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#### Abstract

Teachers' professional development is central to meet the ever-growing challenges at the elementary school level. In this article we describe the development and use of Teachers' Development Scale at the elementary school level in Pakistan. An exploratory factor analysis (n=274) showed two basic dimensions of teachers' professional development: community development, and individual development. Community-based developments included collaborative projects, participation in conferences, and system of educators for proficient advancement. On the other hand, individual developments related to improvement in course work, coaching, observation visits to other schools and qualification degree programs. The implication of the study identifies constraints and suggestions for educators, educationists and instructor mentors.

Key Words: Professional Development, Language Teachers, Elementary Education

# Introduction

Teachers' professional training programs are important for their professional development especially at the elementary level. Elementary level education is considered as the base for future learning. Concepts taught during this elementary stage may become clearer for students, if teachers are more professional and up-to-date with new methodologies designed to face growing challenges. Taking into account this perspective, it is important to investigate potential areas that might be essential for teachers' training and development.

Professional training programs for teachers are aimed at improving educational standards by helping teachers develop new methodologies designed to meet ever-growing challenges (Donnell & Gettinger, 2015; Khuanwang, Lawthong, & Suwanmonkha, 2016; Ninlawan, 2015). The impact of these professional training programs determines the level of improvement both in teachers and students. It is a well known fact that well trained and professional

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teachers are better able to meet new challenges, and are better able to produce highquality outputs (Saroyan & Trigwell, 2015). Well trained and professional teachers are indispensable for the advancement of our schools and the betterment of our educational standards (Lee & Nie, 2014).

These teachers' development programs are usually seen from two perspectives: collaborative teacher training programs (Macià & García, 2016; Vanblaere & Devos, 2016; Williams & Burden, 1997) and teachers' reflections on their own teaching practices (Daloglu, 2004; Davies et al., 2014; Ross & Bruce, 2007). Collaborative professional development focuses on teachers' professional development as a community within which teachers are able to share their experiences. In contrast to community development, teachers as reflective practitioners critically question their own practices in an attempt to better prepare for upcoming challenges.

The studies reviewed above show that teachers' professional development has been investigated from various perspectives in regards to community development and teachers as reflective practitioners. However, the combination of both, the teacher as part of community development together with the teacher as a reflective practitioner, has been underexplored. Consequently, in this paper I center on this zone of investigation that investigates instructors' expert advancement at the basic level in Pakistan. By combining in the analysis the teacher as part of community development together with the teacher as a reflective practitioner, the study aims to find the underlying dimension behind elementary educators' progress within the educational context of Pakistan.

# **Professional Development at the Elementary Level**

Professional development of elementary level teachers is a prerequisite for raising educational standards. Investigating the connection between educator's capabilities and learning performances, Ho, Lee, and Teng (2016) conclude that school-level teacher qualifications have a significant relationship with their perceptions about teaching at school level. Their study relates professional development to teachers' high qualifications, and suggests that this translates into positive perceptions and a furthering of their development. According to the authors, highly qualified teachers have positive perceptions regarding their practices. Nevertheless, their research only focuses on qualifications and professional development, when in fact there are multiple other factors that relate to teachers' professional development. Other factors such as community development and teachers' own reflections on their practices. Flynn, Lissy, Alicea, Tazartes, and McKay (2016) analyzing the impact of teachers learning on management skills conclude that professional development programs result in changes in teachers' organizational practices. They additionally infer that different disciplinary practices negatively affect students' learning. Their research work

focuses on context dependent behavior management that cannot be generalized to all school contexts. On the other hand, Lai et al. (2016), working on school teachers' professional learning contexts, determine that power relations, social suggestions, and teachers' social and professional positioning interact to shape teachers' ways of teaching. Summing up, it can be concluded that teachers' professional development, can be helpful in raising educational standards, teachers' perceptions, behaviors, and their overall social positioning.

# **Community-Based Professional Learning**

The concept of community learning involves teachers within the community in order to share their learning experiences. Wyse, Sugrue, Fentiman, and Moon (2014) making a qualitative inquiry indicate the following: That educational practices can be greatly transformed by those teachers who, first, involve all staff members and Heads in their teaching, and second, understand the benefits of engaging learners in a broader-ranging community oriented and interactive methodology. According to the authors, the main issue is one of resources and resourcefulness in educational development. The main methodology of their work is that of research focused on one school. Nevertheless, the multifaceted study of the subtle connection between pedagogy, knowledge and resources has not been discussed in their work. Vanblaere and Devos (2016), researching the professional learning community through a survey, conclude the following: Transformational leadership counts for participation reflection and the assumption of responsibility. Polly et al. (2015) linking professional development with students' outcome through a multi-level analysis, indicate that teachers' practices and content knowledge, both have significant effects on students' outcomes. Their work is limited only to teachers' content knowledge, and therefore, it does not explain how individualistic and community knowledge contribute to teacher practices. Thacker (2015), uses situated learning theory, as an approach to analyze formal and casual expert learning by optional training. The study concludes that teachers engage in a number of formal and informal professional learning experiences. Yet, the casual learning encounters are the most profitable and critical for their classroom learning. Causal learning experiences are described as shared knowledge or community knowledge, and in this sense, the study reveals that teachers' shared knowledge has an important impact on teacher practices.

