

RESEARCH ARTICLE

Enhancing school improvement competencies through In-Service training: The impact on educational managers in Punjab

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ABSTRACT

This quantitative study investigated the impact of in-service training provided by the Quaid-e-Azam Academy for Educational Development (QAED) on the leading school improvement of educational managers in Punjab, Pakistan. Through a complete understanding of curriculum development principles, managers learn to align standards and benchmarks with classroom assessment/evaluation skills questions, classroom skills, instruction skills, school culture, community support skills, Decision-making, Organizational Structure, and Comprehensive and effective planning skills with educational objectives, ensuring coherence and relevance in instructional practices. A random sample of 49 educational managers from the Punjab province participated in the study. Data were sourced from the adopted questionnaire, which was developed based on the indicators used during QAEDs' in-service training and development interviews. In a Google form, they responded using a five-point Likert scale. The outcomes of the study training will emphasize how the school's mission and vision can be integrated into the school improvement plan and how a positive organizational culture that supports improvement and innovation can be fostered. At the end of the training session, educational managers will have an enhanced understanding and commitment to being prepared with practical strategies and improvement initiatives, as well as promoting innovation and adaptability to foster change and continuous improvement within their specific educational environment, thereby advancing institutional excellence.

Keywords: Educational management; school improvement; educational managers; professional development; promotion-linked training

1. Introduction

School administrators employ professionals, administrators, masters, and leaders in educational institutions whose primary duty is to guide the educational process. Assumptions are derived from curriculum development and delivery, as well as the integration of educational means with set objectives and academic quality. It is essential to note that educational managers are responsible for providing direction in the

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educational process^[1], as they participate in curriculum formulation and the implementation of these formulated curricula. They include duties related to mapping curricular goals to standards, benchmarks, and student learning outcomes (SLOs) ^[2] because the selected instructional approaches must be relevant and aligned with the set goals. Therefore, curriculum development strategies must encompass all curricular aspects, necessitating a systematic approach to ensure comprehensive coverage of the curriculum.

In addition, the work of educational managers is not limited to the classroom. As mentioned in ^[3], the major tasks of leaders include creating the school culture, seeking the support of community members, and making some decisions in the institution. These factors are crucial for safeguarding the learning process, which in turn enhances the learning environment and supports school development.

Promotion Linked Training (PLT) is a form of training provided to educational managers in the Punjab, addressing the general training needs that align with the identified standards governing current education. Punjab, Pakistan, is the largest province of Pakistan, boasting a very large and diversified education system. Punjab is a tribally diverse state with a varying degree of engagement of people in various socio-economic ways. This variety implies comprehensive learning communities and education strategies appropriate to various settings. Community support is a crucial factor in school improvement, particularly in terms of cultural diversity, and the issue of culture in schools is of paramount importance. Quaid-e-Azam Academy for Educational Development (QAED), located in Punjab, Pakistan, is a significant institution for the growth of teachers and educational managers in the field of teaching, offering Continuous Professional Development (CPD) and Promotion-Linked Training (PLT) courses. These programs aim to improve teaching procedures, knowledge content, leadership, and overall quality of education for learners. It is predominantly interested in advancing the competency-based programs concerning classroom assessment and evaluation, instructional techniques, and organizational patterns. Mentoring concerning promotion has been found to enhance professional growth, and a study carried out among the primary school teachers of Punjab has established its significant value ^[4]. This indicates that educational leadership skills become pivotal in the implementation of the curriculum. The issue to be explored is how teachers can effectively manage the classroom, teach leadership, and make informed decisions in curriculum delivery and construction. Also, the educational leaders have power over the school culture that enables them to capture the support of the community, enhancing their power over school outcomes.

The significance of such training programs can be supported by several factors prevalent in educational management. First, integrating all curricular objectives with academic standards and benchmarks is essential for enhancing learning achievement ^[5]. It opened new horizons for assessment, incorporating it into the value-added process, which supports the education process with a more integrated approach. Additionally, educational managers have challenging roles in which they are expected to perform effectively. Hence, they need to possess diverse skills. A study ^[6] revealed that managers who underwent similar training profited greatly, especially in leadership, management and administration, communication, planning, and problem-solving. These are many-faceted changes that are critical to educational leadership.

Instructional leadership has received considerable attention in the literature on educational management ^[7]. According to ^[8], instructional leadership focuses on facilitating the efficient delivery of instruction, which involves providing instructional support and resources to enhance teachers' teaching activities. This aligns with the requirements of the PLT program, which should strengthen officials' PCK, classroom management, and curriculum.

Thus, the PLT program addresses organizational management and strategic planning issues, which ^[9] identified as organizational concerns that can enhance curriculum implementation and improve instructional

practices. It includes skills in financial management, an important area that educational leaders need to develop to manage financial resources more effectively and make sound budgeting decisions ^[10].

