PERCEPTIONS OF UNIVERSITY TEACHING FACULTY ABOUT PROFESSIONAL GROWTH: STRUCTURAL MODELING OF PROFESSIONAL DEVELOPMENT

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Teacher in the teaching field is the backbone of teaching learning process. This sector demands fresh knowledge and professional skills to compete the competitors. This study was about scale construction of teachers’ professional development. It is the basic necessity of teachers to improve professionalism with the passage of the time. This study was quantitative and descriptive in nature. The survey method was used to collect information from university participants related to professional development. The scale was consisted of five factors (cooperation, performance evaluation, human resources, learning environment of students, and research) of professional development. Path analysis for structural equation modeling of professional development scale was conducted. The construct reliability and validity of professional development scale and sub-dimensions were also determined. It is concluded that there was strong significant correlation among factors of professional development of teaching faculty. It confirmed that there was strong path relationship of dimensions with variables. It showed that items were consistent and highly significant. It also indicated that all statements were important to measure the professional development of teaching faculty. University teachers may pay attention more on their professional development. As time is passing, it is most important to gain new and fresh information for better teaching and learning.

Key Words: Teachers’ Professional Development, Cooperation, Evaluation, and Research
1. INTRODUCTION

Professional growth of teachers is both an academically and individual mission which requires not just commitment with new and varying thoughts regarding training, evaluating new exercises and class development, yet in addition a passionate reply as individual persuasions are tested. Conventional models of educator proficient advancement have been described as instructor focused, concentrating on the transmission of data to educators with a presumption that the realizing which happens for teachers is an individual procedure that prompts a quick change in their training and the capacity to apply the new methodology in an assortment of settings. However, it was observed that these things did not exist practically (Bausmith & Barry, 2011; Guskey, 2002; Pickering, 2007; Stoll, Harris, & Handscomb, 2012). Guskey (2000) elaborated the adequacy of customary ways to deal with proficient improvement, for example, one off occasions, increments in compensations for the individuals who addition graduate capabilities and downtime in lieu, all of which have been highlights of instructor proficient advancement in Ireland in the ongoing past. While these methodologies can inspire instructors to visit, and through participation educators familiarity with issues and advancement of their insight and aptitudes do happen, they can likewise propagate expert improvement which are inadequate to cultivate realizing which on a very basic level modifies what instructors instructor how they teach (Boyle, While, & Boyle, 2004). It can be contended that there is inadequate chance to create and react to emotions according to tolerating that parts of their instructing might be dangerous, managing restrictions and feeling engaged; the phases of self-improvement which is important for all encompassing instructor advancement. However this makes a suspicion that the beginning stage is a shortage inside the educator. Luneta (2012) proposes that rather it is increasingly important to perceive the information and experience which the educator brings to proficient improvement encounters and expand upon this with instructors associated with the structure. While in a time of national change the previous may give a superior beginning stage to proficient improvement, without preventing the significance from claiming past encounters, expecting that the current acts of most teachers do not compare to the prescribed changes. Anyway this threat the distance of educators from the very beginning of the expert advancement process which will adversely affect any change endeavors. Every one of these issues shows the significance of the job and position of instructors in the training framework. It shows the responsibilities of mentors and this framework. Among these duties are the persistent improvement of educators and the individuals who are associated with the instructive framework by refreshing their insight and encounters and participation with different associations to enhance their capabilities (Hejaz, Pardakhtchi, & Shahpasand, 2009).
accomplishment of every education framework relies upon the advancement of instructors’ capacities. The Japanese additionally accept that capability of every framework relies upon the improvement of instructors’ aptitudes. Thusly, educators should refresh their insight as per changes of the world and their professional improvement is vital (Daneshpazhoo & Frzad, 2006). In this way, researchers have shown files for professional advancement of educators. As per the workplace of Improvement of Quality and Strategy, segments and guidelines of expert advancement of instructors ought to be set up in a manner that, in one hand empower educators to comprehend the various needs of learner in passionate, social and instructive territories and in other hand, show the educators’ capabilities in information, abilities and frame of mind measurements (Laei, 2012).

