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Teacher Efficacy: Effects on Arts and Science Teachers' Performance

Aamna Saleem Khan, Ph. D.

Abstract

The purpose of the study was to investigate the sense of efficacy between arts and science teachers of secondary schools of Wah Cantt. Teacher efficacy is a simple idea with significant implications. A teacher's efficacy belief is a judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated. It was the descriptive and survey study. The main objective of the study was to investigate the sense of efficacy between arts and science teachers.

For the sample of the study, 48 teachers of Federal Government High Schools of Wah Cantt., and Private Secondary Schools of Wah Cantt. were randomly selected. Questionnaire was developed only for teachers. Twenty seven-items with four-point rating scale were used in order to investigate the effect of teacher efficacy on academic achievement of students. The data was analyzed and interpreted by using One-dimensional of Chi Square. The study reflects that the teachers of arts and science are efficacious and able to help the students in their learning.

Key Words: Education, Teacher, Teacher Efficacy, Teachers' Standard, Teachers' engagement, Academic Achievement

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Teacher Efficacy: Effects on Arts and Science Teachers' Performance

1.1 Introduction

Dewey defines education as a process of living through a continuous reconstruction of experiences. It is the development of all those capacities in the individual, which will enable him to control his environment and fulfill his possibilities. Education, in its limited sense, includes and influences deliberately planned, chosen and employed by the community for the welfare of its coming generations. The purpose is to modify the behavior of the child and to shape his personality in a more desirable form (Khalid, 1998).

Teacher has a pivotal position in society. He enjoys a supreme position of respect and authority. He is the master of student's destinies. Role of teacher in a society is like the backbone in the body. A teacher is designed with the responsibility to prepare the child for future. There is a very great role of teacher. The teacher is the most important and crucial factor in education.

Teachers are called upon to perform many functions and tasks as a routine part of the job. They not only have to deliver instructions but must design, assess, collaborate, counsel, utilize technology effectively, involve parents and other community resources, analyze their teaching practices and continually participate in staff development activities. The National Board for Professional Teaching Standards (1989) has outlined five propositions to enable the teachers to improve their teaching practices and adhere to a higher standard of excellence in teaching:

1. Teachers are committed to students and their learning.
2. Teachers know the subjects they teach and how to teach those subjects to students.
3. Teachers are responsible for managing and monitoring student learning.
4. Teachers think systematically about their practice and learn from experience.
5. Teachers are members of teach communities (Steinbornn, 2000).

1.1.1 Teacher Efficacy

Beliefs can generalize when skills required to accomplish dissimilar activities are acquired together under the supervision of a competent instructor. Great coaches can create all-around athletes whose beliefs about their capabilities cut across various sports. The skills required to organize any course of action are governed by broader self-regulatory skills such as knowing how to diagnose task demands or constructing and evaluating alternative strategies. When young people possess these self-regulatory skills, they can improve their performances across a range of activities, in part because they believe in their ability to solve the problems required to succeed (Pajares, 2005).

Teachers who believe in their ability to positively influence students are generally more satisfied. This belief in one's ability is referred to as self-efficacy (Hoy and Miskel, 2008).

1.1.2 Academic Achievement

According to Lucksinger (2000) teacher efficacy occurs when school environments commit to sincere professional development initiatives beginning with novice teachers. These teachers are more likely to stay in supportive environments that empower them to achieve high goals instead of dissuading them which results in their departure from the profession. High teacher turnover rates disrupt the educational process. New teachers gain must be assimilated into the school environment and familiarized with content and teaching process. As this occurs, students suffer the consequences. Furthermore, teachers remaining in the field who do not receive adequate support and do not learn effective and appropriate methods for delivering instruction and prescribing techniques for optimal learning can provide students with little that will impact their success.

Classroom time must be productive learning time for students. Teacher can accomplish this by early in the school year establishing and instituting classroom procedures and setting academic expectation. Thus, students know from their first day in the classroom what they can and cannot do and what is and is not expected of them. Throughout the school year, you can get the most out of the time you have with students by planning lessons and activities that fit within any time constraints as well as the available learning materials. Teacher should also sequence, pace, monitor and assess student work as well as provide feedback to each student (Farris, 1996).

