

**EFFECTS OF THE PRIMARY EDUCATION PROJECT ON STUDENT ACHIEVEMENTS  
AND PRACTICES OF PRIMARY SCHOOL TEACHERS IN PAKISTAN<sup>1</sup>**

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**1. INTRODUCTION**

The World Bank has assisted Pakistan in different educational projects. In December, 1978 the Government of Pakistan and IDA shared three broad objectives in development of education namely, meeting manpower needs, improving quality and increasing equity (for rural population and among females). The fourth education project completed in 1985 as an experiment had the specific objectives of increasing access, reducing wastage and costs and improving the quality of instruction. The Project Completion Report showed that quality of instruction improved because of increased supervision, on the job training of teachers by LC (learning coordinators) and provision of instructional materials. The sixth education project was based on the prior experience and was launched in Sindh, NWFP and Balochistan provinces. The primary education project facilities have also been extended to the province of Punjab.

The Academy of Educational Planning and Management of the Federal Ministry of Education of Pakistan and Project BRIDGES<sup>1</sup> conducted a sample survey of primary schools in December 1988,

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<sup>1</sup> Basic Research & Implementation in Developing Education Systems.

January 1989. The purpose of the survey was to identify factors that contribute to the achievement and promotion of students in primary schools. About 11,000 children of classes IV and V were tested in Mathematics and Science using curriculum based tests developed by the Primary and Non Formal Education Wing of the Ministry of Education with assistance from the World Bank. About 900 teachers were interviewed using carefully pretested interview protocols and trained teams of interviewers in many subjects ranging from the physical facilities of the school, to their teaching practices. The sample of almost 500 schools was selected using probability sampling applied first to districts within each province of Pakistan and then to schools within districts. The four Provincial Capitals and the Federal District were included in the study. Of the districts included in the sample the distribution as project and non project was as follows (note that being a PEP district or not was not a criterion used in the sampling framework).

Province	PEP Districts	Non PEP District.
NWFP	Mardan, Swat	Peshawar, Bannu
Balochistan	Naseer Abad Jeffarabad, Quetta, Turbat	Kachi
Sindh	Dadu, Sanghar	Badin, Karachi Shikarpur
Punjab	Jhelum, Gujranwla, Shiekhupura, Faisalabad, Bahawalpur.	Lahore City and Cantt., Sahiwal Multan, D.G.Khan, Mianwali.

All Primary schools of the project districts in the provinces of NWFP, Sindh and Balochistan were part of the World Bank project. Project districts of Punjab had only few schools as part of the experimental project. Although the project had been extended to Punjab it has not been fully implemented, no learning coordinators were appointed until completion of the school survey. The steps taken to meet the objectives of the World Bank project like increasing access, improving quality, reducing costs and improving efficiency are summarized in the following statement:

1. "The project financed the construction of over 1000 classrooms; the salaries of a new category of assistant teachers; a program of in-service teachers training; the salaries of persons holding two new supervisory posts; textbooks, teacher's guides, library books, and the development of other instructional aids; furniture for classrooms; residences for female teachers; and other initiatives. The project was conceived as a set of experiments to discover the best ways of improving quality and access in education."<sup>2</sup>

One of the BRIDGES reports says the following about the

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<sup>2</sup> Warwick, D., et. al. "The Implementation of Educational Innovations in Pakistan". Cambridge: BRIDGES, Pakistan Discussion Papers # 1. 1989. Page 13.

project.

