

## **Quality Improvement in the Secondary Schools through District Ranking Initiative in Punjab**

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### **Abstract**

*The present study titled "Quality Improvement in the Secondary Schools through District Ranking Initiative in Punjab" was aimed to study the improvement in public secondary schools of Punjab as a result of the initiatives taken by the previous Government of Punjab (2013-2018) following Punjab Education Sector Reforms Program (PESRP). The government's district ranking initiative in public secondary schools of Punjab. The multistage sampling technique was used to select 800 secondary school teachers from 160 randomly selected high schools of five districts in Punjab. The survey questionnaire for teachers with reliability (.904) was used. Expert opinion was taken to check the face and content validity of the tool. Analysis of quantitative data was done using SPSS, and ANOVA and t-tests were applied besides descriptive statistics. The study results showed statistically significant differences among the satisfaction levels of respondents towards the government's district ranking initiative based on gender, locality, and experience. Urban teachers were more satisfied with the 'government's district ranking initiative, while female teachers were more satisfied with the government's initiative. Results of the study are beneficial for policymakers, government officials, and stakeholders in decision-making and planning for future initiatives. Major recommendations include supporting learning elements in urban and rural schools so that all the students may benefit equally instead of subjectivity locality-wise.*

**Keywords:** Punjab Government's Initiatives, Quality Improvement, Secondary School Education  
**Introduction**

Education is the backbone of any 'country's social, economic, cultural, moral, and technological development. Strengthening education means strengthening the progress and prosperity of the country. According to Hannum and Buchmann (2005), most socio-economic studies concluded that education makes individuals able to improve their economic conditions. The students enter the most vital stage of adolescence during secondary education (National Education Policy, 1998-2010). The developing countries that have made vital progress in achieving universal primary education are now considering secondary education as their central policy concern. Secondary education is the source to attain values, skills, and knowledge that are helpful to produce responsible citizens (Laurie et al., 2016). Secondary education develops openness in the personalities of the individuals and helps them to become better citizens. It also improves the living standard of the individuals (Baumann & Winzar, 2016).

In response to the importance of secondary education, there is a lot of pressure on the secondary education systems in developing countries to provide quality secondary education effectively. Therefore, secondary schools are responsible for preparing students for adulthood and helping them attain the citizenship skills to become valuable citizens (Null et al., 2017). In secondary schools, the principal plays a vital role in the execution of any program or reform. According to Liphon (2016), the secondary school manager is the principal; it is a significant determinant of the secondary education system. Glennerster et al. (2011) report that improved access to secondary education will positively impact school enrolment and completion of a primary level in public schools of Punjab.

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Quality education is the primary right of the students (Cochran-Smith et al., 2017), an agenda of Sustainable Development Goals (United Nations, 2015), and Pakistan is the signatory of (Manzoor, 2018). According to UNESCO (2003), quality of education is considered the learning outcomes of students and is the primary concern of all stakeholders. However, the achievement of desired quality depends on the quality of input and process in proficiency, efficacy, excellence, and social justice. The output of quality education can be gained by ensuring quality at every level of education like training of teachers, learning environment, teacher-learning, assessment, and monitoring (Halai, 2020).

Quality is the collective responsibility of government, district administration, school management, and teachers; but most teachers are held accountable for all quality improvement in schools. School improvement is a versatile and all-rounded process that demands time not only for implementation but also to understand the leadership role (Khachatryan & Parkerson, 2020; Verger et al., 2020; Batool & Arif, 2021). According to Awan & Hussain (2020), as different school reform approaches are common, the success of such efforts depends on staff's motivation and capacity building, requiring an effective leadership role.

Education has been devolved to provinces after the 18<sup>th</sup> Amendment in the Constitution of Pakistan. As a result, making policies and their implementation has become the central task of the provincial governments. Therefore, the government of Punjab took a keen interest to fulfill the education all goals and started School Reforms Roadmap to attain the targets of enrolment, retention, and provision of quality education to the students all over the Punjab Province (Zakar et al., 2013). The ex-Chief Minister of Punjab personally monitored the progress of the PESRP roadmap with its required resources, and relevant support promised to the districts (Punjab Schools Reform Road Map, 2010).

