

Impact of Decentralization in Education on Universalization of Primary Education

Ayaz Muhammad Khan, Munawar S. Mirza

Abstract: The main objective of this study was to examine the impact of decentralization in education on the enrolment and dropouts at primary school level in the province and its low literacy and high literacy districts. Two districts, one from the low literacy category and the other from the high literacy category were selected randomly. A complete cohort of students from grade 1 to grade 5, separately for the pre-devolution period (1997-2002) and post-devolution period (2003-2007) were followed using data from Education Management Information System Punjab (EMIS) for the former and Program Monitoring and Implementation Unit (PMIU) for the later period. A significant increase in enrolment and decline in dropout was observed during the post-devolution period. The less developed, low literacy district responded in a more positive way. Thus the findings support the argument that decentralization will help in expanding access to education and controlling dropouts which may lead to early attainment of universal primary education in Pakistan.

Keywords: decentralization, enrolment, dropout, universal primary education

Introduction

Decentralization is a phenomenon that gained popularity in 1980s and it has been sprawling ever since all across the globe. Most of the developing countries have been adopting it keeping in view all of its theoretical benefits. Decentralization is the allocation of power and authority of decision making from federal to provincial or district or sub-district level to increase the efficiency, effectiveness and accountability of low level management (Rondinelli & Cheema 1983; Behrman, Deolalikar & Soon, 2002; Winkler & Cohen, 2005). It is assumed that with more autonomy at grass roots level, the organization will work in a better and effective way as implementer have a right and say in decision making process (Ibtisam, 1999).

Reyes (2006) in Encyclopedia of Educational Leadership and Administration has defined decentralization in education as a tool to “divide school system into smaller

units while the power and authority remain in the central office. Decentralization is identified with districts, sub districts, area offices, charter schools, vouchers and contracted services”. According to USAID (2006) educational decentralization takes three principle forms. The first, deconcentration in which there is reallocation of decision making within education ministry and bureaucracy. The second one is delegation, or school autonomy, that is the administrative or legal transfer of responsibilities to elected or appointed school management committees, and school governing boards. The third, form is devolution in which there is a permanent transfer of decision making responsibilities in education from central government to lower level of government: province, municipalities or districts. Rondinelli (1983) has rightly said, “The success or failure of any form of decentralization in education depends upon its successful implementation”

Educational decentralization divides school system into smaller units, but the focus of power and authority remains in a single central administration and board of education (Lunenberg & Ornstein, 1996). Individuals at school get empowered because of this devolution of power (Patrinos & Arisingham, 1998). In most of the countries where education has been decentralized, curriculum and testing remained centralized practically whereas functions such as the selection of teachers, textbooks and other instructional materials, and facility construction and maintenance, are being entrusted increasingly to school (Behrman, Deolalikar & Soon, 2002). Decentralization tends to increase both formal and informal parental participation, raise parents’ expectation of school performance and reduce teacher absenteeism from the classrooms. Though it is unlikely that decentralization may have any impact on how teachers use classrooms but parents may monitor teachers’ attendance and can reduce the costs of some school inputs and these factors have an impact on school quality (Winkler & Cohen, 2005, USAID, 2006).

According to World Bank (1998) expansion of coverage, quality improvement measures, decentralization of management and the community participation through the community education and school councils boosted the enrolments and increased accountability to all levels of El Salvador under EDUCO programme (education through community) sponsored by World Bank. Freund & Drori (2003) proved that devolution has a positive effect on retention level of students at matriculation level than previous

years before devolution. Decentralization helped in raising school enrolment by 20% in Columbia (Faguet & Sanchez, 2006). It is extremely difficult to disentangle the effects of education decentralization policies from other variables simultaneously affecting educational outcomes, and there have been few rigorous attempts to do so. Two studies that did attempt to isolate the effects of devolution in Central America concluded that it increased parental participation, reduced teacher and student absenteeism, and increased student learning by a significant, but small amount (Educational Encyclopedia, 2006). International experience has shown that decentralization of education has led to improved educational outcomes in Columbia, in the sense of more students attending school. By contrast, in those places where central control persists outcomes have worsened. They show that enrollment increases as expenditure grows, and falls with the student-teacher ratio, as one would expect (Paul & Sanchez 2006). Decentralization has a great impact on reducing teacher absentees from primary level schools and improves teacher performance (UNESCO, 2006).

