

A Multi-Stakeholder Analysis of Employability Prospects and Industry Readiness of IT Graduates in Goa

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Abstract: *The employability of Information Technology (IT) graduates has become an increasingly important concern in today's rapidly evolving digital economy, particularly in regions undergoing steady technological growth such as Goa. This study examines the key factors influencing the employability of IT graduates in Goa by analyzing the perspectives of students, academicians, and industry professionals. The primary objective is to identify the factors that shape job readiness, employment opportunities, and industry expectations for IT graduates.*

A quantitative research approach was adopted using structured questionnaires administered to three key stakeholder groups: students, academicians, and industry representatives. The collected data were analyzed using descriptive statistics, reliability analysis through Cronbach's Alpha, and inferential statistical methods, primarily the Chi-Square Test of Independence, with the help of R statistical software.

The findings reveal that students' awareness of the IT job market, participation in career-related activities, and perceptions of IT education significantly influence their confidence in securing employment. From the academic perspective, communication skills emerged as a significant factor affecting graduates' job readiness, while curriculum preparedness and adaptability showed comparatively weaker associations. From the industry perspective, technical knowledge, social skills, industry-academia collaboration, and the growth of Goa's IT sector were found to significantly influence employability and job opportunities.

The study concludes that employability is shaped by a combination of technical competence, professional skills, industry exposure, and institutional support. The findings underscore the need for stronger collaboration among educational institutions, industry stakeholders, and policymakers to bridge skill gaps and improve workforce readiness. The study also highlights the importance of industry-aligned curricula, practical learning opportunities, and continuous skill development in enhancing employment outcomes for IT graduates in Goa..

Keywords: IT Graduate Employability, Employability Skills, Technical Skills, Industry-Academia Collaboration, Career Readiness, Higher Education, Goa, Chi-Square Analysis, Learning Analytics

I. INTRODUCTION

The Information Technology (IT) sector is growing very fast. Because of this, companies need skilled and job-ready graduates. Colleges and universities help students learn technical knowledge, communication skills, teamwork, and problem-solving skills needed for jobs. However, getting a job does not depend only on education. Students also need industry readiness, adaptability, and practical experience to succeed in the workplace.

According to Nidhi Sehgal and Saboohi Nasim [1], many factors affect the employability of IT graduates. These include technical skills, communication skills, technology management, soft skills, and the ability to adjust to the



workplace. Their study, “Total Interpretive Structural Modelling of Predictors for Graduate Employability for the Information Technology Sector,” explained that employers want graduates who have both technical knowledge and professional skills. The authors also pointed out that there is a gap between what students learn in colleges and what industries expect from them.

The study by Sehgal and Nasim also found that communication skills, technical knowledge, and technology management skills are important for getting jobs in the IT sector. The study explained that colleges and industries should work together more closely to help students become job-ready and improve employment opportunities.

In India, graduate employability has become an important issue because competition is increasing and technology is changing quickly. Employers want graduates who have technical knowledge as well as soft skills like communication, teamwork, adaptability, leadership, and problem-solving. Even though the IT industry is growing, many graduates still find it difficult to get suitable jobs because there is a gap between what they learn in college and what companies expect in the workplace.

In Goa, the IT sector is slowly growing and creating opportunities in software services, digital technologies, startups, and IT-related industries. However, only a few studies have been done to understand the job opportunities and industry readiness of IT graduates in Goa. Many students think about finding jobs outside Goa because of better salaries, career growth, and more job opportunities in other places.

Therefore, this study aims to understand the employability, industry readiness, technical skills, and workplace preparedness of IT graduates in Goa. The study considers the views of students, academic representatives, and industry professionals. It also tries to identify the main challenges affecting employability and suggests ways to improve collaboration between colleges and industries to create better job opportunities for IT graduates in Goa.

II OBJECTIVES OF THE STUDY

General Objective:-

To study the job opportunities and industry readiness of IT graduates in Goa by understanding the views of students, colleges, and industry professionals.

Specific Objectives:-

- To understand students’ views about job opportunities for IT graduates in Goa.
- To identify the main factors that affect the job chances of IT graduates in Goa.
- To study how confident students feel about getting jobs in the IT sector after graduation.
- To understand how aware students are about the IT job market and latest industry trends in Goa.
- To evaluate how career fairs, placement activities, and support from colleges help students get better job opportunities.
- To study the opinions of academic institutions about students’ communication skills, soft skills, adaptability, and readiness for industry jobs.
- To understand industry views about the employability, technical skills, and workplace readiness of IT graduates in Goa.
- To analyze the connection between employability skills and industry readiness of IT graduates.
- To identify the problems faced by employers while hiring IT graduates in Goa.
- To suggest ways to improve the employability and industry readiness of IT graduates in Goa.

