Development and Validation of Prospective Teachers' Teaching Attitude Scale (PTTAS)

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Abstract

The success in teaching profession depends upon the teachers' attitude towards it. A positive attitude leads to become an effective teacher and vice versa. Present study is an attempt to have an understanding of prospective teachers' attitude towards teaching profession and to develop a scale for measuring it. The sample of the study consisted of 1716 prospective teachers enrolled in Associate Degree in Education program at Government Colleges for Elementary Teachers across the Punjab Province in Pakistan. Five factors of attitude towards teaching profession were identified through focused group discussion, literature review and factor analysis. These factors were professional belief, professional association, compliance of rules and regulation, volunteerism and self-sufficiency. Internal consistency of the scale was calculated to determine the strength of the scale.

Keywords: Scale development, Attitude towards teaching profession, Attitude measurement.

Introduction

Teachers having positive attitude towards teaching play an important role in the effectiveness of teaching learning process. Moreover, the whole professional career of teachers, in one way or the other, depends upon their professional attitude. A teacher manages his/her profession according to attitudes. Positive attitudes always enable teachers to work hard and effectively. While negative or undesirable attitude creates unpleasant environment that may be harmful for the progress of any profession. Therefore, it is important to assign teaching job only to those teachers who have positive attitudes and the attitudes towards the profession should be determined before entering the profession or, at least, during the pre-service training. Davis and Rimm (2004) indicated that awareness of attitudes is fruitful for professional development. Human attitude is the pre- judged responses or considerations of experiences encountered by individuals in everyday life.

In general, attitude is a set of pre-gained instructions based on likings or disliking of anyone toward objects, ideas and beliefs existing in the environment (Mishra, 2003). Similarly, teaching attitude is individuals' mental state of feelings reinforced by their behaviors, manners and loyalty towards teaching profession ((Prasad Babu & Raju, 2013). Positive attitude and required qualification of the teachers are the basic and significant components of the educational system (Kavcar, 2005). In the same way, Swindoll (2012) and Abrham (2003), noted that attitudes are important than experiences because teachers' attitude affects the educational outcomes. Studying prospective teachers' attitudes is the most important issue (Mims, Scott-Little, Lower, Cassidy & Hestenes, 2008), as they are assumed to be potential teachers after the completion of their respective teacher training programs. There is a strong relationship between teachers' attitude and quality of education (Hussain, Ali, Khan, Ramzan & Qadeer, 2011). A teacher having positive attitude helps the students to bring the desired changes in their behavior. (Dockett & Perry, 2006; La paro, Siepak & Scott-Little, 2009).Teachers' attitudes towards their profession are generally interlinked with

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their moral and economical satisfaction, loyalty towards their job, acceptance of professional rules and interest in welfare of their students (Celikoz and Cetin, 2004).

Measurement of human attitudes is significant in the teaching and learning process and it can only be done by an careful method of gathering information about attitudes. Hogan and Smither (2001) stated that information is gathered through two methods i.e. observational methods and self-report methods, but self-report method is relatively better. Trivedi (2007) developed a scale for the measurement of attitude towards teaching profession. This scale focused on different components of teaching attitude viz. Professional Identification, Professional Commitment, knowledge regarding Code of Conduct, Interest in Profession and Professional Ethics that might be significantly correlated with the teachers' attitudes towards teaching profession and the performance of the students. In the same way, Teachers' Attitude Scale was developed by Loreman, Forlin, Umesh and Sharma (2007) this scale focused on age, sex, sociality, professional qualification and knowledge and training, interest in profession, level of confidence and teaching skills. Likewise, Sharbian (2012) developed a tool namely Questionnaire of Attitudes towards the Teaching Professions focusing on three aspects of teaching attitude i.e. Tendency, Appreciation and compliance. Moreover, a scale was developed by Smerci and Smerci (1999) to assess the attitudes of students of faculty of education towards teaching profession.

Another scale was developed by Erkus, Snli, Guven and Bagh (2000) to explore the attitudes of student-teacher. In the same way a scale namely Teacher Attitudes was developed to measure the attitudes of teachers towards teaching profession by Oral, (2004). Evrekli, Inel, Balim, and Kesercioglu (2009) conducted a study to validate the Scale of Constructivist Approach for Prospective Science Teachers. It was developed to assess the attitudes of Turkish Prospective teachers. Another scale was also developed to explore the attitude of teachers towards teaching profession by Trivedi, (2007). She also described the complete procedure of questionnaire development. Agnes (2013) also developed a tool to assess the attitude of Students from the Faculty of Education, Niger Delta University. The researcher focused of certain factors including variety of benefits, internal motives, and status of the profession, interpersonal influence and academic ability. The previously developed instruments for measuring attitudes of the prospective teachers towards teaching profession differ in content and configuration.

