

Original Article

Analysis of Teacher-Led Factors Associated with Students Performance in Standardized Achievement Tests (SAT) in Selected Government Secondary Schools of District Karachi

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Abstract

The present study aimed to analyze the teacher-led factors linked with students' performance in standardized achievement test (SAT) in government secondary schools of Karachi. The research design adopted in current study was quantitative. The population was the secondary school teachers i.e. higher and lower secondary school teachers who were designated as junior school teachers and high school teachers and students from grade were also included. The number of sample schools from where the data was gathered is 30 in which both male and female respondents were given equal opportunity. The data was collected through a questionnaire of likert type. The findings of present study showed that the factors teachers' views, about the level of physical facilities in schools, head teachers' supervisory role, and causes of students better performance in SAT were crucially influencing. While, the students perceptions about the teachers' classroom practice were also a triggering factor in enhancing the performance in standardized achievement test. However, it was concluded that mentioned factors are important to be considered when preparing students for SAT test.

Keywords: Teacher-Led Factors, Students Performance, Standardized Achievement Tests, Government Secondary Schools, District Karachi

INTRODUCTION

Education is the fundamental right for every individual. It helps to promote intellectual, social, moral, aesthetic and economic development. Education enables individuals to adjust themselves in the society. The 1973 Constitution of Pakistan gives high importance to education and term it a fundamental right. The article 25-A spell out that state is responsible for free and compulsory education. Keeping in view the importance of education, the Government of Pakistan has shown various education policies. The major aim of these all policies was to, enhance access of education, decrease all kinds of disparities from education, and raise the quality of education.

Quality education is the burning issue gaining acceptance day by day not in Pakistan but also in the World. The World Education Forum (2000) has drawn attention to the quality of

education at different layers of education. The forum suggested to achieve quality of education in numeracy, literary and life skills. UNESCO (2005) has expressed its concern for quality of education not by increasing the access (enrolment) of education but priority should be given to high quality of schooling. The Dakar Action framework (2000) has also emphasized the quality of education in terms of measurable students' performance, literary and crucial practical skills of life.

The national educational policies of Pakistan have given its vision for improving access, reducing inequalities and improving quality in all aspects and at all level of education in the country. The policies have suggested several reforms in elementary, secondary, higher secondary and for universities. The elementary education is considered backbone of education system throughout the globe. The quality of elementary education in the country is the



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area that calls for immediate attention for policy-makers, curriculum developers, teacher educators, educational managers and teachers. Quality of education has been affected by myriad factors at school level. These factors may be divided at school level, classroom level and teachers' level. The most crucial teacher-led factors influencing the students growth in terms of learning and academic performance . The quality of teachers was definitely one of the most important factors shaping the learning and growth of students (Ingersoll, 1999 and Hawley, 2007). Research indicated that teachers' quality was essential to child development in terms of social development and academic achievement (Lewis et al., 1999 and Hawley, 2007). Teachers' quality is associated with students' improvement and achievement.

Student achievement as an indicator of quality has received national and international acknowledgement. In order to measure students' performance in schools, the government has taken several policy steps. These initiatives include the establishment of National Education Assessment centre (NEAS) and Provincial Education Assessment centre (PEAS). The NEAS and PEAS supposed to improve assessment practices in schools.

From time to time many studies have been executed in Pakistan on focusing learner achievement. In Pakistan the national assessment studies were first time conducted in 1983 under Primary Education Project. These studies produced different findings regarding teachers , head teachers, classroom, professional support and students' characteristics. Majority of these studies were either project-based or sample based. Hardly any study was conducted by taking respondents from province of Sindh. The Education & Literacy Department first time in the history of Sindh assigned the responsibility of conducting SAT for class V students in 2012. The Sukkur IBA conducted these test. These test were conducted in all district of Sindh in public sector schools. These tests produced different findings for different districts of Sindh. Students mean score in Science, Maths and languages (Urdu/Sindhi/English) was different from district to district. Although the overall mean of class 6th students was not satisfactory yet some schools in the city of Karachi produced better results in SAT. In this study, the researcher would like to analyse teachers-led factors that caused students' performance to improve.