III. RESEARCH HYPOTHESES

Students Perspective

H01

There is no connection between students’ knowledge about the IT job market and their confidence in getting a job in Goa.



H11

There is a connection between students' knowledge about the IT job market and their confidence in getting a job in Goa.

H02

There is no connection between taking part in career fairs or recruitment activities and students' views about job opportunities.

H12

There is a connection between taking part in career fairs or recruitment activities and students' views about job opportunities.

H03

There is no connection between students' views about the quality of IT education and their confidence in getting a job.

H13

There is a connection between students' views about the quality of IT education and their confidence in getting a job.

Academic Perspective

H04

There is no connection between soft skill training and graduates being ready for industry jobs.

H14

There is a connection between soft skill training and graduates being ready for industry jobs.

H05

There is no connection between communication skills and graduates being ready for jobs.

H15

There is a connection between communication skills and graduates being ready for jobs.

H06

There is no connection between graduates' ability to adapt and their readiness for the workplace.

H16

There is a connection between graduates' ability to adapt and their readiness for the workplace.

Industry Perspective

H07

There is no connection between technical knowledge and the employability of IT graduates in Goa.

H17

There is a connection between technical knowledge and the employability of IT graduates in Goa.

H08

There is no connection between social skills and employers' expectations for team performance.

H18

There is a connection between social skills and employers' expectations for team performance.

H09

There is no connection between collaboration between colleges and industries and the job opportunities of IT graduates in Goa.

H19

There is a connection between collaboration between colleges and industries and the job opportunities of IT graduates in Goa.

H010

There is no connection between the growth of the IT industry in Goa and job opportunities for IT graduates.

H110

There is a connection between the growth of the IT industry in Goa and job opportunities for IT graduates.



Scope of the Study

This study focuses on IT graduates, college representatives, and industry professionals in Goa. It studies job opportunities, industry expectations, communication skills, soft skills, workplace readiness, and employment opportunities in the IT sector in Goa.

Expected Outcomes of the Study

- Identification of the job-related challenges faced by IT graduates in Goa.
- Better understanding of what industries expect from graduates.
- Evaluation of students' academic preparation and skill gaps.
- Suggestions to improve collaboration between colleges and industries.
- Improvement in curriculum design and employability training programs for students.

IV. REVIEW OF LITERATURE

The employability of IT graduates has become an important topic in colleges and industries. Many studies have examined how academic learning, technical skills, soft skills, and job opportunities are connected in the IT sector. Researchers found that getting a job depends not only on technical knowledge but also on communication skills, teamwork, adaptability, and readiness for industry work.

Many studies show that industries expect graduates to have both technical skills and professional skills. Employers look for candidates who can communicate well, solve problems, work with others, and adjust to changing work situations. However, many graduates find it difficult to meet these expectations because colleges often focus more on theory than practical industry skills.

Research studies also show that soft skills are very important for getting jobs. Skills such as communication, leadership, critical thinking, and interacting well with others are valued by employers in the IT sector. Studies also show that graduates who have strong soft skills along with technical knowledge have better chances of getting jobs and growing in their careers.

Previous studies also explain that graduates become more ready for industry jobs through good curriculum design, internship opportunities, career guidance programs, industry interaction, and practical training. Career fairs, recruitment activities, and collaboration between colleges and industries are also considered useful for improving job opportunities for students.

Many researchers have discussed the gap between what colleges teach and what industries expect. Educational institutions often focus more on theoretical knowledge, while industries expect students to have practical skills, subject knowledge, and the ability to adjust to workplace environments. This difference creates challenges for graduates when they try to get jobs.

Studies about the IT sector in India show that job opportunities are increasing because of digital transformation, software development, artificial intelligence, cloud computing, and new technologies. However, competition in the IT sector is also growing. Because of this, employability skills have become very important for graduates.

Research also shows that students' views about job opportunities affect their career choices. Many graduates decide to move outside their home state or region because they can get better salaries, career growth, and more job opportunities in bigger IT cities.

