



Use Of Infrastructural Facilities by DIET Faculty in DIET Institutions to Offer Professional Development Programmes for Teachers

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ABSTRACT

The District Institutes of Education and Training (DIET) play a crucial role in delivering professional development programmes to teachers. The availability and utilization of infrastructural facilities within DIET institutions are key determinants of the effectiveness of these programmes. This study surveyed 105 DIET faculty using a questionnaire tool to examine the use of infrastructural facilities by DIET faculty in various institutions of Karnataka to offer professional development programs for teachers. Findings indicate that while certain facilities are widely available and utilized, others, particularly subject-specific laboratories and modern technology rooms, were underutilized due to various constraints. Recommendations are provided for optimizing the use of existing infrastructure to enhance the quality of teacher training programmes, with an emphasis on improving facility management, the access, and integration of modern technologies. The study highlights the need for targeted investments and strategic planning to ensure that DIET institutions can fully support the professional growth and development of teachers.

Keywords: DIET Institutions, DIET Infrastructural Facilities, Professional Development Programs, Teacher Training, Infrastructural Facilities.

Introduction

The District Institute of Education and Training (DIET) plays a pivotal role in enhancing the quality of education by providing professional development programmes for teachers at the grassroots level. DIETs are integral to the professional development of teachers, particularly in rural and semi-urban areas, by offering continuous and structured training programmes aimed at improving pedagogical practices and educational outcomes. These institutions serve as nodal agencies for teacher education, ensuring that teachers are equipped with the skills, knowledge, and modern methodologies needed to effectively deliver curriculum and engage students (Sharma & Kaul, 2018). One of the critical factors that determine the success of professional development programs is the availability and utilization of infrastructural facilities within DIET institutions. A well-equipped infrastructure, including libraries, computer labs, and subject-specific laboratories, is essential to foster a conducive learning environment for both teachers and students. Adequate facilities not only enhance the learning experience but also contribute to the overall effectiveness of teacher training programmes (Ghosh, 2020). However, the extent to which DIET faculty members utilize these infrastructural facilities in delivering professional development programmes is not explored. In many DIET institutions, the availability of essential resources such as modern technology rooms, science laboratories, and auditoriums is inconsistent, which may affect the quality of teacher training (Kumar & Verma, 2021). Understanding the patterns of infrastructure usage and identifying gaps in facility provision is crucial for optimizing the professional development programmes offered by DIETs. This study seeks to examine the use of infrastructural facilities by DIET faculty in various institutions and explore how these resources are leveraged to offer effective teacher training programmes.

Objectives of the Study

- To assess the availability, working conditions and utilization of infrastructural facilities in DIET institutions of Karnataka.
- To identify the challenges and gaps related to the availability, working conditions, and utilization of infrastructural facilities in DIET institutions, and their impact on the effectiveness of teacher training programmes.
- To provide recommendations for optimizing the use of infrastructural facilities in DIET institutions to enhance the quality and effectiveness of professional development programmes for teachers.

Review of literature

The literature reviewed for this study provides critical insights into the current status, infrastructural facilities in DIETs in India. Gogoi and Khanikor (2016) highlighted the significance of DIETs in offering teacher training and emphasized that, while the availability of educational facilities in Assam's DIETs was generally satisfactory, challenges such as limited coordination with other institutions persisted. Similarly, Rai (2015) pointed out the systemic issues plaguing DIETs across Maharashtra, Bihar, and Delhi, such as financial constraints, vacant posts, and inadequate infrastructure, which hamper the institutions' ability to function effectively. The study revealed that even though DIETs play a vital role in implementing educational policies like the Right to Education Act of 2009, poor coordination with local schools undermines the effectiveness of teacher training programmes. Rajanna (2019) explored the perception of elementary school teachers regarding DIETs in Karnataka and found that, while DIETs were perceived positively in areas such as in-service training and professional development, there were significant gaps in areas like field-based training and material development. The study stressed the need for DIETs to offer more targeted and relevant training for elementary teachers to enhance their effectiveness. Naik (2013) discussed the disparities in educational development across districts in Karnataka, noting that unequal access to educational resources, including those provided by DIETs, contributed to these disparities. The research emphasized the need for policy interventions to ensure equitable distribution of educational infrastructure.

