized it as learning from different practices, relations between different departments and teams, time allocation for collective thoughts, and being patient toward multiple opinions of individuals. Kriz (2010) pointed out that learning environment resulted in involvement of individuals in learning practices. Cheng, Liou, Tsai, and Chang (2013) stated that teamwork facilitates individuals to engage in learning activities. Trust is the belief of an individual or a group on others to be committed and honest, and never taking unnecessary advantage while opportunity is available (Cummings & Bromily, 1996). It was argued
that trust is the promising factor for teachers’ development (Geijsel et al., 2009; Wermke, 2012), and without trust learning of individual is impossible (Park, Dulambazar, & Rho, 2013).

Transformational leadership stimulates, motivates, and inspires the employees in order to execute desired behavior (Bass & Avolio, 1994). Multiple studies identified transformational leadership as antecedent of TPD (Darroch & Mazerolle, 2013; Geijsel et al., 2009). Furthermore, social support from one’s immediate supervisor and close colleagues are the important factors for TPD (Geijsel et al., 2009; Nir & Bogler, 2008). Social support from one’s immediate supervisor and close colleagues affect OE (Van der Heijden, 2003); the study, however, suggested that there is need to study more on this relationship because the results of her study did not support this relationship. This contradiction offer opportunity for further study to explore the effect of social support on TPD and OE of teachers.

1.2. Task factors
Kwakman (2003) defined work pressure as “quantitative challenging aspects such as the speed of work and workload” (p. 161). Evers, Van Der Heijden, et al. (2011) highlighted the need for further research to examine whether work pressure affects TPD and OE of teachers. Researchers identified the positive influence of high emotional demands on individual learning (adoption of new behavior and skills in line with TPD and OE) (Flecha, Garcia, & Rudd, 2011).

Autonomy is defined as a chosen action and one is responsible for that action (Deci & Ryan, 1987). Strong evidence exist that autonomy is vital factor for professional development that enhanced the learning of individuals which ultimately affects organizations’ performance (Chang, Yeh, Chen, & Hsiao, 2011; Iluz, Michalsky, & Kramarski, 2012). Learning value of function is “the value which the function possesses as a nutrient for superior professional development” (Boerlijst, Van Der Heijden, & Van Assen, 1993, p. 57). Longworth (2013) described that learning opportunities initiate the valuable self-learning of individuals. The author proposed for further validation of this phenomenon empirically, hence the present study proposes learning value of function as an antecedent of TPD and OE for its empirical validation.

1.3. Teachers’ professional development
According to Hoyle and John (1995), TPD is defined as “the process of acquisition of knowledge, skills and values by teachers which will progress the service they offer to clients” (p. 17). It was also defined as “participation in professional learning activities” such as, training, reading, collaborative activities, experimenting, and reflecting (Kwakman, 2003, p. 153). Participation in learning activities leads toward the exchange of different ideas (Edwards, Gilroy, & Hartley, 2002), and enhancement of expertise that are beneficial for teachers to plan and implement innovative pedagogy (Edwards, 2005). It was pointed out that workplace settings affect learning experience of teachers and are supportive for their learning, though, participation gives chances to learn (Fox, Wilson, & Deane, 2010; Little, 2007; vanVelzen, Volman, Brekelmans, & White, 2012). Besides, Darling-Hammond, The Studyi, Andree, Richardson, and Orphanos (2009) argued that professional development is set of activities and ongoing process that is connected with previous learning.

Traditionally, participation in conferences and workshops focused on the improvements in individual knowledge and behavior; however, there was no focus on student outcomes (Chipchase, Johnston, & Long, 2012). Besides, knowledge and skills were transferred in formal settings such as classroom settings that were problematic and enhanced the concept of informal learning at workplace (Cheetham & Chivers, 2001; Eraut, 2007; McGuire & Cseh, 2006).

In recent years, the trend of teachers development has shifted from short lectures and workshops to continuous professional development (CPD) that involves lifelong learning because teachers are required to learn continuously in the rapidly changing environment (Day & Sachs, 2004). Many practitioners use the term CPD, which lies beyond the professional development to state what, is in fact gained through professional development (Keay & Lloyd, 2011). Importance
of CPD is increasing day by day (Wayne, Yoon, Zhu, Cronen, & Garet, 2008). The vision of CPD is knowledge driven society. This vision is based on the fact that proper and prolonged support aids employees to become independent learners and make them able to think innovatively (Armour & Makopoulou, 2012). Moreover, continuous development helps to integrate the formal and informal learning with qualification system (Stanciu & Banciu, 2012).