# **Teachers as Reflective Practitioners**

Teachers' reflections on their teaching practices are vital to their progress. Davies et al. (2014), through a review of 210 research articles, indicate multiple qualities that define a good teacher. These include, 'modeling creative behavior, long-term curriculum planning, developing peer collaboration, and use of resources. Most of

these attributes are related to the process of teacher development through selfreflection. On the other hand, if a teacher's reflection on his or her own practices is not involved, it results in ineffective or 'one shot' teacher training programs (Fullan & Stiegelbauer, 1991; Guskey, 1985, 1986). Hence, all community-based experiences become effective when teachers reflect on them in light of their practices in the classroom.

The idea of teachers as reflective practitioners encompasses instructors' school practices. From this perspective, the concept of 'continuing professional growth has been proposed (Daloglu, 2004; Schön, 1987; Williams & Burden, 1997). This concept takes into account a teacher's ongoing practice and his or her learning, based on teaching challenges posed to him or her by other colleagues (Weiping, 2005). Working on teacher transformation, multiple models have been presented that combine in their analysis the teacher as part of community learning and the teacher as a reflective practitioner.(Antoniou & Kyriakides, 2013; Clarke & Hollingsworth, 2002; Lai, 2015); in such models teachers are viewed as learners and the 'school as [a] learning community'. Their investigation of school teachers over a lapse of three months, Ross and Bruce (2007) suggest that 3 techniques are involved in the progress of teachers: self-observation, self-assessment, and self-reflection. The discussion on a teacher's reflection as a practitioner, presents the way forward for assuming accountability and for creating the conditions necessary to overcome as a better professional any upcoming challenges.

# Method

We constructed an instrument based on teachers' professional development at the primary school level. We included seven dimensions of teachers' professional development keeping in view overall performance. These aspects of professional development were adopted from TALIS (Teaching and Learning International Survey) for teaching at school level (Gilleece, Shiel, Perkins, & Proctor, 2009). The survey consists of five main sections. Section-I is based on background information. Section-II includes professional development. The rest of the sections include teachers' appraisal, attitudes and teaching. The present study adopted only the second part of TALIS, which pertains to teachers' professional development. The items of the scale were also revised to avoid ambiguity in the questionnaire. The respondents were asked to rate items regarding teaching development on a four point scale from one (no impact) to four ( large impact).

# Sample

The data was collected from 42 primary schools located in five cities of Pakistan. 274 language teachers responded to the research survey. The following table shows teachers' characteristics based on their teaching experience.

Description	Frequency	Percent	Valid Percent	<b>Cumulative Percent</b>
This is my first year	37	13.5	13.5	13.5
1-2 years	60	21.9	21.9	35.4
3-5 years	58	21.2	21.2	56.6
6-10 years	45	16.4	16.4	73.0
11-15	37	13.5	13.5	86.5
15+	37	13.5	13.5	100.0
Total	274	100.0	100.0	

Table 1. Teachers' Demographic Information Based on their Experience

#### Results

The seven items of teachers' professional development were exposed to PCA (i.e. Principal Component Analysis) using SPSS software. Before conducting PCA, the essential requirements for EFA (Exploratory Factor Analysis) were calculated. Examination of the correlation matrix verified items of 0.3 and above. The value of Kaiser-Meyer-Olkin was 0.74, which was above than the suggested value of 0.6 (Kaiser, 1970). On the Other hand Bartlett test of Sphericity (Bartlett, 1954) reached statistical significance (p=000), supporting the factorability of correlation matrix.

PCA exhibited two components with eigenvalue above 1, showing a variation of 34.1% and 14.7% respectively. An evaluation of the scree plot showed a clear break after the first two components, which helped to decide to retain these two components as the main part of the study.

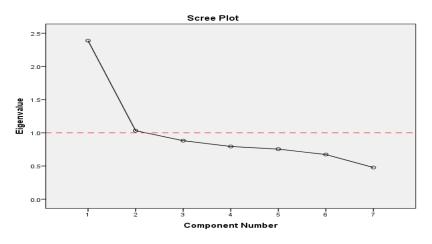


Figure 1: The Scree Plot Regarding Exploratory Factor Analysis

This was further validated by performing PA (i.e. Parallel Analysis). The PA indicated only two components exceeding the value for a sample size (7 variables x 274 respondents).