The 2015 Joint Review Mission (JRM) on the Centrally Sponsored Scheme of Teacher Education (CSSTE) echoed these concerns, noting the lack of resources, inadequate infrastructure, and poor quality of classroom interaction in DIETs across various states. The JRM recommended a focus on improving infrastructure, teacher training quality, and better integration of teacher education with school education to address these shortcomings. The Azim Premji Foundation (2010) outlined the "dysfunctional" state of DIETs nationwide, identifying issues such as poor infrastructure, high vacancy rates, and a lack of autonomy. The report called for urgent reforms to enhance the operational effectiveness of DIETs and restore their role as key academic institutions for teacher training and development.

Methodology

This study employed a survey method and a questionnaire tool for data collection to assess the availability, working conditions, and utilization of infrastructural facilities in DIETs of Karnataka. The data was collected from DIET faculty of Bangalore Rural, Bangalore Urban, Ramanagara, Mandya, Mysore, Chikkaballapura, Tumkur, and Madhugiri DIETs out of 30 DIETs of Karnataka. A self-administered questionnaire was distributed to 120 randomly selected DIET faculty and received 105 completely filled questionnaires. The collected data was further analyzed using SPSS v26.

Data Analysis

Demographic Details of Faculty Members

Measuring demographic details ensures representative sampling, allowing for valid generalization and enhancing the relevance and applicability of findings to diverse populations. Thus, demographic details of faculty were collected and tabulated in Table 1.

Table 1: Demographic Details of DIET Faculty Members

Type	Item	Responses	Percentage
Age	31-40 years	19	18.1
	41-50 years	36	34.3
	51-60 years	50	47.6
	Total	105	100.0
Gender	Male	57	54.3
	Female	48	45.7
	Total	105	100.0

Type	Item	Responses	Percentage
Designation	Lecturer	76	72.4
	Senior Lecturer	29	27.6
	Total	105	100.0

The details represented in Table 1 reveal that a significantly higher percentage (47.6 %) of faculty were aged between 51-60 years and 34.3% of faculty were aged between 41-50 years, while a least percentage (18.1%) belong to age group of 31 to 40. It is also found that a higher percentage (54.3%) of faculty members was male and 45.7% were female. Further, it is identified that a higher percentage (72.4%) of the faculty were working with lecturer designation and 27.6% were working with senior lecturer designation.

The above analysis indicates that most of the faculty members in DIETs were aged between 40 and 60 years. Alternatively, most of the aged DIET faculty showed interest in responding to the questionnaire. Further, analysis indicated that most faculty work with lecturer designation as DIET recruits faculty with professional qualifications of M.Ed and from time to time, the requirements for promoting them change, which many lectures might not been able to fulfil the requirement thus, lecturers were more prevalent among faculty alternatively many faculty members might be awaiting for their promotion. Further, the analysis indicates that almost the same ratio of males and females are working in DIETs, suggesting no gender bias in recruiting faculty members.

Infrastructural Facilities Available in DIET

Availability of Infrastructural Facilities

Infrastructure plays a pivotal role in providing training. Training associated with proper infrastructure enhances the quality of training. Thus, the data on infrastructure was gathered and presented in Table 2.

