SKILL MISMATCH AMONG YOUTH IN URBAN ERNAKULAM

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Niranjana Suresh	**AB23ECO032**
Naveena Dhinker	**AB23ECO012**
Philomina Josna A J	**AB23ECO036**
Ameena K K	**AB23ECO016**
Nancy Koshy Alex Joseph	**AB23ECO030**

Evaluated 9/2/26

UNDER THE GUIDANCE OF

Prof.(Dr.) THUSHARA GEORGE
DEPARTMENT OF ECONOMICS,
ST TERESA'S COLLEGE, ERNAKULAM.

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CERTIFICATE

This is to certify that the project titled **"Skill Mismatch Among Youth In Urban Ernakulam"** submitted in partial fulfilment of the requirement for the award of the degree of Bachelors of Arts in Economics to St. Teresa's College (Autonomous) (Affiliated to Mahatma Gandhi University, Kottayam) is a Bonafide record of the work done by the project group under my supervision and guidance.

Head of the Department

Dr. Anupa Jacob

Guide and Supervisor

Prof.(Dr.) Thushara George

DEPARTMENT OF ECONOMICS
ERNAKULAM
Pin - 682 011
ST. TERESA'S COLLEGE

Name and Signature of External Examiner: Dr. Linda George

DECLARATION

We hereby declare that the project title submitted by us for the Bachelor of Arts Degree in Economics is our original work.

Signature of the supervisor

Prof.(Dr.) Thushara George

Signature of the Candidates

Niranjana Suresh

Naveena Dhinker

Philomina Josna A J

Ameena K K

Nancy Koshy Alex Joseph

DEPARTMENT OF ECONOMICS
ERNAKULAM
Pin - 682 011
ST. TERESA'S COLLEGE

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Niranjana Suresh
Naveena Dhinker
Philomina Josna A J
Ameena K K
Nancy Koshy Alex Joseph

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CHAPTER - 1

INTRODUCTION

1.1 INTRODUCTION

Skill mismatch has become a matter of concern across developed as well as developing countries in recent years. Although more young people are educated today, many employers report the absence of the required skills among candidates for available positions. This gap between the skills provided by the educational system and those demanded by the labour market is commonly referred to as skill mismatch.

In India, the problem of skill mismatch is particularly visible among urban youth. This is due to technological innovations, especially within the IT services domain, leading to emerging trends in work patterns and skill sets needed in the industry. But there has not been proper alignment with these trends within the education domain, creating hurdles for young people, as well as for companies looking for people with the required skill sets in the industry.

Urban areas like Ernakulam district in Kerala provide a suitable setting for analysing the problem of skill mismatch. Ernakulam is known to be a prominent commercial and technological hub, home to many IT companies, start-ups, and service-based firms. Despite having an educated young population and several educational institutions, employers report a mismatch in technical skills, practical exposure, and soft skills among youth.

The information technology (IT) industry, in particular, requires a combination of technical knowledge, problem-solving ability, communication skills, and adaptability. However, many youth entering the job market possess skills and knowledge that are not well aligned with these requirements. This misalignment results in the underutilisation of skills, additional training costs for employers and lower levels of productivity.

In response to this challenge, various vocational training programmes and government initiatives such as the National Skill Development Corporation (NSDC), Pradhan Mantri Kaushal Vikas Yojana (PMKVY), and ASAP Kerala have been launched to improve the employability of youth. These initiatives attempt to create a link between education and employability by offering skills and training suited to the industry. However, the effectiveness of these programmes in addressing skill mismatches at the local level remains uncertain.

Against this background, the present study aims to assess the extent of skill mismatch among urban youth in Ernakulam district from the perspective of employers, particularly in the IT sector. The study further attempts to analyse the role of vocational training and government

initiatives in reducing skill mismatch and enhancing employability among youth. By focusing on employer perceptions, the study aims to provide insights that may help align education and training systems with labour market needs.

1.2 REVIEW OF LITERATURE

Oommen and Manimekalai (2025) conducted a comprehensive study at Infopark, Kochi, to analyse skill discrepancies among IT professionals and their impact on organisational performance. The study, based on a survey of HR managers from IT companies, found that while technical skills are essential, there exist significant skill gaps in communication, creative thinking, and problem-solving. The findings indicate that skill gaps negatively affected organisational performance, including increased workload and difficulties in implementing new working practices. Furthermore, the study highlighted that the majority of the firms rely on internal training programs, implying that the formal education system does not adequately meet the needs of industry. This study emphasises the need for continuous skill assessment and specific training initiatives to address the gaps in the Kochi IT industry to maintain global competitiveness.

Oommen, Manimekalai, Roy, and Nithya (2025) examine the IT professionals in Kerala and their ability to adapt to Industry 4.0 technology adoption. The survey conducted among 410 IT professionals shows moderate awareness of Industry 4.0 notions, coupled with skill gaps, particularly among mid-career workers. The study finds that current curricula and training activities do not keep pace with the industry's changing demands. Work experience, higher education credentials, and continuous upskilling lead to favorable outcomes; in contrast, lack of support from institutions and exposure to cutting-edge tools makes professionals inflexible to adaptability. The study emphasizes the importance of industry, academia, and government collaboration to update curricula and advocate continuous learning.

Prabhu (2022) examined the issue of educated unemployment among youth in Kerala despite the state’s high levels of educational attainment. The findings indicate that many young people are unable to find jobs that match their education and training because of misalignment between academic curriculums and industry needs, the low number of employment opportunities available, and the large number of graduates entering the job market. The study also highlighted

consequences such as underemployment, delayed workforce entry, and migration of skilled youth to other regions.

Lakshmi (2025) offers empirical insights regarding the existence of underemployment among engineering pass-outs in Kerala. This study shows that individual factors such as personal demographics, performance, and background play minimal roles in determining employability. This study identifies that it is not individual factors but structural factors like mismatch between skills, lack of practical training, outdated syllabuses, and weak connections between industry and academia, that determine individual employability. An important aspect of this study is that it demonstrates the crucial significance of practical learning and skill-based training to enhance employability.

Arun (2017), in a study conducted for the Kerala Institute of Labour and Employment (KILE), introduced the concept of an Employability Wall. The study found that 90% of Kerala's educated youth lack the core competencies, particularly in communication skills and analytical reasoning. Despite high literacy levels, growing industries in Ernakulam such as logistics and tourism face difficulties in recruiting suitably skilled youth. The study highlights the need for growth incentives and a technology-driven education system to improve employability and reduce skill mismatch in Kerala.

Gooptu, Bros, and Roy Chowdhury (2023) examined the regional variations in skill mismatch in India, with a specific focus on overeducation across different states. The study employs Periodic Labour Force Survey (PLFS) data to show that states like Kerala exhibit high rates of overeducation, indicating a significant gap between formal qualifications and industry requirements. The study discusses the fact that though the willingness to pursue vocational training is on the rise in Kerala, the percentage of trained persons is low, and the quality of such programs is often insufficient to meet industrial demands. A key takeaway from this study is the "bumping down" effect, where highly educated individuals are forced into low-skill jobs, displacing less-educated workers and leading to economic inefficiency.

Bhal and Sharma (2023) analyse the association between informality in the Indian labour market and skill mismatch through education-occupation mismatch. The study finds a large effect of skill mismatch, especially in the formal sector wages, where overeducated workers face significant wage penalties. In the unorganised sector, skill mismatch plays a relatively lesser role in wage determination than informality. Findings reveal that heterogeneous labour markets in developing countries experience skill mismatch in varied ways.

Unni(2016) analyses India's higher education system in terms of skill delivery in relation to labour market needs. The study argues that despite the increasing number of individuals enrolling in higher education, a large proportion of graduates remain unemployable**.** The author highlights the increasing mismatch between the skills imparted by the higher education institutions and the demands of employers, causing both unemployment and underemployment. Even when there are job vacancies, employers report that many candidates are not job-ready. Furthermore, the study identifies several structural issues within higher education institutions in India, including outdated curricula, neglect of vocational and soft skills, and quality disparities between institutions.

Majumder and Mukherjee (2025) carried out a panel data analysis to examine the problem of skill mismatch in the Indian labour market and found substantial allocative inefficiency, which ultimately leads to a 25% loss in labour productivity. They highlighted a U-shaped relationship, where mismatch is highest among both very low-skilled and highly educated workers, with under-skilled workers facing greater disadvantages in terms of efficiency and job performance.

Sharma, Sharma, and Sharma (2025) analysed skill mismatch in the informal economy and found that a large number of workers are employed in jobs that do not correspond to their education or skill levels. The study identifies overqualification, employment in the wrong field of work, skill gaps, and outdated skills as major forms of mismatch. It further emphasises the need to align education and skill training programmes with labour market requirements.

Manjunath, Shravan, and Dechakka (2019) examine front-line worker performance and skill gaps in the design sector. The study emphasizes the need for focused skill development initiatives by using survey data to demonstrate that interpersonal, communication, problem-solving, and decision-making skills have a major impact on performance while technical skills have a minimal impact due to the automation of much operational work.

Thota (2014) investigates how, in the context of shifting organizational environments, management practices and technology can help in bringing skill gaps among employees. The study contends that disparities in skill levels have an impact on employment, productivity, and income inequality. The study emphasizes the alignment of technology, learning systems, and human resource practices with future competency requirements to enhance organizational competitiveness and workforce adaptability in dynamic global economies.

Pellizzari and Fichen (2017) developed a strong theoretical model to measure skill mismatch using data from the OECD's Programme for the International Assessment of Adult Competencies (PIAAC). The study distinguishes between qualification mismatch and skill mismatch, arguing that formal educational qualifications often act as an imprecise signal of a worker's actual competencies. Based on the skill distribution of self-reported well-matched workers within specific occupations, a method was developed to identify the over-skilled, under-skilled, and well-matched workers. The findings reveal that approximately 75 percent of employees are considered well-matched, while a considerable proportion of over-qualified workers possess lower skill levels than their matched peers, indicating that their education levels do not correspond with their true technical ability.