2. "A critical element in the PEP was the addition of Learning Coordinators, a tier of officials who would supervise and work with teachers in 10 to 20 schools. Within the Union Council, the smallest administrative unit of government, they would visit the schools at least once a month, observe teachers in the classroom, inspect their lesson plans, and take other steps to improve the quality of teaching. Learning coordinators were introduced in all four provinces. However, that name does not have the same meaning in every district. In one province learning coordinators followed the PEP model while in others they served mainly as attendance checkers for their schools."<sup>3</sup>

The World Bank put a lot of money in the Project to improve quality of instruction by on the job training of teachers through learning coordinators. In this paper we want to see the effect of the project on student achievements and classroom practices of teachers. The underlying assumption is that due to increased academic and General supervision the Project teachers received on the job training, resulting in better instructional practices and higher achievement of students. We will first examine the

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<sup>3</sup> Warwick, D. et. al., Op. cit. Page 14.

achievement scores of Maths and science of grades four and five in project and non project classrooms. Then we will examine the differences in teaching practices and in supervision.

For the analysis reported in this paper the schools in the survey were considered project schools if they were located in project districts and the teachers said theirs was a project school. Non project schools were those located in non-project districts and for which the teachers said theirs was not a project school. All schools in which there was a discrepancy between the nature of the district and the report of the teacher were excluded. In Balochistan we excluded 19 cases, which represents 45% of the total in that province, 3 cases in NWFP, 285 in Punjab and 37 cases in Sindh which represent 3%, 46% and 22% of the total of the respective provinces. In Punjab there was a large number of cases excluded which may mean that until the time of the survey the Project was not fully implemented and learning coordinators were not appointed for each school of the project districts. It is also possible that in some cases teachers of project schools were not aware of the project. The sample size of this paper consists of 87 teachers of project schools and 495 from non project schools. We begin the analysis with the average achievement scores of tests given to fourth and fifth grades in science and maths.

#### ANALYSIS OF DATA

**2. Achievements:****Table 1: Average scores of Students taught by Project and Non-Project Teachers.**

Grade + Subject	Project P	Non-Project NP	Total	Significance
M4	14.17 (35)	11.99 (226)	12.28 (261)	.059
S4	15.81 (37)	14.20 (220)	14.43 (257)	.106
M5	12.88 (34)	12.75 (220)	12.77 (254)	.90
S5	16.02 (40)	16.82 (230)	16.70 (270)	.48

**Note:** Figures in parenthesis are the number of teachers interviewed according to weighted data.

The average scores of students of grade-4 Mathematics, taught by project and non-project teachers are 14.17 and 11.99 respectively which is a borderline difference. There is no significant difference in the subject of science in grade 4. Mean scores of S4 for project and non-project are 15.81 and 14.20 respectively.

Average Scores of grade 5 in maths and science are not significantly different. We can conclude from the average scores of grade 5 and grade 4 except M4 that performance of project schools, is not better than the non-project schools. The only borderline significant difference is in grade 4 Mathematics.

We then examined the difference in achievement of students

in project and Non Project Schools Controlling for

1. Gender of Schools.
2. Location of Schools.

The PEP male schools are significantly different from non project male schools in M4 and S4 and there is no significant difference in M5, S5 as is shown in the following table:

Table 2: National Controls of Effects of PEP on Male and Female Schools.

Subject	Male			Female		
	P	NP	Sig.	P	NP	Sig.
M4	16.99 (22)	12.40 (91)	.0001	10.85 (10)	11.06 (65)	.9285
S4	17.15 (24)	13.65 (89)	.0018	14.72 (10)	14.16 (64)	.7436
M5	14.25 (22)	14.17 (87)	.5974	10.25 (8)	11.13 (60)	.7307
S5	17.95 (25)	16.72 (92)	.3972	13.61 (9)	16.32 (66)	.2423

Table 2 shows that the achievement in class 4 of students in Project Schools is significantly higher from the achievement in non project schools for male but not for female schools. There are no effects of the project in class 5 for either gender.

We then examined the effects of the PEP on student achievement separately for Urban and Rural Schools.

