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Promoting Technical Education in Rural Area: A Case Study of Polytechnic Awareness Programs in Khairagarh

ORIGINAL ARTICLE

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Abstract

Today every industry is calling for their employees to develop new skill & be multi-tasking due to the dynamic change in technology. Every state must prepare its Technical Education Institute to provide the updated required skills for the new industrial development. Generally technological ideas and industry-related practical skills. It is a crucial component that creates future quality employees. It serves as a link between industry and education. Furthermore the present research has demonstrated that has various advantages. Therefore, it is vitally important to measure Technical Education academics awareness and perceptions to ascertain the enrollment and how to direct rural students towards technical studies. In this study, a qualitative approach, such as an in-depth interview, survey is employed to discover the awareness of Polytechnic studies, opinion and preparation of the students.

Key Words

Technical Education, Khairagarh, Rural, Engineering, Student.

Introduction

Technical Education this sub system consists of a well-knit chain of polytechnics (A Diploma level education) which provide broad based education in engineering as well as some non-engineering areas. The minimum qualification for entry into a polytechnic is the grade Xth certificate. In practice most of the students enroll after passing XIIth (as lateral entry students). The courses are generally of three year duration but a few range between two and three years. There are nearly 37 Government polytechnics with the annual admission capacity of 13807. In addition, there are nearly 11 private polytechnics. The training is mostly institutional (with some industrial experience), the curricular are predominantly theory & lab oriented and mostly located in rural & urban. They aim to meet the manpower needs of the organized industrial sector. It promotes the social and economic growth of our state. Additionally, it teaches the student how to use the acquired abilities in their employment or self-employed. Technical Education is backed by a vast network of supportive institutions which include the All India Council of Technical Education.

Current Scenario of Polytechnic in Rural Areas

It is essential to have knowledgeable people adept at handling cutting-edge technologies if a state competes with other states on the global stage. A state's ability to use technology effectively improves its economic performance and enhances its standing as a developed state. Technical Education (Polytechnic) institutions aspires to foster the next generation of innovators by having 35% of the workforce hold a diploma or higher-level certificate in the relevant field. In order to embrace the Fourth Industrial Revolution (IR 4.0) and Artificial Intelligence (AI) while addressing unprecedented technological development, Technical Education functions as a coordinating organization to bring together multiple sectors into a unified system. The Polytechnic institutions aim to produce a total of 3.7 % students to meet the demands of the year 2024-25. In conjunction with this scenario, the Chhattisgarh Government aims to attract more students to enroll in Technical Education programs by allocating estimate of Budget 2025-26 3,17.13.22 (figures in thousand rupees). Technical Education is expanded significance and importance through the New Education Policy 2020 result is to be seen in recent years. Furthermore, the Ministries of Education, Higher Education, and Human Resources have frequently served as the public's faces for Technical Education related issues for many years. Yet, a dozen other ministries and up to 37 Government organisations have long had their own Technical education programmes that they run separately and to various standards (such as capacity planning, recruitment and training, and curriculum updating). The diverse nature of Polytechnic depends on variables of gender, study major, and job situations in relation to polytechnic academics and the types of industry/company in which they work. Therefore, the lack of information on these points in rural area leads to the following research paper.

Present Scope & Opportunities

- **Rising Demand for Skilled Technicians:** Chhattisgarh's booming industries energy, mining, infrastructure have a high need for diploma-holders. The state power plants, steel, aluminium, and mining operations benefit from technically trained workforce. govtpolybsp.ac.in
- **Automation & Local Entrepreneurship:** With increasing technology penetration, practical multi-tasking is crucial. Also, diploma holders are increasingly starting micro-enterprises and self-employment avenues.
- **Policy Support Continues:** Government initiatives like the Sub-Mission on Polytechnics and i-Hubs (e.g., NFSU and innovation hubs in Nava Raipur) show strategic push to scale technical education and innovation ecosystems. gpraipur.ac.in
- **Women's Participation:** Establishment of girls-only polytechnics (like Govt. Girls' Polytechnic Bilaspur) is boosting female technical education and regional gender equity. cgbilaspur.ac.in