Desjardins and Rubenson (2011) provide a notable study on skill mismatch by using direct skill measures rather than proxies like educational attainment or occupation, which tend to obscure the actual pattern of mismatch in the labor market. Their analysis shows that mismatch is multidimensional—including overuse, underuse, and skill deficits—and varies across countries, institutions, and occupations. The study highlights that mismatch occurs not just because of individual problems but also because it is heavily influenced by work organization, job design, and national skill formation patterns**.**

Dibeh, Fakih, and Marrouch (2019) examine skill mismatch and youth employment in Lebanon. Using a bivariate probit model, the authors demonstrate how employability and perceptions of skill mismatch are influenced by factors such as education, gender, training, and family support. The study emphasizes the need to align education systems with labor market demands in the MENA region and draws attention to the poor connections between education and employment.

1.3 RESEARCH PROBLEM

Despite the increasing number of educated youth in urban areas, employers continue to report difficulties in finding candidates with skills relevant to the industry requirements. In districts like Ernakulam, which has emerged as a major IT and service-sector hub, this problem becomes more significant due to rapid technological changes and evolving job roles.

Although various vocational training programmes and government initiatives have been introduced to reduce skill gaps and improve youth employability, their effectiveness at the local level remains uncertain. There is limited empirical evidence, particularly from the perspective

of employers, on the extent of skill mismatch among urban youth and the role played by such training programmes in bridging this gap.

The present study seeks to examine the extent of skill mismatch among urban youth in Ernakulam district and to analyse the effectiveness of vocational training and government initiatives in reducing this mismatch and thereby enhancing employability in the IT sector.

1.4 OBJECTIVES

1. To analyse the extent of skill mismatch among urban youth in Ernakulam district.
2. To evaluate the role of vocational training and government initiatives in addressing skill mismatch.

1.5 METHODOLOGY

Research methodology refers to the techniques used for identifying and analyzing information related to a research topic. The structure or methodology of a research study, known as the research design, guides the process of data collection, analysis, and interpretation. The present study adopts a descriptive and analytical research design to examine the extent of skill mismatch among urban youth in Ernakulam district and to analyse the role of vocational training and government initiatives in addressing this mismatch, particularly from the perspective of employers in the IT sector.

1.5.1 SOURCES OF DATA

For the purpose of this study, both primary and secondary data were used.

Primary data: A structured survey questionnaire was used to collect primary data from HR Managers, Technical Leads, recruiters and employers working in IT companies located in urban areas of Ernakulam district. The questionnaire was designed to assess employer perceptions regarding skill availability, skill mismatch, recruitment challenges, and the relevance of vocational training programmes.

Secondary data: Secondary data were collected from published sources such as academic journals, books, research reports, government publications, and official publications from NASSCOM, ASAP Kerala, and the Kerala State Economic Review.

1.5.2 POPULATION

The population of the study comprised IT recruiters, HR professionals and employers working in IT firms located in urban areas of Ernakulam district, including firms operating in IT parks, start-ups, and service-based IT organisations.

1.5.3 SAMPLE DESIGN

Sample design involved selecting a subset of the population to ensure that the findings were representative and reliable.

1.5.3.1 SAMPLE SIZE

A sample size of 20 recruitment professionals was selected for this study. Given the specialised nature of the IT industry and the limited availability of HR professionals, this sample size was considered adequate to provide employer perspective on the prevailing skill gaps in Urban Ernakulam.

1.5.3.2 SAMPLING METHOD

The study uses a random sampling method, to ensure an unbiased selection of respondents. From the identified population of IT professionals and HR managers in Urban Ernakulam, respondents were selected at random to participate in the survey.

1.5.4 METHOD OF DATA COLLECTION

Data collection methods play a vital role in ensuring the accuracy and reliability of the study.

Primary Data Collection:A structured survey questionnaire was circulated online and offline to IT recruiters, HR professionals and employers working in IT firms to capture their evaluation of candidates' skills and employability.

Secondary Data Collection: Secondary data were collected from published sources such as academic journals, books, research reports, government publications, and official publications from NASSCOM, ASAP Kerala, and the Kerala State Economic Review.

1.6 THEORETICAL FRAMEWORK

1.6.1 Human Capital Theory

Human Capital Theory, developed by Gary Becker (1964), explains that education, training, and skills enhance the productivity and efficiency of individuals. Thus, people who invest in education and skill development have higher chances of being employable and earning better returns in the labour market. Human Capital Theory is relevant to the present study as it explains the importance of developing appropriate skills among urban youth in Ernakulam. Despite having formal educational qualifications, many graduates lack skills required by the IT industry. This results in a situation where available human capital is not fully utilised, leading to skill mismatch. Vocational training and government skill development initiatives can be seen as investments in human capital aimed at enhancing employability and reducing skill gaps.

1.6.2 Skill Mismatch Theory

Skill Mismatch Theory explains a situation where skills available in the human resources of an economy fail to match the skills required by the employers in the labour market. According to McGuinness (2006) and OECD reports, skill mismatch can be characterised by several forms, including skill shortages, skill surpluses, and qualitative mismatches, where the type of skills acquired by workers do not correspond to job requirements. In the context of this study, Skill Mismatch Theory assists in understanding the problems faced by youth in the IT industry of Ernakulam. Although many youth possess education, they often lack industry-relevant

technical skills, practical exposure, and soft skills demanded by the employers. This mismatch between acquired skills and job requirements emphasises the need for improved vocational training and stronger alignment between the educational system and industry needs.

1.6.3 Signaling Theory

Signaling Theory, proposed by Michael Spence (1973), explains how education and qualifications act as signals to the employers regarding the capability and productivity of job seekers. When hiring, employers usually rely on educational degrees, certificates, and training credentials as indicators of candidates' skills since actual ability cannot be directly observed at the time of recruitment. According to this theory, issues arise when these signals do not accurately reflect individuals' true skills, resulting in skill mismatch where applicants possess formal qualifications but lack practical and technical skills needed by the employer. In the context of the present study, Signaling Theory helps in understanding employer perspectives of skills and expectations within the IT industry of Ernakulam. Many urban youth possess degrees and credentials that signal their ability to be employed, but employers report deficiencies in job-ready skills and practical experience. Such ineffective signals from education lead to recruitment challenges and higher training costs for employers.

1.6.4 Job Matching Theory

Job Matching Theory, primarily developed by Dale Mortensen, Christopher Pissarides, and Peter Diamond (1994), focuses on the efficiency with which workers and firms find suitable matches in the labour market. This theory brings out that productivity depends on the quality of fit between job-specific requirements and a candidate's skills and attributes. This theory has relevance within the IT industry in Ernakulam, as it explains the challenges that prevent successful hiring. Even when job vacancies exist in parallel with an educated young population, suitable matches may not occur due to information asymmetry, where employers are unable to accurately assess candidates' practical technical abilities, and job seekers are unaware of the specific skills and technologies currently demanded by firms.

1.6.6 Skill-Biased Technological Change (SBTC) Theory

Skill-Biased Technological Change Theory, popularised by economists such as Zvi Griliches (1969) and later Daron Acemoglu, explains that technological advancements do not benefit all workers equally. New technology increases the demand for workers with higher and specialised

skills, while reducing the demand for workers who possess only routine or basic skills. Within the IT sector, changes in programming languages, software platforms, and digital technologies are frequent and require continuous upgrading of skills. Educational and training systems often lag behind these rapid technological changes, resulting in graduates entering the labour market with skills that are no longer fully relevant.

1.7 LIMITATIONS OF THE STUDY

- The time available for the study was limited.
- The study is focused specifically on the urban IT sector of Ernakulam and may not be generalizable to IT sectors in other regions or rural areas.
- The sample size is restricted to 20 respondents. Hence, the findings may not reflect the views of all employers in the district.
- Controlled entry to IT parks and limited response from recruiters posed challenges in data collection, which may have affected the depth of analysis.
- The analysis is based on employer perceptions, which may be subjective and influenced by individual experiences, organisational policies, or expectations.
- Limited access to secondary data at the district level on skill mismatch posed challenges in supporting the analysis with extensive secondary evidence.

CHAPTER - 2

BACKGROUND AND CONTEXT OF THE STUDY

2.1 INTRODUCTION

This chapter gives an overview of the structural and geographical context of the study. It discusses the growth of the Information Technology (IT) sector from a national perspective to its localized development within the state of Kerala. By presenting the socio-economic profile of Ernakulam district and the IT environment in Kochi, the chapter establishes the setting in which urban youth face various dimensions of skill mismatch. It also highlights the institutional efforts aimed at bridging the gap between academic output and industry requirements.

2.2 OVERVIEW OF THE IT SECTOR: NATIONAL AND STATE SCENARIO

The Information Technology (IT) and Business Process Management (BPM) sector has been the primary engine of India's modern economic growth. For the urban youth, this sector represents the most significant source of formal employment and upward social mobility.

2.2.1 The Indian IT-BPM Industry

India has become a Global Sourcing Hub over the past three decades, managing more than half of the global service sourcing market. The sector has grown from providing basic back-office support in the 1990s to delivering high-end digital transformation services today, including Generative AI, Cloud Computing, and Cybersecurity.

For the purpose of this study, the national scenario is critical due to:

- Economic Impact: The IT sector now contributes nearly 10 percent to India's GDP. This makes it a vital pillar of national stability.
- Workforce Scale: The industry currently offers direct employment to more than 5.8 million professionals. As companies begin to adopt the Digital-First strategy, the requirement for skilled talent continues to exceed the number of general graduates.
- The Employability Challenge: Despite high graduation rates, the India Skills Report 2026 indicates that although overall employability is rising, there is still a large gap in

terms of job-ready skills. This structural mismatch where the degree offered by educational institutions does not fully align with industry needs is the core problem explored in this research.

2.2.2 IT Development in Kerala

Kerala's shift toward an IT-driven economy is a result of its high literacy levels and educated workforce. The state has moved away from traditional manufacturing to adopt a Knowledge Economy model.

- Infrastructure Model: Kerala's IT infrastructure is spread across three major hubs: Technopark in the south, Infopark in the center and Cyberpark in the north. These hubs are connected by a state-wide IT corridor which helps facilitate the flow of talent and investment throughout the state.
- Knowledge Economy Mission (KKEM): This major initiative from the state government aims to facilitate gainful employment opportunities to 20 lakh individuals by 2026. By focusing on skill-mapping and digital internships, the mission seeks to fill the gap between higher education and the real needs of global tech companies.
- Strategic Shift: The state government has emphasized the IT sector not just for revenue, but also as a means to overcome the problem of brain drain, ensuring that Kerala's educated youth find world-class opportunities within their home state.