**Table 3: National Controls on effects of PEP by location of schools**

Grade & Subject	Rural			Urban		
	P	NP	Significance	P	NP	Significance
M4	14.89 (29)	11.22 (154)	.0023	11. (5)	13.89 (66)	.5718
S4	16.35 (31)	13.31 (155)	.0036	14.02 (5)	16.59 (60)	.3621
M5	13.58 (28)	12.09 (148)	.1754	10.79 (5)	14.15 (65)	.2375
S5	16.36 (33)	15.57 (157)	.5110	15.43 (5)	19.53 (67)	.1684

In the above table we can see a significant difference in rural Project and Non Project achievements, in M4, S4, and a lack of difference between project and non project schools in urban areas. The only significant differences which came out of the table 3 was in grade 4 rural schools. The project had no impact on urban schools. We then examined the differences between P & NP schools separately for rural male rural female schools and found significant difference only in rural male schools in the subjects of Math and Science grade 4. We can now summarize our

discussion as follows:

**Table 4: Effect of the PEP on Students Achievement with respect to location and gender.**

Location	Male	Female
Rural	High effect M4, S4 .0000 .0001	No effect
Urban	No effect	No effect

To summarize our findings from table 1 to table 4:

1. There is no significant difference between Project and Non Project mean scores for S4, M5, And S5 except a borderline difference in M4.
2. In urban schools there is no impact of the project.
3. In rural schools the only difference was found in Grade 4, Science and Maths. No impact of project on grade 5.
4. In urban rural female schools the project had no significant impact at all.
5. In urban male schools there is no significant impact of the project.
6. In rural male schools there is a strong significant effect in M4 and S4 achievement.

In the following sections we will first examine the effects of the project in supervision and teaching practices at the

national level and then discuss rural male schools trying to explain the overall impact of project and also the observed significant impact on rural male schools. The discussion in this section follows two lines. One is to compare the differences between project and non project schools at the national level, then for rural teachers of rural male schools, since it is in those schools that we have identified the project to have an effect. We then examine the relationships of those teaching practices in which project and non project schools are different with students achievement as an attempt to ascertain which of them may contribute to the observed differences between project and non project schools.

### 3. Effects of the Project on Supervision: (National Effects)

We examined the differences in patterns of supervision in P & NP schools. The following table illustrates the frequency of supervision in the two categories of schools in the sample.

**Table 5: Average No. of visits of supervisors in the project and non-project schools.**

Supervisor	Project	N.Project	Total	Significance
DEO	1.30	1.34	1.33	.87
SDEO	1.83	1.98	1.95	.57
AEO/ASDEOs	2.57	2.71	2.68	.80
LC/Supervisors	7.52	6.04	6.39	.05
Center HM	13.2	6.77	7.47	.36

The only significant difference observed in table-5 is in the visits of learning coordinators/supervisors. The question

asked was not too clear and the teachers who responded may have mixed the term 'supervisor' with the non project supervisory staff in some provinces, even this may be good predictor of the impact of the World Bank Project on achievements of the students. The major objective of the project was to improve the quality of instruction through in-service and on the job training of primary teachers. The learning coordinators, usually experienced teachers themselves were given training in academic supervision like lesson planning, module writing and model lessons and could have well played an important role in boosting up the effectiveness of schools and quality of learning. The average number of visits of the Lc's/supervisors is greater (7.52 vs 6.04) in the project schools than in the non project schools. This difference is statistically significant. To find the impact of visits of LCs we related them with the achievement of students. There was no significant impact found in the achievements of M5, S5 and S4. These visits have a significant impact on the scores of M4. The following summarizes our findings.

**Table 6: National effects of LC/Supervisor visits on Achievements of Grade 4 Mathematics.**

No. of visits in a year	Mean achievements	Significance
1 to 5	13.55 (72)	.046
More than 5	11.80 (189)	

The number of visits was categorized as below or above the median number of visits which was 5 per year. From This table it can be seen that the students of teachers that receive more visits from LC's have lower achievement than students of teachers who receive less visits. We can conclude that frequent number of visits from LC's has a negative impact on student achievement in Math 4.

**3.1 Supervision Effects in Rural Male Schools:**

The following table summarizes the average number of visits by different supervisors in project and non project rural male schools.