The independent variables in present study

were characteristics of educators, learners' views about teachers, teaching styles, professional support and availability of physical facilities. Student achievement in SAT was the dependent variable.

Statement of the Problem

The quality of education in public sector schools is a matter of concern not for Education and Literacy Department, Government of Sindh, but also for policy makers, curriculum developers, teacher educators, teachers and parents. The findings of Standardized Achievement Test (SAT) indicated that the overall mean score of students in Science, Maths, languages in the province of Sindh was not encouraging. Besides this poor performance of students, some public schools in the city of Karachi performed comparatively better than other schools of the province. This study intends to look at the teacher-led factors which caused students' performance better so that the researcher could propose and replicate this model of teacher effectiveness to other schools of the province. The study will also take into account level of professional support and provision of physical facilities in schools in the perspective of students' performance in SAT.

LITERATURE REVIEW

The term school quality is an interpretive concept that is considered as more than just sharing knowledge such as developing skills among learners like social, cultural, and academic skills. Accordingly, various scholars also have found in their research studies that there are numerous factors that guide the learners' academic performance (Bourke 2000 and Winheller , Hattie & Brown 2013). As per findings of a study by Adeogun (2001) the quality of any educational organization is determined by the competencies of its teaching staff and human resources available at hand.

It has been examined by researchers for many decades that there is a link between quality of teachers and learners' academic achievement. Furthermore, the teacher quality has been classified into three main categories. First category covers their qualifications or educational degrees. Second includes the attitudes and belief about the teaching profession they hold. The third category defines the teaching practices being utilized by them in the classroom. While, consensus has been identified associated with teachers' perspective are influential to student achievement (Scheerens et al., 2005).

In addition, qualification of teachers such as degree and teaching experience are believed to be most influencing to learners' achievement. However, multiple studies have been concluded that educational backgrounds of teaching staff has a positive effect on academic achievement of learners. Among these studies some studies showed that a specific qualification is influencing while, others showed that the same qualification does not (Boonen et al., 2014).

According to Hanushek and Rivkin (2006) relationship between a teacher's degree and student achievement is inconclusive, except for mathematics achievement. The study of David Reynolds (1998) found that majority of children learn such classes where they are being taught by using direct method rather than indirect. Teachers, in direct teaching method, conduct lectures and present information in front of students. Students' role is passive while, teacher plays active role. The heads of institutes play mind-blowing role by supervising overall activities in the schools. They consider the needs of students, teachers and other staff and plans accordingly. Such administrative role shows that heads of school are serious in enhancing the overall performance of school.

Mukhtar (1999) disclosed in his study that in primary schools the learners' achievement is below average. Further, he point out the human development report of Asia (1998) and mentioned that basic abilities of 11-12 children are very low. The percentage of reading and writing capabilities of students is 35% and 17.5%. In addition, Mirza (2003) found that pupils were performed better when they have rote memorization tests and their while, their performance were poor in problem solving exams. Valika (2004) identified rote memorization as one of the majors flaws in the education system particularly in Pakistan. Students were given irrelevant information their lives.

UNESCO (2003, Cited in Reddy, 2007) report shows there has variety of projects aiming to increase the quality of education in Pakistan key examples were the National Teaching Kit for Primary classes, the primary education programme, supplementary readers in Punjab, community support process (Balochistan) etc. However, evidences have also been found that learning quality has been enhanced mainly by the initiating quality inputs. On other hand, the quality outputs such as participation and retention have been found.

According to report there are two main inputs

related to quality interventions playing a crucial role in increasing the learning in Pakistan. Firstly, introducing the National Teaching Kit in Primary classes in Sindh, Punjab and NWFP. It proved to be fruitful for learning of students and made teaching more concrete and eye catching. Secondly, initiating supplementary readers in Punjab was important input where learners already have access to material other than the targeted course content. These two inputs proved that learners, male or female, improved their reading comprehension.

PEAS (2008) states that the Government of Pakistan is taking committed efforts for improving enrolment and access to quality education for all. This commitment can be reflected in education policy document (National Education Policy 1998-2010, Education Sector Reforms 2001-05).