2.3 PROFILE OF THE STUDY AREA; ERNAKULAM DISTRICT

Ernakulam District, often referred to as the commercial capital of Kerala, constitutes the primary area of investigation for the present study. The district occupies a central position in the state's economic structure due to its concentration of trade, services, and information technology activities. Its combination of high educational attainment, advanced infrastructure, and rapid urbanisation makes Ernakulam an appropriate and representative region for analysing the problem of skill mismatch among urban youth, particularly in the IT sector.

2.3.1 Demographic and Economic Profile of Ernakulam

Ernakulam is one of the most urbanised and economically developed districts in Kerala. Kochi city and the surrounding municipal areas form a dense urban agglomeration that functions as a major centre for employment and economic activity. The district's strategic location and connectivity through road, rail, air, and sea, supported by Cochin International Airport and Cochin Port, have strengthened its role as a commercial and service hub.

Demographically, Ernakulam records a high literacy rate and a substantial proportion of the working-age and youth population. The district is home to a large number of educational institutions, including universities, engineering colleges, management institutes, and professional training centres. As a result, a steady stream of educated youth enters the labour market each year, particularly seeking employment in the IT and service sectors.

Ernakulam also experiences significant migration flows. It attracts graduates and job-seekers from across all districts of Kerala due to the availability of entry-level positions in IT, IT-enabled services, and allied sectors. At the same time, a section of skilled local youth migrates to other Indian cities or abroad in search of better career prospects. This dual migration pattern intensifies competition in the local labour market and makes issues of unemployment, underemployment, and skill mismatch more visible.

Economically, the district has a diversified structure dominated by the service sector. Key activities include information technology, tourism, banking and finance, healthcare, education, logistics, and retail trade. Trade and commerce are further strengthened by the presence of Cochin Port, which supports shipping, import-export activities, and related services. In addition, small- and medium-scale industries and a growing startup ecosystem contribute to employment generation and economic dynamism.

Despite these strengths, Ernakulam faces challenges in translating educational achievements into suitable employment outcomes. While the supply of educated labour is high, the alignment between qualifications and industry requirements remains imperfect, giving rise to various forms of skill mismatch among urban youth.

2.3.2 IT Ecosystem in Ernakulam

The IT ecosystem in Ernakulam is primarily concentrated in the Kakkanad region, which has evolved from a suburban locality into a major technology hub. The two main pillars of this ecosystem are Infopark Kochi and SmartCity Kochi, both of which play a significant role in shaping urban employment patterns in the district.

Infopark Kochi, established in 2004, is one of the largest IT parks in Kerala. It hosts more than 580 companies, including multinational corporations, Indian IT firms, and technology startups. The park provides employment to over 70,000 professionals and supports activities such as software development, IT services, business process management, data analytics, and digital solutions. The nature of employment in Infopark is largely knowledge-intensive, requiring technical proficiency, problem-solving ability, and adaptability to rapidly changing technologies.

SmartCity Kochi complements Infopark by offering integrated infrastructure for knowledge-based industries. It accommodates IT services companies, shared service centres, research and development units, and innovation-driven enterprises. The range of job roles available includes software engineers, data analysts, system administrators, business analysts, technical consultants, and customer support professionals, many of which demand specialised skills and effective communication abilities.

Although the IT ecosystem in Ernakulam has expanded rapidly and created substantial employment opportunities, employers frequently report difficulty in recruiting industry-ready candidates. Many graduates possess formal academic degrees but lack practical exposure, hands-on technical skills, and soft skills required in the workplace. The diversity of job roles, ranging from high-end software development to IT-enabled services, further highlights the gap between general educational qualifications and specialised industry requirements.

In sum, Ernakulam District combines strong demographic potential, economic diversity, and a rapidly growing IT ecosystem. At the same time, persistent skill mismatch among educated urban youth limits the effective utilisation of these opportunities. This makes Ernakulam an ideal study area for examining the extent, nature, and causes of skill mismatch and for assessing the role of skill development initiatives in improving youth employability.

2.4 DIMENSIONS OF SKILL MISMATCH IN THE IT SECTOR

The IT industry faces a growing challenge of skill mismatch, where employees' qualifications and abilities do not align with job requirements. Rapid technological changes-automation, AI, cloud computing, and digital transformation-create constant demand for new skills. However, educational and training systems often lag behind, leaving many graduates with credentials that do not fully match industry needs. Skill mismatch can result in underutilization of talent, low productivity, job dissatisfaction, and high employee turnover.

Skill mismatch is categorized into three main dimensions: vertical mismatch , horizontal mismatch, and qualitative mismatch. Understanding these dimensions is crucial for designing effective training programs, policy interventions, and career development strategies in the IT sector.

2.4.1 Vertical Skill Mismatch

Vertical mismatch occurs when an employee's education level is higher or lower than the job requirements, most commonly in the form of over-education. In India, the rapid growth of IT-related graduates often exceeds the number of high-skill positions, leading many graduates to take routine or entry-level IT jobs. For instance, computer science graduates may work in customer support or data entry roles that underutilize their knowledge.

The consequences include decreased job satisfaction, lower productivity, wage inefficiencies, and higher turnover. Contributing factors include outdated curricula that focus on theory rather than practical IT skills and limited collaboration between academia and industry. Addressing vertical mismatch requires curriculum updates, structured internships, and targeted skill development programs to better align graduates' education with industry needs.

2.4.2 Horizontal Skill Mismatch

Horizontal mismatch arises when an employee works in a job unrelated to their field of study. In IT, graduates from non-IT backgrounds may enter software testing, digital marketing, or

technical support roles. This often occurs due to limited opportunities in their original fields or the higher appeal of IT jobs.

While horizontal mismatch can increase employment flexibility, it may reduce productivity and slow career advancement in specialized IT roles. Effective solutions include interdisciplinary programs, career counseling, internships, and stronger partnerships between educational institutions and industry to ensure employees are better prepared for IT-specific roles.

2.4.3 Qualitative Skill Mismatch

Qualitative mismatch occurs when employees have formal qualifications but lack the specific skills needed for their job. In IT, this may include gaps in programming, cloud computing, AI, cybersecurity, or soft skills such as communication, teamwork, and problem-solving.

Outdated curricula, lack of hands-on training, and limited exposure to real-world IT environments worsen these skill gaps. The effects include, low performance, higher training costs, and reduced organizational efficiency.

Addressing qualitative mismatch requires reskilling, certification programs, vocational training, and continuous professional development. Initiatives like Skill India and PMKVY aim to bridge these gaps but must align closely with industry requirements to be effective. Bridging qualitative skill gaps is essential for maximizing the potential of young professionals in India's IT sector.

2.5 SKILL DEVELOPMENT AND GOVERNMENT INITIATIVES

The rapid growth of the IT sector and other emerging industries in India has highlighted the importance of skill development for youth employment. Various national and state-level initiatives have been launched to equip young professionals with industry-relevant skills, bridge the skill gap, and enhance employability.

2.5.1 National Skill Development Initiatives

At the national level, the Government of India has launched several programs to address skill gaps and enhance employability among youth. These initiatives aim to equip individuals with industry-relevant skills, promote vocational training, and create a workforce ready to meet the demands of a rapidly evolving economy. Some of the key programs include Skill India Mission, National Skill Development Corporation (NSDC), and Pradhan Mantri Kaushal Vikas Yojana (PMKVY), among others.

Skill India Mission: Launched in 2015, the Skill India Mission aims to train over 40 crore people across different sectors by 2022. It focuses on promoting skill development, entrepreneurship, and vocational training to improve employability among youth.

National Skill Development Corporation (NSDC): Established as a public-private partnership, NSDC supports skill development by funding training programs, creating industry-relevant curricula, and fostering collaboration between private and government training providers.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY): This flagship scheme provides short-term skill training and certification to youth, aligning training with industry standards. PMKVY encourages participation through financial incentives and supports placement in various sectors, including IT, retail, and manufacturing.

2.5.2 Skill Development Initiatives in Kerala

Kerala has implemented several skill development programs to enhance employability among its youth, with a focus on aligning education with industry needs.
Additional Skill Acquisition Programme (ASAP): ASAP is a state-led initiative that provides vocational training to higher secondary students and unemployed youth. It emphasizes hands-on skill development, industry collaboration, and placement support, particularly in sectors like IT, healthcare, and tourism.

Kerala Knowledge Economy Mission (KKEM): KKEM aims to transform Kerala into a knowledge-driven economy by promoting IT, digital literacy, and innovation-based

entrepreneurship. It offers training, incubation support, and skill development programs tailored to the state's emerging technology needs.

Other initiatives include Kerala Development and Innovation Strategic Council (K-DISC), ICT Academy of Kerala, Industrial Training Institutes (ITIs) and Polytechnic-linked training. While these programs may vary in scale, they collectively contribute to enhancing technical and soft skills among Kerala's youth, with ASAP and KKEM serving as the primary drivers.

2.6 CONCLUSION

In summary, this chapter shows that despite Ernakulam's well-developed IT ecosystem centred around Infopark and SmartCity, a significant gap persists between academic qualifications and industry requirements. The existence of vertical, horizontal, and qualitative skill mismatches indicates that a degree alone does not ensure job readiness, reflecting the relevance of Human Capital and Signaling theories.

Although initiatives such as ASAP Kerala and the Kerala Knowledge Economy Mission (KKEM) seek to bridge these gaps, their effectiveness depends on alignment with employer expectations. This chapter thus provides the contextual base for the primary data analysis in the following chapter.

CHAPTER - 3

DATA ANALYSIS AND INTERPRETATION OF SKILL MISMATCH AMONG YOUTH IN URBAN ERNAKULAM

This chapter deals with the analysis and interpretation of primary data collected for the study on skill mismatch among youth in the IT sector of Ernakulam district. The data were collected from HR Managers, recruiters and employers working in IT companies through a structured questionnaire to understand recruitment patterns, skill expectations, extent of mismatch, and the role of vocational and government training programmes in improving youth employability.

For a comprehensive understanding, the analysis is categorized into four key dimensions:

- 3.1 Organizational Profile
- 3.2 Recruitment Patterns
- 3.3 Dimensions of Skill Mismatch
- 3.4 Institutional Interventions

3.1 ORGANIZATIONAL PROFILE

This section presents an overview of the IT companies included in the study. Identifying the type and ownership of these organizations, helps to understand the context in which skill mismatch occurs in Ernakulam's IT sector.

