

EFFECT OF MENTORING PRACTICES ON TEACHERS' PROFESSIONAL DEVELOPMENT AT PRIMARY LEVEL IN THE PUNJAB

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Abstract

Present study aimed to investigate the effect of mentoring practices on teachers' professional development at primary level in Punjab. It was also identify difference in teachers' perception regarding mentoring practices and teachers' professionals on the basis of gender area, age, and experience, professional and academic qualifications. The research design was causal comparative and study was quantitative in nature. A survey was conducted to collect data. All school teachers' of public primary schools were the population of this study. Researcher used multistage random sampling technique for data collection. Eight districts in Punjab were selected at first stage. At second stage 306 markaz from selected districts were selected and five teachers from each markaz were selected randomly. The sample of this study was 1530 teachers. Reacher developed two questionnaires as mentoring practices and teachers' professional development. The reliability of Mentoring Practices Scale for teachers was .927 and the Professional Development Scale for teachers was .914. Both instruments were piloted to ensure validity and reliability. Validity was ensured by seeking opinions from 5 experts, and reliability was calculated by surveying 153 primary school teachers who were not part of the original sample. Researcher personally visited the selected markaz and primary schools. Results of this study concluded that there was no significant difference of teachers' perceptions regarding mentoring practices on the basis of gender. While, in terms of professional qualification there was significant difference found in teachers' perception. In professional development, there was no significant difference found in perception of teachers on the basis of gender and professional qualification. Findings concluded that teachers having academic qualification (M. Phil) emphasis more on PD as compared to other qualifications. The results also revealed that highly experienced and aged teachers' pay great importance towards professional development. So it is recommended that the school management should pay enough attention to teachers' professional skills. And there may be proper training programmes for the mentor to learn the skills of guiding and developing relationships. Professional development practices help teachers to become effective teachers. So, all teachers should be bound to join PD programme every year.

Keywords *Mentoring practices, professional development, Primary level*

Introduction

Mentoring plays a vital role in professional socialization within education, concentrating on critical areas to build the capacity of young professionals to take appropriate actions in their careers. No nation has reached substantial milestones without qualified and professional teachers. Mentoring prepares educators for their job responsibilities, and modern educational institutions use this process to enhance teachers' abilities in their instructional roles. It serves as a primary component of continuous professional development, aimed at improving teaching skills (Johnson, 2007). Mentoring is characterized as a long-term, face-to-face, dyadic relationship between an experienced supervisor and a student teacher, designed to support the mentee's professional, academic, and personal growth (Donaldson, Ensher, & Vallone, 2005).

Education is a constructive development for the nations' progress. Teachers' teaching skills increase the quality of education. It requires driving force for continuous development of educators in their professionalism and teachers' training enables the trainees' efficiency for their performance to a set of standards in teaching and students' learning outcomes (Murphy,

2006). (Ensher, Thomas, & Murphy, 2004). Education provides for an individual's total growth, allowing him to engage actively and effectively in society.

Professional development is a process to deal with the problem of teachers demotivation and despondent (Cruddas, 2005; Hughes, 2012). Mentoring practices can improve the quality of teaching and learning through teachers' professional development. This argument leads to the conclusion that a lack of mentoring practices as a professional development technique may be responsible for a decline in teacher retention, learner accomplishment, and effective teaching and learning. It is fair to conclude that the absence of mentoring methods can impede the implementation of successful professional growth (Cruddas, 2005).

Teachers' professional training and growth are critical components in supporting innovative and beneficial teaching. It is the key to improving the quality of education by providing suitable services at all levels. Teacher' professional development involves tutoring the teacher' professional skills and capabilities, appraising their technical knowledge, providing good quality teaching material and encouraging them in the application of modern teaching techniques in the classrooms. CPD framework launched by the School Education Department, Punjab has been playing a significant role in developing the above-said qualities of teachers through the mentoring methodology. This program was initially started in 2006 in phases for the professional development of PSTs in the province. Teachers' professional development at primary school level is considered prominent through assistant education officers in the Punjab as per the policy documents of vision 2025. As mentoring practices are Centre for professional development. By considering the need and importance of mentoring practices for professional development of primary school teachers, this research has been designed to investigate the effect of mentoring practices on teachers' professional development. The reason for this study to investigate the current effectiveness of mentoring practices for professional development of primary school teachers in the Punjab.

Literature Review

According to Zachary (2012) mentoring process to be one where the "mentor and mentee work together to achieve specific, mutually defined goals that focus on developing the mentee's skills, abilities, knowledge, and thinking; it is in every way a learning partnership (p. 3). The mentoring process transmits necessary professional knowledge and skills with nothing in return. Generally, it is often considered that mentoring process is limited to the professional development of novice teachers (Carr & Heman, 2004, & Harris 2005). The mentoring process moved towards transforming school cultures and it promotes opportunities for the professional development of new teachers (Gless, 2006). Odell and Huling (2010) abridged that mentoring process helps novice teachers to learn how to teach in accordance with professional standards. Most of the mentoring programme compromised support sessions by more experienced teacher to reform the teaching and teacher education and to retain talented teachers (Little, 2010).

Professional development has become an integral part of teacher education and training for last few decades. It has been cooperative in all fields of profession throughout the world. Continuous Professional Development is an academically enhanced process of teacher professionalism pedagogically and ethically (Rogan, 2004). It focuses on developing the knowledge, skills and applied experiences. The professional development programmes address the matters relating to quality issues in education. Robinson (2006) argued that professional development enhanced the skills and knowledge attained for both personal development and career advancement with specific objectives.

