



Research Article

DEMAND AND SUPPLY ANALYSIS OF TEACHER EDUCATION INSTITUTIONS IN PREPARATION OF TEACHERS FOR THE WORKPLACE

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Abstract

To fill the gap between demand and supply of teachers in context of teaching and professional skills is dire need of the globe hence present study was aimed to explore teacher's professional development status with reference to supply and demand of teaching and professional skills. Survey was conducted to collect data by using self-developed questionnaire. All the school educators working in the government high schools who got B.Ed-Honors degree from any teacher education institution as a regular student from 2014 to 2018 were the population. A sample of 400 out of which 200 male and 200 female teacher educators were participated in this study. Findings showed that there was a significant difference between demand and supply of teachers in terms of teaching and professional skills. Teacher education institutions were found not effective in supply of skilled and professional teachers to the market. Assessment, classroom management, and pedagogical along with content knowledge skills, were to be considered essential and demanding. Long terms practice teaching was recommended in order to master these skills.

Key words: Teaching skills, Teacher Education Institutions, demand and supply

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Introduction

Education in broader sense is way to transmit norms, culture and values from one generation to another. Generally, education is formal process for transmission custom, knowledge, skills from generation to generation and teacher is person who develops and shapes this whole process of education. The development of this adaptive leader must be priority of all nations. Teaching is backbone of all professions and teachers are pillars in nation building, so they are training with great professional attitude. Preparation phase implies dedication, commitment, skills for continuous development of teachers Arshad, *et al.*, 2014).

All societies required highly skilled teachers for quality education and empirical evidences prove that survival of education system revolves around its teachers (Commission on National Education, 1959; National Education Policy 1998-2010). Bennet (2000) highlighted that teacher education must be dynamic so that it may be able to keep proper pace in digital arena which demand abrupt change. Panning of teacher education programs could be done in such way so that it should be able to develop sophisticated, broad minded, innovative and creative but kind with students. Florian and Rouse (2010) emphasized that aim of teacher education is to prepare teacher who are capable to take individual and collective responsibility for students learning and participation. Quality of education depends upon quality of environment curriculum and most importantly teachers. Quality instructions are delivered by quality teachers so these instructions have close approximation with

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appropriate input, the process and output of teacher education programs. Innovative method should be adaptive to impart teacher training so that prospective teachers may be able to deliver properly in field.

Shah (2003) explicated that effective teacher education programs develop teachers as philosopher, constructor and moral stewards. These programs develop professional commitment, update knowledge, dispositions and skills. Teachers have self-constructed knowledge which is culturally acceptable and value system shows great concern for students. Teachers are able to know that how people learn and grow; show skills which align acquired and desired level of competence, their practice is reflection of accountability, action and philosophy.

Teachers are responsible for improvement in teacher education program. Nietfeld and Cao (2003) assert that teacher education programs have aimed to focus on pedagogical skills and change in student's belief. Williams & Alawiye (2001) expressed two basic aspects of effective teachers i.e. basic knowledge about teaching and ability to teach in different time constraint. Students learning will be higher if teachers are well equipped with, knowledge, skills and dispositions (Govt. of Pakistan, 1972). Teacher must understand other, know art of communication and have ability to learn from life experiences. Effective training is surety for teachers' effectiveness. Classroom routine and attitude of teacher must be observed for evaluation of instructions. Teacher's performance revolves around skills, knowledge and attitude they have so effective training and professional teacher education is inevitable (Hawkey, 1998).

Pre-service teacher education aimed to groom prospective teacher to make then capable to face challenges at workplace (Gravett *et al.*, 2011). Best strategies and practices by developing skills, dispositions and imparting knowledge must be exploited by the teachers to meet challenges in the field. Best abilities are required by the teachers to meet needs of students and teaching profession.

Sharma (2000) highlighted that well trained teachers can play effective role in teaching learning process. Therefore, it is the responsibility of teacher education programs to prepare prospective teachers accordingly. Therefore teacher education is an experienced phenomena which transform raw behavior of the prospective teachers into professional behavior, so training must boot specific and useful behavior of the future teachers. Professional efficiency and school attractiveness is enhanced by professional skills and positive attitude of teachers. Huge responsibility falls on teacher training institutions in Pakistan to developed well-trained teachers. These training institutions should work in collaboration to develop professional skills and dispositions among prospective teachers.

Yaday (2011) expressed that teacher education enhance professional knowledge, attitude and skills which play major role work life of the teachers, hence it's a significant and specialized part of education which involves systematic development of the teachers. According to staley (2005) teacher training transforms behavior of prospective teachers in such a way that teacher exhibit professional skills, competency knowledge properly at work place.