3.1.1 Classification of Organizations by Type

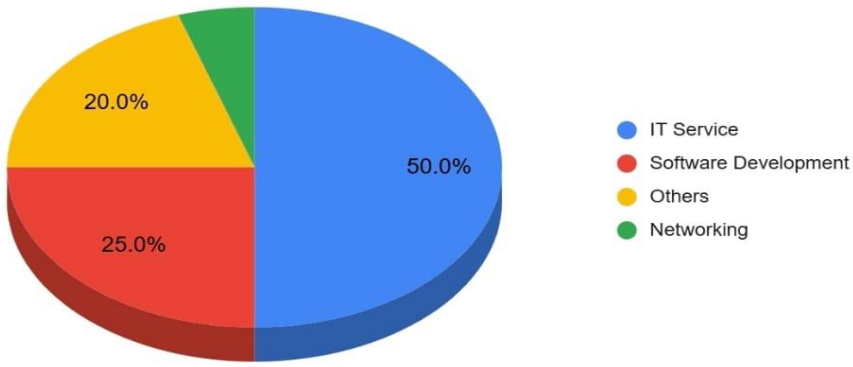


Fig 3.1.1 Classification of Organizations by Type Source : Primary Data

Fig. 3.1.1 represents the primary business activities of the surveyed firms. It is observed that 50 per cent of the respondents are engaged in IT services. This is followed by software

development, accounting for 25 per cent, and networking, which constitutes 5 per cent. The remaining 20 per cent of the surveyed firms operate in other related sectors.

The dominance of service-oriented firms shows that the IT industry in Ernakulam mainly focuses on client-based projects. As a result, employers expect graduates to possess practical and service-related skills in addition to academic qualifications, highlighting a gap between education and industry needs.

3.1.2 Nature of Ownership

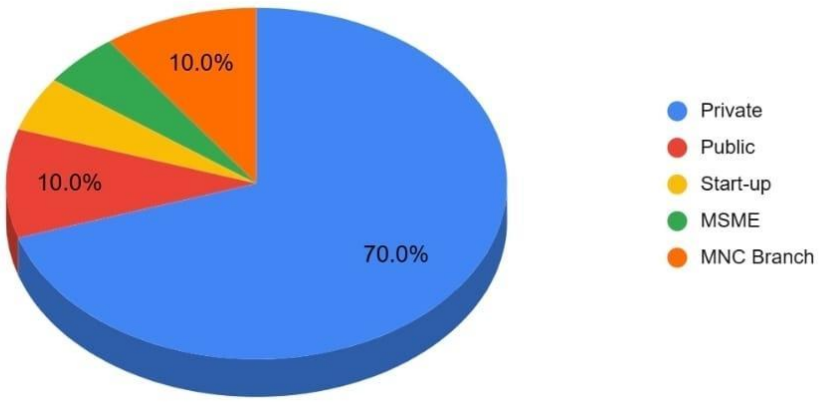


Fig 3.1.2 Nature of Ownership Source : Primary Data

Figure 3.1.2 illustrates the ownership structure of the surveyed firms within the study area. The data shows that private sector firms constitute the majority, accounting for 70 per cent of the respondents. This is followed by public sector units and multinational company (MNC) branches, each representing 10 per cent. Start-ups and MSMEs account for the smallest share, contributing 5 per cent each.

The dominance of private sector firms indicates that recruitment in Ernakulam's IT sector is guided mainly by market-oriented requirements. This may create a skill gap where graduates find it difficult to meet the specific expectations of private employers, leading to the qualitative mismatch.

3.1.3 Total Employee Strength

The survey reveals a significant diversity in the size of IT organisations in Ernakulam. The total employee strength of the surveyed IT firms ranges from small-scale companies with fewer than 50 employees to large organisations employing several thousand workers. Specifically, half of the companies surveyed are large organisations with more than 1,000 employees, while 35 per cent are medium-sized and 15 per cent are small-scale units.

This wide range ensures that the study captures skill mismatch challenges faced by both small-scale companies and large corporate firms within the IT ecosystem of Ernakulam.

3.1.4 Number of Youth Employees

The results show the number of employees aged below 30 years in the surveyed IT companies. Although the smaller companies employ a limited number of young employees, the larger companies have a significantly higher proportion of young employees.

This indicates that the IT sector in Ernakulam offers great employment opportunities for youth, particularly in larger firms. The high level of youth employment confirms that young professionals form the backbone of the IT sector in the district, making their skill levels a top priority for employers.

3.1.5 Annual Youth Recruitment Trends

The number of youth employees recruited annually differs widely among the firms. While small-scale companies hire between 0 and 20 youth annually, large-scale companies report substantial recruitment, with some hiring over 2,000 youth per year.

The irregular recruitment pattern indicates that hiring is demand-driven rather than standardized. Although large companies provide significant employment opportunities for urban youth, the competitive nature of recruitment places greater importance on job-ready skills.

3.2 RECRUITMENT PATTERNS

This section analyses the criteria and methods used by IT firms in Ernakulam to acquire talent. It highlights the educational expectations and the flexibility of employers regarding candidate backgrounds.

3.2.1 Basic Qualification for Entry-Level Hires

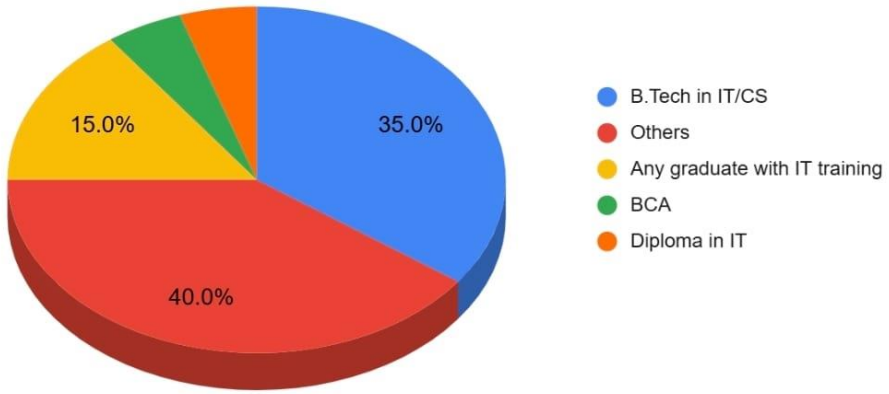


Fig 3.2.1 Basic Qualification for Entry-Level Hires Source : Primary Data

Figure 3.2.1 shows the basic educational qualifications preferred by IT firms in Ernakulam for entry-level recruitment. It is observed that 35 per cent of the firms prefer candidates with a B.Tech in IT or Computer Science. About 15 per cent of the respondents consider any graduate with IT training suitable for entry-level positions. BCA graduates and Diploma holders account for 5 per cent each. A significant 40 per cent of firms fall under the "Others" category, indicating varied or flexible qualification requirements.

The preference for flexible educational qualifications indicates that employers place greater emphasis on skills and practical competence over specific degrees. This contributes to skill mismatch, as many formally qualified graduates lack industry-ready skills, while non-IT graduates with practical IT training compete for the same entry-level positions.

3.2.2 Main Recruitment Channels

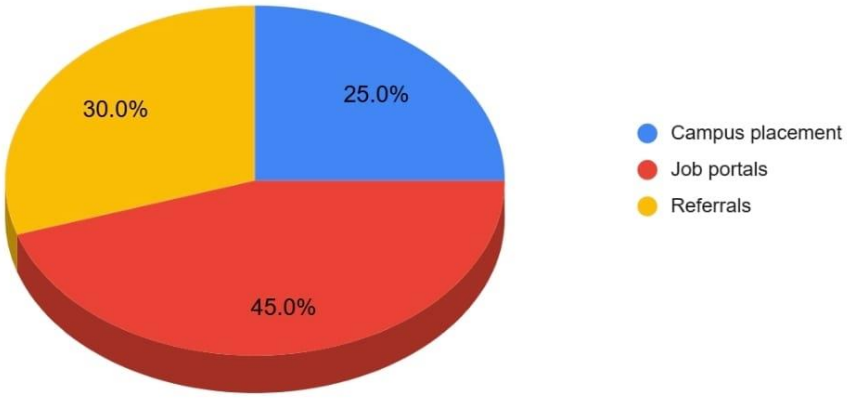


Fig 3.2.2 Main Recruitment Channels Source : Primary Data

Figure 3.2.2 shows the primary channels used by organisations to recruit youth. Job portals emerge as the most preferred channel, contributing 45 per cent of the respondents. This is followed by employee referrals which constitute 30 per cent, while campus placements contribute 25 per cent to the overall recruitment process. Notably, none of the surveyed firms reported internship conversion as their main channel.

The dominance of job portals indicates that organisations prefer flexible and quick hiring methods to meet immediate skill requirements. Job portals and referrals enable employers to screen candidates based on specific skill requirements and practical experience rather than academic credentials alone.The relatively lower reliance on campus placements suggests that academic institutions may not be fully aligned with current industry needs.

3.2.3 Candidates from non-IT

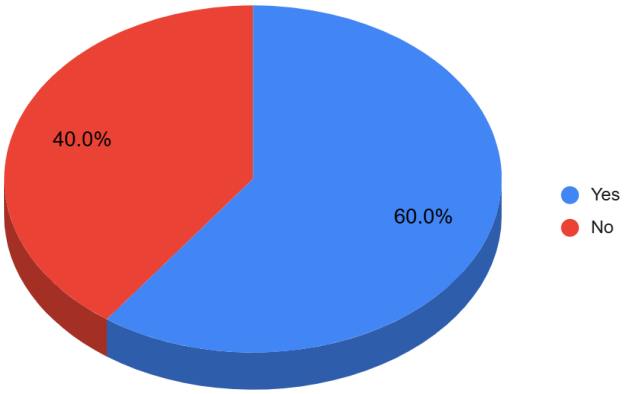


Fig 3.2.3 Candidates from non-IT Source : Primary Data

The pie chart presents responses on the inclusion of candidates from non-IT educational backgrounds. It is observed that 60 per cent of the surveyed firms reported hiring candidates from non-IT backgrounds, while the remaining 40 per cent do not.

The fact that most companies favour hiring non-IT graduates indicates that employers place greater importance on skills and adaptability rather than on formal IT degrees alone. This reflects a flexible hiring approach in which candidates with relevant training or job-oriented skills are considered suitable for IT roles. At the same time, this trend highlights the issue of skill mismatch, as many IT graduates may lack job-ready skills, allowing trained non-IT graduates to compete for the same positions.