This research aims to establish the effectiveness of in-service training programs for educational managers in Punjab Province, specifically in terms of curriculum development methods and their impact on instruction. By examining educational managers' experiences, perspectives, and skills, this research seeks to provide insights into the following:

- Standards and benchmarks are equivalent to educational goals and are already aligned.
- The combination of assessment/ evaluation skills with a teaching-learning process in the classroom environment
- Development of teaching methodologies to respond to the learners' heterogeneity
- Assessing the impact of educational managers on the development of school culture and community involvement.
- Decision-making procedures in schools and other establishments involved in the education sector

This study also provides policymakers and practitioners with important information on the extent and nature of in-service training efforts aimed at enhancing educational managers' curriculum development and educational leadership competencies, employing a systematic analysis of data collected from surveyed educational managers. The research outcomes are believed to be useful to policymakers, educational managers, and practitioners in helping them understand how to promote excellence in curriculum delivery and educational leadership in the future.

Research on the impact of in-service training programmes on educational managers has been interesting, especially in developing nations, including Pakistan. Curriculum development is a critical component of educational management. According to ^[11,12], curricular goals must be compatible with educational standards to raise student achievement levels. They emphasized the need to integrate classroom assessment, evaluation skills, and instructional methods into curriculum implementation. This integration enables various aspects of teaching and learning to complement each other, allowing practices in assessing learning to inform the improvement of teaching strategies.

In Punjab, a Promotion-Linked Training program exists. ^[13] mentioned that the PLT program raises the possibility of professional growth for Punjab trainers, including the development of pedagogical conceptions, classroom administrative abilities, effective communication skills, curriculum creativity, and the application of contemporary teaching-learning techniques, as also emphasized by ^[14].

Educational managers need to possess numerous competencies to perform their tasks ^[15] successfully, which are field-specific and multifaceted. In their study, ^[16] established that managers who underwent the senior teacher training program benefited in leadership, management, administration, communication, planning, and problem-solving skills. This has also been the focus of a previous study ^[17].

As mentioned by ^[18], educational managers influence school culture and decision-making. Increased awareness has been given to instructional leadership, with ^[8] noting the importance of teachers in giving instructional direction. ^[9] noted that school leaders should focus on the issue of strategic planning and the organizational structure to enhance the implementation of the given curriculum and instructional practices, as also noted by ^[19]. In their study, ^[20] identified aspects of personal competencies that comprise qualified knowledge and skills in financial management, enabling educational leaders to deploy financial resources effectively and efficiently, and to make sound financial decisions.

QAED training encourages participants to engage and network with one another due to their shared goals as educational managers, thereby forming a community of practice ^[1,4]. This is consistent with the capacity development literature ^[21] and the construction of professional communities ^[22].

Several studies ^[4,13,23] present the notion that PLT positively impacts career progress, job performance, knowledge enhancement among educational managers, and the institution's overall performance, highlighting that formulating a performance culture helps attract competent experts and boosts a favorable workforce resurgence. Further studies have been conducted on competencies, career preparedness, and perspectives of postgraduate students ^[24]; the impact of training on job satisfaction and employee retention ^[6,25,26]; and the impact of training on employee performance ^[27]. Nevertheless, they observed several positive effects that contributed to the educational atmosphere in Pakistan. However, educational managers encounter numerous challenges in handling causes generatively ^[28]. Some of these include resource limitations and political interference.

The organization in focus is the Quaid-e-Azam Academy for Educational Development (QAED) in Punjab, Pakistan, which contributes to the professional development of teachers and educational managers through Continuous Professional Development (CPD) and Promotion-linked Training (PLT). These practices have sought to change the ways of teaching, methods of teaching, content knowledge, leadership effectiveness, and the quality of education for learners ^[2]. Leadership training may enhance organizational effectiveness ^[29].

CPD makes broad proficiency changes in the teaching skills, subjects, and proficiencies fundamental to great teaching among primary school teachers ^[4]. This implies the research conducted by ^[30] in Ethiopia on the positive role of teacher CPD. Their study ^[4] determined that the activities promoted by QAED's mentorship program are teaching ability, interactive teaching, lesson planning, and motivation.

Intended for teachers and educators who want to advance in their careers, several studies show that PLT programs are designed to equip participants with the knowledge and skills necessary for their new roles ^[1,4]. These programs follow different approaches, such as full-scale training, campus training, tutoring, and coaching, specially tailored to leadership, communication skills, and problem-solving.