Several research studies were undertaken on mentorship and professional growth. Bresnahan (2011) revealed that mentoring had positive effect on the professional development of the teachers and enhanced their communication skills. This study also found that the mentoring process enhanced mentees' communication abilities and helped them communicate successfully with other students. Jaja (2010) indicated that new teachers and mentors were of same opinion that mentoring had helped to achieve the objectives of this programme. Gardiner (2008) emphasized that mentoring programs mostly benefit junior teachers, while senior teachers do not experience the same positive impact from such activities. It was observed that mentoring programs are particularly effective in supporting the induction of new teachers and promoting their continuous professional development. Numerous studies confirm this point of view that mentoring is an effective tool for the enhancement of teaching expertise and new teachers' acclimatization (Hansford et al., 2003; Hudson, 2013; See, 2014; Serrat, 2009). Gordon's (2019) study found that mentoring relationships between experienced teachers and student-teachers can benefit both teachers and students; by serving as mentors, teachers can enrich their professional lives by developing more intimate and rewarding relationships with student-teachers. Mentors help and observe the student-teachers grow and mature into accountable and responsible professional teachers. A study impact of gender, qualification and experience on mentoring practices in public sector universities of Islamabad conducted by Hina, Chaudhary, Nudrat & Arshad, (2017) revealed that there was no statistically significant difference related to mentoring practices on the basis of gender, academic qualification and professional qualification.

Research Questions

Following were the research questions of the study:

1. Is there any effect of mentoring practices on professional development of teachers at primary level in the Punjab?
2. Is there any effect of the factors of mentoring practices on the dimensions of teachers' professional at primary level in the Punjab?
3. Is there any difference of teachers' perceptions regarding mentoring practices on the basis of demographic variables (gender, area, age, experience, professional qualification, academic qualification) at primary level in the Punjab?
4. Is there any difference of teachers' perceptions regarding professional development on the basis of demographic variables (gender, area, age, experience, professional qualification, academic qualification) at primary level in the Punjab?

Material and Methods

Current study was quantitative in nature. Casual comparative research design was used to investigate the effect of mentoring practices on teachers' professional development at primary Level in the Punjab.

Population and Sample

According to School Census there were 36 districts of the Punjab and 3259 markaz of assistant education officers in the Punjab. Among them, 1481 were male markaz and 1778 were female markaz in the whole of the Punjab. As there were 36 districts in the Punjab and the total public primary schools were 36321. Out of these 36321 primary schools, total boys' schools were 17095 and 19226 girls' schools in the Punjab. In 36321 schools the total no of teachers were 142151, in which there were 58585 male teachers and 83565 female teachers in the Punjab.

Thus, the population of the study consisted of all the public sector primary school teachers of Punjab, Pakistan. In this study multi-stage random sampling technique will be

used to collect information from primary school teachers of the Punjab from selected districts, markaz and schools.

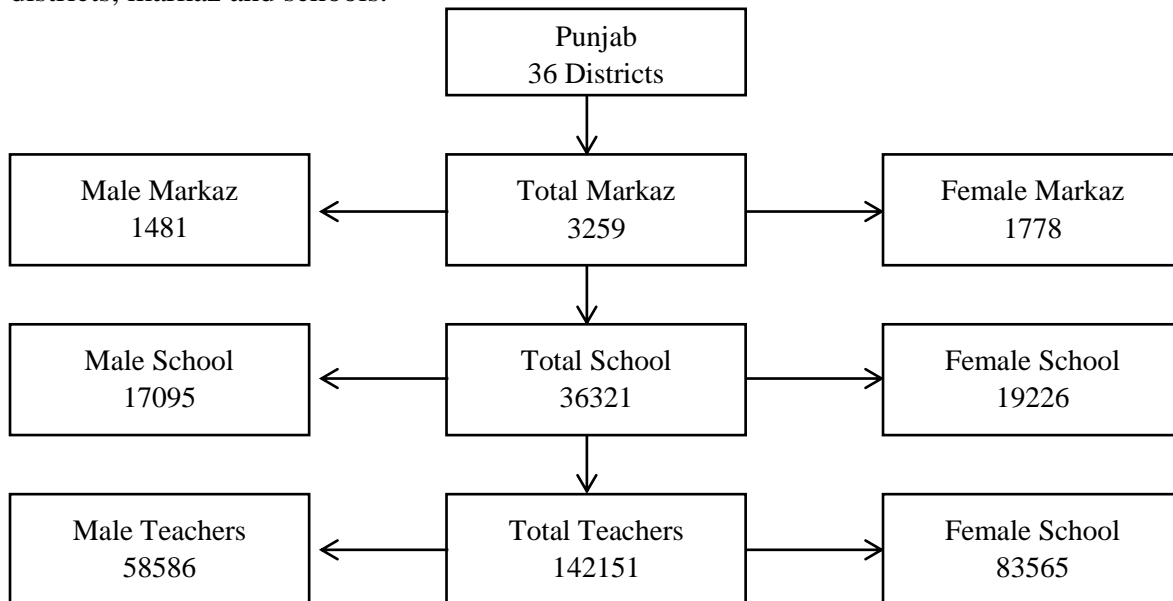


Figure 1: Summary of population of primary school teachers in the Punjab

By using cluster sampling Punjab province was categorized into three geographic zones, in which zone A= Northern, zone B = Central and in zone C= Southern. In zone A there were 4 districts (Attock, Chakwal, Jhelum, and Rawalpindi), in zone B there were 22 districts (Toba Tek Singh, Gujranwala, Gujrat, Mandi Bahauddin, Sahiwal, Bhakkar, Khushab, Narowal, Sialkot, Jhang Lahore, Nankana Sahib, Qasur, Sheikhupura, Hafizabad, Khanewal, Lodhran, Chiniot, Okara, Pakpattan, Mianwali, Faisalabad and Sargodha), and in zone C there were 9 districts (Bahawalnagar, Bahawalpur, Rahim Yar Khan, Dera Ghazi Khan, Layyah, Muzaffargarh, Rajanpur, Multan, and Vehari).

At the first stage, one district (Attock) from zone A, five districts (Chiniot, Faisalabad, Hafizabad, Okara, and Sheikhupura) from zone B and three districts (Bahawalnagar, Bahawalpur, and Multan) from zone C were selected by using proportionate stratified random sampling technique. In this way nine districts were constituted for data collection. In the second stage, 300 markaz from three zones of Punjab were selected, which consisted of 140 male and 160 female markaz. Out of 140 male markaz: 38 markaz from North Punjab, 87 markaz from Central Punjab, and 35 markaz from South Punjab were selected. While from 160 female markaz: 20 markaz from North Punjab, 100 markaz from Central Punjab, and 40 markaz from South Punjab were selected randomly. In the third stage, five teachers from each Markaz were selected randomly to make the total sample of 1500 primary school teachers. In the zone-wise selection a total of 700 male teachers were selected: 90 teachers from North Punjab, 435 teachers from Central Punjab, and 175 from south Punjab were selected randomly. While, a total of 800 female teachers were from three zones: in which 100 from North Punjab, 500 from Central Punjab, and 200 from South Punjab were selected.