3.2.4 Reason for Hiring non-IT Candidates

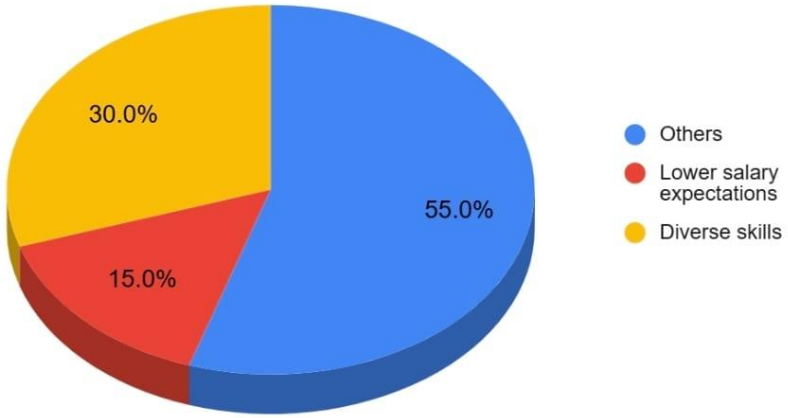


Fig 3.2.4 Reason for Hiring non-IT Candidates Source : Primary Data

The figure illustrates the reasons cited by firms for hiring candidates from non-IT academic backgrounds. Among the responding organizations, 30 per cent reported that the need for diverse skill sets was the primary reason for such hiring, while 15 per cent indicated lower salary expectations as a contributing factor. A majority of respondents, accounting for 55 per cent, fall under the “Others” category, which mainly includes firms that either do not recruit non-IT candidates or follow specific, role-based hiring criteria.

This indicates that the hiring of non-IT graduates is more of a strategic decision rather than a response to a shortage of IT graduates. The emphasis on diverse skill sets suggests that the industry values transferable skills such as problem-solving ability, communication, and adaptability, in addition to technical knowledge. This reflects a shift toward skill-based hiring practices in the IT sector, where practical competence and adaptability are often considered more important than formal IT qualifications. This trend highlights a qualitative skill mismatch, in which formally trained IT graduates may not possess the wide range of skills required by the industry.

3.2.5 Skills Expected from Hires

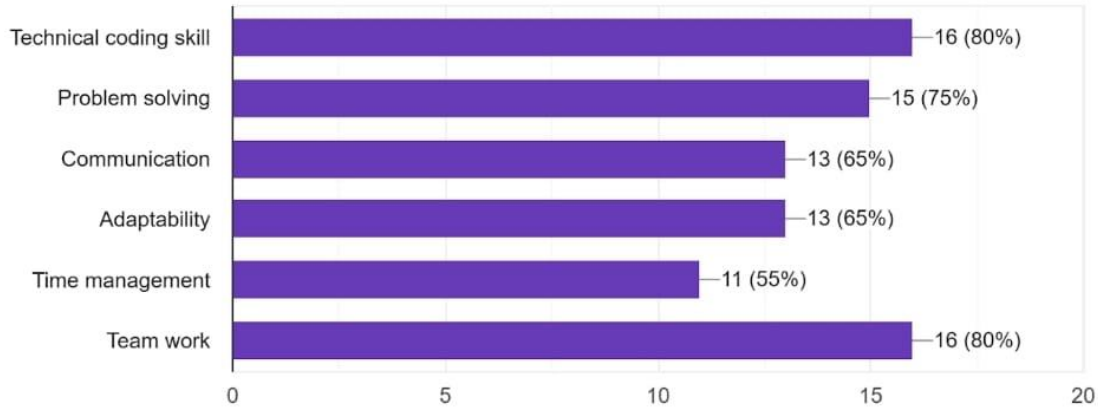


Fig 3.2.5 Skills Expected from Hires Source : Primary Data

Figure 3.2.5 presents the ranking of skills expected by employers from entry-level recruits. Technical coding skills and teamwork ability rank the highest, with both being prioritised by 80 per cent of the surveyed firms. These are followed closely by problem-solving skills, given importance by 75 per cent, while communication skills and adaptability both account for 65 per cent of employer interest. Time management remains an important factor, mentioned by 55 per cent of the respondents.

The findings show that employers look for a balanced combination of technical and soft skills in new hires. While technical coding skills remain important, equal emphasis on teamwork and problem-solving reflects the collaborative and project-oriented nature of IT work. The importance given to communication skills and adaptability indicates that firms value employees who can adjust to changing technologies and work efficiently in dynamic environments. The imbalance between academic training and these expectations explains why many graduates struggle to meet employer requirements despite holding relevant degrees.

3.3 DIMENSIONS OF SKILL MISMATCH

This section examines the various dimensions of skill mismatch experienced by IT firms in Ernakulam while recruiting urban youth. It highlights the difficulties employers experience in finding candidates whose skills match job requirements. By focusing on factors such as lack of practical exposure and mismatch between fields of study and job roles, the section explains the areas where skill mismatch is most prominent. These aspects help in understanding the nature and extent of skill mismatch in the IT sector.

3.3.1 Difficulty in Finding Skilled Youth

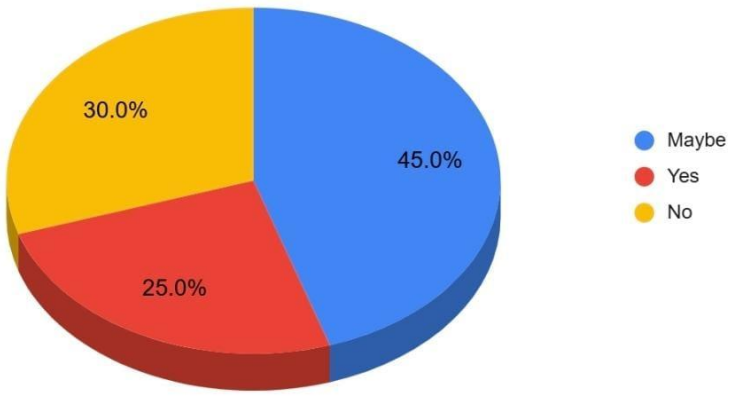


Fig 3.3.1 Difficulty in Finding Skilled Youth Source : Primary Data

Figure 3.3.1 shows the responses of IT firms regarding the availability of suitably skilled youth for their vacancies. Among the surveyed firms, 45 per cent reported occasional or situational difficulty in finding skilled candidates. About 30 per cent of firms reported no major difficulty in recruitment, while 25 per cent experienced clear difficulties in finding suitably skilled youth.

The mixed responses indicate that skill availability in the IT sector is inconsistent rather than uniformly inadequate. The combined share of “Maybe” and “Yes” responses suggests that while there is no absolute shortage of graduates, there is a noticeable shortage of suitably skilled graduates. This variation in candidate quality makes the recruitment process challenging for employers.

3.3.2 Main Causes of Skill Mismatch Observed

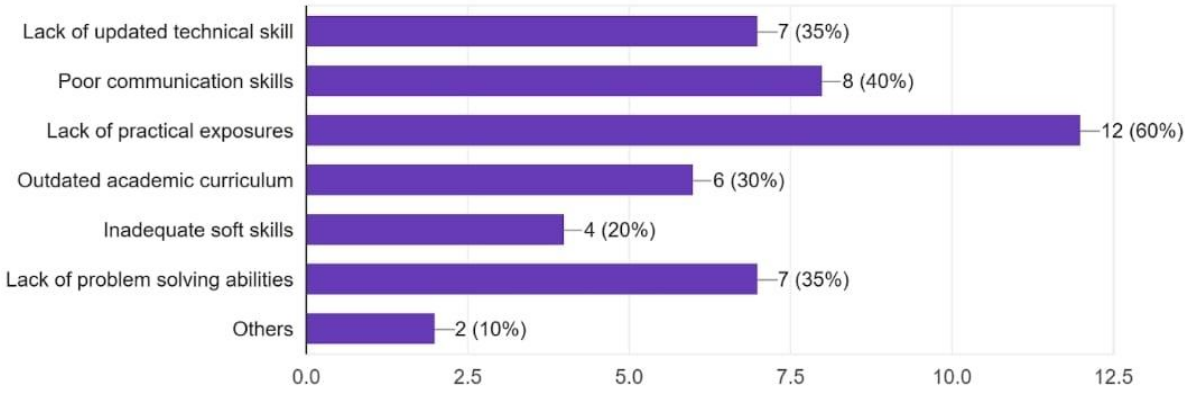


Fig 3.3.2 Main Causes of Skill Mismatch Observed Source : Primary Data

Figure 3.3.2 presents the major causes of skill mismatch identified by the surveyed IT firms in Ernakulam. The most frequently reported factor is lack of practical exposure, cited by 12 firms. This is followed by poor communication skills, reported by 8 firms. Lack of problem-solving ability and lack of updated technical skills were each reported by 7 firms. Outdated academic curriculum was identified by 6 firms as a contributing factor.

The findings clearly indicate that the issue of skill mismatch is influenced by the quality and relevance of skills rather than the absence of educational qualifications. The dominance of lack of practical exposure points to a significant gap between academic learning and real workplace requirements. In addition, deficiencies in communication skills, problem-solving ability, and updated technical knowledge indicate the limitations of existing curricula in adequately preparing students for industry demands.

3.3.3 Qualification Match to Job Requirements

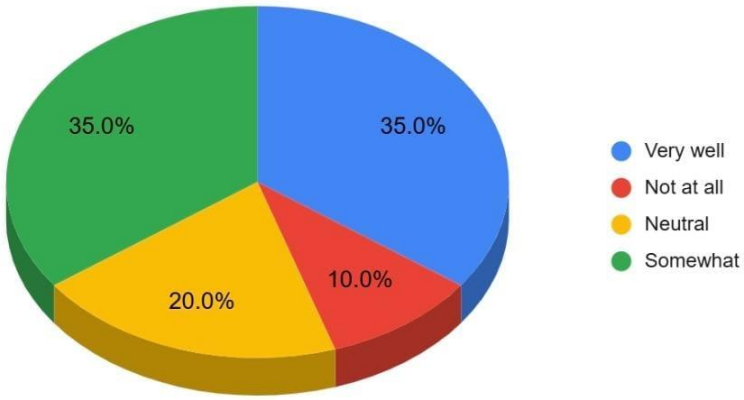


Fig 3.3.3 Qualification Match to Job Requirement Source : Primary Data

Figure 4.3.2 illustrates the extent to which a candidate's formal education meets the specific requirements of the role. It is observed that 35 per cent of the respondents stated that qualifications match their requirements very well, while an equal proportion of 35 per cent felt the match was somewhat adequate. About 20 per cent of the firms expressed a neutral opinion, and the remaining 10 per cent reported that qualifications do not match at all with job requirements.