Numerous standards and lists are presented for proficient development of educators including proficient advancement benchmarks of the education. Liberra, Eyck, Doolan, Brady, and Aviss-Spedding (2004) proficient advancement models of instruction and training division partitioned proficient norms into two separate classes: substance and procedure. Content information, great educating, explore based and family association and learning condition remember for the previous gathering and the database, investment, assessment, structuring and educator learning remember for the last gathering. Division of instruction of Kentucky State presented training arranging and structuring, making learning climate, educating, appraisal and making relationship, assessment and learning, criticism, participation with associates and guardians, movement toward proficient advancement, content information and applying instructive innovation as expert improvement benchmarks for new instructors. They additionally showed numerous models for proficient improvement of educators, including topical information, advancement of HR, various students, placing and instructive technique, assessment, learning condition, unique needs, relations investment and expert improvement. Proficient improvement of teachers saw as a hotspot for refreshing information and aptitudes of instructors in various fields and gives a ground to educators’ attitude change and furthermore empowers instructors to reach to a degree of expert advancement. On the off chance that open doors for learning, information and ability are given in universities and classes, instructors’ exhibitions might be improved. Essential for satisfying this point and accomplishing instructive objective is assessing proficient advancement level of instructors and distinguishing their qualities and feeble focuses to reinforce their quality and improve their frail focuses. In this way, planning instruments to satisfy these objectives is fundamental. Along these lines, in one hand, noticing the significance of expert advancement and mindfulness with respect to the level of this expert improvement will assist us with recognizing the educators’ qualities and entanglements and in other hand, absence of a far reaching instrument for appraisal of the level of expert
improvement of instructors, instigated the specialist to structure a device for this reason (Khan & Begum, 2012).

It can be said that the ongoing survey can be utilized as an appropriate scale to evaluate the measure of the instructors’ expert improvement. To affirm legitimacy of their skills advancement, substance and structure legitimacy are utilized exploratory and corroborative factor analysis. For content legitimacy, teachers’ purposes of perspectives are utilized to settle disadvantages. For legitimacy of structure in initial step, exploratory factor analysis and strategy for principle segment are utilized. At long last, different elements defined: learning condition, fresh knowledge, planning, instructive improvement, involvement, and resources in the form of human and material progress and development. The fundamental goal of professional grooming of teachers is improvement of student performance, every segment with a certain goal in mind provides the baseline to satisfaction. Instructive planning encourages teaching faculty to deliver lectures sagaciously and thoroughly and inspires achievement of instructive purposes (Poorshafei, 2013). If the instructor can make a serene and positive condition, include learners in teaching process, give grounds to their improvement in various perceptions by their help, they can be persuaded for development. Concerning relevant facts, while educators know about essential ideas and particular source of data, they have the option to give learning experience to students and make these encounters significant. Participation with guardians and companions bring about advancement in performance. In like manner, use of instructive innovation in class will bring about their learning. Every one of these segments gives a ground to teachers’ advancement and improves their performance (Liberra et al., 2004). Consistently, for the sake of improving quality of teaching profession, a large number of finance are put resources into educator proficient advancement and expound administrative frameworks have been intended to guarantee that instructors participate in progressing proficient learning exercises. However scarcely any surveys show thorough proof of the effect of such exercises. In addition, PD genius grams frequently need clear and direct connections with class practice. The outcome is the thing that some have alluded to as a “proof void” with regards to recording the supported impacts of PD on either teaching or learner results (Avalos, 2011; Hill, Beisiegel, & Jacob, 2013; Kennedy, 2016).

2. RESEARCH OBJECTIVES
The purpose of the study was
   i. To ascertain perceptions of university teaching faculty about their professional development.
   ii. To find the correlation among factors of professional progress.
   iii. To explore the path analysis by structural equation modeling of professional development scale.
iv. To explore the construct reliability and validity of professional development and sub-dimensions.

v. To explore the discriminant validity and path coefficients of professional development and its sub-factors.