The administrative set-up of Pakistan almost in all fields inclusive of education was centralized. The major administrative units were provinces further divided into divisions each comprising four to six districts.

Pakistan went for devolution of administrative and financial powers in 2000 from provincial government to district level. The plan was carried out through National Reconstruction Bureau, a federal bureau established for devolving powers to grassroots level. The objectives of changing the system of governance as mentioned by National Reconstruction Bureau Pakistan (2001 a) were “to restructure the bureaucratic setup and decentralize the administrative and financial authority to the district level and below and refocus administrative systems to allow public participation in decision-making with improved monitoring system at local councils level.” As a result the local government ordinance 2001 was promulgated.

Decentralization Efforts in Pakistan

Political devolution to district was through elections at district, sub district and union council level and administrative devolution was by empowering at the grassroots level in planning, management, resource mobilization, utilization, implementation,

monitoring and evaluation of the twelve offices including finance and planning, law, education, health, revenue, community development, work & services, information technology, transport, agriculture, enterprises & industries and literacy. The decentralization of educational administration in Pakistan is a major innovation and reform in the political and education system. The purpose was to improve the administrative and implementation processes by entrusting those closer to the field to increase the participation and make appropriate decisions.

District educational management plays a vital role in monitoring the performance of schools regarding increasing enrolment, controlling drop out, provision of teachers and ensuring quality education in their respective districts. Districts are responsible for planning, monitoring and evaluation of education systems at district level. District management coordinates and integrates network activities so that education system may try to achieve maximum internal efficiency through management, allocation and use of resources available for increasing the quantity and improving the quality of education. The districts can generate their own funds in addition to the funds transferred by federal and provincial government. The head of the Education Department in a district is Executive District Officer (EDO). Initially, district governments have been given the functional responsibility for delivering elementary, secondary and college education but college education was excluded from it and now only elementary and secondary education is in its purview.

Decentralization has positive effect on the quality of school especially in the form of delegation it increase parental participation, reduce teacher absentees, and reduce cost of some school inputs these all factor improve the quality of school (Winkler & Cohen (2005). Researches show that devolution in education was associated with the increase in enrolment rates especially of girls' enrolment, and controlling drop outs rate at primary level in the province Punjab (Khan, 2010). By delegating the authority at local level the problem of poor management and accountability are also expected to be solved. International evidence suggests that if power and authority are transferred to the district or the sub district level, it can lead to improved education outcomes.

The purpose of conducting this study was to see whether districts with different literacy rates and economic status had benefitted same from the devolution of education to district governments. It is a common belief that literacy rate of a district indicates its

level of socio- economic development. District with high literacy rate are generally better developed and those having low literacy rates lag behind with respect to socio-economic development. So this study may help in exploring the impact of decentralization on enrolment in districts with varied level of development. For this study enrolment and dropout have been operationalized in the following way.

Enrolment. Enrolment is the number of children enrolled at primary level in government schools (Khan,2010).

Dropout: The number of students who leave the school without completing a stage or cycle of study. In order to compare the dropout rate of primary students during Pre and Post devolution, the year 1997 was considered as baseline year for pre devolution period. Students enrolled in grade one in the base line year reached in grade five in the year 2001. Dropout for each class was computed with reference to enrolment in previous class and overall dropout was computed with reference to base line year. Similarly the year 2003 was considered as the base line for post devolution period. Overall dropout up to year 2007 was computed with reference to base line year i.e. 2003 and class wise dropouts were again computed with reference to enrolment in previous class.