Indicators of performance and quality education have become so popular nowadays in school education that the concept of education seems incomplete without them. Data about the education system's functioning facilities help policymakers make decisions, develop a monitoring system, and bring desirable changes (Dalton, 2017; Muriel & Smith, 2011). In 2010, the challenge of education reform in Pakistan was threefold: scale, capacity to deliver, and political will. To address these challenges in their entirety, Shahbaz Sharif, then the Chief Minister of Punjab, started a program called Punjab Schools Reform Road Map. This program called for the systemic overhaul and transformation of the entire education delivery and monitoring apparatus of the province (See Chaudhary & Tajwar, 2021, p.110). The Punjab Schools Reform Roadmap was established with the financial assistance of the United Kingdom's Department for International Development (DFID) to strengthen the Government initiatives and delivery of educational results under the Punjab Education Sector Reforms Program (PESRP). The primary purpose of the program was to check the progress of educational outcomes of schools and districts. The progress report was sent to the Chief Minister of Punjab every two or three months. Considerable improvement was observed in teachers' and students' attendance due to monitoring team visits (Barber, 2013). The school reform roadmap focuses on the following initiatives:

- 100% Enrollment of all school-going age children,
- 100 % retention of all the enrolled students up to the age of 16 years
- Recruitment and transfers of teachers purely on merit
- Provision of free, compulsory quality education for all
- District ranking on targets
- Transparent selection of officers and their retention connected with targets
- Incentives for teachers and officers on a good performance
- Provision of Information Technology
- IT labs to all high and higher secondary schools of Punjab
- Real-time monitoring information.

The monitoring officers monitor these indicators monthly, and the report is published quarterly (Qambar, 2018). District Ranking System (DRS) has been the most critical step taken to make all data gathered by School Monitoring and Evaluation Teams (MEAs) publicly available on the websites. Every district works enthusiastically on targets to fulfill the district ranking system indicators, leading to better performance and quality improvement in their respective school districts

(Malik & Akram, 2020). Attendance of teachers and students, functioning facilities of schools, visits of district management, and attendance of non-teaching staff are significant indicators of district ranking. DRS is highly appreciated by third-party evaluators, lauded for creating a sense of competition among the provinces and districts within a province to deliver education (Alif Ailaan, 2017).

However, the Road Map highly depends upon the loyalty and commitment of high-ranking officers. Lacking this commitment may decrease educational outcomes as the education system depends significantly on reform's roadmap. Similarly, the district ranking system may become doubtful if significant differences among schools within districts (Andrabi et al., 2012). Another critical initiative is the provision of IT Labs and allied infrastructure for the secondary schools. This infrastructure has proved critical during the pandemic COVID19.

The 21st century claims that information and communication technologies (ICTs) are probably to increase the education quality, the deepening of knowledge, and the creation of knowledge (Tchamyou et al., 2019). Information and communication technologies (ICTs) use has become critical these days; it is highly recommended because ICT help students learn more efficiently and effectively (Lindberg et al., 2017). Moreover, ICT-trained teachers are equipped with a wider range of pedagogies, essential for creativity and innovation (Gil-Flores et al., 2017). ICTs enable school managers to complete their administrative tasks more efficiently (Jogezai et al., 2018). Therefore, the provision of ICT facilities and IT infrastructure in schools is considered the best agent of quality improvement (Raheem et al., 2021). ICT helps all stakeholders to get informed of what is happening locally and globally for better insight and decision making. Information and communication technology (ICT) can complement, enrich and transform education for the better (Jan, 2018).

### **The Statement of Problem**

A comprehensive study was needed that may link the initiatives taken by the Punjab government in the form of the School Reform Road Map (PESRP) adopting the quality framework according to the sustainable goals of development (SDGs) and its status in Pakistan. Hardly any study had been conducted from the perspective of gaining insight into the impact of initiatives taken by the Punjab government. The spirit of quality improvement through government initiatives. Hence, the research aimed to discover the effect of two initiatives of the Punjab government, the district ranking system, and the provision of IT labs and ICT infrastructure upon overall progression toward quality improvement. Whether or not desired change in infrastructure, teacher and student achievements had occurred to reach sustainable development goals in Punjab.

### **Objectives of the Study**

The objectives of the study were to:

1. Assess the importance of district ranking comparison initiative of Punjab Government in secondary schools of Punjab
2. Explore the educational improvements due to the Punjab government's district ranking initiative in public secondary schools of Punjab.

### **Research Questions**

1. How useful District Ranking System has been in achieving the target of quality education?
2. What is the impact of the provision of IT Labs and related infrastructure in achieving the target of quality education?

