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Measuring Self-Efficacy Beliefs in Prospective Teachers During Pre-service Teacher Education Program

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The study was conducted to examine the changes in self-efficacy beliefs in prospective teachers during a Master's level pre-service teacher education program, and sampled 96 female and 20 male student teachers from a public university in Pakistan. A 5-point, Likert-type scale incorporating the four factors: locus of control, persistent behavior, classroom anxiety and professional mastery beliefs, was constructed by using factor analysis to assess self-efficacy beliefs in unique cultural and social norms of Pakistan. Results for the above sample of education programs (Masters Elementary Education, Secondary Education, and Science Education) indicated that prospective teachers' self-efficacy beliefs on all four factors significantly decreased from the first semester to the fourth semester. Similar situation was found on the sample of three teacher education programs on the composite scale. Results of the study with possible implications to policy makers and educators are discussed.

Keywords: Prospective teachers, Teacher education program, Locus of control, Persistent behavior, Classroom anxiety, Mastery beliefs.

It is widely recognized that in daily life situations, people who are confident of their abilities tend to be more successful in what they undertake than those who are less confident (Woolfolk, 2008). The effectiveness of a teacher is likewise dependent upon the level of self-confidence through which he or she approaches many tasks in the teaching process. A confident teacher can implement more effective teaching pedagogies and promote better student achievement (Ashton, 1984). Self-confidence is a component of self-efficacy, and in teachers like others, pertains to beliefs in organizing and executing courses of action required to effectively attain the specific teaching tasks in particular situations (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Self-efficacy beliefs in teachers have affected student outcomes such as achievement scores (Ashton, 1984; Armor et al., 1976; Gibson & Dembo, 1984) new ideas and greater willingness to try new methods to bring about a change in students' learning (Berman et al., 1977; Guskey, 1988; Stein & Wang, 1988) and less criticism on mistakes of students (Ashton & Webb, 1986).

Teacher self-efficacy is conceptualized in terms of locus of control, "efficacy is seen as the extent to which teachers' believed that factors, which they could control, had a larger impact on teaching outcomes than beliefs that the environment held greater power" (Ajzen & Madden, 1986, p.211). If teachers feel a greater sense of control over their professional matters in school, their locus of control will enhance their sense of efficacy, and will increase persistence in academic tasks (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). There is a significant positive relationship between teachers' locus of control and their classroom behaviour (Guskey, 1982; Parkway, Olejnik, & Proller, 1988; Ross & Medway, 1981).

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Teacher efficacy is also correlated with teachers' persistent behaviour and determination. Teachers with high efficacy do hard work and show persistent behaviour when students are tough to teach; they show more commitment to the teaching profession (Woolfolk, 2008). "Teacher persistence means a tendency to persist steadfastly, until successful, in the many specific courses of action that comprise teaching" (Wheatley, 2002, p.3). A persistent teacher may, for example, attempt many teaching techniques to teach a new concept or skill, and continue until all students gain understanding. A teacher's beliefs about persistent behaviour may lead to positive approach in the challenging situations in teaching especially if they have to gone through the trial and error process (Pigge & Marso, 1997).

Self-efficacy beliefs are the significant predictors for stress and anxiety (Chan, 2002). Teacher efficacy beliefs and their impact on anxiety were examined and it was concluded that control beliefs helped to control teacher anxiety during teaching (Punch & Tuettemann, 1990). It was concluded that student teachers' anxiety related to their practicum experiences and was associated with weak perceptions of their career development (Daniels et al., 2006).

Prospective teachers faced anxiety and stress during course work and teaching practice (Capel, 1997; Murray-Harvey et al., 2000). Pigge and Masro (1990) reported that anxiety and stress management strategies and classroom management techniques could enhance the self-efficacy beliefs of student teachers. During teacher education, prospective teachers' teaching skills and pedagogical knowledge was enhanced and teaching anxiety decreased. Prospective teachers had better locus of control and less anxiety during teaching practice and showed more teaching effectiveness and efficacy towards becoming future teachers.