Objectives of the study

This study attempts to find out the impact of devolution in increasing enrollment rate, controlling the dropout rate, improving the number of teachers and teacher students' ratio at primary level in Punjab as well as in districts having high literacy rate and those having low literacy rate.

Population and Sample of the Study

At the time of study there were 35 districts in the Punjab. These districts were placed under two following categories according to the literacy rate therein:

- Category A: High literacy rate districts
- Category B: Low literacy rate districts

Table 1

Categories of Districts Based on Literacy Rate

Sr. No	Category of district	Rank order by literacy rate	Literacy rate range	Names of districts	Total No. of districts
1.	A	1-18	70.5% to 36.0	Rawalpindi, Lahore, Jehlum, Gujrat, Saikot, Chakwal, Gujranwala, Narowal, Faisalabad, T.T Sing, Attock, M. B. Din, Sargoda Sahiwal, Sheikhpura, Multan, Khanewal, Okara	18
2.	B	19-35	36.0 to 20.7	Mianwali Hafizabad, Layyah, Khushab, Jhang, Vehari, Kasur, Bahawalnagar, Bahawalpur, Pakpattan, Bhakkar, R.YKhan, D.G.khan, Lodhran, Muzaffargarh, Rajanpur, Nankana	17

One district was randomly selected from each of the two categories of districts. Lahore represented the high literacy district whereas Bahawalnagar represented the low literacy district. The literacy rate of a district also indicates its overall socio-economic development status.

Bahawalnagar is situated on the Indo-Pakistani border. Its total area is 8,878 square kilometers and has a population of 2,584,786 people. School going population is 242115 (from kachi to grade 8). Most of its people live in villages and engage in cultivation, which is the main source of income. The people living in cities have small businesses. Most of the people of Bahawalnagar live below the poverty line (Dawn, 2010). The literacy rate of the district on 2007 was 49 % (UNESCO, 2008).

Lahore is the capital district of Punjab. Its total area is 1772 square kilometers and it has a population of 10,000,000 people. School going population is 231686 (from kachi to grade 8). As of 2008, the city's gross domestic product (GDP) by purchasing power parity (PPP) was estimated at \$40 billion with a projected average growth rate of 5.6 percent. The contribution of Lahore to the national economy is supposed to be around 13.2%. Its GDP is projected to be \$102 billion by the year 2025, with a slightly higher growth rate of 5.6% per annum. Central to Lahore's economy is the Lahore Stock Exchange (LSE), Pakistan's second largest stock exchange. Lahore has offices of several Pakistani government corporations including the Water and Power Development Authority (WAPDA) and Water and Sewage Authority (WASA). Food and restaurant

businesses remain open all night. Lahore is the second largest financial hub of Pakistan (Urduworld, 2010). The literacy rate of the district on 2007 was 77 % (UNESCO, 2008).

Sources of the data. The Researcher gathered data from the following sources.

- 1 Education Management Information System (EMIS) Punjab for pre-devolution data of enrolment, teachers and dropout rates at primary level from 1997 o 2002.
- 2 PMIU for post-devolution data of enrolment, teachers and dropout rates at primary level from 2003 o 2008.

Results. Results and its interpretations are given below.

Impact of Devolution on Enrolment at Primary Level in Punjab

Proceeding table and graph present year wise primary enrolments of pre and post–devolution period. The table presents enrolment from 1997 to 2002 (pre-devolution) and from 2003 to 2007 (post-devolution) period.