Identification of the factors that form teachers' attitudes towards teaching is significantly hypothetically and functionally important because it has never been examined before. For example, by identifying these subscales of attitudes viz. professional belief, professional association, compliance of rules & regulations, morality, volunteerism and self-sufficiency may help in precisely measuring teaching attitudes. It is observed that teaching beliefs remain dominant throughout the process that brings changes in students' attitude for further success (Raths, 2001). Talis (2009) noted that the professional beliefs of pre-service teachers are significant for the educational development.

Eidelson, Roy, Eidelson and Judy (2003) described that the cognitive and affective aspects are collectively termed as professional beliefs. These "beliefs" might affect the teachers' attitudes while performing in the class-rooms. Heather and Carey (2009) are also of the view that these beliefs help the prospective teachers to lead them for innovative ideas for better performance in the class-rooms. On the other hand, association of the teachers with their profession may be known as an indicator of their teaching attitude. Due to its effectiveness researchers decided to select "Morality" as a factor of attitude toward teaching. Previous studies or the scales hardly focused on prospective teachers' attitude towards teaching profession. Therefore, researchers have decided to develop a scale that assesses prospective teachers' attitude towards teaching profession. The study in hand is an attempt to

develop a scale that can explore the prospective teacher's attitudes towards teaching profession.

Methodology

Different methods are adopted to develop a scale for the measurement of concepts, hypotheses or paradigms like attitude. Two of such important methods are known by the names of their prescribers i.e. Thurston's method of scale construction (also known as method of equal appearing intervals) and Likert's method of scale construction (also known as method of summated ratings) (Trivedi, 2007). In the same way McGraw, Peter, Cacioppo and John (2001) reported that Likert method is also called summated ratings due to the summation of each item. The researcher followed Likert scale development method. Reason to follow this method is its acceptability, popularity and ease in use. As Oppenheim, 1996; Carno & Brewer, 1973; and Anderson (1988) indicated that Likert Scales are popular; its construction and use is less hard than Thrustan (1932) techniques. Moreover, psychologists, educationists' opinions were in the favor of Likert method. They suggested that this method is well-organized and effective for developing a reliable scale. Hassan & Sharigley (1984) also favored Likert method due to its effectiveness and high reliability. Participants were free to indicate their attitude, whether they strongly agree (SA), agree (A), agree to some extent (undecided or natural), disagree (DA) or strongly disagree (SD) with each statement.

Items Development and Experts Opinion

For the development of Prospective Teachers Teaching Attitudes Scale (PTTAS) eight to ten statements were constructed for each aspect of attitudes towards teaching profession. Suggestions of different authors, like Wang (1932), Thruston (1929), Likert (1932), Fowler (2009) were kept in mind while developing the items.

Initially 40 items based on the literature review finalized. Nine items were formed to explore the attitude about Professional Belief, eight items were to investigate attitude about Professional Association, nine items were to explore the attitude about Compliance of Rules & Regulations, eight items were formed to investigate Volunteerism and eight items were to search Self-Sufficiency. After the development of items, four experts examined content validity of these items. After the suggestions of experts seven items were removed. Then 33 items about attitudes towards teaching profession remained for try-out on of prospective teachers.

Data Collection

The population of the study comprised of all the students enrolled in Associate Degree in Education (ADE) being offered at Government Elementary Teachers Training Colleges (GCETs) in Punjab Province. There are thirty three Elementary Teachers Training Colleges in Punjab Province and 20 colleges have launched the program "Associate Degree in Education (ADE)". There were 1716 prospective teachers enrolled in this program, including 440 males and 1276 females, in all the 20 Elementary Teachers Training Colleges offering Associate Degree in Education. The researcher used census sampling technique to involve all the enrolled prospective teachers in the data collection process. To collect data a survey was conducted. Researchers went to 20 GCETs of Punjab province for data collection and received back 1667 filled in questionnaires.

Statistical Procedure

The Prospective Teachers' Attitudes towards Teaching Profession Scale constructed was developed on 5 point Likert Scale. The data was collected from the prospective teachers

to whether the strongly agree or strongly disagree to the statements. They were to select on of the following options

1. strongly disagree (SD)
2. disagree (DA)
3. agree to some extant (ASE),
4. agree (A)
5. strongly agree (SA).

Most of the statements were constructed in positive way whereas some were structured negatively. At the time of statistical procedure all negative statements were reversed.