### **Significance of the Study**

The study has contributed new knowledge in school governance and leadership studies by analyzing the government's district ranking and IT Labs initiative for quality improvement in Punjab. Such study had not been conducted at the secondary level in Punjab so far. The study is significant in the following ways:

- The findings of the study are helpful for policymakers and decision-makers.
- The study is helpful for the stakeholders
- The study is also helpful for the government to take future decisions and initiatives for quality improvement at the secondary level.
- The findings of the study have also provided guidelines for other provinces

**Methodology**

The survey method was used. The population of the study comprised all public secondary schools and higher secondary schools of Punjab, i.e., 7082 schools in total. Following Alvi (2016) multi-stage sampling, which combines two or more probability techniques was used. Five districts of Punjab, Bahawalpur, Sahiwal, Sheikhpura, Rajanpur, and Rawalpindi were selected by lottery method; two districts were categorized in high ranking, and two in low, while one district falls in medium ranking, according to District rankings available in the last quarter of 2018. This period was chosen because School Sector Reform Program ended its 1<sup>st</sup> phase in 2018, so it was assumed that maximum improvement in quality was achieved by that time. The accessible population includes 1076 Public secondary and higher secondary schools from five districts selected through stratified sampling, categorizing schools in male-female and urban-rural strata. The consent form for schools was sought through district management. 32 schools (half male, half female) from each district were selected randomly making a total of 160 secondary and higher secondary schools. Five senior teachers were selected from each school, rendering each school a cluster. Total 800 teachers out of 4947 teachers of five selected districts made our target sample. Almost 1200 questionnaires were sent to teachers through personal visits and with the help of friends. Only 900 returned; out of which 807 have been used for final data analysis.

**Table 1: Demographic Description of the Data**

No	Districts	f	%
1	Sheikhpura	105	13.0
2	Sahiwal	162	20.0
3	Bahawalnagar	163	20.0
4	Rajanpur	61	8.0
5	Rawalpindi	315	39.0
	Total	806	100.0
<b>Gender</b>			
1	Male	459	57.0
2	Female	347	43.0
	Total	806	100.0
<b>Locality</b>			
1	Urban	447	56.0
2	Rural	359	44.0
	Total	806	100.0
<b>Experience</b>			
1	1-5 Years	240	30.0
2	5-10 years	252	31.0
3	10-15 Years	162	20.0
4	15-20 Years	78	10.0
5	Above 20 Years	74	9.0

A self-constructed questionnaire comprising two parts was used. The items in the questionnaire were selected from the detail of initiatives provided in SSRP, and literature review. The selected items were validated for content review by experts, 3 university professors, and 2 practitioners from the field. The face validity was verified by peer review to ensure the readability and comprehension of the items. Then, the questionnaire was pilot tested with 50 teachers. The pilot had yielded reliable results. The final questionnaire constituted 31 items for scale and demographic information of teachers regarding their, gender, locality, and experience. The collected data were recorded in SPSS for further analysis. The overall reliability of the items was .904. Furthermore, the KMO and Bartlett test's value of .902 further confirmed the sampling adequacy.

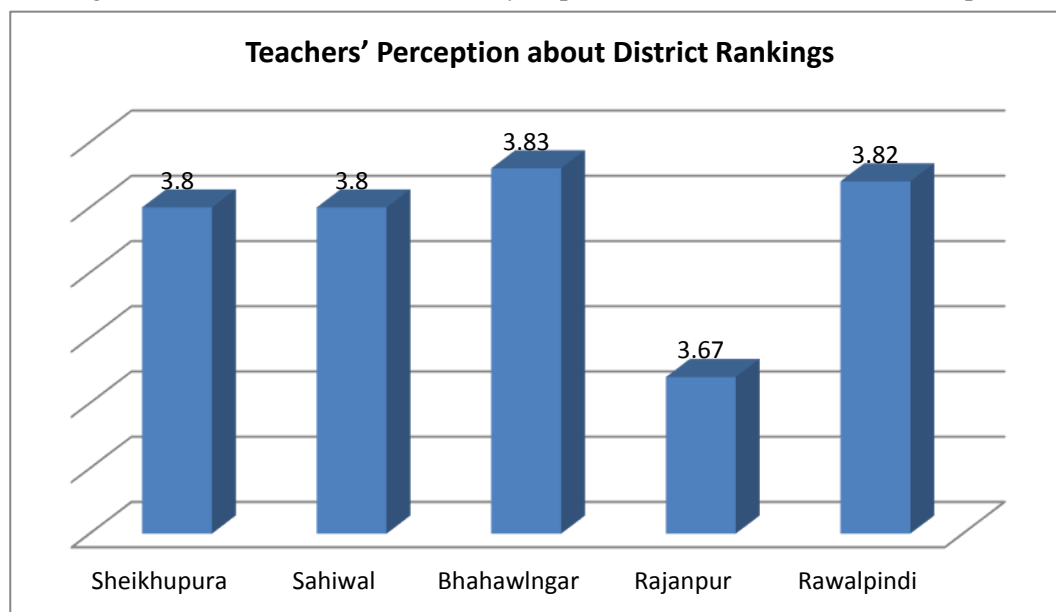
Exploratory factor analysis (EFA) was employed, using the Principal Component Factoring extraction method and Varimax rotation with Kaiser Normalization. The outcome was three robust factors; their statistics are shared below:

**Table 2: Scale Statistics**

No.	Factors	No of Items	M	Variance	SD	Alpha
1	Quality Improvement	15	57.10	59.211	7.695	.822
2	District Rankings	5	18.32	11.964	3.459	.732
3	IT infrastructure & Labs	11	41.03	69.618	8.344	.907

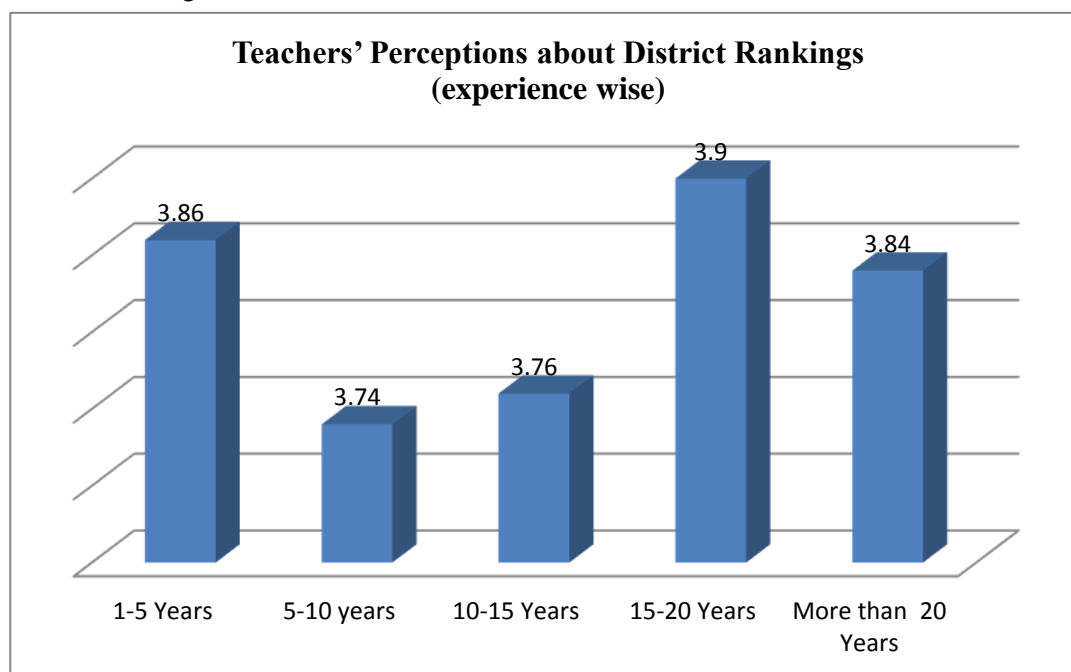
**Data Analysis**

The following section details the inferential analysis performed to answer the research questions.



**Figure 1: District Wise Teachers' perception about District Ranking Initiative**

Figure 1 relates to overall perceptions of teachers regarding the district ranking system. It is noted that Bahawalnagar teachers have expressed the most favorable opinion, followed by Rawalpindi, Sheikhupura, and Sahiwal; whereas Rajanpur teachers hold the least favorable opinion about district rankings.



**Figure 2: Teachers' Perceptions about District Ranking Initiative (experience-wise)**

Figure 2 explains the perceptions of teachers with different experience levels. It is noted that teachers with 15-20 years' experience perceived DRS most favorably, followed by teachers with 1-5 and more than 20 years of experience. The teachers with 5-10 years of experience perceived DRS least favorably followed by teachers with 15-20 years of experience. It means nearly 30% of teachers do not appreciate DRS well.