Table 2

By Year Primary School Enrolments during Pre and Post-Devolution Period

Period	Years	Male Enrolment	Yearly fluctuation in percentage	Female Enrolment	Yearly fluctuation in percentage	Total M+F	Yearly fluctuation in percentage
Pre devolution	1997	3438729		2540288		5979017	
	1998	4094455	19.06	2990335	17.71	7084790	18.49
	1999	3968934	-3.06	2690858	-10.01	6659792	-5.99
	2000	3820742	-3.73	2801772	4.12	6622514	-0.55
	2001	3826682	0.15	2829931	1.00	6656613	0.51
	2002	3585436	-6.30	2802501	-0.96	6387937	-4.03
Average pre –devolution		3789163	6	2775947	11.86	6565110	8.43
Post devolution	2003	3483593	-8.96	2894583	2.28	6378176	-4.18
	2004	3840496	10.24	3343415	15.50	7183911	12.63
	2005	4142653	7.86	3560970	6.50	7703623	7.23
	2006	4300772	3.81	3764659	5.72	8065431	4.69
	2007	4235939	-1.50	3713367	-1.36	7949306	-1.43
	2008	4087066	-3.51	3616773	-2.60	7703839	-3.08
Average Percent increase in post / pre Devolution Period		6		25		14	

Figure No 1

Primary Students' Enrolments during Pre and Post-Devolution Period

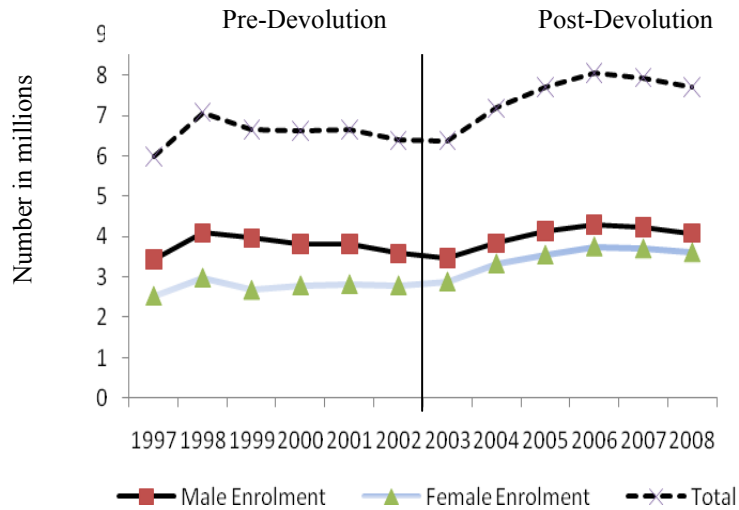


Figure 1 depicts the data in Table 2 on a schematic form. There was a significant increase of 14% enrolment in the post-devolution period. There was a high increase in the overall average enrolment among females which was 25% higher than the pre-devolution era. The finding supports that devolution is associated with the increase in enrolment rates especially of girls' enrolment. The implementation of devolution in the year 2001-02 contributed a large increase in the enrolment rate at primary level.

Impact of Devolution on the Dropout of Primary Students

Proceeding table and graph present year wise dropout of primary students during pre and post-devolution periods. The table presents dropout from 1997 to 2002 (pre-devolution) and from 2003 to 2007 (post-devolution) period.