**Table 7: Average number of visits of supervisors in project and non project rural male schools.**

Supervisor Level	Project	NP	Significance
DEO	1.28	1.42	.7338
SDEO	1.68	1.95	.5208
AEO/ASDEO	3.04	3.60	.5784
LC/Supervisor	7.58	6.07	.411
Center HM	16.25	3.25	.0009

On average the number of visits of DEO, SDEO and AEO's to rural boys schools is not significantly different between project and non project schools. On average center headmasters paid more visits to project schools. This difference is statistically significant. There is an insignificant difference of LC visits to project and non project schools. When we related center headmaster's visits to Project and non project schools we found a significant impact on M5, S5 scores and no significant impact on S4 & M4 in rural male schools. A highly significant positive correlation coefficient for M5 ( $r = 0.573$ ,  $sig = 0.01$ ,  $N = 18$ ) and for S5 ( $r = 0.820$ ,  $sig. = 0.01$ ,  $N = 18$ ) came out. Mean scores

of M5 and S5 are 16.18 and 17.57. It shows that center headmaster visits are much effective to increase the achievement level of grade 5 students. However these are not significantly affecting grade 4. It is possible that CHMs pay more attention to grade 5 at the time of their visits to rural male schools.

**4. Effects of the Primary Education Project on Teaching New Methods of Teaching:**

An effect of learning co-ordinators seems to be on teachers. A question was asked from the teachers about effect on their teaching from the learning co-ordinators/supervisors visits. The following table summarizes their answers.

**Table 8: Effects of LC/Supervisor visits on Learning New teaching Methods.**

Category	Learned new Methods	Not Learned New Methods	N.	Significance
Project	81.1% (59)	18.9% (14)	73	.0000
N.Project	48.9% (175)	51.1% (182)	357	

About 81% teachers of the project schools reported that they learned new teaching methods by visits of the supervisors, only 19% reported otherwise the 49% of the non-project teachers reported that they learned new methods. The difference between project and non-project is highly significant. We assume that the

better scores of M4 at national level may be due to the project school teachers learning new methods of teaching. When we saw the effect of learning new methods on the scores of M4, M5, S4 and S5 we did not obtain any significant difference, which means the teachers who learned new methods were not able to give more learning to their students. In the following discussion we will try to find those practices of teachers which have an impact on learning of the students.

We explored the same issue for the students of rural male teachers, the group which was more influenced by PEP. The following table shows the answers of rural teachers of male schools.

**Table 9: Effect of PEP on Teaching New Methods of Teaching (Rural Male Schools)**

Category	Learned new methods	Not learned new methods	N	Significance
P	90% (38)	10% (4)	42	.0000
NP	49% (66)	51% (69)	135 41.3	

The above table indicates that 90% of the project teachers reported that they learned new methods and only 49% non project teachers claimed that they could learn new methods of teaching. When we related this claim of teachers we found that in M4 there

is a significant impact on achievements (14.87 vs 12.18, Sig. 0.0316). No effect of new methods learned was there on M5, S5 and S4 in rural boys schools. Though we could not find effects of new methods at national level yet better achievement of M4 of project schools at rural male level is due to new teaching methods.

#### 5. Periods, No of Exercises, (National Effects)

The response of the teachers of project and non-project show that on average there is no difference in the periods taught per week in Maths. The two kinds of teachers teach about 7 periods of mathematics. The difference is not statistically significant. There is a significant difference between project and non project schools in that teachers of project schools had covered on average 38.8 exercises at the time of the survey compared to the teachers of non project schools covering 26.2 exercises in the same time period in mathematics. This difference is highly significant. There is no significant difference in periods taken in science in a week as well as number of exercises covered by project and non-project teachers. The correlation is insignificant between exercise numbers in Maths and achievements.

