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Attitude of Student Teachers Toward Assessment, Peers, Subject Matter, and Teacher Educator Effectiveness

Sadia Shaukat

Faculty of Education, University of Education, Lahore

Abstract

This study investigated the attitudes of future teachers in a teacher preparation program toward teacher effectiveness, content taught, peers collaboration and assessment techniques. It was hypothesized that student teachers with more preparation would score higher on a scale of these four dimensions than students teachers with less preparation. The sample consisted of a class of B.Ed students and a class of M.Ed students. A questionnaire was developed and administered at the beginning and the end of each teacher education program. No significant difference was found between the pretest and posttest scores of the two groups. Factor analysis at posttest showed that assessment concerns have now arisen. It is suggested that current courses do little to enhance interest and enthusiasm. Guidelines are recommended for policy makers and educationists for improving teacher education programs to effect changes in the preparation of future teachers.

Keywords: attitudes, assessment, peers, course content, student teachers, teacher preparation program

1. Introduction

Teacher education programs shape student teachers' beliefs toward instruction and play a role in learning to teach effectively, developing professional growth, and increasing the knowledge and skills of prospective teachers (Paulin, 2006; Ross & Bruce, 2007). Professional growth refers to changes in behaviour, knowledge, images, beliefs, and perceptions of novice teachers (Kagan, 1992). These are important factors in teacher education programs and professional development (Posnanski, 2002). Teacher education programs seek to develop positive values, supportive ideas, high ethical principles, and strong moral understandings related to teacher preparation. Prospective teachers need to acquire theoretical and practical knowledge about how to teach effectively (Forlin, 2010).

Teacher education is a crucial component of education with its distinctive streams of pre- service and in-service program. The teacher education program has been designed to prepare prospective and in-service teachers through information, knowledge and pedagogical skills to develop their abilities and to establish positive attitudes and behaviour towards the profession of education. The program consists of formal and informal policies, activities and experiences to enable

prospective teachers to perform their responsibilities in the classroom and school effectively and efficiently (Farrant 1990).

Teacher quality is an important aspect of the teacher education program, and refers to the combination of three characteristics of effective teachers such as teachers' professional qualification, teachers' professional commitment and teachers' efficacy to bring about change in teaching. Teacher educational background and teaching practices impact on students' learning. Teachers with effective teaching styles play an important role in improving students' achievement scores and positive attitudes toward their studies. Effective teachers develop relationships with students and interact with them (Rivkin, Haushek, & Kain, 2005; Rockoff, 2004). Teachers who have received professional training should be able to deliver appropriate knowledge and use effective practices according to the contemporary needs of their classrooms. The educators of teachers should contribute to the development of a systemic approach to teacher quality (Malm, 2009) by designing conceptual, empirical, and pedagogical approaches to enhance the quality of the teacher education programs (Levine, 2006).

Similarly, the quality of the teacher educator and the subject matter are also essential components of a teacher education program. The basic requirement of teaching is choosing what should be taught by collecting useful learning matter, by designing instructional activities, by asking the students' probing questions, and by evaluating their academic performance. Through the subject matter not only concepts are delivered it also assist students' learning and enable rational thinking to find the solutions of confused problems and myths. With the help of relevant subject matter, teacher educators can enhance the intellectual development of prospective teachers and foster their higher cognitive thinking skills. A theoretical mastery of content knowledge, and the ability to analyze different domains of knowledge critically enables students to become effective actors in their environment (Shulman, 1986).

Learning is a social enterprise that can be enhanced through collaboration (Smith, 2002). Through collaborative relationships, students share ideas and brainstorm (Gardiner & Robinson, 2011). Collaboration "provides a context for students to draw upon one another's emotional, experiential and intellectual resources to accomplish more collectively than individually" (p, 2). Learning with peer collaboration has been shown to provide a supportive and cooperative context for students (Baker & Milner, 2006; Goodnough et al., 2009; Smith, 2002). Teacher professionalism emphasises the usefulness of collaborative learning for transforming educational practices (Achinstein, 2002; Darling-Hammond, 2006; Shulman & Shulman, 2004). Peer collaboration has significant results on learning. Through peer support, prospective teachers invest and assist in their colleagues' lesson planning and academic tasks in more innovative and dynamic ways, and this collaboration help students to overcome learning difficulties (Baker & Milner, 2006).

Assessment is an important element of evaluation. Assessment refers to collecting data about students' academic performance, to improve evaluation methods and to identify students' learning difficulties. A teacher education program should include assessment approaches for evaluating students' performance and develop teacher educators' capabilities to plan, implement, and monitor their students' progress (Pecheone & Chung, 2006). Student teachers should be instructed about to use portfolios, reflection notes, specific rubrics, and assessment criteria and

they should be given information about appropriate assessment strategies to evaluate their students' performance (Darling-Hammond, 2010 ; Alla, 2013).