Furthermore, Orvis and Leffler (2011) stated that formal and informal learning is associated with continuous learning. Informal learning is not only structured or classroom-based learning (Marsick & Watkins, 2001) but includes other learning activities such as observing coworker, asking questions, listening to stories, and other independent activities that promote individual’s knowledge about his/her job (Attwell, 2007). On the other hand, formal learning is classroom-based or structured learning that result in getting certificates and degrees (Cross, 2007; Selwyn, 2007). Bell and Kozlowski (2008) described that informal learning escalates the learning of individual through feedback, experience, and reflection and this learning stimulates him/her to acquire those knowledge and skills that are effective for better performance. Similarly, Hall (2009) and Dabbagh and Kitsantas (2012) stated that learning at workplace enables individual to indulge in formal and informal learning activities like training (formal learning). Cheetham and Chivers (2001) endorsed this point of view. Evers, Van Der Heijden, et al. (2011) argued that informal training yields social networking (informal learning).

Noe et al. (2013) noted that organizational and task factors including job demands and emotional resources make employees able to engage in formal and informal learning activities. Kwakman (2003) pointed out that TPD affects professional expertise of teachers (Birney, Beckmann, & Wood, 2012). However, their study did not probe this cause and effect relationship, and identified the need to empirically test this effect. Hence, the present study focused on impact of organizational factors and task factors on TPD and adopted the concept of professional development as participation in learning activities (Evers, Van Der Heijden, et al., 2011), teachers learning, and bringing those learning into practice for the growth of teachers’ expertise (Kwakman, 2003), and students’ learning outcomes(Avalos, 2011; Clarke & Fournillier, 2012).

1.4. Occupational expertise

Occupational “expertise” and occupational “competence” are defined as personal qualities and abilities of an individual that are necessary for routine life workforce. Moreover, expertise and competence have same meanings (Evers, Kreijns, et al., 2011), and can be used interchangeably (Van der Heijden, 1998). Professional competence consisting of individual skills is necessary for the fulfillment of job responsibilities that can be improved and boosted through training and participation in learning activities (Ko, 2012). Wood, Whelan, Sojo, and Wong (2013) stated that expertise motivated employees to adopt new skills. Perdue, Ninemeier, and Woods (2000) and Kane (1992) related the professional competence with special characteristics, interpersonal relations, motivation, knowledge, and social standing that result in improved performance. On the other hand, Litchfield, Oakland, and Anderson (2002) pointed out that professional competence must involve long-term learning, and critical thinking that are higher level skills. Additionally, Ko and Hsiao (2008) found quantification skills, communication skills, personal characteristics, and culinary knowledge as determinants of professional competence. Among the broader range of competencies, professional competencies are necessary at workplace, hence it is vital to recognize actual competency in order to promote core competencies (Ko, 2012). Loveday, Wiggins, and Searle (2013) stated that wrong judgments of expertise resulted in system failures, underprivileged organizational culture, and low performance. Furthermore, Lucas, Casey, Loo, McDonald, and Giannakaki (2004) argued that vocational expertise was the primary source where teachers’ recognized their OE, which resulted in privileged professional culture (Lucas & Unwin, 2009).

According to Grangeat and Gray (2007), development of OE has been extensively considered in different industrial and commercial locales but there is still less empirical investigation within the field of teaching (Evers, Kreijns, et al., 2011, Evers, Van Der Heijden, et al., 2011). In the present study,
OE is conceptualized on the basis of five dimensions. Four dimensions such as knowledge, meta-cognitive knowledge, skills, and social recognition are adopted from Van der Heijden (2000, 2002) and Van der Heijde and Van der Heijden (2006) studies. However, Van Woerkom (2003) and Van der Heijden (1996, 2000, 2003) illustrated that competence and flexibility are closely associated with one another, and have the ability to perform efficiently and effectively. People that have the ability to be flexible and high performer and acquire new expertise are termed as flexperts (Van der Heijden, 1996). Therefore, the present study added flexibility as fifth dimension of OE.

Knowledge includes procedural knowledge (“knowing how”), declarative knowledge (“knowing that”), and conditional knowledge (“knowing when and where or under what conditions”), Alexander, Schallert, and Hare (1991). The capability to evaluate knowledge critically and deep understanding about all forms of knowledge is the attribute of expertise (Benner, 2004) that intensify the ability to learn from practice (Petty, Scholes, & Ellis, 2011). Meta-cognitive knowledge comprises the concept of self-consciousness or self-insight (Van der Heijden, 2000). Skills requirements refer to those specific skills that are needed at workplace and required in order to accomplish professional tasks. Besides knowledge and skills, social recognition is important dimension because social relations with supervisors and close colleagues have to do with expertise (Evers, Van Der Heijden, et al., 2011). It was suggested that employees must keep their knowledge and skills up to date and participate in learning practices in order to develop new skills (Keay & Lloyd, 2011).

Previous studies have investigated clinical expertise (Green, Perry, & Harrison, 2008; Petty et al., 2011; Rushton & Lindsay, 2008), in-house practitioners’ expertise (Berger, Reber, & Heyman, 2007; Bowen, 2009; De Bussy & Wolf, 2009) consultant’s expertise (Pang & Yeo, 2012), and the expertise of profession (Tobin, 2004), or education (Peterson & Mak, 2006), however, few studies have examined the OE of teachers. Thus, by focusing on OE of teachers, the present study added value in existing literature.