METHODOLOGY

The present research is descriptive in nature. The quantitative paradigm was used to collect data. The rationale behind using this paradigm was to get in-depth understanding of the context. The population of the study comprised of Government Secondary and lower secondary schools working in District Karachi. Karachi is the largest city of Pakistan. Secondary and lower secondary school teachers. These teachers have designated as Junior school teachers (JSTs) and High school teachers (HSTs). In addition, students of class 8th studying in govt. lower secondary and higher secondary schools of different towns of Karachi. Furthermore, a careful selection of secondary schools was done keeping in view certain considerations. The first was the representation of different types of schools i.e. schools where students mean score in Science, Mathematics and language was highest and schools where students schools was not good. The sample size was restricted to 30 schools. It was ensured to include all towns of the Karachi in the study. Male and female schools were given equal participation. Schools anonymity and confidentiality was ensured while defining their characteristics. Data was collected from both male and female teachers. Similarly students' questionnaire was given to boy and girls students. During visiting schools, the researcher requested head teachers to nominate those teachers to whom they consider appropriate or those who have taught students science, Maths and English. Head teachers nominated 4-5 teachers from their schools. Regarding students, 1-2 students were selected from each school, keeping in view

students performance in the classroom or SAT examination. In order to get the responses of teachers a questionnaire was designed. It was a Likert type scale, in which teachers were asked to respond different statement in the scale: Very satisfied, moderately satisfied and not satisfied. In some items: Strongly Disagree, Disagree, No Comments, Agree and Strongly Agree was used to elicit teachers' views. Teachers views were elicited regarding academic and professional qualification, experience as a teacher and their views on different aspects such as level of physical facilities, head teachers supervisory role, SMC effectiveness, causes of students' performance in SAT and their level of job satisfaction. However, the purpose of students' questionnaire was to

seek their views about teachers' lesson planning skills, aspects relating to these skills such as teachers style of teaching, ability to engage students in activities, nature of assessment and feedback on class work and homework. The questionnaire contained 12 items.

Validity and Reliability of Questionnaire

Both questionnaire were based on review of research regarding teachers and students effectiveness. The supervisors and language experts' guidance help researcher to validate it. The reliability of students' questionnaire was ensured through SPSS software.

The reliability (Cron back Alpha) of the questionnaire was found 0.76.

Table 1

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.756	.760	12

Guided Observation Protocol

The purpose of this protocol was to capture key moments that were recorded during school visits. For this purpose held informal meetings with head teachers. The purpose of informal meetings was to be acquainted with head teachers' views about: school improvement initiatives, challenges faced and causes of students good or not performance in SAT. The other purposes of the observation were to capture the moments that researcher thought were important to share in research report. While, the responses obtained from Teachers questionnaire were analyzed in

percentages. SPSS was used for this purpose. The responses obtained from Students questionnaire were analyzed in mean, standard deviation and percentages. For this purpose SPSS was used. The present study has attempted to analyse teachers-led factors that appears to be associated to students' performance in Standardized Achievement Tests (SAT). The other purposes of the study were to find out views of govt. secondary teachers about: Level of physical facilities, head teachers supervisory role, SMC, students' performance in SAT and to study students' perspectives about teachers' classroom practices.

FINDINGS AND RESULTS

Table 2

Teachers' Views about Level of Physical Facilities in schools

Item	Mean	Std. Deviation
Overall Level of Satisfaction about Physical facilities	4.33	.503
Condition of School Building	4.35	.754
Quality of classroom (Wide, airy)	4.53	.748
Cleanliness in school	4.26	.725
Level of Co-curricular activities	4.18	.765
Availability of drinking water	4.19	.580
Play area for children	4.25	.510
Uninterrupted electricity is available	4.10	.7750

Most of teachers were satisfied from overall satisfaction about availability of physical facilities. Regarding the condition of school buildings teachers showed that they were very

well satisfied with the condition of school building. They also mentioned that the quality of classrooms in terms of airy and wide is appreciable. According to the analyzed data the

response of teachers regarding the level of co-curricular activities is satisfactory. Furthermore, they also mentioned that drinking water, play

area for children and availability of electricity were also satisfactory in their schools.