^[23] presented a mixed-method analysis based on the PLT project designed to enhance school heads' ICT skills (BS-17 to BS-18). According to the observed data, the study depicted an improvement in the ICT skills of the participants, and the participants reported other major qualities identified in the qualitative study. The findings, based on actual experiences, validate that the training model linked with promotion for QAED Punjab effectively contributes to the enhancement of teachers' capacity and competencies, as well as their leadership traits. The study by ^[2] focused on the research question of the present study, which found that in-service training effectively enhanced the people-focused and democratic leadership skills of educational managers in Punjab. The effectiveness of CPD programs has been explored from the perspective of primary school teachers ^[31]. Similarly, the effectiveness of the in-service teacher training programmes offered by the Directorate of Staff Development (DSD) and the recently established QAED was explored. It can be concluded that the generally positive effects of QAED programs should receive constant funding for support systems and training ^[3].

The following were the research objectives of this study:

1. To analyze the impact of promotion-linked training on enhancing curriculum, standards, benchmarks, students' learning outcomes (SLOs), and competencies skills on the professional development of educational managers in Punjab.

2. To investigate the impact of promotion-linked training on enhancing instruction, classroom, and classroom assessment/evaluation skills on the professional development of educational managers in Punjab.
3. To measure the impact of promotion-linked training on enhancing effective planning skills, school culture, community support, Decision-making, and Organization on the professional development of educational managers in Punjab.

2. Methodology

The current study employed a quantitative cross-sectional survey design to assess the perspectives of 49 educational managers on in-service training programs and leadership practices in their schools. The justification for the simple random sampling technique was to ensure that each educational manager in the target population had an equal chance of being selected [37], thereby minimizing selection bias within the scope of this study. The target population comprised public secondary school educational managers (principals, heads, and senior teachers). Participants were selected using a simple random sampling technique. Data were collected through a self-administered Google Forms survey distributed to 49 participants online. The demographic characteristics of the participating educational managers are presented in the following table.

Table 1. Demographic characteristics of participating educational managers (N=49)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Role	Principal	15	30.61%
	Head	18	36.73%
	Senior Teacher	16	32.65%
Experience Level (Years)	0-5	9	18.37%
	6-10	14	28.57%
	11-15	13	26.53%
	16+	13	26.53%
Gender	Male	27	55.10%
	Female	22	44.90%
District	District A	24	48.98%
	District B	25	51.02%

The above table describes the demographic information of the respondents regarding their role, experience, gender and district.

Survey data obtained through Google Forms were analyzed. The frequency distribution was calculated appropriately for the scaled variables and demographic factors using SPSS 20 software.

3. Results

Table 2. Impact of promotion-linked training on enhancing curriculum, standards, benchmarks, students' learning outcomes (SLOs), and competencies skills for educational managers in Punjab

N	Mean	SD
49	4.16	0.746

The above table describes the results as highly positive. With a mean score of 4.16 and a standard deviation of 0.746, based on 49 responses, the findings strongly suggest that the training program had a significant and consistent positive impact on the professional development of educational managers in these critical areas. The high mean indicates that the participants found the training highly effective in enhancing their knowledge and skills related to curriculum development, educational standards, benchmarks, and SLOs.

Table 3. Impact of promotion-linked training on enhancing instructional skills, classroom skills, and classroom assessment/ evaluation skills of educational managers in Punjab

Instructional Skills		Classroom Skills	Classroom Assessment/ Evaluation
Mean	4.24	4.27	4.34
SD	.693	.670	.747

According to the above table, the results were positive. The findings demonstrate the consistently high impact of the training program. The mean scores of 4.24 for instructional skills, 4.27 for classroom skills, and 4.33 for classroom assessment and evaluation skills (all on a presumed 5-point scale) indicate that the participants perceived significant improvements in these important areas. The standard deviations, ranging from 0.670 to 0.747, suggest a high level of agreement among respondents, with classroom skills showing the most consistency (SD = 0.670). Notably, classroom assessment and evaluation skills received the highest mean score (4.33), indicating that the training was particularly effective in this area.

Table 4. Impact of promotion-linked training on enhancing effective planning skills, understanding of school culture, community support, decision-making, and organizational structure skills among educational managers in Punjab

	Effective planning skills	School culture	Community supports skills	Decision-making skills	Organizational Structure skills
Mean	4.22	4.22	4.14	4.20	4.18
SD	.771	.771	.842	.889	.782

The results demonstrate a consistently positive impact in all areas. The findings show uniformly high mean scores ranging from 4.14 to 4.22 on a presumed 5-point scale. Comprehensive and effective planning skills, along with an understanding of school culture (including students and their families), received the highest mean scores of 4.22, indicating a significant perceived improvement in these crucial areas. Decision-making and organizational structure skills followed closely, with mean scores of 4.20 and 4.18, respectively. Community support skills scored slightly lower but were still notably high at 4.14. The standard deviations, ranging from 0.771 to 0.889, suggest a generally consistent response pattern across participants, with decision-making skills showing the greatest variation (SD = 0.889).