Teacher education programs should emphasise the core components of teacher quality, content presentation, peer collaboration and assessment techniques while teaching. Teacher training programs should address student teachers' pedagogical and professional issues and problems, and identify beliefs about effective teaching behaviour (Posnanski, 2002). This current study will explore attitudes of student teachers toward teacher effectiveness, to the content taught, to peers and to assessment.

2. Research Questions

- To what extent does a teacher education program change the attitudes of future teachers toward teacher educators' behaviour ?
- To what extent do the attitudes of future teachers change toward the presentation of subject matter after completing a teacher education program?
- To what extent do the attitudes of future teachers change toward peers collaboration after completing a teacher education program?
- To what extent do the attitudes of future teachers change toward students' assessment techniques after completing a teacher education program?

3. Methodology

A pretest-posttest design was used in collecting data from a sample of 138 prospective teachers. A questionnaire was administered at the beginning and at the end of a teacher education program. Within the questionnaire, participants recorded responses on a 5-point Likert scale.

3.1 Sample

The sample consisted of 138 student teachers (117 females, 21 males) enrolled in a one-year teacher education program in a public university (see Table 1). The vast majority of teachers ($n = 118$, 86% were aged 19-23-years. The remaining teachers ($n = 20$, 14%) were aged ≥ 27 years, The majority of participants ($n = 83$, 60%) had a bachelors' degree, and 51 (37%) held a masters' degree.

Table 1 *Participants' Demographic Data*

No	Variables	N	%
1	Gender		
	Male	21	15.2
	Female	117	84.8
2	Age		
	19-22	56	40.6
	23-26	62	44.9
	27-30	15	10.9
	31- 34	5	3.6
3	Academic qualifications		
	B.A.	83	60.1
	B.Ed	4	2.9
	M.A.	51	37.0
4	Previous Teaching Experience		
	Yes	97	70.3
	No	41	29.7
5	Program		
	B.Ed	83	60.1
	M.Ed	55	39.9

3.2 Data collection

Data were collected from prospective teachers through random sampling of M.Ed and B.Ed programs. Data were gathered at the beginning and at the end of the program. Prior permission was sought from head of the department before data collection. Participants were informed about the nature of the study and their consent was sought for data collection. Participants were given instructions about questionnaire by the researcher, who informed the participants that their opinions would remain confidential and would not be shared for any other purpose. The participants took 30 minutes to complete the questionnaire.

4. Data Analysis and Results

The prospective teachers' responses were collected using a 5-point Likert scale. Responses ranged from 5 for *Strongly Agree* to 1 for *Strongly Disagree*. Factor analysis was run to determine the validity and reliability of the questionnaire. A paired *t* test was used to analyze results of demographic variables between the four factors of professional preparation, attitudes to teacher effectiveness, attitudes to subject matter, attitudes to peer collaboration and attitudes to assessment

4.1 Attitudes to teacher effectiveness

This scale comprised eleven items purporting to measure teacher preparation effectiveness derived from the international literature (Marzano, R. J., Pickering, D. J., & Pollock, 2001; Rice, 2003; Johnson, 2006; Darling-Hammond, 2007) were designed. Factor analysis with principal components factorising followed by an oblique rotation was used to develop the ‘Attitudes to teacher effectiveness’ scale. A nine-item scale constructed from these items had a Cronbach’s alpha of .80. The factor ‘Attitudes to teacher effectiveness’ comprised nine items with explained 50.59% variance was finalized.

Table 2 *Attitudes to teacher effectiveness items for prospective teacher (N =138)*

Item	Teacher	M	SD	Factor loading	Correlation with total less item
2	Is welcoming towards students.	3.95	0.85	0.57	0.33
3	Presents interesting lessons.	4.07	0.84	0.65	0.47
4	Is concerned about students' studies	4.08	0.83	0.52	0.51
5	Understands individual differences	3.67	0.94	0.76	0.53
6	Maintains the standard criteria for evaluation.	3.81	1.02	0.28	0.42
7	Uses media and other learning resources effectively	2.99	1.35	0.75	0.45
8	Uses counseling techniques to solve students' problems	3.31	1.32	0.74	0.59
9	Maintains classroom discipline.	4.19	0.86	0.33	0.57
10	Organizes good quality teaching assignments	4.08	0.91	0.38	0.45

Table 3, 4 and 5 show the only variables to give significant breakdowns of the mean score/items of the attitudes to teacher effectiveness scale. Significant differences were determined between pretest and posttest scores using the paired *t* test.