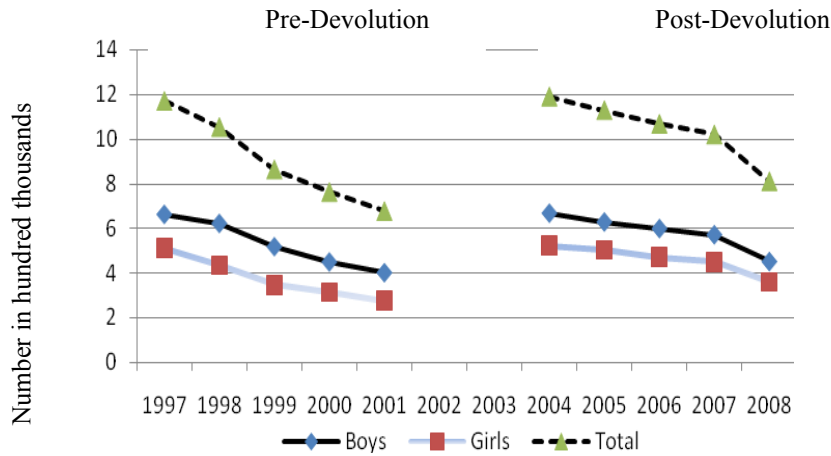
Table 3

By Year Dropout of Primary Students for Pre and Post-Devolutions Cohorts

Period	Years	Class	Boys		Girls		Total Enrolment	Total Yearly drop-out %
			Enrolment	drop-out %	Enrolment	Drop-out %		
Pre-Devolution	1997	I	661913		509935		1171848	
	1998	II	621349	6.128	433703	14.94	1055052	9.96
	1999	III	517762	16.67	346824	20.03	864550	18.05
	2000	IV	449183	13.24	314202	9.40	763385	11.70
	2001	V	401319	10.65	276127	12.11	677446	11.25
Dropout I-V Pre devolution				44.70		56.50		51
Post-devolution	2003	I	667206		524187		1191393	
	2004	II	627821	5.90	502400	4.15	1130221	5.13
	2005	III	598631	4.64	470605	6.32	1069236	5.39
	2006	IV	570878	4.63	450270	4.32	1021148	4.49
	2007	V	451051	20.98	360549	19.92	811600	20.52
Dropout I-V post devolution				36.15		34.71		35.54

Figure No 2

Primary Students' dropout for Cohort during Pre and Post- Devolution



Dropout rate of pre and post-devolution has both been alarming when we compare it with the developed world. Post-devolution overall dropout rate was 36.15% significantly lower as compared to the pre-devolution period that was 44.70%. There was an impressive decrease in the dropout rate of girl students that fell from 56.50% in pre-devolution period to 34.71% in post-devolution period.

The findings support that devolution is associated with the decrease in dropout rate provided political stability is there.

Impact of Devolution on the Attrition Rate of Primary School Teachers

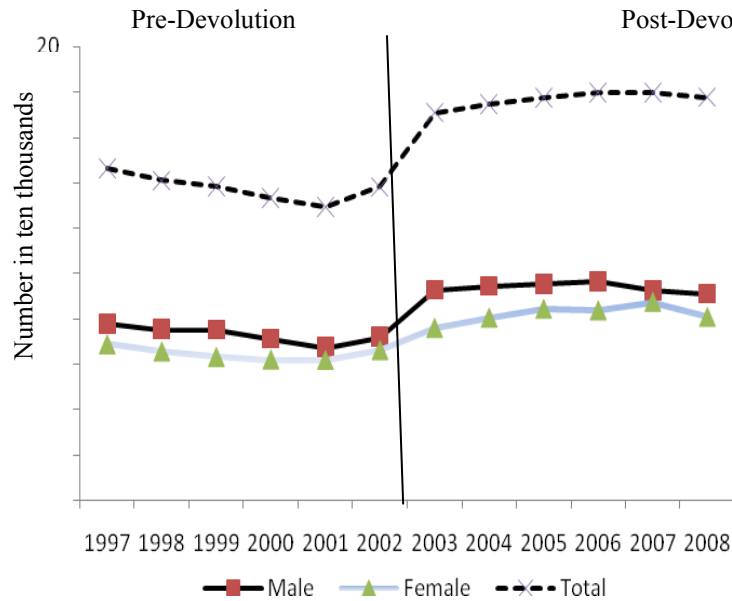
Proceeding table and graph present by year numbers of primary teachers during pre and post-devolution periods.