Teachers' sense of efficacy plays an important role in schooling. Teachers with a greater sense of efficacy can motivate those students who have a low interest in studies (Soodak & Podell, 1993). At school level efficacious teachers tend to engage in more classroom decision making (Moore & Esselman, 1992) into a higher level of planning and organization (Allinder, 1994). Teachers with

high efficacy show less criticism for those students who make errors (Ashton & Webb, 1986) and demonstrate more commitment about teaching (Allinder, 1994). Teachers with greater efficacy beliefs obtained higher student achievement (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998) and greater respect from their students. Self-respect is a measure of the regard a person has for his or her own worth arrived at through self-reflection on earlier achievements (Myers, 2005).

High self-efficacy has a substantial affect on the successful completion of activities (Bandura, 1977). By exerting more effort, with deeper engrossment and a strong locus of control, the expectation is a rise in achievement (Schunk, 1982) which in turn will enhance professional self-respect. Mastery in the classroom is the strongest of four sources of teacher efficacy (Bandura, 1997) and is associated with the physical arousal (confidence/anxiety) of classroom actions (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Teacher education programmes should provide opportunities to prospective teachers for real teaching experiences with coaching and managing children in different contexts and give them mastery experiences and feedback. Research has shown that effective classroom instruction in teacher training program may modify the student teachers' perceptions about classroom management ((Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Teachers' sense of efficacy is especially important for prospective teachers as they enter into the teaching profession. Prospective teachers come in teaching preparation programmes with certain beliefs about teaching and learning which may be subject to change (Clark & Peterson, 1986; Tschannen-Moran, Woolfolk & Hoy, 1998; Weinstein, 1989). However, these beliefs may be resistant to change (Kagan, 1992). There is empirical evidence that teacher-training programs themselves have less impact on prospective teachers' beliefs (Gibson, 1972). However under certain conditions prospective teachers' beliefs regarding teaching and learning may change during their program. Tamir (1991) stated that teacher preparation programs and the experiences of prospective teachers have a considerable influence on their expressed views and beliefs about learning and teaching. He indicated that teacher education program might develop the attitude and beliefs of prospective teachers. Hollingsworth (1989) reported that student teachers enter teacher-training programmes with certain beliefs about teaching and learning and these beliefs seem to change as a result of experiences, which are provided by the programs.

Teacher training programs play an important role in the development of prospective teachers' self-efficacy beliefs and their professional growth (Kagan, 1992; Woolfolk, 2004). The ultimate aim of teacher education institutions in preparing for professional development should focus on the expansion of efficacy beliefs of prospective teachers as a mean of reducing their lower efficacy beliefs by increasing their self-confidence to teach in regular classrooms (Forlin, Loreman, Sharma, & Earle, 2007). As Hsien (2007) states that teacher education programmes play a significant role in developing efficacy beliefs and levels of confidence of prospective teachers in handling difficult students in the classroom.

By keeping in view the importance of prospective teachers' efficacy beliefs, the current research study was carried out to investigate the prospective teachers' efficacy beliefs before joining to teaching profession , this study measured the fluctuation in prospective teachers' teaching efficacy beliefs whether increasing or decreasing with the progression of two years teacher education program. In this study, a scale to measure prospective teachers' efficacy beliefs was also constructed in the context of Pakistan.

Objective of the study

The objectives of the study were to assess the prospective teachers' self- efficacy beliefs:

- In relation to locus of control, persistent behavior, classroom anxiety and professional mastery.
- During four semesters across Elementary, Secondary and Science Teacher Education programs.

Hypotheses

- There would not be significant difference in prospective teachers' self-efficacy beliefs enrolled in the M.A. Education program on the composite scale and each of the four factors: locus of control, persistent behavior, classroom anxiety and professional mastery at the end of each semester.
- There would not be significant difference in prospective teachers' self-efficacy beliefs enrolled in the M.A. Elementary Education program on the composite scale and each of the four factors: locus of control, persistent behavior, classroom anxiety and professional mastery at the end of each semester.
- There would not be significant difference in prospective teachers' self-efficacy beliefs enrolled in the M.A. Secondary Education program on the composite scale and each of the four factors: locus of control, persistent behavior, classroom anxiety and professional mastery at the end of each semester.
- There would not be significant difference in prospective teachers' self-efficacy beliefs enrolled in the M.A. Science Education program on the composite scale and each of the four factors: locus of control, persistent behavior, classroom anxiety and professional mastery at the end of each semester.