Research Instruments

On the bases of related literature, two data collection tools (one for each research variable) comprised of self-report questions were developed. The participants of the study responded on a 5-point Likert type scale ranging from strongly disagree to 5= strongly agree for each item of these two instruments. There were two sections to each questionnaire in which the first part covered the demographic data (name, age, gender, academic qualification,

professional qualification, experience, and school), and the second part comprised statements according to the relevant variables. These two instruments were piloted tested to check the reliability and validity.

Mentoring Practices Scale for Teachers

The first instrument mentoring practices scale for teachers was developed by the researcher. It was a Likert type close ended instrument. There were thirty two items having five factors related to mentoring practices. They were instructional support, feedback process, career advice, to guide, and development of professional Attitude. The reliability of Mentoring Practices Scale for Teachers was .927

Professional Development Scale for Teachers

The second instrument “Professional Development Scale for Teachers” was also developed by the researcher. It was also close ended instrument. There were twenty eight items having five factors related to professional development. They are reflective instructional practices, knowledge updating, creative competency, communication development, and psychological empowerment. The reliability of the Professional Development Scale for Teachers was .914.

Data Collection

The survey on the large scale was conducted, after finalizing the instrument of the study. The survey package consisted of a letter from the researcher, duly signed by the dissertation supervisor and the Director, Institute of Education and Research, University of the Punjab, Lahore requesting the teacher-educators and their heads to facilitate the researcher in obtaining the data. The researcher, personally collected the data by visiting selected districts, markaz and public primary schools and successful in getting 1500 completed questionnaires from primary school teachers.

Data Analysis

The data collected through these instruments were tabulated and analyzed using the statistical software package SPSS (Statistical Package for Social Sciences, Version 20.0). In order to answer research questions, both descriptive and inferential statistics were used. To test the hypotheses, t-test, ANOVA (Analysis of Variance), and regression analysis were used. All the hypotheses were tested at the significance level of 0.05 ($\alpha = 0.05$).

Table 1

Regression coefficient of Mentoring Practices and Professional Development

Variables	B	SE	β	Sig.
Constant	24.94***	1.66		
Mentoring Practices	.658***	.014	.777	0.000
R ²	.61			

Note N=1500

*** $p \leq 0001$

The result showed the effect of mentoring practices on professional development of teachers. The R² value of .61 revealed that the predictor variable explained 61% variance in the outcome variable with $F(1, 1498) = 2284.9, P \leq .0001$. The finding revealed that mentoring practices positively predict professional development ($\beta = .777, p \leq .0001$).

To check for Normality, Linearity, and Outliers, *Normal Probability Plot (P-P) of the Regression Standardized Residual*, and the *Scatterplot* were inspected. These are presented below.

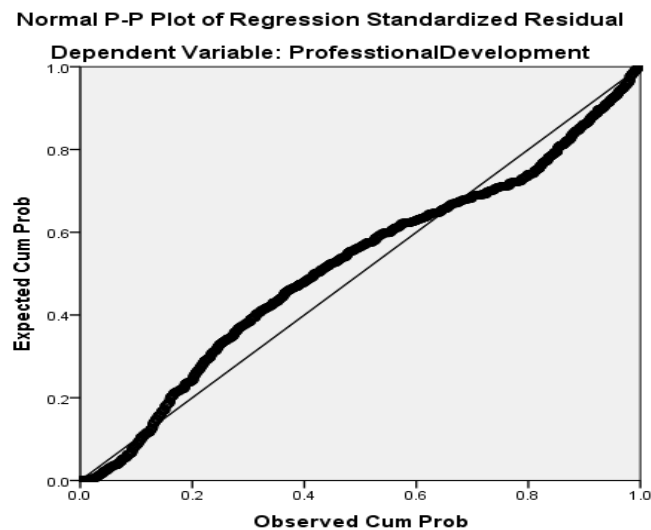


Figure 2: Normal Probability Plot (P-P) of the Regression Standardized Residual

It is obvious that the points in the normal P-P plot (see figure 4.1), “lie in a diagonal line from bottom left to top right, suggesting no major deviation from normality” (pallant, 2007, p. 156).

The scatterplot of the standardized residuals is shown below (see figure 4.2). According to Pallant (2007), “the residuals should be roughly rectangularly distributed, with most of the scores concentrated in the center (along the 0 point)” (p. 156), as is the case here.

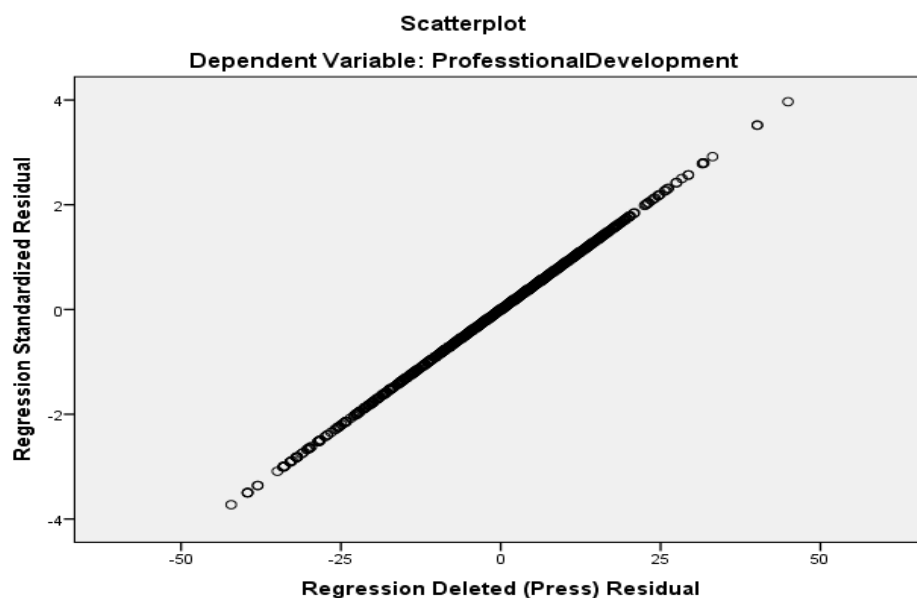


Figure 3: The scatterplot can also be used to detect the presence of outlier.