There are various methods to access effectiveness and quality of teacher education programs. Cao and Nietfeld (2005) investigated that when teacher focus on instructional

goals, needs of the students, content sequencing, material, teaching strategies, curriculum issues, pre and post assessment then program will be highly effective. Gradual follow ups after training are useful for professional development of teachers. Quality of training may be ensured keeping in view management skills and instructional method by regular monitoring of principle and senior teachers (UNESCO, 2006).

According to Moore (2004) teacher training revolve around lesson planning, classroom management, monitoring of students achievement. Farooq and Shahzadi (2006) quote Andrew that internalization of skills and knowledge make teachers capable to use them properly as per need. Moon, Mayes and Hutchinson (2004) indicated there are three triggering factors for student's achievement i.e. classroom climate, professional characteristics and teaching skills.

McBer (2000) investigated that teacher must show high professional skills pedagogy, lesson planning, classroom management, resource management, time management, challenging and appropriate homework and assessment techniques. Soon (2004) found that the skills of graduates of Postgraduate Teaching Course (PGD) in Malaysia in developing the tests and making students' report need to be upgraded. Khan (2004) expressed about pre-service teacher education that this training have many loopholes with reference to curriculum and instructions.

Keeping in view quality indicators there are two important factors for continuous evaluation. Firstly prospective teachers must be capable to address individual differences and cater needs of all students. Secondly, frequent change is required in attitude and behavior. Shahid (2007) stated that excellence in teaching and commitment is attained by effective pre-service teacher education programs.

McGuinness (1993) criticized that there many flaws in current teacher education program. Tubbs (2014) complained that teaching practice is not getting proper attention by teachers; meanwhile teacher education in Pakistan is also not up to the mark. Teachers do not have proper skills to play their role effectively and concerned constituencies are continuously criticizing teacher education. Quality of teacher education is continuously being compromised whereas quantitative expansion got momentum gradually.

As per current scenario of teacher education in Pakistan, the National Education Policy: 1998-2010 observes: "The qualitative dimension of teacher education program has received marginal attention resulting in mass production of teachers with shallow understanding of both the content and methodology of education" (Government of Pakistan, 1998). UNESCO published a report about teacher education in Pakistan points out that "absence of quality has to be tackled urgently in a context where teacher-learner interactions are mediated by a supportive management, as well as by an enabling policy environment" (UNESCO, 2006). Currently teacher education in Pakistan needs serious reforms to ensure quality. Therefore, a little effort was made to evaluate the effectiveness of teacher training institute in developing, training and inculcating professional skills in prospective teachers.

Around the globe wide range of reforms are undertaking with reference to instructions, assessment, and curriculum in order to make teachers competent for workplace. What kind of skills that prospective teachers actually have and what kind of skills they need to perform their role in this global arena? This leads to the question what teacher preparation programs

are needed to prepare teachers who are ready to teach in their classroom. Therefore, this study was designed to evaluate the effectiveness of teacher training institution in preparation of teachers for workplace: demand and supply analysis. The objectives of the study were:

- Explore the perceptions of school educators about the extent to which teacher preparation institutions met their expectations in developing different teaching and professional skills (Supply Analysis).
- Compare the perceptions of male and female school educators about the extent to which teacher preparation institutions met their expectations in developing different teaching and professional skills (Supply Analysis in terms of gender).
- Measure the sort of teaching and professional skills level do school educators themselves rate important for demand of workplace (Demand Analysis).
- Compare the sort of teaching and professional skills level do male and female school educators themselves rate important for demand of workplace (Demand Analysis in terms of gender).

METHODOLOGY

The research design of a study outlines the basic approach that researcher used to answer the research question. Quantitative research uses a fixed design that organizes in advance the research question and a detailed method of data collection and analysis. The present study was descriptive in nature. As narrated by Gay (2000), typical descriptive studies are concerned with the assessment of attitudes, opinions, demographic information, conditions and procedures.

Population and Sampling

As the researcher was interested to seek information to pursue answers of the above mentioned research questions from the male and female teacher educators serving in government high schools. Therefore, all the school educators working in the government high schools who got their B.Ed-Honors degree from any of teacher education institution on regular bases from 2014 to 2018, were considered as population. To select the respondent, 280 government high schools out of which 137 boys and 143 girls' schools, were conveniently taken. From each of the schools all the teacher educators who have passed B.Ed-Honors from any teacher education institution on regular basis from 2014 to 2018 were included in the sample size. To overcome the fear of unequal participation of male and female school educators' data of 400 school educators 200 male and 200 female school educators were included for data analysis purpose.