Factor Analysis

Explanatory and confirmatory factor analyses were made to test the construct validity of the scale. The results of Üstüner (2006) having alpha reliability Coefficient 0.89 and were used to determine the appropriateness of the data for factor analysis. It has been confirmed by Büyüköz-türk, (2008) and Tavşancıl, (2002) that the value will be accepted as perfect when it approached 1 and unacceptable when it was below 0.50. In the same way Devillis (2003) suggest that factor having alpha reliability Coefficient equal or more than 0.50 is reliable. ,But Nenka (2010) stated that this value should be less than 0.40. the same is used for the present study and factors loading having value less than 0.40 were not considered.

Table 1: Factor Analysis

S. #	Professional Beliefs	Professional Association	Compliance of Rules & Regulation	Volunteerism	Self-sufficiency
1	0.44				
2	0.62				
3			0.60		
4	0.52				
5	0.59				
6	0.68				
7	0.49				
8	0.63				
9	0.69				
10		0.57			
11		0.63			
12					0.36
13		0.67			
14					0.32
15		0.49			
16				0.70	
17		0.61			
18				0.74	
19				0.79	
20		0.53			
21					0.69
22			0.54		
23					0.43
24					0.68
25			0.60		

26					0.53
27			0.70		
28			0.67		
29					0.67
30			0.41		
%age of variance explained	34.50	34.53	35.18	54.44	29.99
Eigen Values	2.76	2.07	2.11	1.63	2.10

Through browsing and scanning related literature, five factors related to teachers' attitude towards teaching profession, were selected. Selected factors were Professional Beliefs, Professional Association, Compliance of Rules & Regulation, Volunteerism, and Self-Sufficiency. Alpha reliability, coefficient of Professional Beliefs, Personal Association, Compliance of Rules & Regulation, Volunteerism and Self-Sufficiency was found 0.73, 0.62, 0.47, 0.39 and 0.54 respectively. Devillis (2003) suggest that factor having alpha reliability Coefficient equal or more than 0.50 is reliable. Alpha reliability coefficient of all the factors other than Compliance of Rules & Regulation and Volunteerism factors was more than 0.50. All these factors other than "Compliance of Rules & Regulation" and "Volunteerism" were reliable as per criterion suggested by Devillis (1991). Alpha reliability coefficient for "Compliance of Rules & Regulation" and "Volunteerism" factors was found 0.47 and 0.39 respectively which is less than the 0.50. It has been decided to delete the items from the questionnaires so that coefficient of Alpha reliability values of the factors of PTTAS may be increased. The same is shown in the table below;

Table 2: *Alpha Reliability Coefficient of PTTAS factors*

PTTAS Factors	No. of items	α- reliability co-efficient	Item Numbers
Professional Beliefs	8	0.73	1,2,4,6,7,8,9,10
Professional Association	6	0.62	12,13,15,17,19,22
Compliance of Rules & Regulation	8	0.47	3,5,24,26,28,30,31,33
Volunteerism	4	0.39	11,18,20,21
Self-sufficiency	7	0.54	14,16,23,25,27,29,32

The coefficient of reliability for the piloted version was calculated and the same is reported in the below table;

Table 3: *Mean, Standard Deviation and Reliability Coefficient on PTTAS*

No. of items	Mean	Standard Deviation	Cronbach Alpha Reliability Coefficient
33	140.50	13.10	0.86

Development of Final PTTAS

Final version of Prospective Teachers Teaching Attitudes Scale (PTTAS) consists of 30 items. The coefficient of reliability for piloted version of the questionnaire was 0.86; it increased to 0.88 after deleting three items viz. 5, 11 and 26 from the initial draft. Hence, Final PTTAS consists of 30 items. Mean score, standard deviation and coefficient of final version of PTTAS is reported in table 3.6.

Table 4: *Mean, Standard Deviation and Reliability Coefficient of final PTTAS*

No. of items	Mean	Standard Deviation	Cronbach Alpha Reliability Coefficient
30	129.38	12.63	0.88

After excluding the items viz. number 5, 11, 26 alpha reliability coefficients for different factors of the scale is reported in table below.

Table 5: Factor wise *Alpha Reliability Coefficient of final version of PTTAS factors*

PTTAS Factors	No. of items	α- reliability co-efficient	Item Numbers
Professional Beliefs	8	0.73	1,2,4,5,6,7,8,9
Professional Association	6	0.62	10,11,13,15,17,20
Compliance of Rules and Regulation	6	0.62	3,22,25,27,28,30
Volunteerism	3	0.57	16,18,19
Self-sufficiency	7	0.54	12,14,21,23,24,26,29
Attitude towards teaching Profession	30	0.88	1, 2, 3, ... 30

Alpha reliability coefficient of all the factors of final version of PTTAS was more than 0.50 which shows that the instrument is valid and reliable. Final Scale consists of 30 items having 0.88 alpha levels, which is very satisfactory point.