Teachers are responsible for finding ways to educate all children and it is a teacher's duty to participate in professional development activities that foster this responsibility. Practices such as differentiated instruction, data driven instruction and identifying areas of weakness in students are crucial to developing the quality of classroom teachers. Differentiated instruction is vital for increased student performance because it meets the needs of every student. This connects to the notion of schools making improvements based on test data, especially in weak areas. Teachers need to remember that external characteristics, such as student socioeconomic status and parental educational attainment, impact student achievement in significant ways but when those differences are controlled for, teachers is the most important determinants of student achievement (Gallagher, 2002).

1.1.3 Teacher Efficacy and Academic Achievement

Teachers need to act as change-agents and provide a more visible role in the leadership of the education process. Performance based standards for teachers can make a broader impact on schools and the improvement of education. They provide a link between expectations of students and those of teachers. With the level of accountability

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and the expectations demanded by National Board Certification (1998), teachers would be raised if the standards are effectively implemented (Stienbronn, 2000).

No doubt the welfare, prosperity and security of nation depend upon the quality of its education. In the present era the nations are competing in the field of knowledge only. The politicians are relying upon the knowledge, its scholars and scientists and its applications and its results and repercussion. Now a day the competitions are totally in the fields of science, technology and economics. All these disciplines are inter-linked. The higher the nation goes into the sphere of knowledge, the more it is recognized as a great nation. The quality and level of excellence in education depend upon the quality and competence of teachers. It is rightly said that no system of education can rise above its teachers and no nation can rise above its system of education. The teacher is the echelon in the entire system of education. It is also correctly stated that if any revolution is to be brought in education that should be started from teacher. During the professional preparation of teachers, emphasis is laid upon the enhancement of their competencies through changing their behavior. The competence is defined as having enough power, skill, means or talent to do something (Govt. of the Punjab, 1999).

All the students seem intent on their studies. These students know what they are doing and clearly are highly motivated. Motivation is an aspect of confidence. Confident students are usually highly motivated, because they know they can succeed and it is generally thought that success encourages greater efforts and confidence. It is a kind of cyclical form (Yiwen, 2004).

The class environment influencing student motivation includes effective use of praise, development of appropriate long-term and short-term instructional goals, setting realistic learning objectives and using a variety of methods to group students, instruct and evaluate them (Arif, 2003).

According to Shah and Sultana (1999-2000), to convey information effectively is the real work to be performed by teacher. Competencies in this skill make the effort of teacher goal-oriented and participation of the students fruitful. Education is an objective-oriented activity.

A teacher with a high sense of self-efficacy will devote more time to academic pursuits and provide students who are having difficulties the guidance they need to succeed. A teacher's sense of efficacy plays a role in his or her students' learning. Students who have a teacher with a high sense of efficacy will learn more than those who have one that is full of self-doubt. To a teacher with a high self-efficacy, difficult students are teachable through additional effort and the appropriate teaching methods. The student's problems are surmountable by being creative and working hard (Bandura, 1997).

1.1.4 Aim – Its Purpose

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The study is of great significance. It is helpful to identify the teacher's problems about their methods of teaching. It provides guideline for the teachers. Consequently, it is helpful in the improvement of quality of education. It also enables the teachers to appraise and evaluate their professional activities and teaching procedures. The teachers keep themselves closely in touch with expanding knowledge in all fields. They learn to be a critic of their own performance and stimulus progress among their colleagues and others professional workers. It is helpful for improving the teacher-pupil relationships, teacher-teacher relationships, teacher-administration relationships.

The study of teacher efficacy provides many meaningful educational outcomes such as teachers' persistence, enthusiasm, commitment and instructional behavior, as well as student outcomes such as achievements, motivation and self efficacy beliefs. However, persistent measurement problems have plagued those who have sought to study teacher efficacy. Finally the study provides new directions for future research.

1.2 Methods

1.2.1 Sample of the Study

Sample of the study is shown in Table 1.