There was no significant difference found in periods taken per week in Maths and science in rural male schools, similarly No. of Maths and Science exercises covered have no significant impact on achievements of Maths and Science. So we can conclude that these teaching practices do not differ between project and

non project schools. This discussion on periods taught per week in maths and science and exercise number reached by the class concludes that there is no significant impact of these variables on the scores of M4, M5, S4 and S5. So the above mentioned variables do not explain the difference in project and non project schools in various tests.

#### 6. Effects of PEP on Classwork and Homework (National).

The papers already completed in the BRIDGES series tell us that about 99% teachers assign home-work to their students. To find the amount of home-work assigned in Maths and Science a question was included asking from teachers the amount of daily homework assigned by them in Maths, Science and other subjects. The teachers of Maths in non-project schools assign more homework than the project school teachers. The only significant difference was in Maths homework per day. On average the teachers of project schools assign 4.97 Maths questions compared to 6.42 questions by non project teachers. By comparing the amount of homework with the classwork we come across a useful comparison which can be summarized in the following table:

**Table 10: Comparison of homework and classwork by Project and Non-Project teachers in Maths**

HM/CW	P	N.P	Significance
Average Exercise No. the class reached in Maths	38.60 (74)	26.18 (439)	.0018
Average Number of questions assigned per day as H.W.	4.97 (76)	6.42 (444)	.0018

From table No.4 we can conclude that:

- (i) On Average the pace of the teachers of project schools is faster than that of the non-project schools in classwork.
- (ii) On average less homework is assigned by project teachers and more by the non project teachers.

The above results suggest a pattern of effective teaching. The teachers who work more in the school and rely less on homework perform better than the teachers working less in classroom and relying more on homework. However, this hypothesis is not supported by our exam of the effect of these variables in teaching of science. The number of completed exercises in M4, S4 and S5 are not significantly related with achievements. Nationally there is no effect of homework assigned per day on achievements of students.

In the project and non project male and rural schools the only significant difference found is in assigning Maths homework per day (7.96, 5.91 exercises in NP & P, significance .0034). There was no significance difference in science homework. When we related homework to the achievements in M4, M5, S4, S5 we found that it has high significant effect on M5 only ( $r = 0.28$ , mean achievements = 14.39 at .01 Sig.). All other tests had shown insignificant effects.

**7. Effects of Project in the Use of Instructional Materials:****Table 11: Use of Teaching Learning Materials/Aids (National Level)**

<b>Materials</b>	<b>Project</b>	<b>N.Project</b>	<b>Significance</b>
1. Use of Black Boards	99.7	98.2	.6284
2. Have a teaching kit	63.8	65.7	.8325
3. Have manuals in T.Kit	60.4	71.1	.1647
4. Ever used that kit	56.9	53.0	.7048
5. Were you trained in use of kit	15.9	14.3	.7806
6. In how many lessons used T.Kit.	10.68	7.32	.1057

Rows 1 to 5 of the above table show the percentages of teachers of Project and Non-Project schools whereas row No.6 have the average No. of lessons in which the kits are used. The last column contains the statistical significance of each row. It is evident from the above table that use of Black Boards, having teaching kits and their manuals, No. of lessons in which teaching kits are used and training of teaching kits are not significantly different in the project and non-project schools.

### 7.1 Rural Male Effects

Examining the same thing separately in rural area schools we found the following.

**Table 12: Use of Teaching Material in Rural Male Schools.**

<b>Materials</b>	<b>P.</b>	<b>N.P</b>	<b>Sig.</b>
1. Use Of blackboard	100%	99%	1.00
2. Have a teaching kit	86.2%	77.3%	.2887
3. Have manuals in T.Kit	72.7%	77.5%	.7217
4. Ever used T.Kit.	66.0%	47.4%	.0778
5. Were you Trained in use of Teaching kit.	21.9%	13.1%	.0437
6. In how many lessons used Teaching kit.	10.95	5.62	.0166

We can see that the differences between project and non project schools are significant only for the last three items. We then related these three items with the achievements and obtained the following results.