Research Instrument

The study was descriptive, therefore, the researcher deems it necessary to develop questionnaire as research instrument. Questionnaire was developed after reviewing the literature on teachers' teaching and professional skills, course objectives of B.Ed-Honors programs, and with the help of supervisor. A questionnaire have three sections, in first section some demographic information were solicited about the sex, professional qualification and year of passing B.Ed, second section is containing sixty five items under the eight heading of different teaching and professional skills that are mentioned below in the table-1. The responses on the this part of questionnaire were attributed on a continuum of "strongly agree", "agree", "neutral", "disagree" and "strongly disagree" with scoring of 5, 4,

3, 2, and 1 respectively. In third section school educators are requested to rate the skill level which they were considered important and demanding for effective teaching and success at the workplace.

The responses on the this section were attributed on a continuum of “very demand of the work place”, “demand of the work place”, “slightly demand of the work place”, and “not at all the demand of the work place” with scoring of 4, 3, 2, and 1 respectively. Before collecting the actual data the researcher carried out a pilot study to ensure the reliability and quality of the questionnaire. For this 30 school educators were taken for pilot testing.

Data of these questionnaires were put into SPSS. Split half method was used to measure the internal consistency of the questionnaire and it was found a reasonable internal consistency with Cronbach alpha value of 0.79. Researcher therefore proceed to do further analysis to answer the research questions.

Table-1

Number of items under different Teaching and Professional Skills

Sr.	Teacher and Professional Skills	Frequency of Items
1	Pedagogical Skill	10
2	Lesson Planning Skill	8
3	Classroom Management Skill	10
4	Motivational Skill	7
5	Interpersonal Relationship Skill	7
6	Communication and Presentation Skill	8
7	Assessment Skill	9
8	School Record Maintain Skill	6
Total		65

To get more authentic and valid response, data were collected using two ways i-e researcher personally visited the most of the schools and questionnaire from school educators from far areas, some of my friends and colleagues were helped out the researcher. Data analyzed using inferential and descriptive statistic. Statistical Package for Social Sciences (SPSS) has been used for data analysis. Collected data were organized, tabulated and analyzed through simple percentage was used to the demand analysis, apply Chi Square for supply analysis and apply t-test for comparison the difference between two set of scores of males and females.

Analysis and Interpretation of Data

To explore the perceptions of school educators about the extent to which teacher education institutions met their expectations in developing different teaching and professional skills (Supply Analysis), Chi-square was used as mentioned table-2

Table-2

Effectiveness in Development of Skill

Skill Types	F	SA	A	N	DA	SDA	Total	χ^2
Lesson Planning	F _o	94	90	68	72	76	400	19.52*
	F _e	80	80	80	80	80	400	
Classroom Management	F _o	76	72	78	85	89	400	4.80
	F _e	80	80	80	80	80	400	
School Record Maintain	F _o	73	76	80	86	89	404	6.93
	F _e	80	80	80	80	80	400	
Motivational	F _o	75	82	77	90	76	400	5.26
	F _e	80	80	80	80	80	400	
Interpersonal Relationship	F _o	76	80	78	84	82	400	1.61
	F _e	80	80	80	80	80	400	
Assessment	F _o	78	69	75	90	88	400	15.74*
	F _e	80	80	80	80	80	400	
Pedagogical	F _o	83	76	74	89	78	400	5.72
	F _e	80	80	80	80	80	400	
Communication and Presentation	F _o	93	91	73	72	71	400	17.14*
	F _e	80	80	80	80	80	400	

*significant, df = 4, α = 0.05

Table-2 depicted that the values of χ^2 (calculated) in lesson planning, assessment and communication & presentation skills were found to be 19.52, 15.74 and 17.14 respectively are greater than the value of χ^2 (tabulated) 9.488. The result in these skills is significant at 0.05 level, therefore, it can be inferred that the majority of school educators believed that the teacher education institution from wherein they got B.Ed-Honours developed the skills such as lesson planning, assessment and communication & presentation skill effectively.

On another side the table shows that that the values of χ^2 (calculated) found in the skills such as classroom management, school record maintain, motivational, interpersonal relationship and pedagogy were found to be 4.80, 6.93, 5.26, 1.61, and 5.72 less than the value of χ^2 (tabulated) 9.488. Thus the result of these skills is not significant at 0.05 level, which means the bulk of respondents disagreed with the contribution of teacher education institutions with the development of above-mentioned skills effectively.