Although 70 per cent of firms reported that educational qualifications match job requirements either very well or to some extent, nearly 30 per cent employers feel the qualification is either neutral or entirely inadequate. This points to a quality gap in higher education, where academic qualifications alone are often not sufficient to meet workplace expectations. The finding reinforces the existence of skill mismatch, as formal education provides only a basic foundation and does not fully equip graduates with the practical and role-specific skills required in the IT sector.

3.3.4 Observation of Over-qualified Candidates

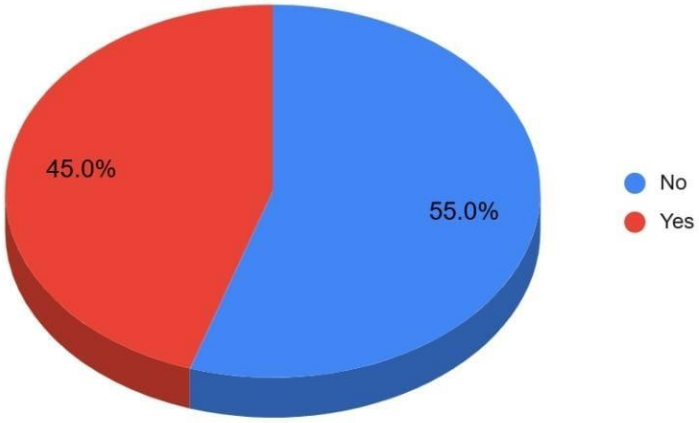


Fig3.3.4 Observation of Over-qualified Candidates Source : Primary Data

The figure presents the responses regarding whether employers come across over-qualified candidates during recruitment. Nearly 55 percent state that they do not usually find applicants whose education exceeds job needs, while 45 percent confirm that such cases are common. This shows that a considerable section of the labour market still receives candidates with higher qualifications than required.

The results show that over-qualification exists in the IT sector of Ernakulam, though it is not widespread. While a majority of firms do not experience this issue, a considerable proportion of employers report encountering candidates whose qualifications exceed job requirements. This suggests that due to limited suitable opportunities, some highly qualified youth accept entry-level positions. Such situations reflect the presence of vertical skill mismatch, which may result in job dissatisfaction and underutilization of skills.

3.3.5 Observation of Under-qualified Candidates

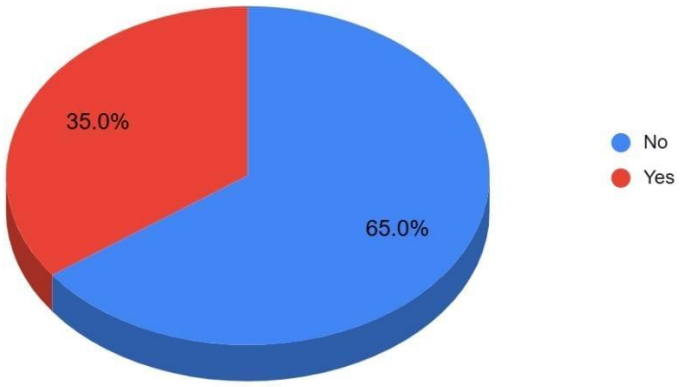


Fig 3.3.5 Observation of Under-qualified Candidates Source : Primary Data

The chart presents responses regarding whether employers encounter under-qualified or unskilled candidates for skilled positions. It is observed that 65 per cent of the surveyed firms reported that they do not usually face this issue, while 35 per cent of firms indicated that they do encounter under-qualified candidates during recruitment.

The findings show that while most firms do not frequently come across under-qualified candidates, a notable proportion still faces this issue. This indicates that some youth enter the job market without adequate practical or job-specific skills, despite having formal educational qualifications. This situation highlights a gap in the education system, where academic credentials are granted without ensuring sufficient workplace readiness. As a result, employers are often required to provide additional training or adjust job expectations, emphasizing the need for stronger skill-oriented education and industry-relevant training to ensure better workforce readiness.

3.3.6 Alignment of Study to Job

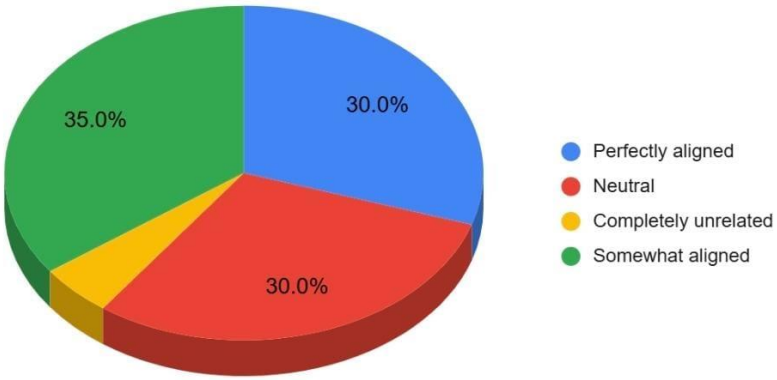


Fig 3.3.6 Alignment of Study to Job Source : Primary Data

The chart examines the relevance of the candidates' academic background to their assigned job functions. About 35 per cent of firms reported that the field of study is somewhat aligned with job requirements, while 30 per cent stated that it is perfectly aligned. An equal share of 30 per cent expressed a neutral opinion, and a small proportion of 5 per cent reported that the field of study is completely unrelated to the job role.

These responses indicate that while a majority of firms experience some level of alignment between education and employment, the alignment is often partial rather than exact. The sizable neutral response suggests that academic specialization does not always translate directly into job roles in the IT sector. This reflects the presence of horizontal skill mismatch, where graduates work in roles that differ from their field of study, reinforcing the importance of transferable and adaptable skills over narrow academic specialization.

3.3.7 Frequency of Training Required

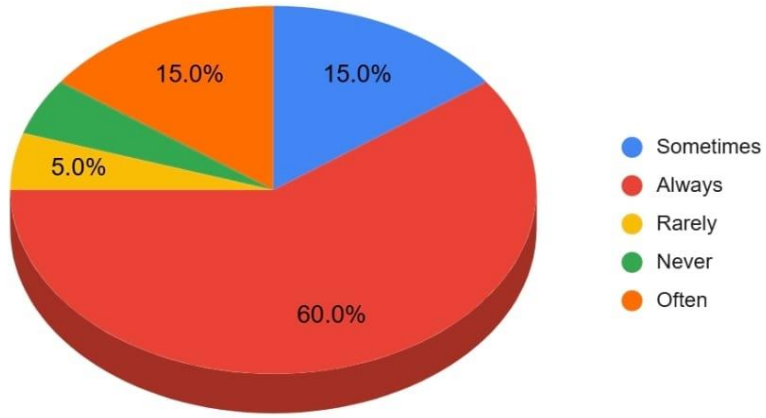


Fig 3.3.7 Frequency of Training Required Source : Primary Data

The pie chart measures how frequently IT firms in Ernakulam find it necessary to provide additional training to freshers to make them job-ready. The data shows that 60 per cent of firms reported that they always provide training while 15 per cent do so often. Only 5 per cent of the surveyed firms stated that training is rarely or never required for new hires.

The strong dependence on training suggests that many graduates lack sufficient job-ready skills at the time of recruitment. The fact that most firms consistently invest in training reflects the presence of a skill gap between academic preparation and industry requirements. While employer-provided training helps bridge this gap, it also increases the cost and time involved in recruitment.

3.4 INSTITUTIONAL INTERVENTIONS

This section examines the role of vocational training and government-led skill development initiatives in addressing skill mismatch among urban youth in Ernakulam. It focuses on employer awareness of such programs, recruitment of trained candidates, and employer perceptions regarding the effectiveness of these initiatives. By analysing responses related to government schemes and vocational training, the section evaluates their contribution in improving employability and bridging the gap between education and industry requirements.

3.4.1 Familiarity with Skill Development Programs

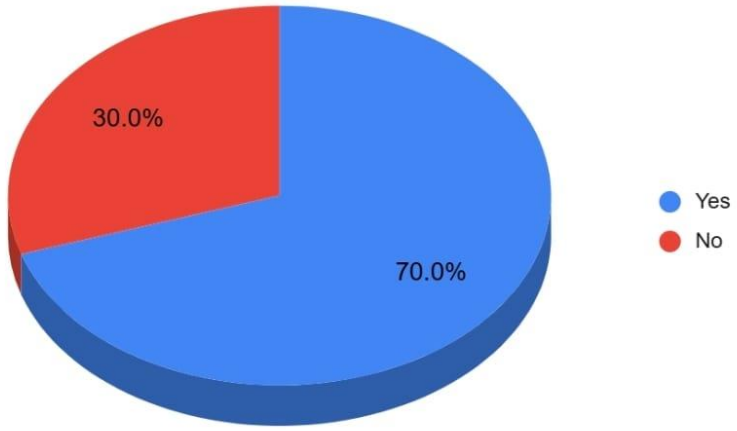


Fig 3.4.1 Familiarity with Skill Development Programs Source : Primary Data

Figure 3.4.1 presents responses on employer familiarity with government and private skill development programmes such as ASAP Kerala, PMKVY, and NSDC. It is observed that 70 per cent of the surveyed firms reported being aware of such vocational training initiatives, while the remaining 30 per cent indicated a lack of familiarity.

The high level of awareness among employers suggests that skill development programmes have gained reasonable visibility within the IT sector in Ernakulam. However, the presence of nearly one-third of firms lacking awareness indicates gaps in outreach and industry engagement. Improving communication between training agencies and IT firms could enhance the effectiveness of these programmes and increase their role in reducing skill mismatch among urban youth.