Table 3 *Mean score comparison between Pretest and Posttest on Teacher effectiveness Factor for all respondents (N =138)*

Pair	M	SD	SE	<i>t</i>	<i>p</i>
Pretest Teacher	3.84	0.60	0.051	0.49	0.62
Posttest teacher	3.80	0.69	0.059		

Note: M is the mean score/item

The score on the posttest did not differ significantly from the pretest score.

Table 4 *Mean scores comparison between pretest and posttest on Teacher effectiveness factor for M.Ed student teachers (N =55)*

Pair	<i>M</i>	<i>SD</i>	<i>SE</i>	<i>t</i>	<i>P</i>
Pretest Teacher	3.72	0.67	0.09	-3.02	0.01*
Posttest teacher	4.00	0.46	0.06		

Note: M is the mean score/item

*Effect size is small: ($r = 0.34$ for paired test)

Table 4 shows that there was significant difference between pretest and posttest on M.Ed sample. The small effect size indicates a recognisable educational outcome (Cohen, 1988). Prospective teachers' mean scores significantly improved due to the effects of teacher on posttest.

Table 5 *Mean scores comparison between pretest and posttest on Teacher factor for B Ed student teachers (N=83)*

Pair	<i>M</i>	<i>SD</i>	<i>SE</i>	<i>t</i>	<i>P</i>
Pretest Teacher	3.92	0.54	0.06	2.35	0.02*
Posttest teacher	3.67	0.79	0.09		

Note: M is the mean score/item

Significant fall, $p < 5\%$, small effect size, ($r = 0.03$ for paired test)

Table 5 shows that there was significant difference between pretest and posttest on B.Ed sample that has a recognisable educational outcome. Prospective teachers' mean scores did not improve and significantly decreased on posttest.

4.2 Attitudes to the subject matter

Seven items supposed to measure presentation of subject matter for profession preparation were designed after an extensive review of the international literature (Wilson, 1988; Foner, 1988; Dossey at al., 1987; Anderson, 1988). For determining the validity and reliability of 'presentation of subject matter' subscale, factor analysis with principal components factorising followed by an oblique rotation was run. A six-item scale constructed from these items has a Cronbach alpha reliability of 0.743. The factor 'Attitudes to the subject matter' explains 44.23% of the variance 44.23% in the items.

Table 6 *Attitude to subject matter items for prospective teachers (N=138)*

Item	<i>The content of my lesson</i>	Mean	Standard Deviation	Factor loading	Correlation with total less item
1	Challenging assignments	3.92	0.85	0.67	0.49
2	frequent presentations	3.64	1.02	0.60	0.43
3	interesting tasks on the subject	3.97	0.81	0.67	0.47
4	innovative topics for discussion	3.84	0.91	0.71	0.53
5	Well-organized	3.96	0.89	0.71	0.52
6	attractive presentations	3.84	0.96	0.63	0.45

Table 7 *Mean scores comparison between pretest and posttest on Content factor (N=138)*

Pair	Mean	SD	SD	t	p
Pretest content	3.87	0.60	0.05	1.19	0.23
Posttest content	3.77	0.74	0.06		

Note: M is the mean score/item

There is no significant change. Scores on posttest do not correlate significantly with pretest.

M Ed and B Ed samples show the same result.

Attitudes to the Peer collaboration

Five items were designed to measure the attitudes to the appreciation of peers for professional preparation after an extensive international literature review (Gardiner & Robinson, 2011 ; Baker & Milner, 2006; Goodnough et al., 2009; Achinstein, 2002). For determining the validity and reliability of 'appreciation of peers' subscale, factor analysis with principal components

factorising followed by an oblique rotation was run. A five-item scale constructed from these items has a Cronbach alpha reliability of 0.729. The factor ‘Attitudes to the appreciation of peers’ explained 48.08% of the total item variance.

Table 8 *Attitudes to the appreciation of peers items on prospective teachers (N=138)*

Item	<i>My peers</i>	Mean	Standard Deviation	Factor loading	Correlation with total less item
1	Peer appreciation	4.12	0.90	.686	.483
2	Peer competition	4.09	0.85	.672	.470
3	Peer inspiration	4.12	0.84	.717	.514
4	Peer collaboration	3.86	0.88	.700	.494
5	Peer's feedback	4.20	0.82	.692	.487

Table 9 *Mean scores comparison between pretest and posttest on peer factor (N=138)*

Pair	Mean	SD	Std. Error Mean	t	p
Pretest Peer	4.08	0.59	0.05	0.38	0.70
Posttest Peer	4.05	0.59	0.05		

Note: M is the mean score/item

There is no significant change but scores on posttest do correlate significantly with pretest (5%).

M Ed and B Ed samples show the same result.

