# Contribution of Professional Efficacy and Demographic Factors towards Performance of Secondary Schools Teachers

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Abstract

*This research examined the contribution of secondary school teachers' professional self-efficacy and demographic factors (locality, gender, and discipline) on their performance. This study mainly focused on the three areas of impact of teachers' professional self-efficacy i.e. students' engagement, instructions strategies, and classroom management. A sample of 360 senior secondary school teachers (216 males and 144 females) was selected using stratified random sampling technique. A valid and reliable instrument of teachers' self-efficacy was used to measure the professional self-efficacy of teachers. Data for teachers' performance in terms of 10th grade students scores in different subjects was collected from the gazette of concerned Boards of Intermediate and Secondary Education. Data was analyzed using inferential statistics. To compare the different groups teachers based on different demographic characteristics for their self-efficacy and performance, t-test was applied. Regression analysis was used to find out the relative contribution of teachers' profession self-efficacy and demographic variables towards teachers' performance. The analyzed data revealed that demographic variables were not the significant contributors for teachers' performance while professional self-efficacy was found to be a significant contributor towards teachers' performance. Thus, the findings of this study leads to its implications for developing teachers' professional self-efficacy through pre-service and in-service trainings.*

***Key words:*** professional self-efficacy, instructional strategies, students' learning engagement, classroom management, gender, discipline

## Introduction

There are various factors that contribute towards teachers' performance. Teachers' training, competence, and personal demographic characteristics like qualification and experience, environment of the workplace affect their professional commitment and job satisfaction. In turn, all these factors affect teachers' classroom teaching, overall performance regarding professional job, and belief about their own performance capacity. Teachers' belief about their own performance capacity is termed as teachers' self-efficacy (Henson, 2001; Goddard, Hoy, & Hoy, 2000). (Sharma, Loreman & Forlin, 2012) have defined

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teacher's self-efficacy as the set of beliefs possessed by a teacher about his/ her capabilities and skills to inculcate and guide students' behaviour and performance in learning irrespective of hurdles and problems. According to (Klassen ,Tze , Betts, & Gordon, 2011), professional self-efficacy is the aspect of teachers' competence that makes them to believe that they are capable to perform their professional duties. The efficacious teachers usually put more efforts in motivating and engaging students in the learning process, supporting them to resolve their learning difficulties, making judgments and decisions for their effective teachings, using their professional knowledge, and being skillful to perform their leadership roles that they need to play in their professional life.

The theoretical bases for the development of self-efficacy can be explained in the light of its four sources identified by (Bandura, 1997). These sources are experience, social modeling, social persuasion, and emotional and physical reaction. For example, participation in training programs provides chances to have instructions on teaching and then get experience of using specific pedagogies practically; they practically receive social modeling by attending the presentations in pedagogy by experts; receive social persuasion by participating in a discussion followed by a feedback; and they come across emotional and physical reaction by implementing the pedagogies practically in classroom. Thus, training may result in increased self-efficacy and increased performance.

Teachers 'self-efficacy is well researched area around the world but in there are rare studies in Pakistan to give a holistic picture of impact of teachers' self-efficacy and it determinants. For example, (Butt, Khan & Jehan, 2012) conducted a study to find the impact of English teacher' self-efficacy beliefs on students' performance; and (Ahmad, Khan, and Rehman, 2015) conducted a study to compare the self-efficacy of male and female teachers at elementary level. All these researchers came with findings that female teachers had greater sense of efficacy than male teachers. (Shezad and Naureen, 2017) investigated the impact of teachers' self-efficacy on secondary school students' academic achievement and found that teachers' self-efficacy had a positive impact on the students' academic achievement. (Zamir, Arshad & Nazir, 2017) compared the self-efficacy of elementary school teachers of public and private sector, and found that teachers from private schools had higher level of self-efficacy as compared to teachers from public sector. Furthermore, they found female teachers from both public and private sector had higher self-efficacy as compared to their male counterparts. (Aziz & Quraishi, 2017) explored the influence of gender, professional qualification, and job

experience on secondary school teachers' self-efficacy. The results showed no significant influence of gender on self-efficacy while qualification and experience appeared as significant contributor for teachers' self-efficacy.

With reference to Pakistan, there is need to improve teacher education so as to meet the challenges of quality education. In Pakistan, the teachers working in different areas have workplace which differs with respect to infrastructure, school environment, and socio-economic conditions of the overall feeding area for the schools. Hence, there was need to explore the contribution of different factors like gender, locality, and field of studies including teachers' self-efficacy on their performance. To fill this knowledge gape, a study was conducted to examine the contribution of teachers' efficacy beliefs and demographic factors towards performance of secondary school teachers. The objectives of this study were: i) to examine the self-efficacy and performance of secondary school teachers in Khyber Pakhtunkhwa, Pakistan; ii) to find out the difference of self-efficacy and performance of secondary school teachers having different demographics characteristics (male and female, urban and rural, and Arts and science subjects); and iii) to examine the relative contribution of self-efficacy, and selected demographic characteristics of teachers towards their performance.