Table 6: Inter-correlations between Sub scales of PTTAS

	Professional Belief	Professional Association	Compliance of Rules & Regulation	Volunteerism	Self-Sufficiency	Attitude towards teaching
Professional Belief	1	$.583^{**}$	$.597^{**}$	$.481^{**}$	$.527^{**}$	$.835^{**}$
Professional Association		1	$.566^{**}$	$.541^{**}$	$.450^{**}$	$.786^{**}$
Compliance of Rules and Regulation			1	$.555^{**}$	$.636^{**}$	$.834^{**}$
Volunteerism				1	$.530^{**}$	$.726^{**}$
Self-Sufficiency					1	$.794^{**}$
Attitude towards teaching						1

Correlation between subscales (5 factors) of PTTAS is reported in the above table.
Correlations for all the factors of the scale were found to be significant at α<0.01

Conclusion

Prospective teachers teaching attitude scale comprising of 30 items is a reliable instrument (α=.88). All the five sub-scales of the PTTAS are also reliable and strongly co-related with each other. Hence, the scale developed can be used for determining the teaching attitudes of prospective teachers anywhere.

Discussion

Measurement of prospective teachers' attitude is an important area of teacher education. The purpose of study at hand was to develop and valid a reliable scale for measuring prospective teachers' attitude towards teaching profession. This procedure based on a comprehensive literature review for theoretical base of the instrument. More specifically, the PTTAS measure five meaningful factors of teaching attitude including professional belief; professional association; compliance of rules and regulation; volunteerism; and self-sufficiency. Although there are certain other scales for the measurement of teaching attitudes developed by Oral (2004); Evrekli, Inel, Balim, and Kesercioglu (2009); Trivedi (2007); and Agnes (2013) but all of these scales were developed in the perspective that do not match the developing countries. Only the scale developed by Trivedi (2007) was of such background but it was also for the in-service teachers. Therefore, the present scale is significant in the way that it is the first attempt in the area and help in measuring the attitudes of prospective teachers.

Recommendations

The scale at hand was developed through data collection at the graduation level (Students of ADE). Its reliability can also be ascertained at Master level (MA Education, M. Ed., etc.). Moreover, the reliability of the scale may also be verified after translating it in some other langue. In the same way it may be used in different countries for the verification of its validity and reliability.

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Prospective Teachers' Teaching Attitude Scale (PTTAS)

1= Strongly Disagree, 2=Disagree, 3=Agree to some extent, 4=Agree, 5=Strongly Agree

Sr. No.	Statement	SA	A	ATSE	DA	SDA
1	I feel Pride in belonging to teaching profession.	5	4	3	2	1
2	I prefer to teaching profession than other professions.	5	4	3	2	1
3	I will try my best to satisfy my students	5	4	3	2	1
4	I love teaching profession	5	4	3	2	1
5	Teaching is the best means of self-expression	5	4	3	2	1
6	I am sure teaching will be a source of pleasure for me	5	4	3	2	1
7	I am capable of teaching in any type of classroom environment	5	4	3	2	1
8	A respectable status can be enjoyed in teaching profession	5	4	3	2	1
9	Teaching is a respectful profession	5	4	3	2	1
10	I will accept to teach dull minded students	5	4	3	2	1
11	I will accept to teach poor students	5	4	3	2	1
12	I will plan teaching according to my interest	5	4	3	2	1
13	My choice as a profession is only teaching	5	4	3	2	1
14	I will create learning environment of my interest	5	4	3	2	1
15	I will give extra time for my profession	5	4	3	2	1
16	I will prefer students' needs on my personal needs	5	4	3	2	1
17	Dealing with youth help teacher to remain enthusiastic	5	4	3	2	1
18	According to the students need I will give them extra time	5	4	3	2	1
19	I believe in students' welfare	5	4	3	2	1
20	Teaching profession is an ambition of my life	5	4	3	2	1
21	I will give equal attention to all the students	5	4	3	2	1
22	I abide by the rules of teaching profession	5	4	3	2	1
23	I will allow students to ask questions in the class	5	4	3	2	1
24	I will give equal attention to each student's questions	5	4	3	2	1
25	I will enjoy friendly relation with students	5	4	3	2	1
26	I will give equal amount of help to each student	5	4	3	2	1
27	Rules and regulations will promote my standards in my profession	5	4	3	2	1
28	I will follow policies of school management	5	4	3	2	1
29	I will cooperate with my fellow teachers	5	4	3	2	1
30	I will always spare myself to help students	5	4	3	2	1