3. METHODOLOGY
This study was quantitative and descriptive in nature. The survey method was used to collect information from participants related to professional development. The main intention of survey study was scale development and validation. University teachers were participated in this survey research. There were six universities of Lahore where participants were selected. Three public and three private universities included in study. The various faculties were there. However, similar departments were chosen from diversify fields to draw the sample for study. The total sample was two hundred and seventy teachers. The return rate of the questionnaires was quite low. The study was concerned to scale development and validation regarding professional development of those personnel who were enjoying teaching field. Professional development scale was developed with the help of five dimensions for example; Learning Environment, Cooperation, Research, Performance Evaluation, and Human Resources. There are also many other factors which influence professional development of teachers. These factors were selected after reviewing the literature in detail. These are the crucial ingredients to measure the professional development because teaching field is connected with these elements to large extent. Scale was validated by field experts of different departments. They reviewed and gave their professional opinions. They highlighted the weak areas in scale and gave comments how it can be reduced for valid instrument. The questionnaire was finalized on five point likert type scale after modifying and inculcating the suggested changes by the experts. It was distributed among respondents and they were assured that this data would be used for research purposes and never be discussed with anyone. There were three items of each factor except evaluation. The detail of factors along themes is presented in table 1. The reliability of the scale was .91, which was statistical significant. This value shows the intensity and connectivity of items with each other. Data were gathered by putting hard efforts of researchers. It was hard task to collect data from university teachers due to which return rate was not hundred percent. The collected data were analyzed by descriptive and inferential statistical techniques. Different testes were applied to analyze the data. The structural equation modeling was developed by path analysis of the data. Construct reliability, validity, discriminant validity, and path coefficients were measured in analysis of the study.

4. RESULTS AND FINDINGS
The results and findings of the study are given below in detail.

Table 1. Mean and Standard Deviations of Professional Development of Teachers
Factors with themes | M | SD
--- | --- | ---
**Learning Environment**
encourages students | 4.80 | .402
healthy atmosphere | 4.24 | .605
skills and attitude | 4.58 | .719

**Cooperation**
cooperate with teachers | 4.78 | .418
Teachers parents meetings | 4.73 | .445
Consultations about issues | 4.47 | .722

**Research**
spends times for research | 4.20 | .402
Interaction with researchers | 4.58 | .779
Publications | 4.71 | .456

**Evaluation**
evaluate performance | 4.31 | .466
Use evaluation approaches | 4.62 | .488
Performance share with parents | 4.71 | .456
use evaluation results | 4.56 | .620

**Human resources**
Manage effectively | 4.76 | .432
Aware about human differences | 4.13 | .622
Intra and integrated approach | 4.11 | .316

Table shows the status of professional development of teachers in universities. There were five factors of professional development of teachers. They encourage students to learn effectively and take part in curricular and co-curricular activities. For this, healthy and sound minded environment is provided to them for better learning and social training. Teachers gain new knowledge with the passage of the time and develop necessary skills along positive attitude. They build strong positive relations by showing cooperation with each other in the faculty. They also conduct meetings with students and their parents and discuss their problems that how these can be solved and overcome. They prefer to solve problems with consultations of learners and faculty members. Research is the most vital element of professional development in teaching profession in all over the world. It is the part and parcel factor of PD. Teachers spend time on conducting research and show their interest in research activities. They attend research conferences and seminars and during these functions they interact with professional national and international researchers. These interactions provide facilities and opportunities to them to publish their research in good journals. They agree about evaluate their performance. They use different evaluation approaches to measure their teaching and professional performance. They also evaluate performance of students and share with parents in meetings. Learning evaluation of learners is used in the results. Teachers agreed strongly that they
manage human and material resources effectively in the profession. They use intra and integrated approaches and this thing makes their professional development more vigorous and pleasant.

Table 2. Correlation among Factors of Professional Development of Teachers

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Environment</td>
<td>1</td>
<td>.489**</td>
<td>.534**</td>
<td>.583**</td>
<td>.499**</td>
<td>.806**</td>
</tr>
<tr>
<td>Cooperation</td>
<td></td>
<td>1</td>
<td>.609**</td>
<td>.479**</td>
<td>.697**</td>
<td>.777**</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
<td>1</td>
<td>.835**</td>
<td>.540**</td>
<td>.774**</td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>.617**</td>
<td>.746**</td>
</tr>
<tr>
<td>Human Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>.806**</td>
</tr>
<tr>
<td>Professional Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Table indicates the relationship among dimensions of professional development of teachers. There were five factors and all were strongly related with each other. The highest association $r = .806^{**}$ of two factors were learning environment and human resources. It is concluded that there was strong significant correlation among factors of professional development of teaching faculty.