3.4.2 Recruitment of Vocationally Trained Candidates

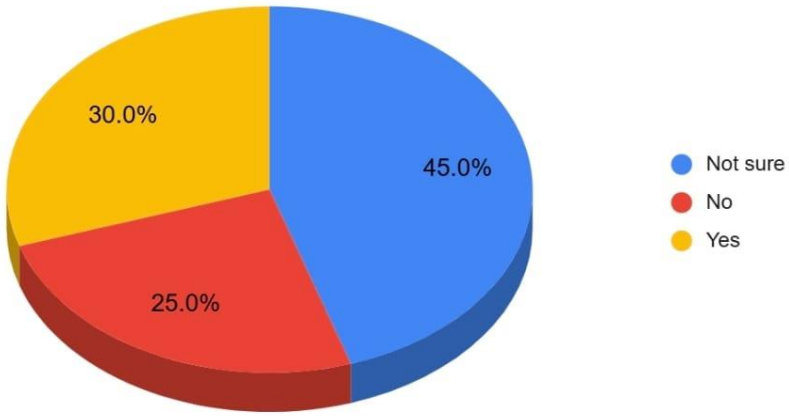


Fig 3.4.2 Recruitment of Vocationally Trained Candidates Source : Primary Data

Figure 3.4.2 indicates the responses of firms regarding the recruitment of candidates trained under skill development programmes. About 30 per cent of the firms confirmed that they had recruited such candidates, while 25 per cent reported that they had not. Nearly 45 per cent of the respondents were unsure whether candidates trained under these programmes had been recruited.

The large proportion of firms reporting uncertainty indicates that vocational certifications are not clearly identified or tracked during the recruitment process. While a section of firms has benefited from candidates trained under skill development programmes, the lack of clarity reduces the visible impact of these initiatives.

3.4.3 Performance of Certified Candidates

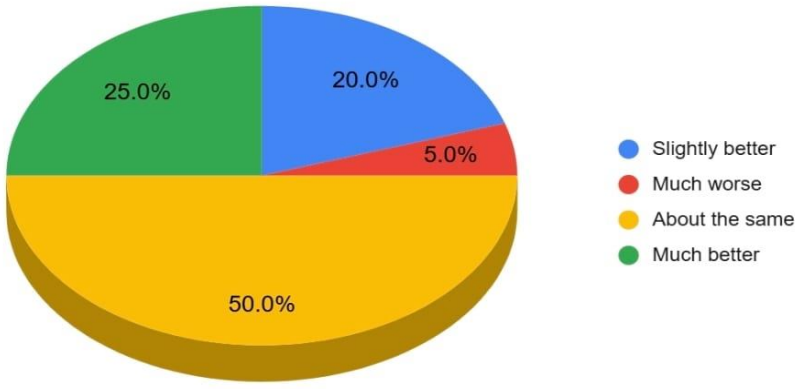


Fig 3.4.3 Performance of Certified Candidates Source : Primary Data

The pie chart compares how well certified candidates perform on the job. Around 50 per cent of the respondents reported that the performance of certified candidates is about the same as that of non-certified employees. About 25 per cent felt that certified candidates perform much better, while 20 per cent observed slightly better performance. Only a very small fraction, 5 per cent, felt that certified candidates perform worse.

The results indicate that vocational certification alone does not automatically ensure superior job performance. Although some employers recognize improved performance among certified candidates, the majority do not observe any significant difference. This points to variations in the quality and relevance of training programmes. Strengthening practical content, industry exposure, and alignment of vocational training with actual job requirements is therefore necessary to improve the effectiveness of such certifications in reducing skill mismatch.

3.4.4 Relevance of Training to Real Skill Needs

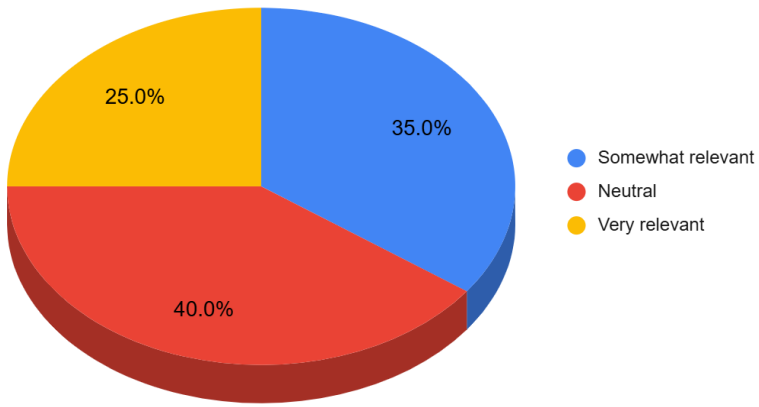


Fig 3.4.4 Relevance of Training to Real Skill Needs Source : Primary Data

Figure 3.3.4 evaluates the alignment between training curricula and actual industry requirements. 40 per cent of firms expressed a neutral view regarding the usefulness of training. Around 35 per cent felt that the training is somewhat relevant, while only 25 per cent considered the training to be very relevant to real workplace skill needs.

The findings point to a clear gap between the content of training programmes and actual industry skill requirements. With only one-fourth of employers considering the training to be very relevant, it suggests that many programmes are not keeping pace with the rapid changes in the IT sector. The large share of neutral responses further reflects uncertainty about the

practical usefulness of such training. To reduce this content gap, training curricula need regular updating and closer collaboration with IT firms so that skills taught are aligned with real workplace demands.

3.4.5 Impact on Employability

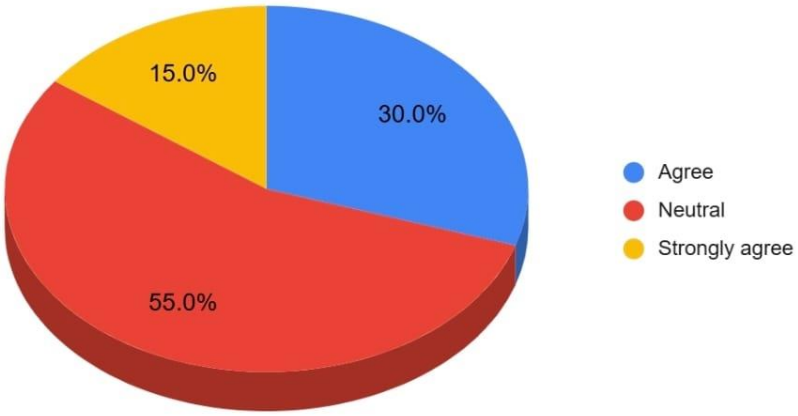


Fig 3.4.5 Impact on Employability Source : Primary Data

Figure 3.4.5 shows employer responses on whether skill development schemes improve the employability of youth in the IT sector. About 55 per cent of the respondents expressed a neutral opinion on the impact of government training schemes, while 30 per cent agreed and 15 per cent strongly agreed that these initiatives improve employability. Notably, none of the surveyed firms expressed disagreement.

The high proportion of neutral responses highlights uncertainty among employers regarding the effectiveness of government and private skill development schemes. While firms do not view these programmes negatively, they are not fully convinced that such training alone makes candidates job-ready.

3.4.6 Quality of Practical Exposure in Trained Candidates

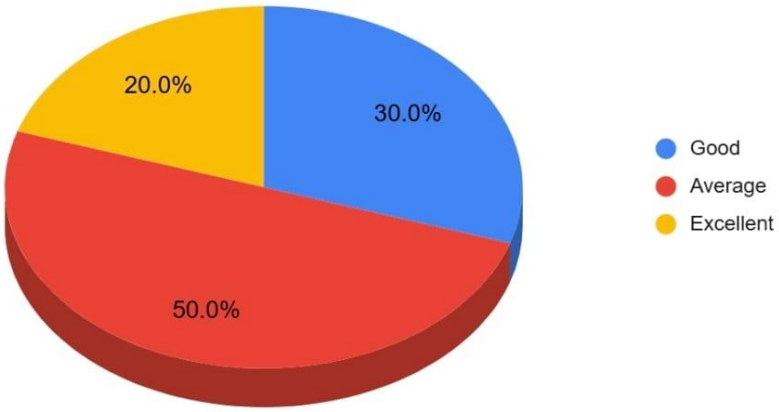


Fig3.4.6 Quality of Practical Exposure in Trained Candidates Source: Primary Data

The pie chart shows employer responses regarding the practical exposure of vocationally trained candidates. Half of the respondents, 50 per cent rated the practical exposure at a moderate level, 30 per cent considered it above average, and 20 per cent rated it as excellent. None of the surveyed firms indicated low practical exposure among candidates.

The predominance of moderate ratings indicates that the practical experience provided by the vocational training programs is not sufficient to meet industry expectations. In the IT sector, practical skills are more critical than theoretical knowledge, and the fact that half of employers perceive only average hands-on abilities highlights a significant skill gap. This explains why companies often need to spend additional time and resources retraining new hires. Improving the practical aspects of these programs and tailoring them to industry needs could enhance the job readiness of youth.

3.4.7 Collaboration with Skill Development Centres or Government Training Programs

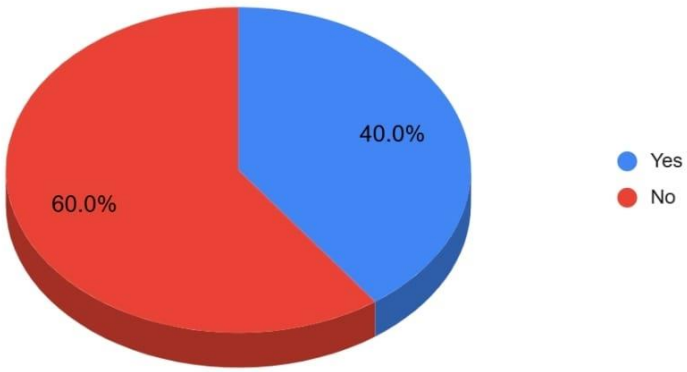


Fig 3.4.7 Collaboration with Skill Development Centres or Government Training Programs
Source : Primary Data

Figure 3.4.7 illustrates the level of direct partnership between IT companies and skill development institutes. 60 per cent of the surveyed companies do not directly collaborate with these institutes for hiring, while 40 per cent maintain active collaborations

This highlights a communication gap between IT firms and training institutes. When a large proportion of companies do not engage with these programs, institutes may not have a clear understanding of the skills in demand. Greater collaboration is needed to ensure that training programs are aligned with industry requirements and can better prepare youth for employment.

CHAPTER - 4

FINDINGS, RECOMMENDATIONS AND CONCLUSION

4.I INTRODUCTION

Skill mismatch has emerged as a major challenge in today's labour market, particularly among urban youth in rapidly growing service sectors such as Information Technology. Many young people with high educational qualifications face challenges in finding suitable employment, while at the same time, employers report a lack of qualified and skilled workers.