**Table 13: Effect of training & Use of Teaching Kit on achievements of Rural Male Schools**

Question	Subject & Grade	Yes	No	Sig.
1. Have you ever used teaching kit?	M4	15.47 (28)	12.38 (35)	.0122
	S4	16.97 (26)	13.38 (35)	.0054
	M5	15.72 (28)	13.80 (32)	.1814
	S5	19.26 (32)	15.35 (33)	.0227
2. Were you trained to use Teaching Kit?	M4	12.47 (12)	14.68 (51)	.1323
	S4	12.76 (12)	15.92 (51)	.0024
	M5	13.82 (10)	15.56 (51)	.0263
	S5	17.38 (12)	17.71 (55)	.1699
3. In how many lessons Teaching kit is used?	No significant impact on M4, M5, S4 and S5.			

It is evident from the above table that the use of teaching kit has a significant effect on the achievements of M4, S4 and S5. The students of teachers who used the kit have better scores compared to the teachers who never used the kit. This difference is not significant in M5 with respect to the training of teachers to use the kit. It is found that this training has a negative

impact on achievement. The teachers who are trained in use of teaching kit showed significantly lower scores in S4 and M5 than the teachers not trained to use teaching kit. However, the difference is not significant in M4 and S5. Another point to note is that number of lessons in which teaching kit is used has no significant impact on any of the subjects.

It is clear from this discussion that at the national level the use of the above mentioned materials has no significant impact on achievements. But in rural male schools, the use of the kit results in better achievement in M4, S4 and S5. So one of the factors of better performance of project schools is the teaching kit. However number of lessons in which teaching kit is used have no significant impact on any of the four subjects.

### 8. Physical Punishment:

Project teachers on average punish their students more than non-project teachers. The following table summarizes the differences:

**Table 14: Use of Physical Punishment by Project and Non-Project School Teachers.**

	Project	N.Project	Significance
No use of punishment	37.3% (31)	51.9% (242)	
Use of punishment	62.7% (52)	48.1% (224)	.05
<b>Total:-</b>	<b>83</b>	<b>466</b>	

Table 13 shows that 62.7% of the project teachers use physical punishment. The percentage for non-project teachers is 48.1. The difference is statistically significant. However when we related punishment with achievement of students in M4, M5, S4 and S5 we could not get any significant effect of this teaching practice.

In rural Male schools there was no significant difference found in the use of Physical punishment between project and non project schools.

#### 9. Use of Monitors:

Use of monitors is another variable in which the project and non-project schools differ significantly. The following table summarizes those differences:

**Table 15: Use of Monitors by project and non-project school teachers.**

Answer	Project	N.Project	Significance
Do not use Monitors	21.4 (17)	38.8 (179)	
Use Monitors	78.6 (63)	61.2 (283)	.004

The above table shows that proportionately more project teachers (78.6%) use monitors than the non-project teachers (61.2%). The differences have high statistical significance.

Another question asked was how many hours per week the monitors were used, There is no significant difference between both types of schools in number of hours. However the achievements of students in M4, M5, S4 & S5 was not significantly different in classes where monitors are used from those in which they are not used which mean this teaching practice has no impact on achievement.

### 9.1 Rural Male Effects

In rural male schools there was no significant difference found in use of monitors in the project and non project schools. However, there is a borderline significant difference in the amount of time (hours) the monitors are used.

Table 16: Hours per week the monitor is used

Category	Mean	Significance
P	3.73 (35)	.057
NP	5.31 (109)	

The above table shows that project teachers use monitors on average 3.73 hours per week compared to 5.31 hours of non project teachers. Again we obtained the correlation between the hours monitors are used and achievements in all subjects. The following table summarizes these correlations.

**Table 17: Impact of No. of Hours Monitors used on Achievements in Rural Male Schools.**

<b>Subject</b>	<b>Correlation Coefficient</b>	<b>Significance</b>
M4 (61)	- .40	. 01
M5 (58)	- .31	. 01
S4 (61)	- .37	. 01
S5 (64)	- .19	Insignificant

It is evident from the table above that hours of monitor have significantly negative effect on achievements. More significant impact is on M4, M5, S4 and not on S5. The above discussion proves that use of monitors adversely effects the achievements in rural male schools. However, the effect is not so high which effected the project schools to show poor scores than the non project schools.