Method

Sample

A convenient sample of 116 prospective teachers enrolled in a teacher education program at one public university in Pakistan was surveyed. Participants were from one of the three programs offered to prospective teachers in a teacher preparation program. These programs were Masters programmes in Elementary Education (MA-ELE), Secondary Education (MA-SEC) and Science Education (MA-SCI) and consisted of $N = 33$, $N = 54$ and $N = 29$ teachers respectively. The Eighty two percent prospective teachers were females and among them 88% were above 20 years.

Instrument

Prospective Teacher Self-efficacy Scale (PTSES). The scale is based on four factors: locus of control, persistent behaviour, classroom anxiety and professional mastery was used to measure the prospective teachers' self-efficacy beliefs. In constructing the scale, primarily instrument was administrated on the 300 prospective teachers. An initial pool of 49 teacher efficacy statements from the literature was sought. Most items were positively worded but some (items 1, 6, 21, 25, 26, 31, 36, 41, and 46, see Table 1) were negatively worded. Each item was measured on a 5-point Likert-type scale with 5 representing higher efficacy.

Procedure

After seeking permission from the education authorities the survey questionnaires were distributed in class to the prospective teachers with informed consent. The participants were given a choice not to complete the survey if they did not wish to do so. They were also told about the anonymous nature of the survey.

Incomplete questionnaires were discarded before data entry. Data were collected from prospective teachers enrolled in the Masters of Education in MA-ELE, MA-SEC and MA-SCI streams using the TSES at the end of their first, second semester, third semester and fourth semesters.

Data Analysis

Multivariate analysis of variance was (MONOVA) was used to see the mean scores difference in self-efficacy beliefs of prospective

Table 1
Factor Loading of Items of Prospective Teachers' Self-efficacy Scale

	Factor Loadings			
When I see myself as a teacher in the future I see myself	LOC	PB	CA	PM
Factor 1: Locus of control				
4. Quickly finding out about the administrative tasks a teacher has to do.	.30			
5. Setting the objectives of lesson whenever required and then achieve them	.42			
7. Respected by my colleagues for being in control of my work	.28			
8. Being a very well organized teacher	.53			
9. Other teachers sometimes asking me for advice.	.32			
Factor 2: Persistent behaviour				
13. Evaluating my teaching methods, making corrections and trying again.		.61		
14. Maintaining standard or same criteria for evaluating my students.		.52		
16. Modifying my teaching approach to get my students to understand better.		.55		
17. Using several different teaching methods if necessary in order to achieve my lesson objectives.		.58		
19. Using motivational techniques, like rewards, with those Students who show little interest.		.49		
20. Making a thorough investigation to find out why some of my students' results are poor.		.63		
22. Making mistakes in my teaching but also learning from these mistakes.		.45		
24. Working at every task until it is finished.		.29		
Factor 3: Classroom Anxiety				
27. Becoming upset quite rapidly with students who are not serious about their studies.			.63	
28. Becoming nervous if the Principal observes me during class.			.73	
29. Feeling nervous and anxious whenever I go into the classroom.			.60	
30. Finding it difficult to sleep sometimes because of worries about my teaching.			.47	
37. Becoming quite rapidly upset because of the work load.			.59	
Factor 4: Professional Mastery				
38. Feeling very confident about my abilities as a teacher when my students are very successful in their studies.				.644
39. Observing that parents trust my advice in solving their children's school problems.				.677
40. Being a positive role model for my students.				.753
41. Becoming a satisfied person because I am a successful teacher.				.621
42. Having students' respect me because I am confident in my abilities.				.589
44. Having students who try to come up to my expectations of them.				.677
48. Seeing new tasks as challenges to be met and overcome.				.627