4. Discussion

The results of this study on promotion-linked training for educational managers in Punjab strongly support the implementation of comprehensive teaching and training programs in all aspects of educational administration. The mean score of 4.16, which aims to enhance the curriculum, standards, benchmarks, and student learning outcomes (SLOs), suggests that the training program has been most effective in building the capacity of educational managers in this area of need. This aligns with a shift in focus towards instructional leadership in the literature on educational management ^[9]. School leaders need to be able to steer curriculum processes to enhance learners' achievements, and this training appears to meet this demand effectively. Moreover, the even higher results, such as instructional skills (4.24), classroom skills (4.27), and classroom assessment and evaluation (4.34), indicate that the program equips the managerial workforce with real-life, tangible qualities that facilitate teaching and learning activities. This is especially true if the focus of instructional leadership is aligned with the quality of education, which remains a challenge in many developing countries, including Pakistan. The high scores in school culture (4.22) and community support skills (4.14) show that the program effectively prepares leaders. This aligns with the literature on the centrality of school culture in promoting educational changes ^[32]. The slightly lower rating for community support skills is a category that still yields great results, but could indicate an area for improvement in the next round of training.

This means that addressing the culture within schools is crucial, especially in the Punjab community, where students come from diverse socio-economic backgrounds and the level of engagement with schooling varies among communities. The training was also very useful, and its implementation can help improve conditions for more inclusive learning communities. The mean scores of the training program in creating a rating for education for effective planning skills were 4.22, and for decision-making skills were 4. The mean scores of 20 for leadership skills and 4.18 for organizational structure skills indicate a need to raise the standard of developing educational leaders. These skills are deemed crucial in school administration, and these needs are frequently mentioned as requiring support in schools in developing countries^[33]. Although the SD for decision-making skills (SD = 0.889) is slightly higher than those found for the other skills, it might indicate that participants have different understandings of this domain, their experience level, or the types of decisions required for school settings. This might be an area to explore, and more specific learning interventions could be designed for future training programs. The scores analyzed were above average in all dimensions, revealing that the training program model provides a broad perspective on moulding educational managers professionally. This aligns with the leadership development literature, which suggests the need for technical and adaptive approaches to leadership development^[18]. It is essential to acknowledge the impact of this inclusive strategy, particularly in Punjab, where the reform process has been consistent, and the need for quality educational leaders is crucial for sustaining and enhancing the education system and its outcomes, as noted in^[34-36]. The positive findings in these areas are not merely statistical but resonate deeply with the practical realities and foundational values of education within the province, highlighting the PLT program's contextual relevance and its capacity to address localized needs for more inclusive learning communities. Despite these positive findings, there are some limitations, such as the study employed a quantitative cross-sectional design, which captures perceptions at a single point in time and does not allow for the assessment of long-term impacts, and the sample size of 49 educational managers that limits the generalizability of these findings to the broader population of educational managers across Punjab. Based on these findings and limitations, we offer several targeted recommendations for future research and policy. For future research, longitudinal studies are highly recommended to track the sustained impact of PLT on educational managers' performance, their career progression, and ultimately, student learning outcomes over an extended period. Qualitative explorations could also provide deeper insights into specific challenges faced by educational managers in implementing acquired skills, or explore nuanced perspectives on the cultural and socio-economic influences on training effectiveness. From a policy perspective, the consistently positive feedback on the QAED PLT model suggests its strong potential as a tool for continuous professional development and for informing partnership and succession plans within the Punjab education sector, aimed at enhancing overall educational quality and leadership. We recommend that the Quaid-e-Azam Academy for Educational Development (QAED) and the Punjab education department consider continued investment in and refinement of this training model, potentially incorporating modules that address areas with slightly higher variation in understanding, such as decision-making skills, and further strengthening community support strategies based on the identified need.

5. Conclusions

The results of this research on the effectiveness of promotion-linked training for educational managers in Punjab are positive across all analyzed domains. The results indicate that curriculum content writing and design, teaching methods, classroom conduct, and assessment test formulation skills have all been enhanced, with a mean score of 4.14 to 4. They rated availability at an average of 34 on a 5-point scale. Significant improvements were identified in school culture, planning skills, decision-making, and organizational structural skills. A consistent picture of high means and low standard deviations on all dimensions supported the idea that the educational managers' professional training program has successfully enhanced managerial professionalism.

These outcomes demonstrate that promotion-linked training has effectively addressed areas of educational leadership and may strengthen school management, instructional quality, and decision-making processes. The fact that the feedback is always positive when it comes to the different skills being offered by this training model suggests that this training model can be a useful tool in the education sector to further professional development, as well as partnership and succession plans in the province of Punjab, to enhance educational quality and leadership.

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Conflict of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

Ethics Approval

Ethical approval was not required for this study, as it involved the analysis of publicly available data and did not involve any interventions or the collection of sensitive personal information.

Data Availability

The data that supports the findings of this study are available from the corresponding author upon reasonable request.

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