1.5. Effects of organizational and task factors on TPD and OE

The present study proposed organizational and task factors as predictors of TPD and OE in line with HRM and HRD fields (Evers et al., 2009, Evers, Kreijns, et al., 2011, Evers, Van Der Heijden, et al., 2011). It was pointed out that university structural, cultural, and social factors such as collaborative networks, workplace interactions and learning, and colleagues support stimulate teachers’ development and expertise (Avalos, 2011). Previous studies stated culture as predictor of teachers’ learning, hence, organization structure, social environment, and norms, beliefs, and organizational arrangements affect the workplace development and learning of teachers (Jurasaite-Harbison & Rex, 2010; Melville & Wallace, 2007). Several studies identified relationship of TPD and OE with organizational factors (Park et al., 2013; Silins, Mulford, & Zarins, 2002), and task factors (Birney et al., 2012; Evers, Kreijns, et al., 2011) (Figure 1).

1.6. Statement of hypotheses

H1: Organizational factors positively affect TPD.

H1a: Structural factors have significant impact on TPD.

H1b: Cultural factors significantly predict the TPD.

H1c: Social-psychological relations factors significantly affect TPD.

H2: Task factors have significant impact on TPD.
**Figure 1. Conceptual framework.**

| Organizational factors          |
|--------------------------------|
| • Structural                  |
|   - organizational facilities |
| • Cultural                    |
|   - Learning climate          |
|   - Team style                |
|   - Trust                     |
| • Social-psychological relations |
|   - Transformational leadership |
|   - Social support from immediate supervisor |
|   - Social support from close colleague |

| Task factors                |
|-----------------------------|
| • Work pressure             |
| • Emotional demands        |
| • Autonomy                 |
| • Learning value of the function |

**H$_{2a}$**: Work pressure significantly predicts the TPD.

**H$_{2b}$**: Emotional demands significantly influence TPD.

**H$_{2c}$**: Autonomy has positive effects on TPD.

**H$_{2d}$**: Learning value of function has positive influence on TPD.

**H$_{3}$**: Organizational factors positively affect OE.

**H$_{3a}$**: Structural factors have significant impact on OE.

**H$_{3b}$**: Cultural factors significantly predict the OE.

**H$_{3c}$**: Social-psychological relations factors significantly affect OE.

**H$_{4}$**: Task factors have significant impact on OE.

**H$_{4a}$**: Work pressure significantly predicts OE.

**H$_{4b}$**: Emotional demands positively and significantly influence OE.

**H$_{4c}$**: Autonomy positively affects OE.

**H$_{4d}$**: Learning value of function has positive influence on OE.
H5: TPD significantly affects OE.

H6: TPD mediates the association between organizational factors and OE.

H7: TPD mediates the relationship between task factors and OE.

2. Methods

2.1. Research design
It was causal and cross-sectional study. The positivist paradigm had been used for the study.

2.2. Instrument development
Questionnaire was adapted using scales validated in previous studies. The questionnaire had two sections. The first section contained participants’ demographic characteristics involving gender, marital status, age, education level, work experience, and types of HEI (private or public sector). The second section consisted of items of organizational factors, task factors, TPD, and OE. A 5-point Likert scale was used for measurement and all questions were closed ended. The instrument development is given in Table 1.

2.3. Sample
Teachers of HEIs were the population of the study. Convenience sampling technique was used for the study. Respondents were teachers of universities who filled the questionnaire. A total of 361 questionnaires were administered personally and through post. Responses received included 253 questionnaires. After scrutiny, 233 responses were found adequate for data analysis. The response rate was, therefore, 70%. Statistical tests included demographic analysis, descriptive analysis, reliability test, and regression analysis. SPSS 20 software was used for data analysis.

2.4. Validity and reliability
The face and content validity of items in questionnaire was evaluated through six professionals. Moreover, pilot testing feedback from 30 respondents was analyzed to check the instruments’ reliability. Factor analysis was performed, as indicated in Table 2, which extracted 13 factors from 63 items. Data were suitable because all values of KMO were greater than 0.5