In Goa, only a few studies have examined the employability and industry readiness of IT graduates. Most existing studies focus on general higher education, tourism jobs, or overall employment trends. Very little research has studied the opinions of students, colleges, and industry professionals together about the employability of IT graduates in Goa.

The present study tries to examine the job opportunities, industry expectations, communication skills, technical skills, workplace readiness, and employability of IT graduates in Goa. The study collects views from students, colleges, and industry professionals to better understand these areas.



V. RESEARCH GAP

Many studies have examined employability and industry readiness of graduates, but some research gaps still exist, especially in Goa.

Most earlier studies focus only on students' opinions or employers' expectations separately. Very few studies have combined the views of students, colleges, and industry professionals together to fully understand the challenges and opportunities related to employability.

Most research also focuses on large cities and major IT hubs in India. Very little research has been done on the job opportunities of IT graduates in Goa. There is limited information about:

- students' confidence in getting IT jobs in Goa,
- availability of local IT job opportunities,
- usefulness of career fairs and recruitment activities,
- industry expectations from IT graduates in Goa,
- and the role of collaboration between colleges and industries in improving employability.

There is also limited research on why many IT graduates look for jobs outside Goa. The connection between soft skills, communication skills, workplace adaptability, and industry readiness of IT graduates in Goa has also not been studied properly.

Vlachopoulos and Tsitiridou[2] explained that getting a job depends not only on technical knowledge but also on communication skills, teamwork, adaptability, problem-solving skills, and workplace readiness. The authors stated that employers expect graduates to have both technical skills and professional skills for modern workplaces. Their study also showed that internships, practical training, collaboration between colleges and industries, and work-based learning help students improve their employability and industry readiness. The study further identified a gap between academic learning and industry expectations because colleges often focus more on theory while industries expect practical and workplace-related skills.

Awadhiya [3] studied the importance of employability skills for IT graduates in getting entry-level jobs in the Indian IT sector. The study found that employers expect graduates to have not only technical knowledge but also soft skills such as communication, teamwork, problem-solving, decision-making, and self-management. The research explained that employability skills are important for career success and workplace readiness. The study also showed that there is often a gap between what students learn and what industries expect because many graduates do not have enough practical and workplace-related skills. The author suggested that colleges, industries, and policymakers should work together to improve employability skills and make academic learning more industry-oriented.

Misra and Khurana[4] explained that employability skills are very important for IT professionals in today's job market. The authors stated that employers expect graduates to have not only technical knowledge but also communication skills, teamwork, leadership skills, problem-solving abilities, and adaptability. Their study showed that there is often a gap between the skills taught in colleges and the skills expected by industries. The research also explained that practical exposure, industry-based learning, and soft skill development are important for improving employability and workplace readiness among IT graduates.

Reddy and Kumar[5] studied the skills that the Information Technology industry expects from engineering graduates for getting jobs. The study explained that employers expect graduates to have both technical knowledge and professional skills such as communication, teamwork, critical thinking, problem-solving, and adaptability. The authors highlighted that fast changes in the IT sector have increased the need for industry-ready graduates with practical skills and workplace knowledge. The research also showed that there is a gap between what colleges teach and what industries expect because many graduates do not have enough practical training and real-world experience. The study suggested that colleges should improve industry collaboration, practical learning, and skill-based training to improve employability among engineering and IT graduates.

Kajale and Shaikh [6] studied the skills that the Information Technology industry expects from engineering graduates for getting jobs. The study explained that IT companies expect graduates to have both technical skills and soft skills



such as communication, teamwork, problem-solving, adaptability, self-motivation, and leadership skills. The authors highlighted that the fast growth of the Indian IT industry has increased the need for industry-ready graduates with practical knowledge and workplace skills. The research also showed that there is a gap between what colleges teach and what industries expect because many graduates do not get enough practical training and employability-based learning. The study further explained that onboarding training, industry collaboration, practical learning, and soft skill development are important for improving employability and workplace readiness among engineering graduates.

Rahman and Karim [7] studied the career readiness gap among Information Technology students in developing countries. The study explained that many IT students face problems in meeting industry expectations because they do not get enough practical exposure, soft skill training, and industry-based learning. The authors highlighted that employers expect graduates to have technical knowledge along with communication skills, teamwork, adaptability, critical thinking, and problem-solving abilities. The research also explained that internships, mentorship programs, industry collaboration, project-based learning, and career development programs help improve employability and workplace readiness among IT students. The study further suggested that colleges should improve practical learning and industry interaction to prepare graduates for modern workplace requirements.