**10. Summary of Findings:**

1. The school survey includes interviews of 15% project and 84% non project teachers at national level. The percentage of project teachers increased to 17% in

rural male schools according to weighted data.

2. The project schools have no better scores at national level than non project schools except mathematics of grade 4. It has better scores in the rural male schools in M4 and S4. No significant difference could be seen in M5 and S5. The project is not fully successful at national level and partially successful in rural male schools. No effect of the project is there on urban male and female schools and also in rural female school.
3. Supervision of the project and non project schools is not adequate. There are a few visits of the supervisors i.e. DEO, SDEO and AEOs which have no effect on learning. The LC supervisors have more visits in project schools which are not significantly helpful in learning. The center headmasters visit more the project schools and have a better effect on achievement of grade 5 in rural male schools.
4. A high ratio of project teachers (81 to 90%) learned new methods of teaching by the visits of learning coordinators at national level as well as in rural male schools. However these new methods of teaching do not contribute to better scores except M4 in rural male schools.
5. Teaching speed of the project teachers is high in

covering number of exercises in science and maths. There is no significant difference in taking periods per week. Hence No. of periods are not effective in better achievements. The number of exercises increase only the level of achievement of M5 at national level, and assigning more exercises per day as homework also affects M5 scores positively in rural schools only. No impact of the above mentioned variables was found on M4, S4, and S5 nationally or for rural male schools.

6. At national level provision and use of teaching learning materials like blackboards and teaching kit is almost same in project and non project schools. However in rural male schools, use of teaching kit has a positive impact on science achievement. Training of teaching kit adversely affects S4 and M5 scores and No. of lessons in which the kit is used have not indicated any impact on achievement of students.

7. Physical punishment though given more by the project teachers has no effect on achievement. Similarly more teachers of the project schools use monitors nationally which is not effective on achievements. In rural male schools the monitors are used for less hours per week and hours of monitors have a negative impact on achievement.

**11. Policy Implications:**

This paper can be useful for policy planning in Pakistan as well as internationally, because the project is being executed with the financial and technical help of the World Bank and implemented by the government of Pakistan. We have seen in the preceding discussions that at national level the project is almost failure but in rural boys schools it is partially successful. So the impact of the project is not on all areas and sections of the population. Considering the huge amount and time consumed it is unjust that females and urban schools could not get benefits from the project specially the rural female which are already deprived of educational facilities.

Another point is that the project had an impact on M4 and S4 and no impact on grade 5 achievements which means certain grades are neglected. As the education is a continuous step by step process it is required to give proper consideration to each grade. Similarly all subjects require the proper guidance. It seems that in project schools mathematics is given more emphasis than the other subjects. These kind of differences need to be minimized.

The LC/Supervisor being a major tier of academic supervision in the schools has not been proved much more effective in this study. It is a dire need that the LC/Supervisor should not become a part of the system which is already less flexible to accept

change and the LC should be more professional oriented and dedicated to their professional work. Those teaching practices should be emphasized more by LCs which prove significant positive impact on achievement level of students.

#### ENDNOTES.

1. This paper was produced during the BRIDGES Training Workshop on Analysis of Survey Data which took place at the Academy of Educational Planning and Management from January 6 to February 8, 1990. The workshop was conducted by Donald Warwick and Fernando Reimers from Harvard University. Earlier drafts of this paper were discussed in the training workshop and received feedback from the instructors as well as from the participants: Ijaz Ahmad, Nawaz Ahmad, Islamuddin Baluch, M. Anwar Hussain, Syed Fazal-Qadir, Nasim Qaisrani and Ikram Qureshi. The contents of this paper are the sole responsibility of the author.

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