## Methodology

Survey research design was adopted for this study. The following procedures and method were used for conducting this study.

### *Population and Sample of the Study*

Khyber Pakhtunkhwa province is constituted on 5 zones. Out of five (5) zones, three (3) zones were the target population of this study. Total numbers of High and Higher Secondary Schools (Boys and Girls) in these zones were 1667. Total Secondary Schools Teachers with Arts subject (Male and Female) were 4974 and total Secondary Schools Teachers teaching Science subjects (Male and Female) were 1574. Total number of students (Science and Arts) appeared in SSC exam ($10^{th}$ grade) boys and girls were 97,460 in the selected three zones (EMIS, 2013) who formulated the total population of the study. For selecting sample of study, three-step cluster-sampling technique was used. Among 5 zones of the province, three (3) zones were randomly selected. Then from each selected zone, two (2) districts were randomly selected. From each sample District, twenty (20) high and higher Secondary

Schools (12 schools for boys and 8 schools for girls) were selected using stratified random sampling technique. Then from each selected school, three Senior School Teachers (SST), one Science teacher, and two Arts subject teachers were selected by using random sampling technique. Thus, a total of three hundred and sixty (360) teachers (216 males and 144 females, & 120 Science teachers and 240 General teachers) constituted the sample of the study. Furthermore, 3600 students of $10^{th}$ grade (1800 boys and 1400 girls) being taught by the selected teachers were included in students' sample.

*Research Instruments*

The researchers used the original versions of the Teachers' self-efficacy Scale (TSES) prepared by Anita Woolfolk Hoy (2000), Professor Educational Psychology & Philosophy, School of Educational Policy & Leadership, The Ohio State University, Columbus, Ohio. Proper permissions to use the original scales were obtained through email from Anita Woolfolk Hoy. It was translated into Urdu for easiness of data collection process. The TSES scale was structured around three dimensions/factors i.e. instructional strategies, students' engagement (SE) and classroom management (CM). Thirteen (13) items represent instructional strategies, five (05) items represent students' engagement (SE) and six (06) items represent classroom management (CM). The reliability coefficient for this scale was found to be 0.802. The academic scores of the students corresponding to teachers Arts and Science disciplines were collected through a checklist designed for the entering scores and related information in an organized from.

*Data Collection*

Researcher visited each and every selected school to collect the primary data on teachers' professional efficacy from the sample teachers through TSES scale after having their consent. To measure the impact of teachers' professional efficacy in terms of students' achievement, results sheets of selected students from corresponding Boards of Intermediate & Secondary Education (BISE) were collected after permission from the relevant competent authorities.

*Data Analysis*

The collected data was organized for analysis. The performance score of a teacher was calculated using GPA formula

devised by the Govt. of Punjab (1996) for the calculation of teacher performance. The formula is as:
GPA= ($A^+ \times 10 + A \times 7 + B \times 5 + C \times 3 + D \times 2 + E \times 1$) × 10 ÷ (Total Number of Students) Where A+= Number of students with A+ grade; A= Number of students with A grade; B= Number of students with B grade; C= Number of students with C grade; D= Number of students with D grade; and E= Number of students with E grade.Different groups of teachers were compared using t-test, and the relative contribution of self-efficacy, gender, and locality was determined through regression analysis.

## Results

The analyzed data has been presented and interpreted in the following tables:

*Table* 1 *Measure of Teachers' professional self-efficacy and Performance*

| Aspect professional self-efficacy | N | Population Mean | Observed Mean | SD |
|---|---|---|---|---|
| Total Professional self-efficacy | 360 | 72 | 100.86 | 11.049 |

Table 1 shows that observed mean of teachers' professional self-efficacy was greater that population mean of professional self-efficacy was much higher that population mean score showing that teachers had relatively high professional self-efficacy.

*Table 2 Difference between professional self-efficacy of teachers with different categories*

| Categories | N | Mean | S. D | t-value | p-value |
|---|---|---|---|---|---|
| Male | 216 | 98.944 | 11.527 | 2.715 | 0.007* |
| Female | 144 | 102.14 | 10.026 | | |
| Urban | 180 | 100.33 | 10.386 | 0.920 | 0.357 |
| Rural | 180 | 101.40 | 11.678 | | |
| Science | 120 | 100.75 | 12.373 | 0.138 | 0.890 |
| Arts | 240 | 100.92 | 10.351 | | |

* Significant at 0.05

Table 2 shows that female teachers (Mean score= 102.14) had greater self-efficacy scores than that of male teachers (Mean score=98.944) and the difference was significant (t=2.715, p<0.05). There

was no significant difference ($p<0.05$) between the self-efficacy of urban and rural teachers as well as the teachers of Arts and science subjects.

*Table 3 Teachers' Performance scores*

| N | Mean | SD | Score distribution | | |
|---|---|---|---|---|---|
| | | | 2.56-9.99 | 10-19.99 | 20-30 |
| 360 | 10.34 | 3.63 | 51.1% | 47.8% | 1.1% |

Table 3 indicates that majority of teachers had low performance score; only 1% teacher had higher performance scores.