1.2.2 Research Instrument

To measure teacher efficacy, data was collected through 27 items questionnaire (Appendix A) which was constructed and discussed with experts in concerned areas. It was improved in the light of their suggestion. Questionnaire was developed only for teachers. Twenty seven items with four-point rating scale was used in order to investigate the effect of teacher efficacy on academic achievements of students. It has consisted of 17-item previously developed and used by Naz (2002) and 10- item previously developed and used by Gibson (1984). Pilot testing was conducted in order to improve the questionnaire and check the effectiveness of the questionnaire.

1.2.3 Data Analysis

One-dimensional chi square was applied for data analysis. One-dimensional chi square can be used to compare frequencies occurring in different categories or the categories may be groups, so that the chi square is comparing groups with respect to the frequency of occurrence of different events (Gay, 2000). The data was analyzed by using Statistical Package for Social Sciences (SPSS).

1.3 Discussion

Highly efficacious teachers do not shy away from students who are struggling with challenging coursework but develop novel ways of dealing with the complicated situation (Gibson and Dembo, 1984).

High efficacy teachers agreed that if a teacher tried really hard, he or she could get through to even the most difficult or unmotivated students. High efficacy teachers are more at ease in the classroom, they smile more, provide students with more positive interactions and manage their classrooms more successfully, are less defensive, more accepting of student disagreement and challenges and more effective in producing student achievement gains. They spend more time teaching curriculum and interacting with students on academic content. Low efficacy teachers expressed lower expectations and focused on rule enforcement and behavior management (Ashton, 1985).

The teachers are high efficacious and they convinced that they can develop creative ways to cope with system. Teachers know that they can motivate their students to participate in their learning tasks. They have adequate skills and motivation, so they can teach to the most difficult students. If students did not remember information which teacher gave in a previous lesson, teachers know to increase their retention in the next lesson. High teacher-efficacy may be present in the classroom through a teacher's relentless pursuit of bringing about change in all students or as a teacher's creative approach to successfully meeting all objectives for students' engagement and learning (Pajares, 1996 and Freidman, 2003).

The teachers feel their self confident while teaching weak students. Teachers have enough training to deal with their learning problems. The teachers are satisfied and successful with their students. Successful performance was found to raise the level of efficacy (Goddard, Hoy and Woolfolk-Hoy, 2004).

The teachers are convinced that, as time goes by, they will continue to become more and more capable of helping to address their student's need. Efficacy beliefs become more stable over time and are fairly stable once set, this stability is due to the wealth of experiences (Schwarzer and Hallum, 2008).

1.4 Conclusions

Conclusions were drawn from the study:

1. When teachers get disrupted while teaching, they were confident that they can maintain their composure and continue to teach well. All teachers are confident in their ability to be responsive to their student's needs, even they having a bad day. If students are particularly disruptive one day, teachers ask their self what they have been doing differently. If a student in their class becomes disruptive and noisy, teachers feel assured that they know some techniques to redirect him quickly.
2. The teachers were convinced that they are able to successfully teach the relevant subject content to even the most difficult. When teachers try really hard, they are able to teach even the most difficult students.
3. The teachers are convinced that they can develop creative ways to cope with system. The teachers know that they can motivate their students to participate in

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- their learning tasks. When students are having difficulty with an assignment, teachers were usually able to adjust to their level. The teachers have adequate skills and motivation, they can teach to the most difficult students. If students did not remember information which teacher gave in a previous lesson, teachers know to increase their retention in the next lesson.
4. The teachers feel their self confident while teaching weak students. The teachers can alter their own teaching behavior to help the weakest students in their class. The teachers have enough training to deal with their learning problems.
 5. The teachers are convinced that, as time goes by, they will continue to become more and more capable of helping to address their student's needs.
 6. The teachers (Arts, Science, Male and Female) believe that every student is reachable and teachable and by putting required effort in teaching, students' academic achievement will enhance.