Perceptions regarding Mentoring Practices

Table 2

Comparison between male and female teachers' perceptions regarding mentoring practices in terms of their gender (t-test results by gender).

Variable	Gender	N	M	SD	t-value	df	Sig(2-tailed)
Instructional Support	Male	700	28.82	7.01	-3.957	1398.95	.000
	Female	800	30.17	6.13			

Feedback Process	Male	700	21.78	4.69	-1.113	1498	.266
	Female	800	22.05	4.56			
Career Advice	Male	700	21.11	5.10	-2.819	1498	.005
	Female	800	21.85	4.99			
To Guide	Male	700	19.47	3.38	4.513	1486.30	.000
	Female	800	18.58	4.22			
Development of professional Attitude	Male	700	26.47	4.88	.392	1498	.695
	Female	800	26.36	5.49			
Overall	Male	700	117.65	19.87	-1.234	1498	.214
Mentoring Practices	Female	800	119.01	22.30			

N=1500

Subscales towards mentoring practices, there was no significant mean difference between t-value at $p \leq 0.05$ level of significance in scores of male and female teachers' perception regarding mentoring practices in terms of remaining two sub scales, feedback process and development of professional attitude. Hence, it was reflected that significant difference was found in male and female teachers' perception regarding mentoring practices specific to instructional support, career advice and to guidance. The result revealed that there was no significance difference was found in the perceptions of male and female teachers' towards overall mentoring practices.

Table 3

Comparison between male and female teachers' perceptions regarding mentoring practices in terms of professional qualification (t-test results by professional qualification).

Variable	Professional Qualification	N	M	SD	t-value	df	Sig(2-tailed)
Instructional Support	B. Ed	1015	29.83	6.465	2.440	1498	.015
	M. Ed/ M. A Education	485	28.94	6.818			
Feedback Process	B. Ed	1015	22.13	4.478	2.564	1498	.010
	M. Ed/ M. A Education	485	21.48	4.899			
Career Advice	B. Ed	1015	21.85	5.042	3.799	1498	.000
	M. Ed/ M. A Education	485	20.97	5.016			
To Guide	B. Ed	1015	19.21	3.793	3.081	1498	.002
	M. Ed/ M. A Education	485	18.55	4.027			
Development of professional Attitude	B. Ed	1015	26.56	5.230	1.642	1498	.101
	M. Ed/ M. A Education	485	26.09	5.189			
Overall	B.Ed	1015	119.85	20.803	3.193	14.98	.001
Mentoring Practices	M.Ed/M. A Education	485	115.85	21.850			

N=1500

There was no significant mean difference existed between t-value at $p \leq 0.05$ level of significance in scores for professional qualification B.Ed/ M.Ed. regarding mentoring practices in terms of remaining one sub scale, development of professional attitude. Hence, it

was reflected that significant difference was found in professional qualification B.Ed/ M.Ed teachers' perception regarding mentoring practices in all sub scales except one sub scale development of professional attitude. The findings revealed that difference was found in the perception of primary teachers' about overall mentoring practices in terms of professional qualifications.

Table 4

Mean and standard deviation of male and female teachers' perceptions regarding mentoring practices in terms of age

Variables	Age	N	Mean	SD
Mentoring Practices	25-35 years	448	116.96	21.57
	36-45 years	341	118.40	21.65
	46-55 years	525	119.62	20.23
	56 and above	186	118.22	22.15
	Total	1500	118.37	21.21

Participants were divided into four groups according to their age (Group 1= 25-35 years, Group 2=36-45 years, Group 3=46-55 years, Group4= 56 and above).The mean scores of teachers having age group 3= 46-55 years was higher as compared to the mean scores of teachers having age group 1=25-35 years, group 2= 36-45 years, group 4=56 and above. This indicated that the teachers having age Group 3= 46-55 years believe more on mentoring practices as compared to other age groups.

Table 5

One-way analysis of variance summary table for teachers' mentoring practices in terms of age

Variables		Df	Sum of squares	Mean square	F	Sig
Instructional Support	Between groups	3	72.246	26.08	.600	.615
	Within groups	1496	65062.35	42.49		
	Total	1499	56140.60			
Feedback Process	Between groups	3	95.535	31.84	1.48	.216
	Within groups	1496	31994.02	21.38		
	Total	1499	32089.55			
Career Advice	Between groups	3	64.197	21.39	.837	.474
	Within groups	1496	38258.77	25.57		
	Total	1499	38322.97			
To Guide	Between groups	3	94.76	31.58	2.10	.098
	Within groups	1496	22482.22	15.02		
	Total	1499	22576.99			
Development of professional Attitude	Between groups	3	65.80	21.93	.805	.491
	Within groups	1496	40771.22	27.25		
	Total	1499	40837.02			

Results disclosed that there was statistically no significant difference at $p \leq 0.005$ level of significance in teachers' perception regarding mentoring practices on the bases of five sub scales (Instructional Support, Feedback Process, Career Advice, To Guide and Development of professional Attitude). Hence, it was concluded that there was no significant difference was found on teachers' perception regarding mentoring practices based on five sub scales scores for the four age groups.

Table 6

Mean and standard deviation of male and female teachers' perceptions regarding mentoring practices in terms of academic qualification.

Variables	Academic Qualification	N	Mean	SD
Mentoring Practices	B. A/ B. Sc	432	119.44	21.84
	M. A/ M. Sc	985	117.90	20.98
	M. Phil	80	118.05	21.90
	PhD	3	129.67	1.52
	Total	1500	118.37	21.21

Table 6 represents the mean scores for teachers' perception regarding overall mentoring practices with respect to their academic qualification. The mean scores of teachers having academic qualification PhD ($M = 129.67$, $SD = 1.52$) was higher as compared to the mean scores of teachers having academic qualification (B.A/ B.Sc., M.A / M.Sc., and M.Phil.). This indicated that the teachers having academic qualification PhD emphasizes more on mentoring practices as compared to other academic qualification groups.