**Table 3: One-Way ANOVA District-wise for Quality Improvement**

Districts	N	Mean	SD	SE	F	Sig.
Sheikhupura	105	3.9273	.73547	.07177	2.820	.028

Sahiwal	162	3.6212	.93290	.07330
Bahawalnagar	163	3.8740	.63414	.04967
Rajanpur	61	3.5872	.58742	.07521
Rawalpindi	315	3.6724	.73421	.04137
Total	806	3.7296	.75852	.02672

The data in the Table 3 has informed that there are significant differences in teachers' perceptions about quality improvement in their schools. According to teachers, the Sheikhpura district has given its best for quality improvement, whereas Rajanpur has been lagging in its efforts.

**Table 4: One Way ANOVA District-wise for IT Labs**

Districts	N	M	SD	SE	F	Sig.
Sheikhpura	105	3.7429	.53353	.05207	5.176	.000
Sahiwal	162	3.8239	.53051	.04168		
Bahawalnagar	163	3.9162	.54773	.04290		
Rajanpur	61	3.7596	.39577	.05067		
Rawalpindi	315	3.7721	.49193	.02772		
Total	806	3.8069	.51299	.01807		

The data in the Table 4 has informed that there are significant differences in teachers' perceptions about the provision of IT labs and related infrastructure in their schools. The teachers of Bahawalnagar have been most satisfied with the provision of IT labs and ICT infrastructure in their schools, followed by Sahiwal. In contrast, Rajanpur teachers have been least satisfied.

**Table 5: Correlation Matrix of the Research Variables**

Factors	District Rankings	IT Labs & Infrastructure	Quality Improvement
District Rankings	1	.513**	.678**
IT Labs & Infrastructure		1	.586**
Quality Improvement			1

Pearson Product Moment Correlation test was run to witness the strength of the association between 3 key factors, District Rankings, IT Labs, and quality improvement. The results inform that DRS is more closely related to quality improvement than IT Labs. It means schools still perform under extrinsic control, the stronger the control the better the performance.

**Table 5: Multiple Linear Regression (Quality Improvement in Education is the Dependent Variable)**

	Models	Standardized Coefficients	t-value	p-value	Collinearity Statistics	
		$\beta$			Tolerance	VIF
1	(Constant)		27.418	.000		
	District Rankings	.678	26.118	.000	1.000	1.000
2	(Constant)		21.758	.000		
	District Rankings	.512	18.274	.000	.737	1.357
	IT Labs	.323	11.555	.000	.737	1.357

a. Dependent Variable: Quality Improvement

Multiple linear regression was conducted using the stepwise method to determine the impact of two initiatives, DRS and IT Labs on quality improvement. 2 models were generated. The 1<sup>st</sup> model describes that district ranking (DRS) can singularly cause 67% variance in quality improvement ( $\beta=.678$ ,  $p=>.001$ ). Model 2 explains that both DRS and IT Labs can collectively cause 84% variance in quality improvement ( $\beta=.512$ ,  $p>.001$ ;  $\beta=.323$ ,  $p>.001$ ).

### Findings

- Teachers' perception of district Bahawalnagar (M=3.83, SD=.596) was more favorable while the Teachers' perception of district Rajanpur (M=3.67, SD=.514) was least favorable towards the effectiveness of Punjab 'government's district ranking initiative.
- 15-20 years experienced 'teachers' perception (M=3.90, SD=.639) was more favorable while the 5-10 years experience 'teachers' perception (M=3.74, SD=.595) was least favorable towards the effectiveness of the Punjab 'government's District ranking initiative.
- According to One-way ANOVA regarding quality improvement, teachers of Sheikhpura district has given their best for quality improvement, whereas Rajanpur has been lagging in their efforts

- According to One-way ANOVA, the teachers of Bahawalnagar have been most satisfied with the provision of IT labs and ICT infrastructure in their schools, followed by Sahiwal. In contrast, Rajanpur teachers have been least satisfied.
- Pearson correlation scores have identified that DRS is more closely related to quality improvement than IT Labs. It means schools still perform under extrinsic control, the stronger the control the better the performance
- Multiple Linear Regression results have pointed out that district rankings (DRS) can singularly cause 67% variance in quality improvement, while both DRS and IT Labs can collectively cause 84% variance in quality improvement.