Table 3

Teachers' views about Head teachers' Supervisory Role

Item	Mean	Std. Deviation
Teachers subject-based needs are assessed	4.62	.603
Teachers get opportunities for professional development/in-service training	4.19	.754
My own degree of success in implementing the curricular activities	4.07	.799
Parental support for students attendance	4.22	.699
Parental involvement in school management committee	4.09	.788
School Management Committees support in school affairs	4.13	.621

The above table shows that teachers' subject-based needs were assessed. It is also mentioned that they get opportunities related to their professional growth. In addition, the given table discloses that they are satisfied with degree

of success in implementing the curricular activities. While, their responses for the parental involvement in students' attendance and school management committee and school affairs were also satisfactory.

Table 4

Teachers Views about Causes of Students better Performance in SAT

Item	Mean	Std. Deviation
Students performed better in SAT because course covered in time	4.52	.605
Students performed better in SAT because teachers used to assess their performance during lesson	4.18	.745
Students performed better in SAT because of parents provided support in their studies	4.91	.790
Students performed better in SAT because teachers consulted activities other than textbook	4.26	.683
Students performed better in SAT because head teachers monitor students' progress regularly	4.19	.795
Head teachers' support in implementing curriculum	4.10	.499
Head teachers' supervisory role	4.27	.528

According to the data analyzed in present study the teachers linked students better SAT achievement with completion of course in time and majority of them were agreed to the view the course is being completed on time. In addition, they linked students' better SAT achievement with teachers' continuous assessment that was performed during running the lesson, and were moderately agreed to the statement. The findings of present study also disclosed that teachers were satisfied with the support provided by the parents of students in their study. Moreover, the table above shows that teachers bring activities in the class other than the activities mentioned in the textbooks, and they also monitor their performance on regular basis. They also agreed to the view that head teachers of schools support them in integrating the curriculum and their supervisory role was also satisfactory.

Summary of Findings emerged from 'Teachers Questionnaire'

The analysis of Teachers Questionnaire indicated that level of physical facilities in secondary schools of Karachi was not commendable. There was scarcity of teaching resources in schools. Some facilities such as school building and availability of water were in moderate condition. However, the condition of cleanliness and implementation of co-curricular activities in schools were not satisfactory. This tantamount that secondary schools in Karachi hardly pay attention to students' social development, moral development, and aesthetic development. Data revealed that teachers professional needs and subject based needs were rarely addressed. Only few teachers were provided opportunities for professional growth in secondary school. Parents hardly support their

kids education. This is general in public sector schools that majority of parents get themselves relieved from child's responsibility. They hardly take care children attendance and performance. They hardly attend SMC meeting. This is the dilemma of government schools. Schools where students performed better in SAT was viewed by teachers differently. Teachers linked their students good performance is to teachers' better planning, use of activities, use of teaching resources. Teachers' views clearly indicated that head teachers' supervisory role such as regular monitoring of classroom activities played a vital role in students improved SAT scores.

Teachers' own level of satisfactions from their job was to a great extent. Senior teachers linked students improved performance to merit based teachers appointment in schools.

Part Two: Analysis of Students Views about teachers' classroom Practice

The purpose of students questionnaire was to seek their views about teachers lesson planning skills, aspects relating to these skills such as teachers style of teaching, ability to engage

students in activities, nature of assessment and feedback on class work and homework. The questionnaire had 12 items. The reliability (Crone back Alpha) of the questionnaire was found 0.76. The item wise analysis is as under:

Findings emerged from Students Questionnaire

Students' questionnaire was designed to capture the views of secondary school students in govt. schools about their feelings about teaching styles of teachers. The findings emerged from students questionnaire indicated students level of interest about different aspects of teaching were satisfactory. According to students teachers explains topics very well, teachers comes in classroom well and fully prepared and students' level of participation is commendable. Teacher encourage students to speak out in the classroom during the lesson. During teaching in govt. secondary schools teachers not only give feedback to students but also check their home. Students looked satisfied from head teachers' role as a monitoring officer. Students' responses indicated that teachers role was very crucial in improving students SAT score.