Pradeep et al. [8] studied the career readiness gap among Information Technology students in developing countries. The study explained that many IT students face problems in meeting industry expectations because they do not get enough practical exposure, soft skill training, and industry-based learning. The authors highlighted that employers expect graduates to have technical knowledge along with communication skills, teamwork abilities, adaptability, critical thinking, and problem-solving skills. The research also explained that internships, AI-based mock interviews, mentorship programs, adaptive learning systems, project-based learning, and industry collaboration help improve employability and workplace readiness among IT students. The study further identified a gap between college curriculum and industry requirements, especially in practical and workplace-related skills, and suggested that educational institutions should improve industry interaction and practical learning to prepare graduates for modern workplace needs.

Kholifah et al.[9] studied how digital skills help vocational education graduates become ready for work. The study included 2,587 vocational graduates and was based on Human Capital Theory, which explains that education and skills help people become more successful in their careers. The researchers found that digital skills, the ability to use new technology, software knowledge, problem-solving skills, and the use of ICT tools all help graduates get better job opportunities. The study also showed that digital communication and teamwork are very important because they help graduates use their digital skills to create new ideas and complete tasks effectively. The authors suggested that vocational institutions should provide training in industry-related software, digital communication, and teamwork projects so that students can develop the skills needed by employers and become more prepared for the modern workplace.

Kholifah et al.[10] studied how digital skills help vocational students get ready for jobs. The study included 2,587 vocational graduates. It was based on Human Capital Theory, which says that education and skills help people succeed in their careers. The researchers found that skills such as using digital tools, learning new technologies, working with software, solving problems, and using ICT resources can improve job opportunities. The study also found that digital communication and teamwork play an important role because they help graduates share ideas, work with others, and complete tasks more effectively. The authors suggested that vocational institutions should provide training in industry-related software, digital communication, and teamwork activities. This can help students develop the skills needed by employers and prepare them for today's digital workplace.

VI. RESEARCH METHODOLOGY

Research Design :- This study uses a simple research plan called a quantitative and descriptive design. It also uses prediction methods to understand data. Machine Learning is used to study and predict how ready IT graduates in Goa are for jobs in the industry. The study looks at how different factors are connected. These include academic



performance, behavior, and job-related skills. The goal is to understand how these factors affect employability and industry readiness in a clear and data-based way.

Study Area :- This study is done in Goa, India. It looks at colleges that teach Information Technology and related courses. The research includes different people involved in education and jobs. These are students, teachers, Training and Placement Officers (TPOs), and IT industry experts in Goa. The study tries to understand their views about IT education and job readiness in Goa's IT field.

Population and Sample Size : The study includes people from Goa who are connected to Information Technology education and jobs. These people are IT students, teachers, Training and Placement Officers (TPOs), and industry professionals.

The sample for the study includes 127 students, 55 academic staff and TPOs, and 45 industry professionals. In total, 227 responses were collected for the analysis.

Sampling Techniques :- The study uses a convenience sampling method. In this method, respondents are selected based on their easy availability and access. This technique was chosen because it saves time and makes it easier to collect data using online platforms.

Data Collection Method :- The study collected primary data using structured questionnaires. These questionnaires were created using Google Forms.

Three different questionnaires were prepared for three groups: students, academic staff and Training & Placement Officers (TPOs), and industry professionals.

The questions included different types such as rating scale (Likert scale), multiple-choice, and category-based questions. These questions were about job skills, employability, readiness for industry, and job opportunities in Goa.

VII. DATA ANALYSIS AND INTERPRETATION

Introduction : This section explains the analysis and understanding of the data collected from students, academic representatives/Training and Placement Officers (TPOs), and industry professionals about the employability opportunities and industry readiness of IT graduates in Goa. The data was collected using structured questionnaires through Google Forms. It was then analyzed using statistical methods and machine learning techniques.

Demographic Analysis:- Demographic analysis was done to understand the background of the respondents. This included details such as their education level, stakeholder group, and professional involvement.

The respondents included:

IT students studying higher education courses in Goa

Academic representatives and Training and Placement Officers (TPOs)

Industry professionals working in the IT sector in Goa

The demographic information collected helped group the respondents properly and made the results easier to understand and interpret.