Extraction method: (Principal component analysis followed by varimax rotation of facto axes)
Locus of control α = 0.46, Persistent behaviour α =0.81, Classroom Anxiety α= 0.67, Professional mastery α= 0.82

Table 2
Inter Factor Correlation of subscales (Factors) with each other and complete Scale

Factors	*Items*	*M*	*SD*	F1 (LOC)	F2 (PB)	F3 (CA)	F4 (PM)
Locus of Control (F1)	5	4.08	0.28				
Persistent Behaviour (F2)	8	4.06	0.38	.26**			
Classroom Anxiety (F3)	5	4.05	0.27	.28**	.23**		
Professional Mastery (F4)	7	3.95	0.33	.18	.42**	.28**	
Total of Teacher Self-Efficacy Scale	25	16.10	0.78	.66**	.71**	0.64**	.68**

*$p < .01$ for all correlations (2-tailed

Table 3
Multivariate Statistics for Measuring Prospective Teachers' Self- Efficacy Beliefs (N = 108) across different programs

programs	Scale	First Semester		Second Semester		Third Semester		Fourth Semester		*F*	*p*
M.A. Education											
	Locus of Control	4.12_{a}	0.31	4.01_{b}	0.49	3.90_{c}	0.40	3.70_{abc}	0.46	7.20***	0.001
	Persistent Behaviour	4.50_{ab}	0.46	4.43	0.53	4.32_{b}	0.33	4.31_{a}	0.49	4.94*	0.03
	Classroom Anxiety	2.15	0.67	2.24	0.61	2.28	0.73	2.37	0.76	1.88	0.21
	Professional Mastery	4.37_{a}	0.47	4.36_{b}	0.46	4.28	0.34	4.22_{ab}	0.45	3.72*	0.04
	Composite Scale	4.07_{a}	0.29	4.07	0.30	4.00	0.26	3.96_{a}	0.31	11048.5***	0.001
M.A. Elementary Education	Locus of Control	4.01a	0.30	3.89	0.49	4.05b	0.31	3.63ab	0.49	3.70*	0.04
	Persistent Behaviour	4.53_{a}	0.29	4.33	0.70	4.38	0.30	4.16_{a}	0.63	4.68*	0.03
	Classroom Anxiety	2.25	0.84	2.38	0.64	2.27	0.85	2.48	0.85	0.73	0.31
	Professional Mastery	4.42_{a}	0.35	4.24	0.55	4.24	0.33	4.12_{a}	0.52	4.09*	0.02
	Composite Scale	4.12_{a}	0.23	4.05	0.32	4.04	0.26	3.91_{a}	0.36	3473.3***	0.001
M.A. Secondary Education	Locus of Control	4.10_{a}	0.38	3.86	0.57	3.89	0.39	3.82_{a}	0.43	2.63*	0.03
	Persistent Behaviour	4.56_{a}	0.37	4.48	0.46	4.27_{a}	0.32	4.38	0.45	5.47*	0.02
	Classroom Anxiety	2.05_{a}	0.53	2.19	0.65	2.37	0.69	2.43_{a}	0.82	4.14*	0.03
	Professional Mastery	4.43	0.39	4.44	0.42	4.36	0.31	4.33	0.34	1.19	0.32
	Composite Scale	4.09_{a}	0.26	4.03	0.35	4.03	0.25	3.95_{a}	0.33	5112.4***	0.001
Masters' in Science Education	Locus of Control	4.11	0.57	4.22_{a}	0.42	4.12	0.38	3.72_{a}	0.31	3.70*	0.04
	Persistent Behaviour	4.35	0.71	4.46	0.36	4.34	0.37	4.37	0.31	0.65	0.42
	Classroom Anxiety	2.24	0.66	2.16	0.47	2.10	0.64	2.11	0.39	0.24	0.33
	Professional Mastery	4.17	0.66	4.36	0.42	4.19	0.41	4.16	0.50	2.83	0.42
	Composite Scale	4.12_{a}	0.24	4.05	0.32	4.03	0.24	3.89_{a}	0.34	2890.5***	0.001

df =3. Note. Means with the same subscript differ significantly, ****p* < .001 significant difference across the semesters,
**p* < .05 significant difference across the semesters

teachers on the four subscales locus of control, persistent behaviour, classroom anxiety and professional mastery beliefs.