Table 7

One-way analysis of variance summary table for teachers' mentoring practices in terms of their academic qualification

Variables		Df	Sum of squares	Mean square	F	Sig
Instructional Support	Between groups	3	176.048	58.68	1.351	.256
	Within groups	1494	64964.55	43.42		
	Total	1499	65140.60			
Feedback Process	Between groups	3	41.114	13.70	.640	.589
	Within groups	1494	32048.44	21.42		
	Total	1499	32098.55			
Career Advice	Between groups	3	24.49	8.166	.319	.812
	Within groups	1494	38298.47	25.601		
	Total	1499	37322.99			
To Guide	Between groups	3	20.59	6.865	.455	.714
	Within groups	1494	22556.39	15.07		
	Total	1499	22576.99			
Development of professional Attitude	Between groups	3	46	15.63	.573	.633
	Within groups	1494	40790.12	27.26		
	Total	1499	40837.02			

There was no significant difference at the $p \leq 0.05$ level of significance in teachers' perception regarding mentoring practices on the bases of five sub scales (Instructional Support, Feedback Process, Career Advice, To Guide and Development of professional Attitude). Thus, it was concluded that there was no significant difference was found on teachers' perception regarding mentoring practices based on five sub scales scores for the four groups of academic qualification.

Table 8

Mean and standard deviation of male and female teachers' perceptions regarding mentoring practices in terms of teaching experience.

Variables	Teaching Experience	N	Mean	SD
Mentoring practices	1-5 years	417	119.13	20.38
	6-10 years	380	118.26	21.74
	11-15 years	172	114.91	24.47
	16-20 years	498	118.40	20.34
	21 and above years	33	127.73	16.94
	Total	1500	11837	21.21

The mean scores of teachers having teaching experience 21 and above years ($M = 127.73$, $SD = 16.94$) was higher as compared to the mean scores of teachers having experience (Group 1= 1-5 years, Group 2 = 6-10 years, Group 3 =11-15 and Group 4 = years 16-20 years). It showed that teachers having teaching experience 21 and above emphasis more on mentoring practices as compared to teachers having teaching experience (Group 1= 1-5 years, Group 2=6-10 years, Group 3=11-15 and Group 4=years 16-20 years).

Table 9

One-way analysis of variance summary table for teachers' mentoring practices in terms of their teaching experience.

Variables		Df	Sum of squares	Mean square	F	Sig
Instructional Support	Between groups	4	545.45	136.36	3.15	0.14
	Within groups	1495	64595.14	43.20		
	Total	1499	65140.60			
Feedback Process	Between groups	4	92.54	23.13	1.08	.364
	Within groups	1495	31997.01	21.40		
	Total	1499	32089.55			
Career Advice	Between groups	4	213.32	53.33	2.09	.080
	Within groups	1495	38109.64	25.49		
	Total	1499	38322.97			
To Guide	Between groups	4	199	49.82	3.32	.010
	Within groups	1495	22377.70	14.96		
	Total	1499	22576.99			
Development of professional Attitude	Between groups	4	149.96	37.49	1.37	.239
	Within groups	1495	40687.06	27.21		
	Total	1499	40837.02			

A one way between groups analysis of variance was conducted to explore the effect of teaching experience on perceptions of teachers' mentoring practices on five sub scales. There was statistically significant difference in to guide at the $p \leq 0.005$ level of significance as compared to other five sub scales (Instructional Support, Feedback Process, Career Advice, and Development of professional Attitude). Moreover, it was concluded that there was significant difference was found in teaching experience of teachers' perception regarding mentoring practices specific to "to guide"

Perceptions regarding Professional Development

Table 10

Comparison between male and female teachers' perceptions regarding professional development in terms of their gender (t-test results by gender).

Variable	Gender	N	M	SD	t-value	df	Sig(2-tailed)
Reflective	Male	700	25.94	4.87	-.787	1498	.431
Instructional Practices	Female	800	26.15	5.43			
Knowledge	Male	700	18.47	3.82	2.31	1498	.021
Updating	Female	800	18.00	4.05			
Creative	Male	700	14.45	3.36	-.521	1498	.602
Competency	Female	800	14.55	3.49			
Communication	Male	700	22.10	4.57	1.77	1498	.076
Development	Female	800	21.65	5.03			
Psychological	Male	700	22.50	4.33	2.44	1498	0.14
Empowerment	Female	800	21.92	4.89			
Overall	Male	700	103.48	16.07	1.305	1493.	.192
Professional Development	Female	800	102.28	19.45		14	

An independent sample t-test was applied to compare the primary school teachers mean scores for the male and female teachers on five sub scales and overall towards professional development. Moreover, there is no significant mean difference between t-value at $p \leq 0.05$ level of significance in scores of male and female teachers' perceptions regarding professional development in terms of remaining four sub scales (reflective instructional practices, creative competency, communication development and psychological empowerment). It was reflected that significant difference was found in males and females teachers' perceptions regarding professional development specific to knowledge updating. Then, it was reflected that no meaning difference was found in the perception of males and females teachers' about overall professional development.

Table 11

Comparison between male and female teachers' perceptions regarding professional development in terms of professional qualification (t-test results by professional qualification)

Variable	Professional Qualifications	N	M	SD	t-value	df	Sig(2-tailed)
Reflective	B. Ed	1015	26.20	5.22	1.580	1498	.114
Instructional Practices	M. Ed/ M. A Education	485	25.75	5.07			
Knowledge	B. Ed	1015	18.33	3.93	1.481	1498	.139
Updating	M. Ed/ M. A Education	485	18.00	3.99			
Creative	B. Ed	1015	14.60	3.42	1.501	1498	.134
Competency	M. Ed/ M. A Education	485	14.32	3.45			
Communication	B. Ed	1015	21.92	4.87	.667	1498	.505
Development	M. Ed/ M. A Education	485	21.74	4.73			
Psychological	B. Ed	1015	22.21	4.75	.203	1498	.839
Empowerment	M. Ed/ M. A Education	485	22.16	4.42			
Overall	B. Ed	1015	103.26	18.06	1.301	1498	.194

Professional development M. Ed/ M. A Education 485 101.97 17.71

As table 11 indicated that there was no significant mean difference in scores for male and female teachers' perceptions regarding professional development based of five sub scales. Hence, it was reflected that no difference was found in the perception of primary teachers' about overall professional development in terms of professional qualifications.