Perception of Employment Opportunities:- The analysis showed that many students feel that job opportunities for IT graduates in Goa are average and somewhat limited when compared to bigger IT cities in India. Many students were also worried about lower salary packages and fewer career growth opportunities available within the state.

Interpretation

This shows that the IT sector in Goa is slowly growing, but many students still feel that local job opportunities are limited. Because of this, many IT graduates think about searching for jobs outside Goa where they may find better career opportunities and higher salaries.

Factors Affecting Employability

Students identified several important factors that affect employability. These include:

Technical skills

Communication skills

Internship experience



Industry exposure
Soft skills
Availability of local job opportunities

Interpretation

The findings show that getting a job depends not only on technical knowledge but also on professional and personal skills. Students believe that practical experience, good communication, and industry exposure are very important for getting employment in the IT sector.

Confidence in Securing Employment

The analysis showed that students had different levels of confidence about getting a job after graduation. Students who had internship experience and took part in career-related activities felt more confident about finding employment.

Interpretation

The findings suggest that career guidance programs, internships, and interaction with industry professionals help improve students' confidence and prepare them better for employment.

Career Mobility Intentions:-A large number of students showed interest in looking for job opportunities outside Goa.

Interpretation:-This finding shows that many students are concerned about limited job opportunities, lower salary expectations, and fewer long-term career growth options in the IT sector within Goa.

Analysis of Academic/TPO Responses

Academic representatives and Training and Placement Officers (TPOs) shared their views on the readiness of graduates for employment. They provided information about students' communication skills, adaptability, and overall employability.

Importance of Soft Skills

Most academic respondents agreed that soft skills training is very important for preparing graduates to meet industry requirements and become job-ready.

Interpretation

The findings show that soft skills play a major role in employability. Skills such as communication, teamwork, adaptability, and leadership help students perform better in the workplace and increase their chances of getting employed.

Industry Readiness of Graduates

Academic respondents stated that many graduates have good theoretical knowledge from their studies. However, they believe that students need more practical experience and workplace-focused training to be fully prepared for industry jobs.

Interpretation

The findings suggest that there is a gap between what students learn in academic programs and what industries expect from employees. More practical learning and industry exposure can help bridge this gap and improve graduate readiness.

Communication and Teamwork Skills

The analysis showed that communication skills and the ability to work well with others are important factors in determining whether a graduate is ready for employment.

Interpretation

The findings suggest that graduates who can communicate clearly and work effectively in a team are seen as more employable. These skills help them adjust to the workplace and perform better in professional environments.

Analysis of Industry Responses

Industry professionals shared their views on hiring challenges, the skills of graduates, and job opportunities available in Goa.



Employer Perception of Graduate Readiness

Many employers stated that graduates need to improve their communication skills, practical knowledge, and ability to adapt to workplace environments.

Interpretation

The findings show that employers expect graduates to have both strong technical skills and professional skills before joining the workforce. Good communication, practical experience, and workplace adaptability are considered important for employment success.

Industry Expectations

Employers identified several important factors that improve employability. These include:

- Technical knowledge
- Communication skills
- Problem-solving ability
- Teamwork
- Adaptability
- Workplace discipline

Interpretation

The findings show that the IT industry looks for both technical and soft skills in graduates. Employers believe that a combination of these skills is important for getting a job, performing well at work, and achieving long-term career growth.

Industry-Academia Collaboration

Most industry respondents agreed that educational institutions and industries should work more closely together.

Interpretation

The findings suggest that stronger partnerships between colleges and industries can help reduce the gap between academic learning and workplace requirements. Such collaboration can improve the curriculum, provide more practical experience, and better prepare students for employment.

Statistical Analysis

Simple statistical methods such as percentages, frequency distributions, and mean analysis were used to summarize the responses collected from the participants.

Other statistical methods, including correlation analysis and chi-square tests, were used to study the relationship between different employability factors, such as:

- Communication skills and employability
- Technical skills and job readiness
- Internship experience and confidence in getting a job
- Industry awareness and career planning

The analysis showed that these factors are closely related to employability and workplace readiness among IT graduates.

Interpretation

The statistical results suggest that communication skills, technical knowledge, internship experience, and awareness of the industry play an important role in improving employability and preparing graduates for the workplace.

Machine Learning Analysis

Machine Learning techniques were used to predict employability readiness and confidence in securing employment among IT graduates.