Results

For the current study, data were collected from 108 prospective teachers. The item scores were subjected to principal components factor analysis followed by a varimax rotation of the factor axes due to the high likelihood of factor inter-correlation (Youngman, 1979; Norusis, 1990). Following established practice, only factors with eigenvalues greater than unity were considered as significant (Rummel, 1970). Inspection of the rotated factor structure matrix showed that the hypothesised four factors were present in the scale representing Pakistani cultural context, but in explaining just 43.2% of total item variance. As only 25 items could be retained under the four factors on the criterion of a sizeable factor loading, the rejected 24 items were omitted and the factor analysis re-run.

The first factor accounted for 25.44% of the variance and included statements describing administrative tasks, setting objectives, organized teacher, control over work and was called 'locus of control'. This factor consisted of five statements. The two statements with the highest loadings on this factor were those of setting the objectives and being a well-organized teacher.

The second factor explained for 7.04% of the variance and was labelled as 'persistent behaviour'. The statements with the highest loadings on this factor were of evaluating teaching methods and investigating students' results. This factor comprised of eight statements. The third factor which was comprised of five statements and accounted for 5.49 % of the variance and was labelled as classroom anxiety.

The two statements with the highest loadings on this factor were those of becoming upset over students' studies and becoming nervous over principal visit. The fourth factor accounted for 5.24 % of the variance, and consisted of seven statements referring to role model for students and parents' trust on teaches' advice and expectations over students' work, these three statements with the highest loadings on this factor. The results of the factor analysis with the loadings of the four factors are presented in Table 1.

The Table 2 describes the correlation among factors and factors with overall sum of prospective teachers' self-efficacy scale. The inter-factor relationships are less strong than each factor contribution to the total scale. It showed that each factor contributes into the scale as an independent factor due to the weaker relationship with other factors. Although these four factors have strong relationship with the prospective teachers' self-efficacy scale.

The following table 3 presents data on prospective teachers measured in terms of locus of control, persistent behaviour, classroom anxiety and professional mastery between different kinds of teacher education program.

MONOVA was carried out to determine the significant difference in prospective teachers' self-efficacy beliefs enrolled in M.A. Education program on teacher efficacy composite scale and each of its subscales: locus of control, persistent behaviour, classroom anxiety and professional mastery beliefs across four semesters. Prospective teachers' mean scores on teacher efficacy beliefs scale were decreased significantly from first semester (M=4.07) F (3,113) = 11048.5, p< 0.001 to fourth semester (M= 3.96). Likewise, prospective teachers' locus of control beliefs declined significantly from first semester (M=4.12) F (3,113) =7.20. p<0.001 to fourth semester (M= 3.70). Similar results were found on persistent behaviour beliefs subscale (first semester, M= 4.50, F (3, 113) = 4.94 (fourth semester, M= 4.31) and professional mastery beliefs subscale (first semester, M= 4.37, fourth semester, M= 4.22). Parallel results were concluded on the sample of prospective teachers enrolled in M.A. Elementary teacher education program. Prospective teachers' classroom anxiety beliefs significantly increased enrolled in M.A. Secondary Education from first semester (M= 2.05) F (3, 113) = 4.14 p<0.03 to fourth semester (M=2.43). However their locus of control beliefs (first semester, M= 4.10, fourth semester, M= 3.82) and persistent behaviour beliefs (first semester, M=4.56, fourth semester= 4.38) were significantly decreased with the progression of the coursework. On the sample of Masters' in Science Education, prospective teachers' locus of control beliefs decreased significantly from first semester (M= 4.11) F (3,113) = 3.70, p < 0.04 to fourth semester (M= 3.72) though no significant difference was found on other subscales.