To compare the perceptions of male and female school educators about the extent to which teacher education institutions met their expectations in developing different teaching and professional skills (Supply Analysis in terms of gender), the t-test was used as shown in table-3.

Table-3

Gender Difference regarding the Effectiveness in Development of Skill

Skill Types	Gender	N	Mean	SD	SEM	T
Lesson Planning	Male	200	36.49	5.03	0.49	0.82
	Female	200	36.08	4.85		
Classroom Management	Male	200	26.48	10.16	1.01	2.04
	Female	200	24.41	9.99		
School Record Maintain	Male	200	18.45	9.41	0.81	2.78
	Female	200	20.72	6.67		
Motivational	Male	200	24.8	4.85	0.42	2.17
	Female	200	25.73	5.43		
Interpersonal Relationship	Male	200	24.01	6.15	0.64	2.36
	Female	200	22.48	6.76		
Assessment	Male	200	27.38	9.7	0.95	1.11
	Female	200	28.44	9.48		
Pedagogical	Male	200	36.57	6.66	0.59	3.44
	Female	200	34.53	5.09		
Communication and Presentation	Male	200	23.47	9.54	0.93	0.94
	Female	200	24.34	9.07		

If $t > 1.96$ significant difference at 0.05 level

Table-3 indicated that the calculated value of t was found in lesson planning, assessment, and communication & presentation skills to be 0.82, 1.11, and 0.94 respectively are less than tabulated value 1.96. Therefore, in these skills significant gender difference was not found at the 0.05 level. Hence the result indicates both male and female school educators agreed that teacher education institutions from wherein they got B.Ed-Honors are effectively developing these skills.

On the other hand the calculated value of t in classroom management, maintaining of the school record, motivational, interpersonal, relationship, and pedagogical skills were found to be 2.04, 2.78, 2.17, 2.36, and 3.44 respectively are greater than tabulated value i-e 1.96. Therefore, in these types of skills a significant gender difference was reported at 0.05 level. It can be said that as compared with female school educators, male school educators believed that teacher training institutions from wherein they got B.Ed-Honors degree was effectively developed classroom management, maintaining of school record, motivational, interpersonal, relationship, and pedagogical skills.

To measure the sort of teaching and professional skill level, do school educators themselves rate important for demand of workplace (Demand Analysis), mean score and rank order

process was used as given in table-4

Table-4

Mean Rating of School Educators about the Demand level of Teaching and Professional Skills at Workplace

Skills Types	Very Demand	Demand	Slight Demand	No Demand	Total	Mean Rating	Ranking
Lesson Planning	137	112	94	57	400	114	7
Classroom Management	202	137	43	18	400	127	3
School Record Management	107	89	93	111	400	96	15
Motivational	126	108	97	69	400	110	10
Interpersonal Relationship	163	115	79	43	400	119	5
Assessment	218	110	45	27	400	124	4
Pedagogical	222	134	27	17	400	128	2
Communication and Presentation	197	159	31	13	400	129	1
Selection and use of AVAids	119	111	89	81	400	106	11
Pedagogical Knowledge	150	116	70	64	400	112	8
Writing	124	100	88	88	400	104	12
Time Management	141	103	90	66	400	111	9
Critical Thinking	91	87	117	105	400	98	14
Computer	67	121	109	103	400	99	13
Leadership	143	137	69	51	400	116	6

Table 4 shows the sort of teaching and professional skills that school educators themselves rated important for the demand of their workplace. School educators rated communication and presentation skills is very important for effective teaching and its demand for the workplace being a successful teacher is ranked first. Similarly pedagogical, classroom management, assessment, and interpersonal relationship skills are ranked as 2nd, 3rd, 4th, and 5th respectively. These are the topmost five skills that are essential and demanding from the school educators needs to be developed effectively in prospective teachers. On the other hand less demanding skills as rated by school educators are found to be school record management, critical thinking, computer, writing and selection and use of A.V.Aids skills. To compare the sort of teaching and professional skills level do male and female school

educators themselves rate important for demand of workplace (Demand Analysis in terms of gender), mean score and rank order process was used as given in table-5

Table-5:

Gender wise Comparison of Demand level of Teaching and Professional Skills at Workplace