Table 5

Item Statistics of Students responses

Item	Mean	Std. Deviation	N
Lessons in this subject are interesting	4.22	.503	51
The teacher explains topics clearly and use teaching material	4.08	.744	51
Teacher comes in class well prepared	4.08	.796	51
Teacher always encourage me to work and participate in class	4.12	.683	51
Teacher encourage me to ask question	4.06	.785	51
Teacher respond my questions immediately	4.18	.590	51
Teacher corrects my mistakes during lesson	4.24	.428	51
Teachers feedback clarifies my concepts	4.08	.744	51
I get opportunities to work with other students in classroom	4.12	.621	51
Teachers gives me homework regularly.	4.10	.671	51
My home work is checked the other day.	4.20	.530	51
Head teacher visit our classroom regularly to check our work	3.69	.905	51

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feedback to students but also check their home. Students looked satisfied from head teachers' role as a monitoring officer. Students' responses indicated that teachers role was very crucial in improving students SAT score.

Discussion of Findings

The present study has attempted to analyse teachers-led factors that appears to be associated to students' performance in Standardized Achievement Tests (SAT). The other purposes of the study were to find out views of govt. secondary teachers about: Level of physical

facilities, head teachers supervisory role, SMC, students' performance in SAT and to study students' perspectives about teachers' classroom practices.

The findings of the study have generated several policy Implications. The findings of 'Teachers Questionnaire' suggested that there were physical facilities in govt. schools in Karachi Pakistan. The quality of physical facilities impact teachers and students morale. Oshagbemi (1999) indicated that physical conditions and facilities are important elements of job satisfaction of teachers. The findings further revealed that secondary schools in Karachi pay attention to students' social development, moral development, and aesthetic development. If students are not engaged in different activities it will hamper their performance as Greg Chen & Lynne A. Weikart (2008) explain that in a school where students are busy in some kind of activities it will help them to concentrate in their studies.

The study's findings revealed that teachers' professional needs and subject based needs were hardly tackled by education authorities.

The findings of the present study indicates that during pre-service training (PTC/CT or 1 year B.ED) teachers are rarely engaged in development and utilization of teaching resources. This have been endorsed by a study conducted in India by Sharma, Moore and Sonawane (2009) found shortage of teaching resources as one of the big hurdle in preparing pre-service teachers. Another study conducted in Hong Kong by Chong, Forlin and Lan (2007) also identified teachers' concerns about insufficient resource provision during pre-service education. The findings of the study suggested that teachers' subject-based knowledge always helps in improving students' performance and knowledge as shared by head teachers and students views. Results from similiar kind of studies show that teachers' knowledge is significant so as to clarify correctly and ask the correct, and, subject-based questions (Darling-Hammond, 1999).

In this study teachers have linked their students' good performance to teachers' better planning, use of activities and use of teaching resources. Marzano (2003) also explained that teachers' factors influence school quality and quality of teaching -learning environment. According to the findings of this study parents support their kids' education. Study findings suggested that head teachers who regularly

monitor students' performance in govt. schools their students scored better in SAT. As Feyisa Demie & Kirstin Lewis (2010) described head teacher role was crucial to maintain ethos and school's success and an outstanding educational leader always support teachers in school.

The findings of the study indicated that Parents were not supportive in their children attendance and education. There are ample researches available that clearly says that parents' role is crucial in their children education as Xitao Fan (2001) conducted a study on role of parents in students' growth. He examined that education ambitions for their children stands out for its most obvious positive effect on students' academic growth and development. The study findings suggested that in secondary schools parents seemed less interested in their children education. In a similar study Hill & Tyson (2009) found that parental school involvement during middle school may decline because parents think that they can no longer support their children. The reason was that the nature of subjects were comparatively challenging at secondary level and it becomes difficult for parents to give support that will increase their kid's achievement.

The schools management committees (SMCs) were not very much active in secondary schools. This was shared by teachers and head teachers in this study. There are many studies that confirm SMCs role in educational improvement. Kyoko Taniguchi & Yukiko Hirakawa (2015) described that community participation enhances educational productivity, for example through improving the student-teacher ratio by improving level of educational inputs.

In schools were children performed very well in SAT, the researcher found that SMCs were more active there. As it was supported by the study of Kyoko Taniguchi & Yukiko Hirakawa (2015) who mentioned that communities in high-achieving schools conducted various activities to facilitate the schools.