Discussion

The current study has revealed that the prospective teachers' self-efficacy beliefs enrolled in teacher education programs (Elementary, Secondary, and Masters' in Science Education) decreased over the course of teacher education. One reason for this decrease could be that the prospective teachers engaged in many curricular activities to meet the course requirements (causal assignments and presentations, exam preparation and taking notes), as seen in previous studies, e.g., coursework did not develop a significant role for enhancing the prospective teachers' self-efficacy beliefs (Ginns & Tulip, 1995; Lin, Hazareesingh, Taylor, Gorrell., & Carlson, 2001).

Locus of Control is the essential factor that deeply affects teaching-learning environments and students' achievement (Ross & Medway, 1981). Prospective teachers' locus of control beliefs (regarding classroom management) in teacher education programs were found declined with the progression of coursework. The reasons behind the significantly low locus of control beliefs of prospective teachers could be due to the lack of planning how to assess, and allocate lesson plans ; lack of formulation and management in class sessions, chaotic assessment techniques, haphazard completion of frequent projects and unorganized assignments' schedule during teacher education program.

Persistent behaviour is the second important aspect of prospective teachers' self-efficacy beliefs (Dembo, 2001). Monotonous teaching methods were used by teacher educators, No feedback was provided to prospective students on their mistakes in assignments, lack of guidance about the use of teaching skills till the point of complete understanding to clarify the students' concept, these reasons made the cause of lack of persistency for accomplishing academic tasks. For developing determination regarding academic tasks the use motivational devices such as rewards and appreciations to stimulate student teachers for learning are considered the best strategies (Bregman & Mohammad, 1998; Greaney & Hasan, 1998). Unfortunately these strategies were not adopted for enhancing prospective teachers' persistency beliefs.

Furthermore, it was investigated in this study that *classroom anxiety beliefs* of prospective teachers significantly increased with the progression of coursework. It may be assumed that prospective teachers were not provided adequate guidance to overcome their anxiety during presentations and how to perform various tasks simultaneously without getting anxious. Frequently assigned tasks at end of each semester near to exams which also became a substantial cause of their anxiety. This research finding is consistent with the previous research studies, that prospective teachers faced anxiety and stress during course work due to the overburden schedule (Capel, 1997; Murray-Harvey et al., 2000).

Professional mastery relates to those teachers who can make a difference in students' learning and have strong understanding of the teaching and learning process. There was a significant mean fall in prospective teachers' professional mastery beliefs from first semester to fourth semester. Some reasons may be assumed such as lack of knowledge about the professional competencies and its practical implications for future teaching, lack of knowledge about professional masters of teaching, lack of professional teachers' skills to prepare them to face the future teaching responsibilities were not taught and discussed during their coursework by the teacher educators.

The teacher education program is a general scheme relating to teaching strategies and teaching theories. 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. It is very surprising in the Pakistani context, where more emphasis is given to theoretical knowledge and there is little focus on practical knowledge (Situation Analysis of Teacher Education in Pakistan, 2006). The significant evidence can be seen in the nature of courses which are being taught to train prospective teacher for future teaching. Teacher education program might be developing awareness about the theoretical knowledge of the teaching profession for the purpose of meeting degree requirements, but it does not provide the sound instructions for teaching. Teacher education program has certain flaws, and its limited instructions do not prepare fully for the teaching profession. 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).

Limitations and Suggestions

The major limitation of this study is that researchers selected prospective teachers from one public university. The fact of the matter is that no causal relationship can be established, because the independent variables (Masters Programs or four factors of the self - efficacy beliefs) are selected variables.

Since self-efficacy and teacher expectations are interlinked, researchers propose that future studies should carry out observations of prospective teachers' teaching during their teaching practice. Also designing experiments with manipulation of parameters would be an effective way to ascertain effects on the development of prospective teachers' self-efficacy beliefs.

References

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behaviour: Attitudes, intentions, and perceived behavioural control. *Journal of Experimental Social Psychology*, *22*, 453-474.