Table 4
Year wise Attrition Rate of Primary Teachers during Pre and post-Devolution Period

Period	Years	Male Teachers	Attrition rate male teachers in percentages %	Female Teachers	Attrition rate female teachers in percentages %	Total	Total attrition rate of teachers in percentages %
Pre – evolution	1997	77598		68659		146257	
	1998	75283	-3.02	65532	-4.55	140815	-3.74
	1999	74967	-0.37	63202	-3.55	138169	-1.85
	2000	71111	-5.14	62072	-1.78	133183	-3.60
	2001	67255	-5.42	61796	-0.44	129051	-3.10
	2002	71959	6.99	66125	7.00	138084	6.99
Average pre-devolution		73029		64564		137593	
Post – evolution	2003	92512		78470		170982	
	2004	94173	1.79	80312	2.34	174485	2.04
	2005	95154	1.04	82160	2.30	177314	1.62
	2006	96302	1.20	83562	1.70	179864	1.43
	2007	92384	-4.06	87314	4.49	179698	-0.09
	2008	90839	-1.67	86810	-0.57	177649	-1.14
Average Post-devolution		93561		83105		176665	
Percent Increase		28		29		28	

Figure No 3

Attrition Rates of Primary School Teachers during Pre and Post-Devolution Period



Decentralization in education led to an increase in the number of teachers at primary level. Overall increase among primary school teachers in the post-devolution period was 28 %. In the year 2003, the beginning of post-devolution period; local governments hired nearly 23% more primary school teachers as compared with the previous years. The number of male and female primary school teachers increased by 28% and 27%, respectively after devolution in 2003. Whilst during the pre-devolution five years the number of male and female teachers decreased by 1% to 5% a year. The trend during the post-devolution period was opposite to it as the number of teachers increased in the initial four years of devolution by 1% to 2 % a year but a decrease of 4 % was observed in the year 2007 for male teachers. During the same period the number of female teachers increased by 4%. The finding supports that a significant number of teachers were employed during the post devolution period.

Impact of Devolution on the Teacher-Student Ratio at Primary School Level

Proceeding table and graph present by year teacher-student ratio during pre and post-devolution periods.

Table 5

By Year Primary School Teacher Student Ratio for Pre and Post-Devolution Period

Period	Years	Teacher student Ratio Male	Teacher student Ratio Female	Teacher student Ratio Total
Pre-devolution	1997	44.31	36.99	40.88
	1998	54.38	45.63	50.32
	1999	52.94	42.57	48.20
	2000	53.72	45.13	49.72
	2001	56.89	45.79	51.58
	2002	49.82	42.38	46.26
Total		52.2	43.08	47.82
Post-devolution	2003	37.65	36.88	37.30
	2004	40.78	41.63	41.17
	2005	43.53	43.34	43.44
	2006	44.65	45.05	44.84
	2007	45.85	42.52	44.24
	2008	44.99	41.66	43.36
Total		43.00	43.00	42.0

Figure No 5

Primary School Teacher-Student Ratio during Pre and Post-Devolution Periods

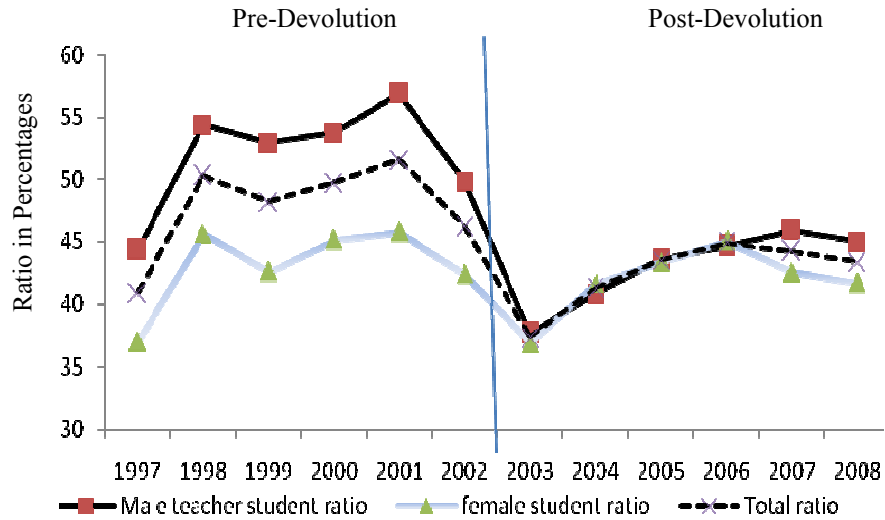


Table 4 and graph present by year teacher-student ratio at primary school level for pre and post devolution periods.