Table 2: Availability of Infrastructural Facilities

Infrastructural Facilities	Yes	Percentage	No	Percentage
Library	103	98.1	2	1.9
Computer lab	92	87.6	13	12.4
Administrative block	90	85.7	15	14.3
Modern technology display room	80	76.2	25	23.8
Physical science lab	69	65.7	36	34.3
Auditorium	67	63.8	38	36.2
Language Lab	55	52.4	50	47.6
Mathematics lab	50	47.6	55	52.4
Reading room	48	45.7	57	54.3
Psychology lab	48	45.7	57	54.3
Physical education room	46	43.8	59	56.2
Work experience room	44	41.9	61	58.1
Natural science lab	40	38.1	65	61.9
Social science lab	38	36.2	67	63.8
Sports and learner's room	34	32.4	71	67.6
Visual arts room	29	27.6	76	72.4
Performing arts room	25	23.8	80	76.2

Table 2 showcases that a library facility is available in the greater majority (98.1%) of the centers, computer lab facility is available in 87.6% of centers, and an administrative block facility is available in 85.7% of centers. Further, the modern educational display room is available in a higher percentage (76.2%) of the centers, a physical science lab is available in 65.7% of the centers, and an auditorium facility is available in 63.8% of the centers. Furthermore, facilities such as language lab, mathematics lab, reading room, psychology lab, physical education room, work experience room, natural science lab, and social science lab were available in the range of 52.4% to 36.2% of centers. The table also indicates that the sports and learner's room (32.4%), visual art room (27.4%) and performing arts room (23.8%) facilities are available in fewer centers.

The above analysis indicates that various infrastructural facilities like libraries, computer labs, and administrative blocks are widely available, as a high percentage of faculty members reported the availability. However, certain facilities like performing arts rooms and Virtual art room facilities are less common as a

higher percentage of faculty indicated their absence. This could be because less prominence is given to training teachers in performing and visual arts due to a lack of funding for this subject area. Alternatively, the infrastructure and training needs of performing arts and visual arts teachers are given less priority over core academic subjects. The analysis also indicates that the availability of the natural science lab, social science lab, and sports and learner's room is marginally less. This suggests that though there are many faculty members from social science backgrounds, less prominence is given to them in providing proper infrastructure for them.

Working Conditions of Infrastructural Facilities

Working conditions of infrastructural facilities are essential to understand the effectiveness of infrastructural facilities. Thus, data on the working conditions of infrastructural facilities was gathered and tabulated below.

Table 3: Working Conditions of Infrastructural Facilities

Infrastructural Facilities	Yes	Percentage	No	Percentage	N =
Library	92	89.3	11	10.7	103
Administrative block	76	82.6	16	17.4	92
Computer lab	69	76.7	21	23.3	90
Educational technology display room	53	66.3	27	33.8	80
Auditorium	46	66.7	23	33.3	69
Physical education room	36	53.7	31	46.3	67
Language Lab	32	58.2	23	41.8	55
Physical science lab	29	58.0	21	42.0	50
Mathematics lab	22	45.8	26	54.2	48
Reading room	21	43.8	27	56.3	48
Psychology lab	21	45.7	25	54.3	46
Work experience room	15	34.1	29	65.9	44
Natural science lab	15	37.5	25	62.5	40
Social science lab	13	34.2	25	65.8	38
Visual arts room	13	38.2	21	61.8	34
Sports and learner's room	8	27.6	21	72.4	29
Performing Arts room	5	20.0	20	80.0	25

The above Table 3 shows that the majority (89.3%) of faculty indicated that the library facility is in working condition, and 82.6% reported that the administrative block is in working condition. Further, a higher (76.7%) of faculty reported that the computer lab is in working condition, 66.3% reported that educational technology display room is in working condition, and 66.7% reported that the auditorium is in working condition. Furthermore, facilities such as language lab, physical science lab, mathematics lab, and reading room. psychology lab, psychology lab, work experience room, natural science lab, visual art room, social science lab, and sports and learner's room are available in the range of 53.7% to 34.1%. In contrast, a lesser percentage of faculty indicated that sports and learning room (27.6%) and performing art room (20.0%) facilities are in working condition.

Thus, it can inferred that certain facilities, such as a library, administrative block, and physical education room, are in working condition. However, certain facilities like sports and learner's rooms and performing arts rooms are not in working condition. This could be because of a lack of proper funds to maintain the facilities in the DIET centers. Alternatively, their condition may not impact the training programmes offered by DIET.