Figure 1 shows the structural equation modelling of teachers’ professional development in teaching. There were five sub-factors of professional development for example; research, learning environment, human resources, performance evaluation, and cooperative behavior with others. The primary variable was professional development of teachers. The main factor and its sub-factors were in blue boxes and Items of all dimensions were loaded in yellow color. It confirmed that there was strong path relationship of dimensions with variable; cooperation $r = .77$, evaluate the performance $r = .88$, human resources $r = .81$, learning environment of students $r = .75$, and research activities $r = .87$. All statements of sub-factors in yellow boxes almost had range from value .5 to above .9. It showed that items were
consistent and highly significant. It also indicated that all statements were important to measure the professional development of teaching faculty. Teachers were highly motivated to attend research activities because research events provided them opportunities to make commitments with teaching profession strong. It also helped them to introduce new activities in learning atmosphere for developing deep understanding of learners. They cooperated with other faculty members and solve problems with supportive behavior.

### Construct Reliability and Validity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Cronbach’s Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers Professional Development</td>
<td>0.877</td>
<td>0.893</td>
<td>0.910</td>
<td>0.674</td>
</tr>
<tr>
<td>Research</td>
<td>0.736</td>
<td>0.764</td>
<td>0.855</td>
<td>0.667</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>0.797</td>
<td>0.914</td>
<td>0.879</td>
<td>0.709</td>
</tr>
<tr>
<td>Human Resources</td>
<td>0.700</td>
<td>0.715</td>
<td>0.829</td>
<td>0.618</td>
</tr>
<tr>
<td>Evaluation</td>
<td>0.786</td>
<td>0.786</td>
<td>0.867</td>
<td>0.628</td>
</tr>
<tr>
<td>Cooperation</td>
<td>0.553</td>
<td>0.562</td>
<td>0.769</td>
<td>0.526</td>
</tr>
</tbody>
</table>

**Figure 2:** Construct reliability and validity

Figure 2 shows the construct reliability and validity. In path analysis, structural equation modeling measured construct reliability and validity in above figure. Reliability and validity were calculated by four different tests Cronbach’s Alpha, rho_A, Composite reliability, and average variance extracted. Reliability values in green color are showing the strong validness and highly significant constant and reliable tool of professional development of teachers. All values are above the threshold in this figure except red values. Thus, these values are above than marginal line due to which these numbers are in green color.

### f Square

<table>
<thead>
<tr>
<th>Metric</th>
<th>f Square</th>
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</thead>
<tbody>
<tr>
<td>Teachers Professional Development</td>
<td>0.881</td>
</tr>
<tr>
<td>Evaluation</td>
<td>0.406</td>
</tr>
<tr>
<td>Human Resources</td>
<td>2.425</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>0.604</td>
</tr>
<tr>
<td>Research</td>
<td>0.481</td>
</tr>
</tbody>
</table>

**Figure 3:** f square of professional development

This figure is related to f square of professional development variable and its sub-dimensions. All five factors are highly consistent and reliable to measure professional advancement of teaching personnel by indicating strong
correlational and significant values in green color. The strongest dimension was human resources which were managed by teachers in their field.

**Figure 4:** Discriminant validity
Above figure shows the discriminant validity of factors of professional development of teachers. Ahmad, Hussain, and Batool (2019) described that in discriminant validity each factor shows discrimination with others. The values of dimensions of PD were different from each other.