According to the findings of the study, head teachers believed that teachers who have attended in-service as well as preservice course, their students performed very well in SAT examination. There are several researches available that support this finding. As Wilson (2002) confirmed that teacher education courses are the good indicators of measuring teacher success in terms of student achievement. Some head teachers during data collection indicated that CPD or in-services course should be designed

keeping in view realities of the schools. Female teachers were not comfortable to attend these courses in other cities. As it has been endorsed by many studies such as Darling-Hammond et al (2009) who shared that that much research has shown that concentrated, continuous, job-embedded professional development focused on teaching content is more likely to improve teacher content knowledge, classroom instruction, and student achievement.

CONCLUSION

The study was important because the findings would help teachers, head teachers and district education officials in understanding the effects of teachers' features that led for the improvement in students' achievement, their classroom practices and students' preferences about good teachers. Data on how teacher-led factors influence students' achievement will help teacher education institutions in designing future in-service training programs.

In order to understand different aspects of teachers characteristics and students achievement international and local literature was reviewed. The literature suggest number of variables that are attached to effective schools. These variables are related to teachers, head teachers, district management, community and parents support. While reviewing Pakistani research studies, it was found that different factors play an important role in students learning outcomes. In Pakistan, different institutions such as NEAS and PEACE have started to work. These institution were established to investigate the policy implications of students learning assessment.

The study was conducted in govt. schools of District Karachi. Teachers, head teachers and students of class 8th were included in the population. Data were collected using teachers, students questionnaire and school observation protocol.

The findings of the study have suggested that there was lack of physical facilities in govt. schools in Karachi Pakistan. The low quality of physical facilities impact badly teachers and students morale. The findings further revealed that secondary schools in Karachi hardly pay attention to students' social development, moral development, and aesthetic development. The study's findings revealed that teachers' professional needs and subject based needs were hardly tackled by education authorities.

The findings of the present study indicates

that during pre-service training (PTC/CT or 1 year B.ED) teachers are rarely engaged in development and utilization of teaching resources. In this study teachers have linked their students' good performance to teachers' better planning, use of activities and use of teaching resources. Study findings suggested that head teachers who regularly monitor students' performance in govt. schools their students scored better in SAT. The findings of the study indicated that Parents were not supportive in their children attendance and education. There are ample researches available that clearly says that parent's role is crucial in their children education.

The schools management committees (SMCs) were not very much active in secondary schools. This was shared by teachers and head teachers in this study. In schools were children performed very well in SAT, the researcher found that SMCs were more active there. The study has proposed different suggestions for policy makers, teacher educators, teachers, head teachers and other stakeholders.

Recommendations

- Teachers may be provided continuous professional development (CPD) opportunities in Science, Maths and English.
- The CPD courses should be developed based on subject-based needs of teachers.
- Each government elementary college of education may be made responsible to improve junior schools teachers' content knowledge and pedagogical skills in different subject by adopting school.
- Job embedded professional development in science, Maths and English will enable female teachers to attend PD more attentively.
- Highly qualified teachers may be appointed in Science, Maths and English in lower secondary schools.
- The level of Physical facilities may be improved in girls' schools. Separate toilets in girls' schools be established
- Incentives for teachers such as 'Best teacher awards', timely promotion and scholarships for getting M.Phil and PhD degree further raise their morale.
- In order to promote inquiry skills in Science, Science may be taught in labs
- Curriculum
- The measure of students' achievement in SAT

should not be limited to simply assessing the knowledge of basic skills. Rather, it should be assessed in a broader way, such as the incorporation of many theories and multilevel factors on the implication of student proficiency.

- Teacher education institution and PEAS should jointly conduct research studies on investigating link between students' achievement and head teacher and teachers' characteristics. The findings of these studies should be provided to policy makers for decision making in curriculums and teacher education programs.
- It is recommended to initiate co-curricular activities in secondary schools of Karachi.
- Future SAT examination should be designed in a way that it will not only assess students' academic skills but also their social, aesthetic and emotional intelligence.

Competing Interests

The authors did not declare any competing interest.

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