| Table 1. Adaptation of scales |
|-------------------------------|
| **Variables** | **Dimensions** | **No of items** | **Adapted from study** |
|-----------------|----------------|----------------|------------------------|
| OF              | OF             | 4              | (Van Der Heijden, 2003) |
| LC              | 4              | (Black & Deci, 2000) |
| TS              | 3              | Wong & Zapantis, 2013) |
| T               | 3              | (Hay & Tschannen-Moran, 1999) |
| TL              | 5              | (Rafferty & Griffin, 2004) |
| SSS             | 4              | (Van Der Heijden, 2003) |
| SSC             | 4              | (Van Der Heijden, 2003) |
| TF              | WP             | 4              | (Wilson & Sheetz, 2010) |
| ED              | 3              | (De Jonge, Le Blanc, Peeters, & Noordam, 2008) |
| A               | 7              | (Chang et al., 2011) |
| LV              | 6              | (Developed from literature) |
| TPD             | 4              | (Evers, Kreijns, et al., 2011) |
| OE              | 12             | (Evers, Kreijns, et al., 2011) |
| Constructs | OF  | LC | TS | T  | TL | TL  | SSS | SSC | WP | ED | A   | A   | LV  | TPD | OE |
|------------|-----|----|----|----|----|-----|-----|-----|----|----|-----|-----|-----|-----|----|
| Item 1     | .707|     |    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 2     |     | .841|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 3     |     | .823|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 4     |     | .698|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 5     |     | .787|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 6     |     | .798|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 7     |     | .776|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 8     |     | .755|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 9     |     | .778|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 10    |     | .758|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 11    |     | .898|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 12    |     | .892|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 13    |     | .874|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 14    |     | .840|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 15    |     | .852|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 16    |     | .874|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 17    |     | .833|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 18    |     | .844|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 19    |     | .759|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 20    |     | .894|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 21    |     | .789|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 22    |     | .797|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 23    |     | .833|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 24    |     | .838|    |    |    |     |     |     |    |    |     |     |     |     |    |
| Item 25    |     | .748|    |    |    |     |     |     |    |    |     |     |     |     |    |

(Continued)
| Constructs | OF | LC | TS | T | TL | SSS | SSC | WP | ED | A | LV | TPD | OE |
|------------|----|----|----|---|----|-----|-----|----|----|---|----|-----|----|
| Item 26    |    |    |    |   |    |     |     | .776|   |   |    |     |    |
| Item 27    |    |    |    |   |    |     |     | .817|   |   |    |     |    |
| Item 28    |    |    |    |   |    |     | .816|   |   |   |    |     |    |
| Item 29    |    |    |    |   |    |     | .847|   |   |   |    |     |    |
| Item 30    |    |    |    |   |    |     | .640|   |   |   |    |     |    |
| Item 31    |    |    |    |   |    |     | .621|   |   |   |    |     |    |
| Item 32    |    |    |    |   |    |     | .818|   |   |   |    |     |    |
| Item 33    |    |    |    |   |    |     | .807|   |   |   |    |     |    |
| Item 34    |    |    |    |   |    |     | .829|   |   |   |    |     |    |
| Item 35    |    |    |    |   |    |     | .665|   |   |   |    |     |    |
| Item 36    |    |    |    |   |    |     | .556|   |   |   |    |     |    |
| Item 37    |    |    |    |   |    |     | .534|   |   |   |    |     |    |
| Item 38    |    |    |    |   |    |     | .723|   |   |   |    |     |    |
| Item 39    |    |    |    |   |    |     | .665|   |   |   |    |     |    |
| Item 40    |    |    |    |   |    |     | .556|   |   |   |    |     |    |
| Item 41    |    |    |    |   |    |     | .534|   |   |   |    |     |    |
| Item 42    |    |    |    |   |    |     | .513|   |   |   |    |     |    |
| Item 43    |    |    |    |   |    |     | .747|   |   |   |    |     |    |
| Item 44    |    |    |    |   |    |     | .728|   |   |   |    |     |    |
| Item 45    |    |    |    |   |    |     | .784|   |   |   |    |     |    |
| Item 46    |    |    |    |   |    |     | .844|   |   |   |    |     |    |
| Item 47    |    |    |    |   |    |     | .689|   |   |   |    |     |    |
| Item 48    |    |    |    |   |    |     | .797|   |   |   |    |     |    |
| Item 49    |    |    |    |   |    |     | .702|   |   |   |    |     |    |
| Item 50    |    |    |    |   |    |     | .796|   |   |   |    |     |    |