1.4.1 Suggestions

Keeping in view the present study, the following suggestions are made for future research:

1. In future studies, the sample size should be made as larger as possible to generate the more reliable results.
2. In the present study the questionnaire was used as tool for data collection. In future studies following tools can be used to further verify the results obtained in the study:
 - i) Students should be involved in order to get the more reliable results of teacher efficacy because the students can also provide better information about their teachers in term of teacher efficacy.
 - ii) The researcher should personally visited in the class room for observe the teachers because it is not possible that what teachers say whether they actually do.
3. Comparative studies should be carried out between Government and Private Schools teachers, Primary and Secondary schools' teachers, Urdu medium and English medium schools and backwards and rural areas of the country.

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TABLE 1**SAMPLE OF THE STUDY**

Sr.No.	School Names	Numbers of Teachers (Arts and Science)	Category
1.	F.G.G.H.S. No. 2, Wah Cantt.	5(4+1)	Girls High Schools Wah Cantt.
2.	F.G.G.H.S. No. 3, Wah Cantt.	4(0+4)	
3.	F.G.G.H.S. No. 5, Wah Cantt.	6(3+3)	
4.	F.G B.H.S. No. 6, Wah Cantt.	5(4+1)	Boys High Schools Wah Cantt.
5.	F.G B.H.S. No. 7, Wah Cantt.	6(3+3)	
6.	F.G B.H.S. No. 11, Wah Cantt.	6(4+2)	
7.	Pics Model School Wah Cantt.	5(0+5)	Private Secondary Schools Wah Cantt.
8.	Gillani Cambridge School Wah Cantt.	4(2+2)	
9.	Farooqi Ideal Public School Wah Cantt.	7(4+3)	
	Total	48	

APPENDIX “A”

QUESTIONNAIRE

Name:.....

School Name:.....

Note: Please give your response to each of the following statement. No response is right or wrong. This is just your personal view point not about your self.

Exercise 1,2,3,4, as the case may be:

1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True

1. I am convinced that I am able to successfully teach the relevant subject content to even the most difficult.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
2. When I try really hard, I am able to teach even the most difficult students.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
3. I am convinced that, as time goes by, I will continue to become more and more capable of helping to address my student's needs.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
4. Even I get disrupted while teaching; I am confident that I can maintain my composure and continue to teach well.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
5. I am confident in my ability to be responsive to my student's needs, even I am having a bad day.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
6. If I try hard enough, I know that I can exert a positive influence on both the personal and academic development of my students.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
7. I am convinced that I can develop creative ways to cope with system.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
8. I know that I can motivate my students to participate in their learning tasks.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
9. I think that those students's perform better who have better socio-economic status.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
10. I don't differentiate students by socio-economic status.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
11. I think low achieving students from well to do families can learn in normal class rooms.
1. Not at all True 2. Barely True 3. Moderately true 4. Exactly True
12. I feel myself confident while teaching week students.

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- | | | | | |
|-----|--|----------------|--------------------|-----------------|
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 13. | I believe that every student is reachable and teachable. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 14. | I can alter my own teaching behaviour to help the weakest students in my class. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 15. | Teachers are not a powerful influence on student's achievement when all factors are considered. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 16. | A teacher is very limited in what he/she can achieve because a student's environment has large influence on his/her achievement. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 17. | When a student is having difficulty with an assignment I am usually able to adjust to his/her level. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 18. | I have enough training to deal with my learning problems. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 19. | If a teacher has adequate skills and motivation, he/she can teach to the most difficult students. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 20. | The influences of student's home experiences can be overcome by good teaching. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 21. | The hours in my class have little influence on students compared to the influence of their home environment. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 22. | If a student did not remember information I gave in a previous lesson I know to increase his/her retention in the next lesson. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 23. | If students are particularly disruptive one day, I ask myself what I have been doing differently. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 24. | If a student in my class becomes disruptive and noisy, I feel assured that I know some techniques to redirect him quickly. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 25. | When a student does better than usual, many times it is because I exerted a little extra effort. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 26. | Individual differences among the teachers account for the wide variations in student achievement. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |
| 27. | The amount that a student can learn is primarily related to family background. | | | |
| | 1. Not at all True | 2. Barely True | 3. Moderately true | 4. Exactly True |

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