Allinder, R. M. (1994). The relationship between efficacy and the instructional practices of special education teachers and consultants. *Journal of Teacher Education and Special Education*, *17*, 86-95.

Armor, D., Conroy-Osequera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., & Zellman, G. (1976). *Analysis of the school preferred reading programmes in selected Los Angeles minority schools* (Report No. R-2007-LAUSD). Santa Monica, CA: Rand Corporation.

Ashton, P. (1984). Teacher efficacy: A motivational paradigm for effective teacher education. *Journal of Teacher Education, 35* (5), 28-32.

Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. New York: Longman.

Bandura, A. (1977).Self- efficacy: Toward a unifying theory of behavioural change. *Journal of Psychological Review*, *84*,191-215.

Bergman, J. & Mohammad, N. (1998). Primary and secondary education structural issues, in: P. Hoodbhoy (Ed.) *Education and the state*: *fifty years of Pakistan* (Karachi, Oxford University Press), 23–42.

Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programmes supporting educational change: Vol, Vll. Factors affecting implementation and continuation* (Rep.No.R-1589/7-HEW).Santa Monica, CA: RAND. (ERIC Document Reproduction Service No.140432)

Bullough, R. V., Jr., & Baughman, K. (1997). *"First-year teacher" eight years later: An inquiry into teacher development*. New York: Teachers College Press.education teachers, submitted, *Pedagogy in Practice.*

Capel, S. A. (1997). Changes in students' anxieties and concerns after their first and second teaching practices. *Journal of Educational Research, 39,* 2.

Chan, D.W. (2002). Stress, Self-Efficacy, Social Support, and Psychological Distress among Prospective Chinese Teachers in Hong Kong. *Journal of Educational Psychology, 22*, 5.

Clark, C. M., & Peterson, P. L. (1986). Teachers' thought process. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (pp.255-296). New York: Macmillan.

Daniels, M., Clifton, R. A., Perry, R. P., Mandzuk, D., & Hall, N. C. (2006). Student teachers' competence and career certainty: The effects of career anxiety and perceived control. *Journal of Social Psychology of Education, 9,*405-423.

Dembo, M. H. (2001). Learning to teach is not enough—future teachers also need to learn how to learn. *Teacher Education Quarterly, 28* (4), 28-35.

Forlin, C., T. Loreman, U. Sharma, and C. Earle. (2007). Demographic differences in changing pre-service teachers' attitudes, sentiments and concerns about inclusive education. *International Journal of Inclusive Education, 22* (2), 150–59.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*, 569-582.

Gibson, D. R. (1972). Professional socialization: The effects of a college course upon role conceptions of students in teacher training. *Educational Research, 14,* 213-219.

Ginns, I. S., & Tulip, D. F. (1995). Changes in pre-service elementary teachers' sense of efficacy in teaching science. School Science and Mathematics, *95*, 394–400.

Guskey, T.R. (1988).Teacher efficacy, self- concept, and attitudes towards the implementation of instructional innovation. *Journal of Teaching and Teacher education, 4* (1), 63-69.

Guskey, T. R. (1982).Differences in teachers' perceptions of personal control of positive versus negative student learning outcomes. *Contemporary Educational Psychology, 7*, 71-80.

Greaney, V., & Hasan, P. (1998). Public examinations in Pakistan: A system in need of reform. In P. Hoodbhoy (Ed.), *Education and the state: Fifty years of Pakistan* (pp. 136-176). Karachi, Pakistan: Oxford University Press.

Hamre, B., & Oyler, C. (2004). Preparing teachings for inclusive classrooms: Learning from a collaborative inquiry group. *Journal of Teacher Education, 55*(2), 154-163.

Hollingsworth, S. (1989). Prior beliefs and cognitive change in learning to teach. *American Educational Research Journal, 26*, 160-189.

Hsien, M. L. W. (2007). Teacher attitude towards preparation for Inclusion – In support of a unified teacher education programme. *Post Graduate Journal of Education Research, 8*(1), 49-60.