(Continued)
| Constructs | OF | LC | TS | T  | TL | SSS | SSC | WP | ED | A  | LV | TPD | OE |
|------------|----|----|----|----|----|-----|-----|----|----|----|----|-----|----|
| Item 51    |    |    |    |    |    |     |     |    |    |    |    |     | .791 |
| Item 52    |    |    |    |    |    |     |     |    |    |    |    |     | .593 |
| Item 53    |    |    |    |    |    |     |     |    |    |    |    |     | .613 |
| Item 54    |    |    |    |    |    |     |     |    |    |    |    |     | .609 |
| Item 55    |    |    |    |    |    |     |     |    |    |    |    |     | .539 |
| Item 56    |    |    |    |    |    |     |     |    |    |    |    |     | .472 |
| Item 57    |    |    |    |    |    |     |     |    |    |    |    |     | .492 |
| Item 58    |    |    |    |    |    |     |     |    |    |    |    |     | .593 |
| Item 59    |    |    |    |    |    |     |     |    |    |    |    |     | .613 |
| Item 60    |    |    |    |    |    |     |     |    |    |    |    |     | .609 |
| Item 61    |    |    |    |    |    |     |     |    |    |    |    |     | .539 |
| Item 62    |    |    |    |    |    |     |     |    |    |    |    |     | .472 |
| Item 63    |    |    |    |    |    |     |     |    |    |    |    |     | .492 |
| Eigen value| 2.372 | 2.298 | 1.957 | 2.195 | 2.563 | 2.575 | 2.446 | 2.178 | 2.008 | 2.935 | 3.154 | 3.154 | 2.387 |
| % of variance Explained | 59.29 | 57.46 | 65.23 | 73.16 | 51.25 | 64.37 | 61.138 | 54.44 | 66.92 | 41.93 | 52.57 | 59.69 | 33.77 |
| K. M. O    | .753 | .706 | .679 | .713 | .799 | .773 | .632 | .664 | .692 | .799 | .826 | .759 | .794 |
| Bartlett’s Test | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
or close to 1. In Bartlett test the significance level was less than 0.5 that indicated the suitability of data.

2.5. Data analysis
After collection of data, the internal consistency of instrument was tested through Cronbach’s alpha. Before applying factor analysis Cronbach’s alpha for the instrument was calculated as 0.955. Table 3 reflects descriptive statistics and Cronbach’s alpha values of constructs.

Results reflected that all constructs were reliable having values of Cronbach’s alpha in range 0.7–0.8. Pearson correlation was performed to check association among variables. Table 4 shows significant correlation among the variables.

3. Results
Regression analysis was performed to validate hypothesized relationships. The results, Table 5, indicated that organizational factors had significant effect on TPD, supporting H1 hypothesis. Organizational factors were found to have insignificant effect on TPD; hence, H1a was not supported. Cultural factors and social-psychological relations were found to have significant effect on TPD, supporting hypotheses H1b and H1c. Task factors were found to have significant effect on TPD, supporting hypothesis H2. Moreover, results supported hypotheses H2a, H2b, H2c, and H2d and validated that work pressure, emotional demands, autonomy, and learning value of function had significant effect on TPD. Organizational factors were found to have significant effect on OE, supporting hypothesis H3. Organizational facilities were found to have insignificant effect on OE; hence, H3a was not supported. Cultural factors and social-psychological relations were found to have significant effect on OE, supporting hypotheses H3b and H3c. Task factors were found to have significant effect on OE, supporting hypothesis H4. Moreover, results supported hypotheses H4a, H4b, and H4c highlighting that work pressure, autonomy, and learning value of function had significant effect on OE. However, H4a was not supported since emotional demands had no effect on OE. Moreover, it was found that TPD had significant effect on OE, supporting H5 hypothesis.

Barron and Kenny’s method (1986), based on four steps, was used to examine the mediation effect. The results are shown in Table 6. The first step indicated that the model was significant because of t value = 13.121, $R^2 = 0.427$, and standardized coefficient beta = 0.758. The $R^2$ value stated that 42.7% variation in criterion was caused by predictor and standardized beta coefficient value explains 76% contribution of this model. For second mediation step, t value was 11.933, standardized beta coefficient value was .893, and $R^2$ was 0.381. In third step, regression equation showed t value = 15.140, standardized coefficient beta = 0.945, and $R^2$ was 0.498. The fourth step results indicated t value of organizational factors with OE was significant at 6.434, and t value of TPD with OE was also significant at 8.934. This clearly illustrated that partial mediation existed.

Table 7 indicates the results of mediation. Four steps Barron and Kenny’s method (1986) had been used to examine the mediation effect. The first step indicated that the model was significant with t value = 14.675, $R^2 = 0.482$, and standardized coefficient beta = 0.702. The $R^2$ value illustrated that 48.2% variation in criterion was caused by predictor and standardized beta coefficient value explained 70% contribution of this model. For second mediation step, t value was 17.235, standardized beta coefficient value was 0.945, and $R^2$ was 0.563. In third step, regression equation showed t value = 15.140, standardized coefficient beta = 0.566, and $R^2$ was 0.498. The fourth step results indicated that t value of organizational factors with OE was significant at 5.717. Further, t value of TPD with OE was also significant at 6.391. The results indicated partial mediation.