*Table 4 Performance scores of different categories of teachers*

| Categories | N | Mean | S. D | t-value | p-value |
|---|---|---|---|---|---|
| Male | 216 | 9.14 | 3.238 | 8.309 | .000* |
| Female | 144 | 12.12 | 3.455 | | |
| Urban | 180 | 10.45 | 3.385 | 0.595 | .552 |
| Rural | 180 | 10.22 | 3.863 | | |
| Science | 120 | 11.31 | 3.886 | 3.678 | .000* |
| Arts | 240 | 9.84 | 3.396 | | |

*Significant at 0.05 level

Table 4 shows that performance of female teachers (Mean score=12.12) was greater than that of male teachers (Mean score=9.14) and this difference was significant at 0.05 level. Similarly, there was a significant difference ($P<0.05$) between the performance score of teachers from science discipline (Mean = 11.31) and that from Arts discipline (Mean= 9.84). However, there was no significant difference between the teachers of urban and rural locality ($P>0.05$) regarding their performance scores.

Table 5 *Regression showing contribution of independent variables on dependent variables ( $R^2=0.840$ , $F=372.75$*)*

*Significant at 0.05

| Independent Variabls | Standardized Coefficient | | | | |
|---|---|---|---|---|---|
| | B | Std, Error | Beta | T | p |
| (constant) | 20.697 | 1.181 | | 17.519 | .000 |
| Total TPE | 0.037 | 0.008 | 0.897 | 37.516* | .000 |
| Location | 0.0050 | 0.154 | 0.007 | 0..326 | .744 |
| Gender | 0.210 | 0.173 | 0.028 | 1.209 | .227 |
| Discipline | 0.213 | 0.327 | 0.028 | 0.652 | .515 |

a. Dependent Variables: Students Performance
b. Predictors: (Constant), Discipline, Gender, Location, Total Prof Efficacy (TPE)

Table 6 shows that set of dependent variables and predictors forms a fit model which contribute 84% in the variation of dependent variable. The value of F (372.75, P<0.05) indicates a significant difference in the contribution of predictors. The values of regression indicate that teachers' professional self-efficacy (Beta-0.897, P<0.05) is the significant contributor for teachers' performance while location, gender and discipline (field of studies) are not the significant contributors (P>0.05) for their performance.

*Discussion and Conclusions*

The results of this study revealed that teachers of the target area possessed high self-efficacy. There was a significant difference (p<0.05) between self-efficacy score of male and female teachers. Female teachers had higher self-efficacy as compared to male teachers. These findings are similar to the findings of studies conducted by Butt, Khan and Jehan (2012); Ahmad, Khan, and Rehman (2015); and Zamir, Arshad and Nazir (2017). There was no significant difference (P>0.05) between secondary school teachers from urban and rural area as well as between the teachers teaching Arts and Science subjects regarding self-efficacy. The comparison of male and female teachers regarding their performance showed that the performance of female teachers was significantly higher

($p<0.05$) than the performance of male teachers. Similarly, performance score of the teachers of science subjects was greater than that of the teachers teaching Arts subjects and this difference was significant at 0.05 level, whereas they had no significant difference ($P>0.05$) in self-efficacy. This difference may be attributed to the ability of the science students, as in general, students with better performance are enrolled in science discipline. Furthermore, analyzed data revealed that there was no significant difference ($p>0.05$) between the performance of teachers from urban and rural area.

For the relative effect of different factors, the analyzed data in this study revealed that teachers' self-efficacy was the only significant contributor (Beta=0.897, $p<0.05$) for teachers' performance while other factors i.e. gender (Beta=0.028, $p>0.05$), locality (Beta=0.007, $p>0.05$), and teachers' subject of studies (Beta=0.028, $p>0.05$) had not the significant contribution ($p>0.05$) towards teachers' performance. These findings are concordant with the findings of studies by Butt, Khan and Jehan (2012), Shezad and Naureen (2017).

Thus, the results of current study along with synthesis of previous studies indicate teachers' self-efficacy as a significant contributor for teachers' performance. While other mediating factors may vary for different studies in this regard.

*Limitations and recommendations*

Teachers' performance has been measured through students' scores in this study while it may be one indicator of teachers' performance among the other factors that inclusively determine the performance of a teacher. As (Isore, 2009) has claimed that students' scores are influenced by many other factors like students' own struggle, parental support, support from peers, resources of school organization, and schema of student developed by former teachers etc. Thus the students' scores cannot be the true measure of teachers' performance. To resolve this issue, (Danielson & McGreal, 2000) have proposed to measure teachers' performance by using different evaluation tools simultaneously that may reflect the different aspects of their job performance. Thus, in further studies for searching links between self-efficacy and teachers' performance, inclusive measures of performance be used as proposed by (Danielson & McGreal, 2000).

Furthermore, teachers' self-efficacy has been found consistently as a significant contributor for students' academic achievement as well as

teachers' performance. Therefore, factor of self-efficacy be included in teacher trainings as well as selection criterion for future teachers.

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