4.3 Attitudes to Assessment techniques

Four items purporting to measure attitudes to the quality of assessment were designed after an extensive review of the international literature (Darling-Hammond, 2010; Alla, 2013; Smith, 2002). For determining the validity and reliability of ‘quality of assessment’ subscale factor analysis with principal components factorising followed by an oblique rotation was run. A four-item scale constructed from these items has a Cronbach alpha reliability of 0.635. The final scale explained 47.86% of the total item variance. This scale is on the borderline of acceptable reliability, but can be retained for measuring the attitudes of groups (Youngman, 1979).

Table 10 *Attitudes to the quality of Assessment items for prospective teachers (N=138)*

Item	Assessment	Mean	Standard Deviation	Factor loading	Correlation with total less than item
1	Standard criteria for assessment are used	3.96	0.90	.686	0.30
2	Frequent feedback on assignments is given	3.77	1.11	.721	0.32
3	Results provided to students on time	3.56	1.05	.697	0.28
4	Assessment criteria is predefined	3.90	0.89	.662	0.37

Table 11 *Mean scores comparison between pretest and posttest on Assessment factor for all respondents (N=138)*

Pair	Mean	SD	Std. Error Mean	T	p
Pretest Assessment	3.85	0.55	0.04	1.38	0.16
Posttest Assessment	3.77	0.56	0.04		

Note: M is the mean score/item

Table 11 shows that there is no significant change on posttest Assessment scores. Scores on posttest do not correlate significantly with pretest scores.

M Ed and B Ed samples show the same result.

5. Discussion

The study has revealed that for the full sample student teachers' attitudes toward teacher educator effectiveness did not change from the beginning to the end of the teacher preparation program. However, there are significant differences between the B.Ed and M.Ed samples. For the M.Ed, sample mean scores significantly improved but the reverse effect was found for the B.Ed sample. No significant differences were found between samples in the attitudes of prospective teachers on rest of the factors: attitudes toward subject matter, attitudes toward peer collaboration, and attitudes toward assessment techniques. Indeed, for these three factors no significant changes occurred over the duration of the courses.

B.Ed teacher education is a one year program and usually prospective teachers are enrolled after graduation from college with no teaching experience. During the one year teaching education program they tend to get knowledge about general teaching methods. They generally learn the

basic strategies of teaching, and there is more emphasis on theoretical rather than practical knowledge. They have to undergo the short *pan practicum* for performing teaching skills at schools. Because of the strong bias towards the acquisition of theoretical concepts of teaching, prospective teachers' attitudes toward teacher effectiveness did not improve but fell by the end of the B Ed program (Shaukat, 2012).

The nature of coursework at M.Ed level is different from the B.Ed level due to their more advanced level of education. This level concerns the development of intellectual and social awareness of the students in schools. In the Pakistani teaching context, professional job liabilities according to qualification are different. Teachers with high qualifications are assumed to perform high cognitive level tasks, as compared to those teachers who have only low professional qualifications (Iqbal, 1999). It may be assumed that on M Ed courses prospective teachers are taught about the application of teaching strategies, pedagogical skills and learning theories with practical examples. This makes the whole learning process more integrated and the teacher's role of increasing importance. Consequently, the prospective teachers' mean scores on posttest were significantly higher than pretest regarding teacher educator effectiveness.

6. Conclusion

Bullough and Baughman (1997) point out: "Just as teachers hold beliefs, beliefs hold teachers." (p. 69). Therefore, it is essential for teacher educators to consider the beliefs of their students when designing and implementing courses, workshops, and field experiences. Teacher education and teacher preparation are two different concepts of the teaching profession. The teacher education program is a general scheme relating to teaching strategies and teaching theories. On the other hand, the teacher preparation program focuses upon the concept of how to teach by applying best pedagogical knowledge (Howey & Zimpher, 1989). According to Hamre and Olyer (2004) teacher education program has been found to be fundamentally flawed due to the lack of precise knowledge relating to field worldwide. Do not understand this. In the Pakistani context, more emphasis is given to theoretical knowledge and there is little focus on practical knowledge (Situation Analysis of Teacher Education in Pakistan, 2006). Teacher education content is not sufficient enough to develop the teaching skills in prospective teachers. Research also reveals that quality of teacher education has seriously been neglected both in content and methodology in Pakistan (Sheikh, 2000). Teacher educators, themselves, are not competent enough to transfer to prospective teachers the fundamental principles of how to teach with confidence. In the schools, this translates into low quality, rote learning (Pell, Iqbal & Sohail, 2010). Teacher educators report that a second problem is the current content or curricula of the teacher education program, which requires urgent review. Prospective teachers are not being trained like efficacious teachers with the best teaching skills which should be a core element of the teacher education program.

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