Kagan, D.M. (1992). Professional Growth among Pre-service and Beginning Teachers. *Review of Education Research, 62* (2), 129-169.

Lin, L. H., Hazareesingh, N., Taylor, J., Gorrell., & Carlson, H. L. (2001). Early childhood and elementary pre-service teachers' beliefs. *Journal of Early Childhood Teacher Education, 22*,135-150.

Moore, W., & Esselman, M. (1992). *Teacher efficacy, power, school climate and achievement: A desegregating district's experience.* Paper presented at the annual Meeting of the American Educational Research Association, San Francisco.

Murray-Harvey, R., Slee, P. T., Lawson, M. J., Silins, H., Banfield, G., & Russell, A. (2000).Under stress: the concerns and coping strategies of teacher education students. *European Journal of Teacher Education, 23,* 19–35.

Myers, D.G. (2005).Social psychology. (8th ed). New York: McGraw-Hill Companies Inc.

Norusis, M. J. (1990). *SPSS Base System User's Guide*. Chicago:

SPSS Inc.

Parkway, F.G., Olejnik, S., & Proller, N. (1988).A study of the relationships among teacher efficiency, locus of control, stress. *Journal of Research and Development in Education, 21* (40), 13-21.

Pigge, F. L., & Marso, R. N. (1997). A longitudinal study of persisting and no persisting teachers' academic and personal characteristics. *Journal of Experimental Education, 65*, 243-254.

Pigge, F.L. & Marso, R.N. (1990).*The influence of Personality Type, Locus of Control and Personal Attributes upon Changes in Anxieties, Attitude and Confidence of prospective teachers during training*. Paper presented at the annual meeting of the Mid-Western Educational research association Chicago, Illinois.

Punch, K. F., & Tuettemann, E. (1990). Correlates of psychological distress among secondary school teachers. *British Educational Research Journal, 16*, 369-382.

Rich, Y., Lev, S., & Fischer, S. (1996). Extending the concept and assessment of teacher efficacy. *Educational and Psychological Measurement, 56*, 1015-1025.

Ross, J. S., & Medway, F. J. (1981).Teacher locus of control, teacher behaviour and student behaviour as determinants of student achievement. *Journal of Educational Research*, *74*, 375-381.

Rummel, R.J. (1970). *Applied factor analysis*. Evanston, IL: North western University Press.

Schunk, D.H. (1982).*Self efficacy perspective on achievement behaviour.* (Rep.No.C6016486). Paper presented at the annual convention of the American Psychological Association, Washigton DC.: RAND. (ERIC document reproduction service no. ED 226293).

Sheikh, M.A. (2000). *Study guide CC.829: Teacher education in Pakistan*. Islamabad: Allama Iqbal Open University.

Situation analysis of Teacher Education in Pakistan. (2006). United States Agency for International Development.

Soodak, L., & Podell, D. (1993).Teacher efficacy and student problem as factor in special education referral. *Journal of special education*, 27, 66-81.

Stein, M.K., & Wang, M.C. (1988).Teacher development and school improvement: The process of teacher change. *Journal of Teaching and Teacher Education, 4*,171-187.

Tamir, P. (1991). Views and beliefs of Israeli pre-service teachers on teaching and learning. *Journal of Educational Research, 84*, 239-244.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, *68*, 202-248.

Weinstein, C. S. (1989). Teacher education students' perceptions of teaching. *Journal of Teacher Education, 40* (2), 53-60.

Wheatley, K. F. (2002).*Teacher Persistence: A Crucial Disposition, with Implications for Teacher Education.* Essays in Education, 3. Online documents at URL http://www.usca.edu/essays/vol32002/wheatley.pdf. (23rd April 2009).

Woolfolk, A. (2008). *Educational psychology: Active learning edition* (10th ed.). Boston, MA: Pearson.

Woolfolk, A. (2004). *Educational Psychology* (9th ed). India: Pearson Education.

Youngman, M. B. (1979). *Analyzing Social and Educational Research Data*. London: McGraw Hill.

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