### Discussion

Efforts of Punjab have created a competitive environment in the province of Punjab. Based on the Monitoring and Evaluation Assistant (MEA) report published as District Ranking System, a comparison of all 36 districts of Punjab province is made after every three months; as a result, comparison and evaluation have improved the attendance of teachers and students, student enrolment, and retention in the school for the whole academic session. These results are shared by (Qambar, 2018, Mahmood et al., 2012; Batool & Arif, 2021). Now teachers from smaller districts like Bahawalnagar believe that the District Ranking initiative of the Punjab government is effective and should continue for betterment in the education system.

The locality of the school, students, and teachers also impact their performance. This research highlighted that urban teachers were more satisfied with Punjab 'Government's district ranking initiative. In contrast, rural teachers were insignificantly less satisfied with the effectiveness of the Punjab government's initiative, especially the IT Labs and ICT infrastructure (Jan, 2018). Teaching and learning are two continuums of a string. Similarly, Ramos et al. (2020) found out that the performance of urban students is better than rural students. Student performance is a critical indicator of teachers' effectiveness. Typically, facilities and other environmental factors are readily available in urban areas (Rawalpindi) as compared to rural areas (Rajanpur); therefore, urban teachers may excel in performance, but rural teachers have shown better impetus for development. Followers of Abraham Maslow might have said: "satisfied need is not a motivator" (see Gibson & Teasley, 1973). Now it depends on the Punjab government how does it take the Reform Roadmap to the next level to keep all teachers motivated.

Teachers' experience is also an important indicator of their performance and their attitude towards things. Teachers with more experience were more satisfied with Punjab's Government's district ranking initiative, while teachers with less experience were least satisfied with the Punjab Government's district ranking initiative. In contrast, male teachers were less satisfied with the effectiveness of the Punjab government's district ranking initiative. Hoque et al. (2013) mentioned in research that the performance of experienced teachers is better than less experienced teachers. However, too many experienced and junior teachers seem to miss the bus. ICT is a critical factor here; teachers with more than 20 years of service are no longer in learning mode, whereas teachers with less than 5 years of experience should learn to embrace lifelong learning (Raheem et al., 2020). Punjab government should pay more attention to the skill building of junior teachers to make them an asset rather than the liability for the school system (Null et al., 2017; Tchamyoun et al., 2019); only then, vision for sustainable development and quality education can be realized (Awan & Hussain, 2016; Laurie et al., 2016).

The results also raise questions at the hiring of teachers by the Punjab School Education Department; not only the system needs teachers who are polite, humble, and well versed in adolescent psychology for better classrooms management (Alexander, 2020), we also need teachers highly skilled in ICTS for science teaching. It seems that the government ignored this critical factor while hiring young teachers. Such factors may prove critical in social and intellectual development for future generations (Türkkahraman, 2012; Ryan et al., 2017). The monitoring and evaluation system should not check and monitor teacher and student attendances only; it should get a comprehensive report on teachers' skills as well (Verger et al., 2020) since this is the only road to quality education.

### Conclusion

The results of this study inform us about the critical importance of the Punjab government's initiatives for quality improvement and their impact. DRS has proved to be of enormous value and seems quite effective. It tells the story of district competition for better performance. Districts previously ranked in

moderate performance have indeed raised their ranks like Bahawalnagar and Sheikhpura, who have realized the need of the hour. Rajanpur belonging to South Punjab has been one of the most neglect areas, lacking incompetent teachers, ICT infrastructure, and funds; therefore, their lagging is comprehensible. However, Rawalpindi's results are a bit surprising; it is a much more developed and large district as compared to others. It means that smaller districts in Punjab are trying more to come up and compete with developed districts. Hence, the aim of district rankings and other initiatives have been successful in creating momentum for quality improvement in Punjab. More efforts are needed for the equitable supply of funds, and other support to the districts lagging in comprehensive efforts. The DRS has been useful in this aspect in that it has identified the weak areas of different districts, making evidence-based rational decision-making easy for the policymakers, and concerned government departments.

The above discussion shows that the district ranking initiative positively impacts the improvement of the quality of secondary schools in Punjab. Teachers of district Bahawalnagar are more satisfied with this initiative. Teachers with more experience are more satisfied with the district ranking initiative than the teachers with less experience. Urban teachers are more satisfied with Punjab Government's district ranking initiative than the rural teachers. Female teachers are more satisfied than male teachers with Punjab's Government's district ranking initiative.

### Recommendations for Further Research

- This study was limited to two initiatives only; a comprehensive mixed-methods study can be launched to measure the collective effect of other initiatives as well. A similar study could be carried out involving some other districts of Punjab.

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