Table 12

Mean and standard deviation of male and female teachers' perceptions regarding professional development in terms of academic qualification

Variables	Academic Qualification	N	Mean	SD
Professional Development	B. A/ B. Sc	432	103.07	18.14
	M. A/ M. Sc	985	102.69	17.96
	M. Phil	80	103.66	17.28
	Ph. D.	03	98.00	9.53
	Total	1500	102.84	17.95

The mean scores of teachers having academic qualification M.Phil. (M =103.66, SD = 17.28) was higher as compared to the mean scores of teachers having academic qualification (B.A/ B.Sc., M.A/ M.Sc. and PhD). This indicated that the teachers having academic qualification M.Phil. Emphases more on professional development as compared to other academic qualification groups.

Table 13

One-way analysis of variance summary table for teachers' professional development in terms of their academic qualification.

Variables		df	Sum of squares	Mean square	F	Sig
Reflective Instructional Practices	Between groups	3	43.37	14.45	.538	.656
	Within groups	1496	40199.25	26.87		
	Total	1499	40242.62			
Knowledge Updating	Between groups	3	28.47	9.49	.607	.611
	Within groups	1496	23407.48	15.64		
	Total	1499	23435.95			
Creative Competency	Between groups	3	8.09	2.69	.228	.877
	Within groups	1496	17688.80	11.82		
	Total	1499	17696.90			
Communication Development	Between groups	3	55.42	18.47	.792	.498
	Within groups	1496	34882.09	23.31		
	Total	1499	34937.52			
Psychological Empowerment	Between groups	3	38.85	12.95	.599	.616
	Within groups	1496	32367.69	21.63		
	Total	1499	32406.54			

A one way between groups analysis of variance was conducted to explore the effect of academic qualification on perceptions of teachers' professional development on five sub scales. Findings revealed that there was no significant difference at the $p \leq 0.005$ level of significance in teachers' perception regarding professional development on the bases of five sub scales. Hence, it was concluded that there was no significant difference was found on teachers' perceptions regarding professional development based on five sub scales scores for the four groups of academic qualification.

Table 14

Mean and standard deviation of male and female teachers' perceptions regarding professional development in terms of age.

Variables	Age	N	Mean	SD
Professional development	25-35 years	448	101.82	18.74
	36-45 years	341	101.92	19.08
	46-55 years	525	104.52	16.54
	56 and above	186	102.26	17.53
	Total	1500	102.84	17.95

Table 14 represents the mean scores for teachers' perception regarding overall professional development with respect to their age. The mean scores of teachers having age group 3= 46-55 years was higher as compared to the mean scores of teachers having age group 1=25-35 years, group 2= 36-45 years, group 4=56 and above. This indicated that the teachers having age Group 3= 46-55 years believe more on professional development as compared to other age groups.

Table 15

One-way analysis of variance summary table for teachers' professional development in terms of age.

Variables		Df	Sum of squares	Mean square	F	Sig
Reflective Instructional Practices	Between groups	3	102.59	34.19	1.275	.282
	Within groups	1496	40140.03	26.83		
	Total	1499	40242.62			
Knowledge Updating	Between groups	3	168.31	56.10	3.607	.013
	Within groups	1496	23267.64	15.55		
	Total	1499	23435.95			
Creative Competency	Between groups	3	88.33	29.44	2.501	.058
	Within groups	1496	17608.57	11.77		
	Total	1499	17696.90			
Communication Development	Between groups	3	173.37	57.79	2.487	.059
	Within groups	1496	34764.37	23.32		
	Total	1499	34937.52			
Psychological Empowerment	Between groups	3	138.65	46.21	2.143	.093
	Within groups	1496	32267.88	21.56		
	Total	1499	32406.54			

A one way between groups analysis of variance was conducted to explore the effect of age on perceptions of teachers' professional development on five sub scales. There was statistically significant difference at $p \leq 0.05$ level of significance in knowledge updating as compared to other sub scales (reflective instructional practices, creative competency, communication development, and psychological empowerment) t based on four age groups. Hence, it was reflected that significant difference was found in four age groups regarding professional development specific to knowledge updating. .

Table 16

Mean and standard deviation of male and female teachers' perceptions regarding professional development in terms of teaching experience.

Variables	Teaching Experience	N	Mean	SD
Professional	1-5 years	471	102.92	17.43

Development	6-10 years	380	103.12	17.74
	11-15 years	172	100.59	19.47
	16-20 years	498	102.92	18.00
	21 and above years	33	109.15	17.26
	Total	1500	102.84	17.95

The mean scores for teachers' perception regarding overall professional development in terms of teaching experience. The mean scores of teachers having teaching experience 21 and above years ($M = 109.15$, $SD = 17.26$) was higher as compared to the mean scores of teachers having experience (Group 1= 1-5 years, Group 2=6-10 years, Group 3=11-15 and Group 4=years 16-20 years). It showed that teachers having teaching experience 21 and above emphasis more on professional development as compared to teachers having teaching experience (Group 1= 1-5 years, Group 2=6-10 years, Group 3=11-15 and Group 4=years 16-20 years).

Table 17

One-way analysis of variance summary table for teachers' professional development in terms of teaching experience.