Skills Types	Gender	Very Demand	Demand	Slight Demand	No Demand	Total	Male Rating	Female Rating	Male Ranking	Female Ranking
Lesson Planning	Male	42	54	67	37	200	54		8	
	Female	49	47	63	41	200		53		10
Classroom Management	Male	83	69	31	17	200	61		4	
	Female	92	63	33	12	200		63		3
School Record Management	Male	53	45	47	55	200	48		11	
	Female	41	39	67	53	200		49		12
Motivational	Male	66	74	36	24	200	59		6	
	Female	69	77	35	19	200		60		6
Interpersonal Relationship	Male	39	56	62	43	200	52		10	
	Female	41	52	59	48	200		51		11
Assessment	Male	74	68	47	11	200	63		2	
	Female	81	65	45	9	200		64		2
Pedagogical	Male	97	56	33	14	200	62		3	
	Female	89	63	31	17	200		61		4.5
Communication and Presentation	Male	104	81	12	3	200	66		1	
	Female	117	72	7	4	200		65		1
Selection and use of A.V.Aids	Male	31	39	66	64	200	45		12.5	
	Female	43	41	50	66	200		45		13
Pedagogical Knowledge	Male	59	71	49	21	200	60		5	
	Female	57	79	46	18	200		61		4.5
Written	Male	44	57	63	36	200	55		9	
	Female	54	66	42	38	200		54		9
Time Management	Male	43	41	50	66	200	45		12.5	
	Female	80	64	33	23	200		59		7
Critical Thinking	Male	25	34	58	83	200	39		14	
	Female	18	29	37	116	200		28		14
Computer	Male	27	39	44	90	200	37		15	
	Female	19	23	37	121	200		26		15
Leadership	Male	63	59	48	30	200	57		7	
	Female	52	61	56	31	200		56		8

Table 5 shows the sort of teaching and professional skills male and female school educators themselves rated important for the demand of the workplace. Both male and female school educators rated communication and presentation skills is very important for effective teaching and its demand for the workplace being a successful teacher is ranked as 1st.

Similarly both male and female ranked assessment, classroom management, and pedagogical along with content knowledge skills are ranked as 2nd, 3rd, 4th, and 5th respectively. These are the topmost five skills that are essential and demanding from both the sexes as needs to be developed effectively in prospective teachers. On the other hand less demanding skills as rated by both male and female school educators are found to be computer, critical thinking, selection, and use of A.V.Aids along with time management skills. The rank of these skills are 15th, 14th, 13th respectively.

Conclusions and Recommendations

With regards to the hypothesis (supply analysis), it is concluded that the majority of school educators indicated that they had received good skill in lesson planning, students' assessment, and communication & presentation. Respondents agreed with that teacher training institutions are effective in developing lesson planning, students' assessments, and communication & presentation skills in prospective teachers. It is further concluded that respondent expressed dissatisfaction with the teachers training institution to develop classroom management skills, school record management skill, motivational skills, interpersonal relationship skills, and pedagogical skills while when they doing their B.Ed-Honors

It is concluded that both male and female school educators were also agreed with that the teacher education institutions from wherein they got B.Ed-Honors degree had effectively developed lesson planning skills, students' assessment skills and communication & presentation skills. However, teacher training institutions had not played their role in development of classroom management skills; school record management skills, motivational skills, interpersonal relationship skills, and pedagogical skills among school educators. Moreover, it is concluded that teacher training institution were found not effective in the supply of skilled and professional teachers to the market.

On the demand of the workplace side, it is concluded that communication and presentation skills is very important for effective teaching, and its demand for the workplace being a successful teacher is ranked first. Similarly pedagogical, classroom management, assessment and interpersonal relationship skills are ranked as 2nd, 3rd, 4th, and 5th respectively. These are the top most five skills that are essential and demanding from the school educators needs to be developed effectively in prospective teachers. On the other hand less demanding skills as rated by school educators are found to be school record management, critical thinking, computer, writing, and selection and use of A.V.Aids skills. Both male and female school educators also rated communication and presentation skills is very important for effective teaching and its demand for the workplace being a successful teacher is ranked as 1st. And similarly both male and female ranked assessment, classroom management, and pedagogical along with content knowledge skills are ranked as 2nd, 3rd, 4th and 5th respectively. These are the topmost five skills that are essential and demanding from both the sexes as needs to be developed effectively in prospective teachers. Therefore, it

would appear that school educators clearly felt these skills need to be mastered prior to entrance in the service i-e workplace. Teacher preparation courses and curriculum should be revisited, and are needed to be made more interactive, practical, more learner-centered and less examination-centered. Moreover, Practice teaching is best way to master these skills, it is therefore, recommended that the cooperative schools assume primary responsibility for the development of these skills during a practice teaching section. And continued collaboration from the teacher educators and their cooperation in this area is recommended in order to determine specific responsibility for developing demanding skills.

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