The following Machine Learning models were used:

- Logistic Regression
- Decision Tree
- Random Forest



Support Vector Machine (SVM)

Before training the models, the data was cleaned, organized, and important features were selected.

The models were evaluated using:

Accuracy

Precision

Recall

F1-score

Among all the models tested, Random Forest and Decision Tree performed better in predicting employability-related outcomes.

Interpretation

The findings show that Machine Learning can be a useful tool for analyzing employability. It helps identify the key factors that influence graduate readiness and employment opportunities.

Overall Interpretation of Findings

The overall findings of the study show that the employability of IT graduates in Goa is influenced by several factors. These include technical skills, communication skills, soft skills, internship experience, and awareness of industry requirements.

The study also highlights:

A gap between academic learning and industry expectations

The importance of collaboration between educational institutions and industries

The need for more practical and employability-focused training programs

Although the IT sector in Goa is growing, many students still feel that local job opportunities are limited. As a result, many graduates consider looking for employment outside the state.

The findings suggest that educational institutions should focus more on skill development, career guidance programs, internships, and industry interaction. These efforts can help improve graduate employability and better prepare students for workplace success in Goa.

VIII. FINDINGS OF THE STUDY

Reliability Analysis for students

To evaluate the reliability and internal consistency of the research instrument, Cronbach's Alpha was calculated for the items measuring students' perceptions of employability and career readiness within Goa's IT sector. The scale comprised nine items covering key dimensions, including employment prospects, availability of job opportunities, internship experiences, career confidence, awareness of industry trends, and perceptions of the quality of IT education. The reliability analysis produced a **Cronbach's Alpha value of 0.847**, indicating good internal consistency among the questionnaire items. This result suggests that the items collectively measure the underlying construct in a consistent and dependable manner. As reliability coefficients exceeding 0.70 are generally considered acceptable, and those above 0.80 indicate good reliability, the obtained value demonstrates that the instrument is sufficiently robust for subsequent statistical analyses.

Table 1. Reliability Analysis of the Employability and Career Readiness Scale

Construct	Number of Items	Cronbach's Alpha
Employability and Career Readiness of IT Students	9	0.847

The findings confirm that the scale exhibits a satisfactory level of reliability and can be confidently used to assess students' perceptions of employability and career readiness in the context of Goa's IT sector. The strong internal consistency of the instrument supports the validity of the analyses and interpretations presented in this study.



Reliability Analysis for Academics

To evaluate the internal consistency of the academic survey instrument, Cronbach's Alpha was calculated using twelve items covering key aspects such as the quality of IT education, curriculum relevance, internship opportunities, industry preparedness, employability prospects, and infrastructural support for IT graduates in Goa. The analysis produced a Cronbach's Alpha value of **0.846**, indicating a strong level of internal consistency among the questionnaire items.

The reliability coefficient exceeds the commonly accepted threshold of 0.70, confirming that the instrument consistently measures academicians' perceptions of the employability and industry readiness of IT graduates in Goa. This finding suggests that the survey items are well aligned, sufficiently correlated, and collectively represent the underlying construct being examined. Consequently, the questionnaire was deemed reliable and suitable for further statistical analysis and interpretation.

Table 2. Reliability Analysis of the Academic Questionnaire

Construct	Number of Items	Cronbach's Alpha
Academic Perceptions on Employability and Industry Readiness of IT Graduates in Goa	12	0.846

Reliability Analysis for Industry

To evaluate the internal consistency of the industry questionnaire, Cronbach's Alpha was computed using eleven items that captured employers' perceptions of graduate readiness, communication skills, adaptability, domain knowledge, social competencies, career opportunities, salary competitiveness, industry engagement, government support, and industry-academia collaboration.

The analysis yielded a Cronbach's Alpha coefficient of **0.683**, indicating a moderate level of internal consistency among the questionnaire items. While the value falls slightly below the commonly recommended threshold of 0.70, it remains acceptable for exploratory research and suggests that the instrument reasonably measures the underlying construct of industry perceptions regarding the employability and readiness of IT graduates in Goa.

Table 3. Reliability Analysis of the Industry Questionnaire

Construct	Number of Items	Cronbach's Alpha
Industry Perceptions on Employability and Industry Readiness of IT Graduates in Goa	11	0.683

The findings indicate that the questionnaire demonstrates an acceptable degree of reliability for the purposes of this study. Accordingly, the instrument was considered suitable for further statistical analysis and interpretation.