**Figure 5:** Discriminant validity
The discriminant validity of constructs is in red and green color in above figure. It shows that mostly dimensions are above the cut point .9 and only three pillars are below the standard line.
Figure 6: Path coefficients
Figure displays the results of bootstrapping by presenting $T$ and $P$ values. According to Hair (2014) $T$-value must be above than 1.96 and $p$ value should below than .05. Ahmad and Hussain (2019) also indicated that bootstrapping coefficients is adjusted by $t$ and $p$ values. However, all five factors cooperation $T = 4.25$, evaluate the performance $T = 2.59$, human resources $T = 7.64$, learning environment of students $T = 4.65$, and research $T = 3.32$, $P = .001$ of professional development are above the standard values. All five factors show positive, strong and significant values which are bigger than threshold. It means that goodness of fit exists. It is concluded that factors of professional development have strong association with each other.

5. DISCUSSION
This study was about scale construction of teachers’ professional development. It is the basic necessity of teachers to improve professionalism with the passage of the time. The scale was consisted of five factors (cooperation, performance evaluation, human resources, learning environment of students, and research) of professional development. It was observed that all factors showed consistency and connectivity with professional development in teaching field. The cooperation factor showed that how much they integrated with each other and shared ideas among themselves. They utilized human and material resources carefully and showed their interest in research activities. Different tests were applied to check the scale validness. It seemed that all dimensions of PD indicated relatedness with each other and main variable. These findings are consistent with the previous study which conducted by Poorshafei in (2013). It was explored in survey that it was an appropriate scale to evaluate the measure of the instructors’ expert improvement. To affirm legitimacy of their skills advancement, substance and structure legitimacy are utilized exploratory and corroborative factor analysis. For content legitimacy, teachers’ purposes of perspectives are utilized to settle disadvantages. For legitimacy of structure in initial step, exploratory factor analysis and strategy for principle segment are utilized. At long last, different elements defined: learning condition, fresh knowledge, planning, instructive
improvement, involvement, and resources in the form of human and material progress and development. The fundamental goal of professional grooming of teachers is improvement of student performance, every segment with a certain goal in mind provides the baseline to satisfaction. Instructive planning encourages teaching faculty to deliver lectures sagaciously and thoroughly and inspires achievement of instructive purposes.

Conclusions and Recommendations

The intention of the research was to ascertain perceptions of university faculty about their professional growth. The relationship among factors of professional development was also determined to check the closeness of dimensions. Path analysis for structural equation modeling of professional development scale was conducted. The construct reliability and validity of professional development scale and sub-dimensions were determined. Professional development scale was developed with the help of five dimensions for example; Learning Environment, Cooperation, Research, Performance Evaluation, and Human Resources. These are the crucial ingredients to measure the professional development because teaching field is connected with these elements to large extent. Scale was validated by field experts of different departments. The questionnaire was finalized on five point likert type scale after modifying and inculcating the suggested changes by the experts. The reliability of the scale was .91, which was statistical significant. This value shows the intensity and connectivity of items with each other. Teachers gain new knowledge with the passage of the time and develop necessary skills along positive attitude. They build strong positive relations by showing cooperation with each other in the faculty. They also conduct meetings with students and their parents and discuss their problems that how these can be solved and overcome. Research is the most vital element of professional development in teaching profession in all over the world. They also evaluate performance of students and share with parents in meetings. Teachers agreed strongly that they manage human and material resources effectively in the profession. There were five factors and all were strongly related with each other. The highest association $r = .806^*$ of two factors were learning environment and human resources. It is concluded that there was strong significant correlation among factors of professional development of teaching faculty. It confirmed that there was strong path relationship of dimensions with variables. It showed that items were consistent and highly significant. It also indicated that all statements were important to measure the professional development of teaching faculty. Teachers were highly motivated to attend research activities because research events provided them opportunities to made commitments with teaching profession strong. It is concluded that all five factors showed positive, strong and significant values which were bigger than threshold. It means that goodness of fit exists. The professional development scale is valid and reliable to measure the teaching
professionalism. This study was related to scale development and suitability in this context. This scale may be used on large sample for conducting a study on big canvas. In this study, university teachers participated, this scale may be validated by collecting data from school and college teachers. This scale measured only five dimensions of professional development, future researchers may add more relevant factors in scale to measure the professional development of teachers. More factors of PD may more suitable to draw a clear picture of teachers’ professionalism.

REFERENCES