4. Analysis and discussion
The finding of study showed that organizational factors positively and significantly affected TPD. Hence, H3 was accepted that supports similar results from previous studies (Evers et al., 2009, Evers, Kreijns, et al., 2011). Previous studies stated that structural factors like organizational facilities enhance the learning of individuals through providing opportunity to gain knowledge
Table 3. Descriptive statistics and Cronbach’s alpha

|     | N    | Min | Max | Mean | Std. Devi | Vari | Skew | Kurt | Alpha |
|-----|------|-----|-----|------|-----------|------|------|------|-------|
| Stat | Stat | Stat | Stat | Stat | Stat | Stat | Stat | Std. Err | Stat | Std. Err |
| OF   | 233  | 2   | 5   | 3.71 | .673      | .453 | -.444 | .320 | .318   | (.765) |
| LC   | 233  | 2   | 5   | 3.61 | .654      | .427 | -3.42 | .159 | -.205  | .318   | (.753) |
| TS   | 233  | 2   | 5   | 3.74 | .716      | .513 | -3.13 | .159 | -.506  | .318   | (.731) |
| T    | 233  | 2   | 5   | 3.85 | .764      | .583 | -4.15 | .159 | -.189  | .318   | (.816) |
| TL   | 233  | 2   | 5   | 3.49 | .696      | .485 | -2.90 | .159 | -0.70  | .318   | (.759) |
| SSS  | 233  | 2   | 5   | 3.69 | .702      | .492 | -4.35 | .159 | .108   | .318   | (.807) |
| SSC  | 233  | 2   | 5   | 3.70 | .692      | .480 | -5.96 | .159 | -.009  | .318   | (.784) |
| WP   | 233  | 2   | 5   | 3.53 | .737      | .543 | -7.35 | .159 | .636   | .318   | (.718) |
| ED   | 233  | 1   | 5   | 3.68 | .742      | .550 | -3.57 | .159 | -.115  | .318   | (.752) |
| A    | 233  | 2   | 5   | 3.62 | .614      | .377 | -6.36 | .159 | .805   | .318   | (.763) |
| LV   | 233  | 1   | 5   | 3.63 | .681      | .464 | -7.26 | .159 | 1.049  | .318   | (.809) |
| TPD  | 233  | 2   | 5   | 3.74 | .698      | .487 | -2.78 | .159 | -.235  | .318   | (.775) |
| OE   | 233  | 2   | 5   | 3.61 | .559      | .313 | -2.69 | .159 | .409   | .318   | (.820) |

Note: Overall α = .955.
Table 4. Correlation

|     | OF  | LC  | TS  | T   | TL  | SSS | SSC | WP  | ED  | A   | LV  | TPD | OE  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| OF  | 1   |     |     |     |     |     |     |     |     |     |     |     |     |
| LC  | .51** | 1   |     |     |     |     |     |     |     |     |     |     |     |
| TS  | .32** | .53** | 1   |     |     |     |     |     |     |     |     |     |     |
| T   | .22** | .24** | .52** | 1   |     |     |     |     |     |     |     |     |     |
| TL  | .52** | .50** | .41** | .31** | 1   |     |     |     |     |     |     |     |     |
| SSS | .31** | .38** | .29** | .29** | .45** | 1   |     |     |     |     |     |     |     |
| SSC | .34** | .27** | .24** | .26** | .42** | .48** | 1   |     |     |     |     |     |     |
| WP  | .28** | .37** | .32** | .24** | .50** | .43** | .50** | 1   |     |     |     |     |     |
| ED  | .16*  | .20** | .25** | .26** | .21** | .42** | .42** | .43** | 1   |     |     |     |     |
| A   | .41** | .37** | .39** | .36** | .51** | .49** | .44** | .44** | .50** | .48** | 1   |     |     |
| LV  | .29** | .34** | .39** | .42** | .40** | .52** | .48** | .51** | .51** | .70** | 1   |     |     |
| TPD | .35** | .34** | .44** | .49** | .49** | .55** | .49** | .51** | .50** | .66** | .74** | 1   |     |
| OE  | .44** | .43** | .41** | .39** | .46** | .59** | .49** | .58** | .43** | .58** | .63** | .70** | 1   |

Notes: **Significance, p < .01.
*Significance, p < .05.
However, present study results are contrary to the findings of previous studies as $H_{1a}$ was not accepted stating that organizational facilities have no impact on TPD. This reason was that mostly offered limited opportunities to distribute knowledge (Unwin & Fuller, 2003). These organizations provided limited development related opportunities to some senior members of organization; on the other hand, subordinates did not have access to it (Ashton, 2004). Neelakantan (2010) argued that due to budget shortfall, HEIs in Pakistan’s Table 5. Results of hypotheses