Advantages

- **Affordable Education:** As state-funded institutions, diplomas are considerably cheaper than private colleges ideal for low and middle-income students. University Dunia
- **Strong Government Support:** The state aims to establish polytechnics in all 33 districts. Recently added campuses (e.g., Surajpur, Gariyaband, Bemetara, Kondagaon) help improve access. polygariyaband.ac.in
- **AICTE and University Accreditation:** Most polytechnics are affiliated with Chhattisgarh Swami Vivekanand Technical University and approved by the All India Council for Technical Education (AICTE), ensuring recognized curricula. polynarayanpur.ac.in
- **Local industry Alignment:** Programs in Civil, Electrical, Mechanical, Mining (e.g., Gariyaband, Surajpur) match key regional sectors like coal, construction, metallurgy, and power. polygariyaband.ac.in
- **Infrastructure & Facilities:** Newer colleges boast smart classrooms, well-equipped labs, hostels, computer centres, libraries, and sports amenities (e.g., Govt. Co Ed Raipur).The Times of India.
- **Placement Potential:** Diploma holders serve as skilled mid-level technicians, in demand in power, mining, infrastructure, and Government jobs especially with CG's industrial growth.

Methodology

This paper has reviewed some previous studies (2013 to 2025). The factors that affect Technical education attractiveness are listed:

i. Students awareness;
ii. Students and parents perceptions;
iii. Academicians (instructors) and institution.

This study used a qualitative research approach to explore the factors among Technical education (Polytechnic) students (secondary/higher secondary) regarding awareness, perception, and preparedness. Sample was selected from various schools in Khairagarh Districts. Data was collected through semi-structured interviews, one day awareness workshop and literature review. Note that the interview protocol consisted of three sections. Part A on Technical education (Polytechnic) awareness with five open-ended questions. Part B on Polytechnic perception contains five open-ended questions, and finally, Part C is about preparedness with five open questions. This question serves as a guideline for the researcher. The data was analyzed using thematic analysis + descriptive statistics according to the study's variables.

Student Awareness

The main factor that motivated students to pursue Technical education (Polytechnic) was pass-out student motivating their own friends & relatives getting Placements. Students were more likely to enroll in Polytechnic course at Khairagarh to obtain the placement just after completing their last semester exam, embraced skills when they had a strong interest in working in a job connected to their field of interest & study. The decision made by the students to enrol in a Polytechnic programme may be influenced by their awareness of Polytechnic courser offered in Government Polytechnics Khairagarh with basic facilities available in the institute. Hence, the decision to enroll in such a programme is the portrayal of Polytechnic. Decisions to pursue (Polytechnic) is also directly indirectly related to the instructors of Government Polytechnics Khairagarh. Some students exhibit their sensitivity and imagination in novel and imaginative ways. Unfortunately some students are not able to complete the course due to financial problems, lack of interest/English language, diverted to other subjects after first year. Girls ratio shows drop-out due to family problems these are some major reason for less enrollments in the rural areas.

Data Analysis

Quantitative data analyzed using statistical tools such as descriptive analysis, table and chart summary with percentage related to Total No of Students attended the workshop.

Table1: Government Polytechnics Khairagarh Technical Education Workshop Status

S. No.	Year	No of School visited in Khairagarh block	Total No of students attended the workshop	No of Students enrolled/admitted
1	2023	24	1138	220
2	2024	28	2825	120
3	2025	26	1990	198

*(**Source:** Academic Section Govt. Polytechnic, Khairagarh)*

Table2: Result of the Data Collected

S. No.	Particulars	Collected Data
1	Age distribution	15-16 Years
2	Gender	55% girls 45% boys
3	Awareness before workshop	20%
4	Lack of awareness about diploma courses	80%
5	Confusion between diploma & degree	80%
6	Interest in Polytechnic after workshop	65%

*(**Source:** Academic Section Govt. Polytechnic, Khairagarh)*

Observation

This percentage indicates the distribution of respondents by gender wise in survey. It shows that a majority (55%) of the survey participants are girls, while the remaining 45% are boys.Lack of awareness about diploma courses was 80% .Interest in Polytechnic after workshop was 65% including girls.

Conclusion

This paper has viewed career guidance and occupational awareness with regard to addressing the issues of low enrollment in technical education programmes in Khairagarh district. It x-rayed issues of low enrolment in technical education programmes Khairagarh and factors responsible for this menace. The need for career guidance and occupational awareness in schools was addressed and strategies for fostering students' enrolment in technical education programmes through career guidance and occupational awareness workshop. It is suggested in this paper that-Occupational awareness should be created to students through orientations, career talk/week, seminars, role playing and media at the basic education and senior secondary school levels. Parents and all stakeholders should permit their children and wards to take decisions on their own based on their interest and aptitude what course or programme to study.

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