#### Table 2. Monte Carlo PCA for Parallel Analysis

```
3/31/2016 11:09:28 AM
Number of variables: 7
Number of subjects: 274
Number of replications: 100
Eigenvalue # Random Eigenvalue Standard Dev
                          .0498
                 1.2380
                 1.1319
                                  .0354
     2
                                  .0271
                 1.0581
     3
                                  .0241
     Δ
                 0.9935
     5
                 0.9305
                                  .0302
                 0.8648
                                  .0332
     6
     7
                 0.7832
                                  .0428
3/31/2016 11:09:28 AM
Monte Carlo PCA for Parallel Analysis
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A total variance of 48.8 was shown by the two components with component 1 contributing 34.1% and component 2 participating 14.7%. In order to interpret these two components, oblimin rotation was executed. The rotated solution showed the presence of a simple structure, with both components reflecting a number of 3 loadings on component 1, and a number of 4 loadings on component 2. It was also observed that all variables loading substantially was on only one component. No variable showed loading on component 1 and component 2 simultaneouly.

 Table 3. Exploratory Factor Analysis of Teachers' Professional Development

 Survey

	Component	
	1	2
Collaborative research	0.806	
Participation in a network of teachers formed specially for the professional development of teachers		
Education Conferences on Seminar		
Courses/workshops to analyze your teaching as self-practioner		0.804
Mentoring and/or peer observation and coaching as part of a formal school arrangement.		0.692
Observation visits to other schools		0.545
Qualification programs as part of their self-reflection		0.416

Extraction Method: Principal Component Analysis

Rotation Method: Oblimin with Kaiser Normalization

a. Rotation converged in 6 iterations.

Table 3 shows the two separate components. The first component consists of three variables having lowest loading i.e. .607 and highest loading i.e. .807. This shows the loading strength of each factor in the first component. The second component in table 3 consists of four variables, having lowest loading as .414 and highest loading as .804, which is also the strength of the factors loading on the scale.

#### Discussion

This study has determined the underlying structure of the impact of professional development at the elementary level. For this purpose data was collected from 274 teachers at school level. The analysis of the data identified two main components of teachers' professional development, including community-based development and teachers' reflection of teaching practices.

The first component of the exploratory factor analysis reveals the underlying scale of teachers' professional development on community basis at three levels: collaborative research projects, participation in a network of teachers, conferences and seminars. The collaborative research, seminars and conferences showed strong loading, revealing the teachers found these ways more convenient as the part of their professional development. The study partially confirms the previous studies (Cooper & Cowie, 2010; Vanblaere & Devos, 2016; Wyse, Sugrue, Fentiman, & Moon, 2014) which reflect community-based development as a prime source of professional development for teachers.

Similarly, the exploratory factor analysis also reflected teachers' reflection of their practices as the prime source of teachers' professional development. Moreover, teachers' reflection of their practices involved four main aspects: courses/workshops, peer observation or coaching, observation, qualification programs. The factor of course-based workshops was noticed having the highest loading as compared to the qualification programs. One possible reason is that teachers' professional development has a better impact when it relates to their teaching practices; as teachers are in a position to implement the suggested ideas into the classroom. The results of the study are in partial agreement with the research works (Daloglu, 2004; Schön, 1987; Weiping, 2005) which center teacher reflection as a prima facie to teachers' professional development.

The two underlying scales show the possible factors of teachers' professional development with respect to the language teaching context in Pakistan; where education reforms are in progress. Teachers at elementary level have few resources for online training programs and technology-related facilities that play an important role in professional development (Shamim, 2008; Warsi, 2004). Therefore, teachers' for their development rely on collaborative shared knowledge and reflection of their teaching practices, which are the only two possible means for them to groom in their profession.

#### Conclusion

The study-based teachers' professional development scale found two main factors: The first was community-based development which involved teachers' collaborative projects and efforts to develop their teaching practices. The second factor was teachers' reflections on their own practices as a practitioners. These practices consisted of courses/workshops, implementation in classroom, peer observation, observation visits to other schools, and qualification programs. The study concludes that both community development and individual development play a role in the overall professional development of teachers. The present study had possible limitations. The data collected relates only to elementary school teachers in Pakistan. Therefore, the study is context specific and may not be generalized to other contexts. Furthermore, the other possible limitation is that the data collected through a survey questionnaire is part of cross-sectional research design; such an approach aims only to investigate a problem at one point in time. For these reasons, the study recommends conducting a longitudinal research design to examine teachers' professional development and varying factors related to it. A longitudinal study may bring to the fore factors of professional development in more detail.

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