| Hypothesis | Path | Path coefficient | Result |
|------------|------|------------------|--------|
| H1         | Organizational factors $\rightarrow$ TPD | 0.62** | Accepted |
| H1a        | Structural factors $\rightarrow$ TPD | −0.02 | Not accepted |
| H1b        | Cultural factors $\rightarrow$ TPD | 0.29** | Accepted |
| H1c        | Social-psychological relations $\rightarrow$ TPD | 0.50** | Accepted |
| H2         | Task factors $\rightarrow$ TPD | 0.75** | Accepted |
| H2a        | Work pressure $\rightarrow$ TPD | 0.12* | Accepted |
| H2b        | Emotional demands $\rightarrow$ TPD | 0.10* | Accepted |
| H2c        | Autonomy $\rightarrow$ TPD | 0.22** | Accepted |
| H2d        | Learning value of function $\rightarrow$ TPD | 0.47** | Accepted |
| H3         | Organizational factors $\rightarrow$ OE | 0.65** | Accepted |
| H3a        | Structural factors $\rightarrow$ OE | 0.11 | Not accepted |
| H3b        | Cultural factors $\rightarrow$ OE | 0.22** | Accepted |
| H3c        | Social-psychological relations $\rightarrow$ OE | 0.49** | Accepted |
| H4         | Task factors $\rightarrow$ OE | 0.69** | Accepted |
| H4a        | Work pressure $\rightarrow$ OE | 0.31** | Accepted |
| H4b        | Emotional demands $\rightarrow$ OE | 0.05 | Not accepted |
| H4c        | Autonomy $\rightarrow$ OE | 0.18** | Accepted |
| H4d        | Learning value of function $\rightarrow$ OE | 0.32** | Accepted |
| H5         | TPD $\rightarrow$ OE | 0.71** | Accepted |

Notes: **Significance, $p < .01$.  
*Significance, $p < .05$.  

Table 6. Mediation analysis

| Steps | IV | DV | $R^2$ | F Stat | B | Beta | t value |
|-------|----|----|-------|--------|---|------|---------|
| 1     | IV | DV | 0.427 | 172.151| 0.758 | 0.653** | 13.121 |
| 2     | IV | MV | 0.381 | 142.396| 0.893 | 0.618** | 11.933 |
| 3     | MV | DV | 0.498 | 229.213| 0.566 | 0.706** | 15.140 |
| 4     | IV | DV | 0.575 | 155.351| 0.408 | 0.352** | 6.434  |
|       | MV |    | 0.392 |        | 0.488**|       | 8.934  |

Notes: ** Significance level $p < 0.01$.  
Model 1. Predictor: Organizational factors; Criterion: OE.  
Model 2. Predictor: Organizational factors; Mediator: TPD.  
Model 3. Mediator: TPD; Criterion: OE.  
Model 4. Predictors: Organizational factors, and TPD; Criterion: OE.

(Ashton, 2004; Koike, 2002). However, present study results are contrary to the findings of previous studies as $H_{1a}$ was not accepted stating that organizational facilities have no impact on TPD. This reason was that mostly offered limited opportunities to distribute knowledge (Unwin & Fuller, 2003). These organizations provided limited development related opportunities to some senior members of organization; on the other hand, subordinates did not have access to it (Ashton, 2004). Neelakantan (2010) argued that due to budget shortfall, HEIs in Pakistan's
were confronting grim structural and financial situation affecting the TPD. Besides, H1b was accepted in line with the study of Leithwood, Jantzi, and Steinbach (1999), who confirmed that cultural factors support teachers to participate in learning activities. Teachers are encouraged to participate actively in learning activities when organizations create trust between individuals (OECD, 2009), developed team work (Ashton, 2004; Mizell & Forward, 2010), and provide learning environment (Gordon, Rey, Siewiorek, Vivitsou, & von Reis Saari, 2012). Moreover, social factors are supportive factors for TPD because they enhance the participation of teachers in learning activities (Grangeat & Gray, 2007; Kwakman, 2003). Thus, the results of present study are consistent with previous studies’ results in supporting H1c.

Furthermore, the findings of present study highlighted that task factors have significant and positive effects on TPD; hence, H2 was accepted. This hypothesis was supported by Kwakman (2003) and Evers, Van Der Heijden, et al. (2011). Besides, the findings of the study revealed that work pressure, emotional demands, autonomy, and learning value of function promote TPD; thus, H2a, H2b, H2c, and H2d were accepted. The results are in conformity with previous studies (Haggerty, Elgin, & Woolley, 2011; Kwakman, 2003). The results of present study also supported H3a, H3b, and H3c hypotheses stating that organizational factors and its determinants enhance OE of teachers. Previous studies supported these results by identifying positive effect of structural, cultural, and sociopsychological factors on OE (Evers et al., 2009, Evers, Kreijns, et al., 2011; Niemi, Kynäslähti, & Vahtivuori-Hänninen, 2012). It was found that culture comprising team work (Gordon et al., 2009), trust and learning environment (Gordon et al., 2012) promote the acquisition of expertise at workplace. Contrary to previous study (Evers, Kreijns, et al., 2011), H3a was not accepted. However, these results were similar to the study of van der Heijden (2003) who found that organizational facilities has no effect on OE and its dimensions because management was restricted to encourage employability only for employees and not for other function.