Variables		Df	Sum of squares	Mean square	F	Sig
Reflective Instructional Practices	Between groups	4	83.62	20.90	.778	.539
	Within groups	1495	40158.99	26.86		
	Total	1499	40242.62			
Knowledge Updating	Between groups	4	18.42	4.607	.294	.882
	Within groups	1495	23417.53	15.66		
	Total	1499	23435.95			
Creative Competency	Between groups	4	88.21	22.05	1.87	.113
	Within groups	1495	17608.68	11.77		
	Total	1499	17696.90			
Communication Development	Between groups	4	145.51	36.37	1.56	.182
	Within groups	1495	34792.01	23.27		
	Total	1499	34937.52			
Psychological Empowerment	Between groups	4	295.44	73.86	3.43	.008
	Within groups	1495	32111.10	21.47		
	Total	1499	32406.54			

A one way between groups analysis of variance was conducted to explore the effect of teaching experience on perceptions of teachers' professional development on five sub scales. Findings revealed that there was no significant difference at the $p \leq 0.05$ level of significance in teachers' perceptions regarding professional development on the bases of five sub scales (reflective instructional practices, creative competency, communication development and psychological empowerment). Hence, it was concluded that there was no significant difference was found on teachers' perceptions regarding professional development based on five sub scales scores for the five groups of teaching experience.

Overall Perception regarding Mentoring Practices and Professional Development

Table 18

Comparison between male and female teachers' perceptions regarding overall mentoring practices and professional development in terms of their gender (t-test results by gender).

Variable	Gender	N	M	SD	t-value	df	Sig(2-tailed)
Mentoring	Male	700	117.65	19.87	-1.234	1498	.214

Practices	Female	800	119.01	22.30			
Professional	Male	700	103.48	16.07	1.305	1493.14	.192
Development	Female	800	102.28	19.45			

N=1500

As table 18 revealed that there was no significant mean difference on mentoring practices with $t(1498) = -1.234, p = .214$. Findings shows that female teachers exhibited higher scores on mentoring practices ($M = 119.01, SD = 22.30$) compared to male teachers ($M = 117.65, SD = 19.87$). Result revealed that non-significant mean difference on professional development with $t(1493.14) = 1.305, p = .192$. Findings also revealed that male teachers exhibited higher scores on professional development ($M = 103.48, SD = 16.07$) as compared to female teachers ($M = 102.28, SD = 19.45$). So, the null hypothesis that “there is no significant difference between male and female teachers’ perceptions regarding overall mentoring practices and professional development based on gender” was retained.

Table 19

Comparison between male and female teachers’ perceptions regarding overall mentoring practices and professional development in terms of their professional qualification (t-test results by professional qualifications).

Variable	Professional Qualification	N	M	SD	t-value	df	Sig(2-tailed)
Mentoring Practices	B. Ed	1015	119.85	20.803	3.193	1498	.001
	M. Ed/ M. A Education	485	115.85	21.850			
Professional development	B. Ed	1015	103.26	18.06	1.301	1498	.194
	M. Ed/ M. A Education	485	101.97	17.71			

N=1500

As table 19 revealed that there was significant mean difference on mentoring practices with $t(1498) = 3.193, p = .001$. Findings shows that professional qualification B.Ed exhibited higher scores on mentoring practices ($M = 119.85, SD = 20.803$) compared to professional qualification M.Ed/M.A Education ($M = 115.85, SD = 21.850$). Result revealed that non-significant mean difference on professional development with $t(1498) = 1.301, p = .194$. In professional development, professional qualification B. Ed exhibited higher scores ($M = 103.26, SD = 18.06$) as compared to professional qualification M.Ed/M.A Education ($M = 101.97, SD = 17.71$). So, our null hypothesis is rejected and it is concluded that “there is significant mean difference between male and female teachers’ perceptions regarding overall mentoring practices and professional development based on professional qualification”.

Table 20

Comparison between male and female teachers’ perceptions regarding overall mentoring practices and professional development in terms of their academic qualification

Variables	Academic Qualification	N	Mean	SD	Df	F	Sig(2-tailed)
Mentoring Practices	B. A/ B.Sc.	432	119.44	21.84	3	.814	.486
	M. A/ M.Sc.	985	117.90	20.98	1496		
	M. Phil	80	118.05	21.90			
	PhD	3	129.67	1.52			
	Total	1500	118.37	21.21			
Professional development	B. A/ B.Sc.	432	103.07	18.147	3	.175	.913
	M. A/ M.Sc.	985	102.69	17.966	1496		
	M.Phil.	80	103.66	17.281			
	PhD	3	98.00	9.53			

Total	1500	102.84	17.959
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N=1500

A one –way between-group analysis of variance was conducted that there was no statistically significant difference on mentoring practices with $F (1496) = .814, p = .486$. Findings shows that academic qualification PhD exhibited higher scores on mentoring practices ($M = 129.67, SD = 1.52$) compared to other academic qualification. Result revealed that non-significant mean difference on professional development with $F (1496) = .175 p = .194$. In professional development, academic qualification M. Phil exhibited higher scores ($M=103.66, SD = 17.281$) as compared to other academic qualifications. So, the null hypothesis that “there is no significant difference between male and female teachers’ perceptions regarding overall mentoring practices and professional development based on academic qualification” was retained.

Table 21

Comparison between male and female teachers’ perceptions regarding overall mentoring practices and professional development in terms of their teaching experience.

Variables	Teaching Experience	N	Mean	SD	Df	F	Sig(2-tailed)
Mentoring Practices	1-5 years	417	119.13	20.38	4	2.898	.021
	6-10 years	380	118.26	21.74	1495		
	11-15 years	172	114.91	24.47			
	16-20 years	498	118.40	20.34			
	21 and above years	33	127.73	16.94			
	Total	1500	118.37	21.21			
Professional Development	1-5 years	417	102.92	17.43	4	1.72	.142
	6-10 years	380	103.12	17.74	1495		
	11-15 years	172	100.59	19.47			
	16-20 years	498	102.92	18.00			
	21 and above years	33	109.15	17.26			
	Total	1500	102.84	17.95			

N=1500

A one –way between-group analysis of variance was shown that teachers having teaching experience 21 and above years exhibited higher scores on mentoring practices ($M=127.73, SD=16.94$) compared to other teaching experience groups. Result revealed that non-significant mean difference on professional development with $F (1495) = 1.72 p = .142$. In professional development, teachers having teaching experience 21 and above years exhibited higher scores ($M = 109.15, SD = 17.26$) as compared to other teaching experience groups. So, our null hypothesis is rejected and it is concluded that “there is significant difference between male and female teachers’ perception regarding overall mentoring practices and professional development based on teaching experience”

Table 22

Comparison between male and female teachers’ perceptions regarding mentoring practices and professional development in terms of age.