Table 4 :-Summary of your three stakeholder groups:

Respondent Group	Cronbach's Alpha
Students	0.847
Academicians	0.846
Industry Experts	0.683

IX Hypothesis :-Students Perspective

H01

There is no connection between students' knowledge about the IT job market and their confidence in getting a job in Goa.

H11

There is a connection between students' knowledge about the IT job market and their confidence in getting a job in Goa.



Hypothesis Testing for H01

To investigate the relationship between students' awareness of the IT job market and their confidence in securing employment in Goa, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a significance level of **5% ($\alpha = 0.05$)**.

The analysis yielded a **Chi-Square statistic of 25.369** with **8 degrees of freedom** and a **p-value of 0.001346**.

As the obtained p-value is substantially lower than the prescribed significance level of 0.05, the null hypothesis (**H01**) was rejected, while the alternative hypothesis (**H11**) was accepted. This result indicates a statistically significant association between students' awareness of the IT job market and their confidence in securing employment in Goa.

The findings suggest that students with greater awareness of current job market trends, employment opportunities, and industry expectations tend to exhibit higher confidence in obtaining employment within Goa's IT sector. This relationship underscores the importance of strengthening career guidance initiatives, enhancing industry exposure, and improving access to job market information to support students' career preparedness.

Table 5 Chi-Square Test Results for H01

Hypothesis	Chi-Square Value	df	p-value	Decision
H01	25.369	8	0.001346	Reject H01

Conclusion

The results confirm that awareness of the IT job market plays a meaningful role in shaping students' confidence regarding future employment. Therefore, initiatives such as career counseling, industry interaction programs, and placement support may significantly enhance employability perceptions and overall career readiness among IT graduates in Goa.

H02

There is no connection between taking part in career fairs or recruitment activities and students' views about job opportunities.

H12

There is a connection between taking part in career fairs or recruitment activities and students' views about job opportunities.

Hypothesis Testing for H02

To investigate the relationship between participation in career fairs or recruitment activities and students' perceptions of job opportunities in Goa, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a significance level of **5% ($\alpha = 0.05$)**.

The analysis yielded a **Chi-Square statistic of 37.194**, with **2 degrees of freedom**, and a **p-value of 8.382×10^{-9}** .

Since the obtained p-value is considerably lower than the established significance threshold of 0.05, the null hypothesis (**H02**) was rejected and the alternative hypothesis (**H12**) was accepted. This result indicates a statistically significant association between participation in career fairs or recruitment activities and students' perceptions of job opportunities in Goa.

The findings reveal that students who actively engage in career fairs, placement drives, and recruitment-related activities tend to perceive employment opportunities within Goa's IT sector more positively. Such exposure appears to strengthen their understanding of industry expectations, emerging market demands, and available career pathways.

Table 6. Chi-Square Test Results for H02

Hypothesis	Chi-Square Value	Df	p-value	Decision
H02	37.194	2	8.382×10^{-9}	Reject H02

Conclusion

The results highlight the important role of career fairs and recruitment initiatives in shaping students' perceptions of employment opportunities. Strengthening institutional efforts through campus recruitment programs, industry



interaction sessions, and career development workshops may further enhance career awareness, employability perceptions, and overall job readiness among IT students in Goa.

H03

There is no connection between students' views about the quality of IT education and their confidence in getting a job.

H13

There is a connection between students' views about the quality of IT education and their confidence in getting a job.

Hypothesis Testing for H03

To examine the relationship between students' perceptions of IT education quality and their confidence in securing employment in Goa, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a significance level of **5% ($\alpha = 0.05$)**.

The test produced a **Chi-Square value of 46.36**, with **4 degrees of freedom**, and a **p-value of 2.073×10^{-9}** .

Since the p-value is well below 0.05, the null hypothesis (**H03**) was rejected and the alternative hypothesis (**H13**) was accepted. This confirms a statistically significant association between students' perceptions of IT education quality and their confidence in securing employment in Goa.

The findings indicate that students who view the quality of IT education positively are more confident about their employment prospects in Goa's IT sector. This highlights the importance of curriculum quality, practical training, and industry-relevant learning in strengthening employability and career confidence.

Table 7. Chi-Square Test Results for H03

Hypothesis	Chi-Square Value	df	p-value	Decision
H03	46.36	4	2.073×10^{-9}	Reject H03

Conclusion

The results show that perceived IT education quality strongly influences students' confidence in securing employment. Enhancing curriculum design, practical exposure, and industry-oriented training can further improve employability readiness among IT graduates in Goa.