Teacher-student ratio improved after devolution on average it was 1:52 in boys’ school and 1:43 in girls’ school. After devolution in the six years from 2003 to 2008, it became 1:43 combined for male and female which indicates that local governments worked for increasing enrolment as well as hired more teachers for effective teaching learning. Similarly in boys’ school this ratio showed a significant decrease as it declined to 1:43 against 1:52 in pre-devolution era. Though for female it remained the same yet overall data support that devolution has positively affected the teacher-student ratio at primary school level.

By district comparison of increase in enrolment after devolution.

Student enrolment increased in both the districts but increase in Bahawalnagar was significantly higher than that of Lahore showing that devolution has been comparatively more instrumental in increasing enrolment in less developed districts where literacy level was low.

Table 6

Comparison of Percent Increase in Enrolment after Devolution in the two Districts

	Lahore	Bahawalnagar
Male	34	77
Female	38	73
Total	36	75

Table 7 presents that devolution has been a tool in controlling drop out in both districts but it can be observed that dropout rate decreased comparatively more in small, less developed and low literacy level districts.

Table 7

By district comparison of percent dropout rate during pre and post devolution periods

Sex	Lahore		Bahawalnagar	
	Pre-devolution 1998-2002	Post-devolution 2003-2007	Pre-devolution 1998-2002	Post-devolution 2003-2007
Male	63	20	68	22
Female	46	21	53	27
Total	45	17	63	24

Increase in the number of teachers. Table 8 presents that there was a significant increase among primary school teachers in district Lahore especially of male teachers but the increase in the number of teachers in Bahawalnagar district was not that high.

Table 8

Percent Increase in the number of teachers in Lahore and Bahawalnagar districts

	Lahore	Bahawalnagar
Male	40	3
Female	09	8
Total	15	2

Teacher students' ratio. Table 9 shows that there was a little improvement in the teacher student ratio in Lahore district between pre and post-devolution periods but in Bahawalnagar the teacher student ratio jumped from 1:25 to 1:48 because of high increase in enrolment and a very small increase in number of teachers during the post devolution period.

Table 9

Teacher students' ratio during pre and post devolution periods

	Lahore		Bahawalnagar	
	Pre-devolution	Post-evolution	Pre-devolution	Post-evolution
Male	1:47	1:46	1:28	1:42
Female	1:43	1:42	1:18	1:45
Total	1:48	1:42	1:25	1:48

Implications of the study

This study explores new dimensions in showing impact of decentralization in education on elements of universal primary education in the province and in districts with low literacy rates and districts with high literacy rates. Though it appears that five years span is quite small to evaluate the impacts of devolution yet it provides the initial trends of the impact on school enrolment, dropout and provision of teachers. It shows that when administrative and financial powers are delegated to lower levels of governments, it improves the efficiency of the local governance. The local stake-holders play their role enthusiastically as compared to the conditions where they are managed by centralized

system by the people who are less familiar to their problems. This leads to conclude that decentralization of powers to lower levels must go on to improve the public school education services. The more we trickle down powers to lower levels especially in far flung districts, the better results we would have in all aspect of education.

The study could not look into the reasons of non responsiveness of the educational administrators to employ teachers commensurate to the increasing enrolment. The probable reasons could be non availability of educational human resources, lack of financial resources or unexpected increase in enrolment. Similar studies in other districts with detailed analysis of various aspects of inputs and processes of education will help in understanding the contribution and impact of devolution in the field of education.

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Correspondence

Name: Ayaz Muhammad Khan

Email: ayaz@ue.edu.pk