Variables	Age	N	Mean	SD	Df	F	Sig(2-tailed)
Mentoring Practices	25-35 years	448	116.96	21.57	3	1.275	.282

Professional Development	36-45 years	341	118.40	21.65	1496		
	46-55 years	525	119.62	20.23			
	56 and above	186	118.22	22.15			
	Total	1500	118.37	21.21			
	25-35 years	448	101.82	18.74	3	2.375	.068
	36-45 years	341	101.92	19.08	1496		
	46-55 years	525	104.52	16.54			
	56 and above	186	102.26	17.53			
	Total	1500	102.84	17.95			

N=1500

A one –way between-group analysis of variance was conducted to explore the effect of overall mentoring practices on professional development with respect to their age. As table 22 exposed that there was no statistically significant difference on mentoring practices with $F(1496) = 1.275, p = .282$. Findings shows that teachers having age 46-55years exhibited higher scores on mentoring practices ($M=119.62, SD=20.23$) compared to other age groups. Result revealed that non-significant mean difference on professional development with $F(1496) = 2.375, p = .068$. In professional development, teachers having age 46-55 years exhibited higher scores ($M = 104.52, SD = 16.54$) as compared to other age groups. So, the null hypothesis that “there is no significant difference between male and female teachers’ perception regarding overall mentoring practices and professional development based on age” was retained.

Discussion

Findings of the study showed that there is strong positive correlation found between teachers mentoring practices and professional development. It was supported by research conducted by Bresnahan (2011) revealed that mentoring had positive effect on the professional development of the teachers and enhanced their communication skills. This study also showed that mentoring process improved the communication skills and helped the mentees in communicating effectively with students. The Centre for the Use of Research and Evidence in Education (CUREE) (2008) states that professional development is much more successful when mentoring is the core factor. It is argued here that mentoring has a significant impact on the professional development of educators (CUREE, 2008). The study of Jaja (2010) indicated that new teachers and mentors were of same opinion that mentoring had helped to achieve the objectives of this programme. The result of this study supports the results of Jaja’s study that professional development skills of the Primary School Teachers were enhanced through the mentoring process. The study conducted by the Gardiner (2008) also revealed that mentoring programme benefited the junior teachers but the senior teachers were not positively influenced by mentoring activities. The result of Gardiner study contrary to the results of the present study. Most international studies define mentoring as a process in which a more experienced teacher shares his/her expertise with another teacher who is less experienced to facilitate the latter’s adjustment to a new workplace (Anderson & Shannon, 1988; Trubowitz, 2004; Tareef, 2013; Villegas-Reimers, 2003). The data obtained in this

study demonstrates that teachers share this view as well. They believe that participation in mentoring programs facilitates new teachers' induction and enables their ongoing professional development. Numerous studies confirm this point of view that mentoring is an effective tool for the enhancement of teaching expertise and new teachers' acclimatization (Hansford et al., 2003; Hudson, 2013; See, 2014; Serrat, 2009). A study conducted by Gordon (2019) revealed that mentoring relationship between experience teacher and student-teacher can be beneficial to both the teachers and the students; by being mentors, teachers may be enriched professionally in terms of a more intimate and rewarding relationship with the student-teachers. Mentors help and observe the student-teachers grow and mature into accountable and responsible professional teachers. The results of Gordon (2019) study support the result of this study that experience teachers focuses more on mentoring practices as compared less experienced teachers. A study impact of gender, qualification and experience on mentoring practices in public sector universities of Islamabad conducted by Hina, Chaudhary, Nudrat & Arshad, (2017) revealed that there was no statistically significant difference related to mentoring practices on the basis of gender, academic qualification and professional qualification. However there was significant difference in mentoring practices on the basis of job experience. The data shows that the employees having experience from 4 to 6 years were more responsive towards the mentoring practices as compared to the employees having more than 6 years of experience or having less than 4 years of experience. The results of this study support the results of present research.

Conclusion

The present study was about the effect of mentoring practices on teachers' professional development of primary school teachers. One of the major findings depicted that there is strong positive correlation between mentoring practices and professional development of primary school teachers at Punjab. There was no significant difference of teachers' perceptions regarding mentoring practices on the basis of gender. While, in terms of professional qualification there was significant difference found in teachers' perception. The results also concluded that teachers having age 46 to 55 years believe more on mentoring practices. The findings of the mentoring practices also indicated that most highly qualified and experienced teachers having academic qualification (Ph. D) and teaching experience (21 and above years) emphasis more on it. It means that mentoring is a process by which a novice individual gets assistance from senior person. In professional development, there was no significant difference found in perception of teachers on the basis of gender and professional qualification. Findings concluded that teachers having academic qualification (M. Phil) emphasis more on Ph.D. as compared to other qualifications. The results also discovered that highly experienced and aged teachers' pay great importance towards professional development.

Recommendations

On the bases of major findings and conclusions, following recommendations are made:

1. Mentoring plays a vital role in integrating new employees into the business. As a result, this problem may receive special attention. For this aim, the school may assign any senior teacher to supervise and train the new entrant in everyday professional responsibilities. If the school administration has any financial difficulties in selecting a particular individual for this reason. Then any senior instructor may be assigned this work as a special assignment. The mentor may be rewarded with a diploma, acknowledgment, or time off from ordinary duties.
2. Mentoring services for primary school teachers, including training, research, monitoring, and assessment, have seen significant growth. A strong set of goals,

structures, and networking are essential components of policy commitment. The Directorate of Staff Development and the University Education Departments must develop a comprehensive and well-connected mentoring strategy for implementation.

3. There may be proper training programmes for the mentor to learn the skills of guiding and developing relationships.
4. The school management should pay enough attention to teachers' professional skills.
5. Professional development practices help teachers to become effective teachers. So, all teachers should be bound to join PD programme every year.

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