Utilization of Infrastructural Facilities

Utilization of infrastructure indicates the actual usage of infrastructure, which guarantees the influence of the facility in providing training programmes and increases effectiveness. Thus, the data on the utilization of infrastructure is gathered and tabulated in Table 4.

Table 4: Utilization of Infrastructural Facilities

Infrastructural Facilities	Yes	Percentage	No	Percentage	N =
Library	79	85.9	13	14.1	92
Administrative block	57	75.0	19	25.0	76
Computer lab	50	72.5	19	27.5	69
Educational technology display room	36	67.9	17	32.1	53
Auditorium	33	71.7	13	28.3	46
Physical science lab	22	61.1	14	38.9	36
Mathematics lab	16	50.0	16	50.0	32
Reading room	15	51.7	14	48.3	29
Language Lab	15	68.2	7	31.8	22
Physical education room	10	47.6	11	52.4	21
Psychology lab	8	38.1	13	61.9	21
Natural science lab	6	40.0	9	60.0	15
Social science lab	5	33.3	10	66.7	15
Visual arts room	4	30.8	9	69.2	13
Sports and learner's room	2	15.4	11	84.6	13
Work experience room	2	25.0	6	75.0	8
Performing Arts room	1	20.0	4	80.0	5

The analysis tabulated in Table 4 indicates that the majority (85.9%) of faculty had utilized library facilities. A higher percentage (75.0%) had utilized the administrative block, 72.5% of faculty had utilized the computer lab, 71.7% of faculty had utilized the auditorium, 68.2% had utilized language lab, 67.9% had utilized the educational technology display room, 51.7% had utilized reading room and 50.0% had utilized mathematics lab. Furthermore, facilities, such as physical education room, psychology lab, natural science lab, visual art room, social science lab, visual art room, and work experience room were utilized by the faculty in the range of 47.6% to 25.0%. In contrast, A lower percentage of faculty had utilized the sports and learner's room (15.4%) and performing arts room (20.0%).

This indicates a mixed picture of the utilization of different infrastructural facilities, while most of the faculty utilize certain facilities, such as the library and administrative block. However, certain facilities like sports and learner's rooms, work experience rooms, and performing art rooms are not utilized by faculty as these facilities were available in a few centers and are not in working condition in most of the centers.

Recommendations

Based on the findings of this study, the following recommendations are proposed to improve the use of infrastructural facilities in DIET institutions for professional development programmes:

- Regular maintenance schedules should be established for all infrastructural facilities, particularly laboratories and technology rooms, to ensure they remain functional and accessible to faculty and trainees.
- A dedicated staff should be assigned to manage and oversee the key facilities such as libraries, computer labs, and subject-specific labs.
- Faculty should be encouraged to integrate specialized facilities like laboratories, language labs, and technology rooms into their professional development programmes
- Conduct workshops and awareness programmes for faculty members to encourage the greater use of underutilized facilities, such as the mathematics lab, social science lab, and performing arts room.

Conclusion

The study highlights the critical role that infrastructural facilities play in the success of professional development programmes offered by DIET institutions. While most DIETs have a substantial number of facilities, such as libraries and computer labs, in working condition, their full utilization by faculty remains limited, particularly in subject-specific labs like mathematics, natural science, and social science. The findings reveal that although facilities like libraries and educational technology rooms are widely used, there are significant gaps in the use of laboratories and other specialized rooms, often due to inadequate resources, maintenance issues, or lack of access.

To optimize the potential of DIETs in offering professional development, it is essential to improve facility management, increase access to underutilized infrastructure, and ensure that modern technology and learning spaces are adequately maintained and accessible. Investments in infrastructure and strategic planning should

focus on enhancing the working conditions of these facilities and enabling faculty to leverage them more effectively in their training programmes. In doing so, DIET institutions can provide continuous professional development programmes for teachers and contribute to improve the overall quality of education.

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