In addition, the results of the present study indicated that task factors and its dimensions such as work pressure, autonomy, and learning value of function significantly affected OE; hence, H4a, H4b, H4c, and H4d were accepted. Similar results were found in the study of Kwakman (2003) who stated that increased pressure and autonomy resulted in acquisition of expertise; however, she did not test these relationships empirically. Van der Heijden and Van der Heijden (2006 identified the association between learning value of function and personal flexibility that is one of the essential aspects of OE. Moreover, studies of Immordino and Damasio (2007) illustrated that emotional demands (according to Kwakman, 2003 referred as emotional investments) are required for skill development. However, the present study contradicted these findings by not accepting H4b which stated that emotional demands have no effect on OE. As previous studies just gave the concept that task factors and its elements affect OE (Evers, Van Der Heijden, et al., 2011; Van der Heijden

### Table 7. Mediation analysis

| Steps | IV  | DV  | R²   | F Stat | B    | Beta  | t value |
|-------|-----|-----|------|--------|------|-------|---------|
| 1     | IV  | DV  | 0.482| 215.343| 0.702| 0.695**| 14.675  |
| 2     | IV  | MV  | 0.563| 297.038| 0.945| 0.750**| 17.235  |
| 3     | MV  | DV  | 0.498| 229.213| 0.566| 0.706**| 15.140  |
| 4     | MV  | DV  | 0.561| 146.663| 0.382| 0.378**| 5.717   |

Notes: ** Significance level p < 0.01.
Model 1. Predictor: Task factors; Criterion: OE.
Model 2. Predictor: Task factors; Mediator: TPD.
Model 3. Mediator: TPD; Criterion: OE.
Model 4. Predictors: Task factors, and TPD; Criterion: OE.
et al., 2005), but no study has yet examined this relationship empirically. Thus, the findings of this study established that work pressure, autonomy, and learning value of function affected OE; however, emotional demands did not affect OE of teachers.

Furthermore, the findings of the present study showed the positive and significant effect of TPD on OE; hence, H5 was accepted. Similar results were found in previous studies describing that teachers adopt new skills through their continuous development (Horn & Little, 2010; Sun et al., 2013). Besides, previous studies gave the concept that organizational and task factors affect TPD and OE. As Grangeat and Gray (2007) pointed out that social support from colleagues compels teachers to adopt new skills. They stated that teachers face many problems in their professional development; however, these problems can be overcome by collegial social support and competence level of teachers would enhance. Van der Heijden (2003) described attention from supervisor as a main aspect of transformational leadership, and found its impact on various dimensions of OE. Moreover, Kwakman (2003) identified the relationship of task factors with TPD and OE. To our knowledge previous studies gave the concept of mediation of TPD between these factors and OE, but, no study has yet examined this empirically (Evers, Kreijns, et al., 2011). Thus, proposed hypotheses H6 and H7 were accepted stating that TPD mediated between organizational and, task factors-OE relationship; however partial mediation existed.

5. Conclusions and recommendations

5.1. Managerial implications
The findings of this study provide new insight into organizational and task factors that promote TDP and EO. The results provide opportunities to the administration in the HEIs in Pakistan to plan and implement appropriate interventions to enhance professional development and expertise of teachers for desirable learning outcomes. The findings of study emphasized that HEIs should offer compatible organizational facilities enabling teachers at HEIs to enhance their professional competence and significantly contribute in learning activities. Notwithstanding the resource constraints, there is need for creating conducive learning culture at HEIs that nurture sustainable teachers’ development and improved competence for superior performance to achieve academic excellence.

5.2. Academic implications
The present study investigated simultaneously organizational factors (structural, cultural, and social-psychological relations), and task factors (work pressure, emotional demands, autonomy, and learning value of function) as predictors of TPD and OE. Moreover, this study examined the mediation of TPD (no study has yet studies this mediation) between organizational and task factors and OE linkage. Furthermore, this study added value to the literature by employing HEIs sample that had not been done before. Moreover, the study offered deep insights into the phenomenon of TDP and OE at HEIs and offered opportunity to researchers and academicians to replicate this model in different contexts.

5.3. Limitations of research
The present research possesses some limitations that include limited time, resource constraint, the lukewarm response of respondents, and the perceptual biasness due to convenience sampling.

5.4. Future research
The present study offered recommendations for future. OE was examined as a composite variable by focusing on five dimensions (such as knowledge, meta-cognition, skill requirements, social recognition, and growth and flexibility). Future research could examine the effect of organizational and task factors on knowledge, meta-cognition, skill requirements, social recognition, and growth and flexibility separately. Thus, future research is needed to replicate this study in order to generalize these results. As previous studies recommended examining mediation of TPD; thus, present study showed partial mediation of TPD between organizational and task factors and OE association. Hence, future research is required to further generalize these mediation results. In
addition, the results indicating insignificant effects of organizational facilities on TDP and OE were inconsistent from previous studies’ results. As a consequence, future research is needed to further explore this phenomenon to generalize these results. Present study is cross sectional in nature; hence a longitudinal study is recommended in future.

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