The present study focuses on skill mismatch among youth in urban Ernakulam, a major IT and commercial hub in Kerala. With the growth of IT parks like Infopark and SmartCity, Ernakulam has become a major source of employment for educated youth. However, the changing nature of technology, evolving job roles, and increasing demand for practical and soft skills have increased the problem of skill mismatch in the region.

This chapter highlights the key findings of the study based on primary data collected from IT firms operating in Ernakulam district. The findings provide insights into the organizational profile of firms, recruitment trends, the extent of skill gaps, and the role of vocational training and government initiatives in addressing these gaps. Based on these findings, suitable recommendations are suggested to improve youth employability and reduce skill mismatch.

4.2 FINDINGS OF THE STUDY

- **Organizational Structure of IT Firms:** The IT sector in Ernakulam is largely dominated by private-sector firms, ranging from small startups to large multinational corporations. This diversity indicates that the challenges of recruitment and skill mismatch affect organizations of all scales.

- **Workforce Composition:** A significant proportion of employees in the surveyed IT firms belong to the below-30 age group. This confirms that young professionals form the backbone of the IT industry in Ernakulam, making their employability and skill readiness crucial for the sector's sustainability.
- **High Demand for Entry-Level Talent:** Large and medium-sized firms in the district recruit a high number of freshers every year. This continuous demand indicates that

employment opportunities exist, but the challenge lies in preparing youth to meet industry expectations.

- **Preference for Professional IT Qualifications:** Most firms indicate a preference for candidates with professional IT qualifications such as B.Tech in IT or Computer Science. However, this preference does not guarantee employment, as employers emphasize competence over mere possession of a degree.

- **Growing Acceptance of Non-IT Educational Backgrounds:** The findings show increasing openness among IT firms to hire candidates from non-IT backgrounds, provided they possess relevant technical skills or training. This reflects a shift from degree-centric hiring to skill-based recruitment practices.

- **Recruitment Channels:** The study highlights that job portals and direct applications are the most commonly used recruitment methods, followed by campus placements and employee referrals. This indicates that firms prefer a broader talent pool where practical skills can be evaluated more effectively.

- **Nature of the Skill Mismatch:** A considerable number of employers report difficulty in finding suitably skilled youth despite the availability of educated job seekers. The study clearly identifies the mismatch as qualitative rather than quantitative. While candidates possess formal educational qualifications, they often lack the practical competencies required to perform effectively in real work environments.

- **Deficiency in Practical Exposure:** Lack of hands-on experience is identified as a major weakness among job applicants. Employers feel that academic and vocational training does not sufficiently expose students to real-world IT tasks and project-based learning.

- **Soft Skill Gaps Among Candidates:** In addition to technical shortcomings, employers report deficiencies in communication skills, teamwork, and problem-solving abilities. These soft skills are considered essential for client-based IT work and collaborative environments.

- **Dependence on In-House Training:** Most firms indicate that newly recruited employees require internal training before becoming fully productive. This suggests that formal education and training systems are not adequately aligned with industry requirements.

- **Effectiveness of Skill Development Programs:** Although awareness of government and vocational training initiatives exists among employers, actual recruitment from these programs remains limited. Among firms that do hire certified candidates, performance is often on par with regular graduates, suggesting that improved industry alignment could enhance outcomes.

- **Limited Industry–Institute Collaboration:** A majority of firms do not directly collaborate with skill development centers or government programs. This communication gap limits the ability of institutes to align their training with current industry demands.

- **Impact of Skill Mismatch:** The combined effect of technical and soft skill gaps leads to additional training costs, delayed workforce readiness, and instances of underemployment or over qualification.

4.3 RECOMMENDATIONS

- **Strengthening Practical and Industry-Oriented Training:**
  Educational institutions should focus more on hands-on learning through live projects, internships, and practical lab sessions. This would help students gain real-world exposure and bridge the gap between academic learning and workplace requirements.

- **Curriculum Revision in Line with Industry Needs:**
  Universities and training institutes should regularly revise their curricula in collaboration with IT industry professionals to keep them aligned with rapidly changing technologies and industry practices.

- **Enhancement of Soft Skill Development:**
  In addition to technical training, institutions should give equal importance to communication skills, teamwork, problem-solving abilities, and adaptability to meet the demands of the IT industry.

- **Promote Skill-Based Hiring Practices:**
  Employers should continue moving towards skill-based recruitment rather than relying solely on formal degrees. Skill assessments, practical tests, and probation-based evaluation can help identify capable candidates regardless of educational background.

- **Expand Industry–Institute Collaboration:**
  Stronger collaboration between IT firms, educational institutions, and skill development agencies should be encouraged to align curricula, training, and skill development with current industry requirements.

- **Improve the Effectiveness of Skill Development Programs:**
  Government and vocational training programmes should be closely aligned with industry requirements. Regular feedback from employers can help improve the quality, relevance, and practical orientation of these initiatives.

- **Support Entry-Level Training and Apprenticeships:**
  IT firms may introduce structured trainee or apprenticeship programmes for fresh graduates. This can reduce initial productivity gaps while helping youth acquire workplace-ready skills.

4.4 CONCLUSION

Skill mismatch continues to pose a significant challenge to youth employability in the IT sector of Ernakulam. This study was undertaken to examine the nature and extent of skill mismatch among young job seekers and to analyse employer perceptions regarding employability, training, and skill development initiatives in the region.

The analysis shows that although the IT sector in Ernakulam provides substantial employment opportunities for youth, there exists a noticeable gap between the skills possessed by job seekers and the skills expected by employers. While most candidates possess formal educational qualifications, many lack adequate practical exposure, updated technical knowledge, and essential soft skills such as communication, teamwork, and problem-solving. This confirms that the nature of skill mismatch in the region is largely qualitative rather than quantitative.

The study also highlights a growing shift from degree-based hiring to skill-based recruitment practices. While professional IT qualifications continue to be preferred, employers increasingly show openness towards candidates from non-IT backgrounds, provided they demonstrate relevant technical competence. However, the widespread dependence on in-house training suggests that existing educational and training institutions are not fully aligned with the evolving needs of the IT industry.

Employer perceptions regarding government and private skill development programmes remain mixed. A majority of respondents expressed a neutral opinion on whether these training schemes significantly improve employability. This indicates that while such programmes are recognised, they are yet to consistently produce job-ready candidates who fully meet industry expectations.

In conclusion, the study establishes that skill mismatch remains a significant challenge affecting youth employability and organizational efficiency in the IT sector of Ernakulam. Addressing this issue requires coordinated efforts from educational institutions, training providers, and industry stakeholders. Strengthening practical learning, updating curricula, and promoting closer industry–institute collaboration can enhance workforce readiness and ensure better utilization of youth talent. Reducing skill mismatch will not only improve employment outcomes for urban youth but also contribute to the sustainable growth of the IT sector in the region.

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APPENDIX

SECTION A: BASIC INSTITUTIONAL PROFILE

1. Name of the organisation (optional): _____

2. Type of organisation:
   - IT Services
   - Software development
   - Networking/Hardware
   - Others

3. Nature of ownership:
   - Private
   - Public
   - Start-up
   - MSME
   - MNC Branch

4. Number of total employees: _____

5. Number of youth employees (below 30): _____

SECTION B: RECRUITMENT PATTERN:

6. Number of youth hired per year (below 30): _____

7. Basic qualification required for entry level hire:
   - B.Tech in IT/CS
   - BCA
   - Diploma in IT
   - Any graduate with IT training
   - Others

8. Main recruitment channel:

- Campus placement
- Job portals
- Internship conversion
- Referrals
- Others

9. Do you hire candidates from non-IT background (eg., Commerce,Mechanical ,Arts) for IT related roles :

- Yes
- No

10. If yes, Number of current youth employees from non-IT educational backgrounds : ____

11. What is the main reason for hiring non-IT candidates :

- Lack of available IT graduates
- Lower salary expectations
- Diverse skills
- Others

12. Skills expected from hires (rank 1-6):

- Technical coding skill
- Problem solving
- Communication
- Adaptability
- Time management
- Team work

SECTION C : SKILL MISMATCH INDICATORS :

13. Do you face any difficulties in finding skilled youth for your vacancies?

- Yes
- No
- Maybe

14. Main causes of skill mismatch observed (choose all suitable options) :

- Lack of updated technical skills
- Poor communication skills
- Lack of practical exposure
- Outdated academic curriculum
- Inadequate soft skills
- Lack of problem solving ability
- Others

15. How well does the educational qualification of youth aspirants match your job requirements:

- Very well
- Somewhat
- Neutral
- Poorly
- Not at all

16. Have you observed over qualified candidates for entry level jobs :

- Yes
- No

17. Have you observed under qualified or unskilled candidates for skilled position :

- Yes
- No

18. Number of unskilled or under qualified candidates hired due to lack of suitable candidates : _____

19. How aligned are candidates fields of study with their job function :

- Perfectly aligned
- Somewhat aligned
- Neutral
- Poorly aligned
- Completely unrelated

20. How often do you need to train new hires to bring them up to job standards :

- Always
- Often
- Sometimes
- Rarely
- Never

SECTION D : ROLE OF VOCATIONAL TRAINING AND GOVERNMENT INITIATIVES:

21. Are you familiar with any government or private skill development programs (eg., ASAP Kerala , PMKVY, NSDC, etc.) that prepare youth for IT jobs :

- Yes
- No

22. Have you recruited any candidates who were trained under such programs :

- Yes
- No
- Not sure

23. Do certified candidates (with NSDC, ASAP, etc. certification) perform better :

- Much better
- Slightly better
- About the same
- Slightly worse
- Much worse

24. How relevant do you find the current vocational training programs to your company's real skill needs :

- Very relevant
- Somewhat relevant
- Neutral
- Slightly irrelevant

- Completely irrelevant

25. Do you think government training schemes improve the employability of youth in the IT sector :

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

26. How would you rate the quality of practical exposure that vocationally trained candidates possess:

- Excellent
- Good
- Average
- Poor
- Very poor

27. Do you collaborate directly with any skill development centers or government training programs for hiring or internships:

- Yes
- No

28. If yes, how effective has this collaboration been in providing suitable candidates:

- Very effective
- Somewhat effective
- Neutral
- Ineffective
- Very Ineffective

29. Suggest improvements for vocational training programs (if any): _____