Academic Perspective

H04

There is no connection between soft skill training and graduates being ready for industry jobs.

H14

There is a connection between soft skill training and graduates being ready for industry jobs.

Hypothesis Testing for H04

To examine the relationship between curriculum preparedness (used as a proxy for soft skill training) and graduates' readiness for industry jobs, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The test yielded a **Chi-Square value of 9.9681**, with **6 degrees of freedom**, and a **p-value of 0.126**.

Since the p-value is greater than 0.05, the null hypothesis (**H04**) was not rejected. This indicates no statistically significant association between curriculum preparedness and graduates' readiness for industry jobs.

The findings suggest that curriculum preparedness alone does not significantly influence whether graduates are perceived as industry-ready. Other factors, such as practical exposure, technical competence, internship experience, communication skills, and industry engagement, may have a greater impact.

Table 8. Chi-Square Test Results for H04

Hypothesis	Chi-Square Value	df	p-value	Decision
H04	9.9681	6	0.126	Fail to Reject H04



Conclusion

The results show no significant relationship between curriculum preparedness and graduates' readiness for industry jobs. While curriculum quality remains important, improving employability may require stronger industry collaboration, experiential learning, and skill-based training.

H05

There is no connection between communication skills and graduates being ready for jobs.

H15

There is a connection between communication skills and graduates being ready for jobs.

Hypothesis Testing for H05

To examine the relationship between communication skills and graduates' readiness for employment, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The test yielded a **Chi-Square value of 69.239**, with **4 degrees of freedom**, and a **p-value of 3.285×10^{-14}** .

Since the p-value is well below 0.05, the null hypothesis (**H05**) was rejected, and the alternative hypothesis (**H15**) was accepted. This confirms a statistically significant association between communication skills and graduates' readiness for employment.

The findings indicate that communication skills play a key role in job readiness. Graduates with stronger communication abilities are more likely to be seen as prepared for professional roles and workplace interactions.

Table 9. Chi-Square Test Results for H05

Hypothesis	Chi-Square Value	df	p-value	Decision
H05	69.239	4	3.285×10^{-14}	Reject H05

Conclusion

The results show that communication skills significantly influence graduates' readiness for employment. Strengthening communication training, presentation skills, and interpersonal development can help improve graduate employability.

H06

There is no connection between graduates' ability to adapt and their readiness for the workplace.

H16

There is a connection between graduates' ability to adapt and their readiness for the workplace.

Hypothesis Testing for H06

To examine the relationship between graduates' adaptability (measured using analytical skills as a proxy) and workplace readiness, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The test produced a **Chi-Square value of 9.7633**, with **6 degrees of freedom**, and a **p-value of 0.135**.

Since the p-value is greater than 0.05, the null hypothesis (**H06**) was not rejected. This indicates no statistically significant association between graduates' adaptability and workplace readiness.

The findings suggest that adaptability alone does not significantly influence job readiness among IT graduates in Goa. Other factors, such as technical skills, practical experience, communication abilities, and industry exposure, may have a greater impact.

Table 9. Chi-Square Test Results for H06

Hypothesis	Chi-Square Value	df	p-value	Decision
H06	9.7633	6	0.135	Fail to Reject H06

Conclusion

The results show no significant relationship between graduates' adaptability and workplace readiness. While adaptability remains valuable, improving job readiness may require stronger technical training, practical learning, and industry engagement.



Industry Perspective

H07

There is no connection between technical knowledge and the employability of IT graduates in Goa.

H17

There is a connection between technical knowledge and the employability of IT graduates in Goa.

Hypothesis Testing for H07

To examine the relationship between technical knowledge and the employability of IT graduates in Goa, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The analysis yielded a **Chi-Square value of 42.669**, with **9 degrees of freedom**, and a **p-value of 2.479×10^{-6}** .

As the p-value is well below the significance threshold of 0.05, the null hypothesis (**H07**) was rejected and the alternative hypothesis (**H17**) was accepted. This confirms a statistically significant association between technical knowledge and the employability of IT graduates in Goa.

The findings indicate that technical knowledge plays a key role in employability within Goa's IT sector. Graduates with stronger domain expertise and technical competencies are more likely to be viewed as employable and better equipped to meet industry expectations.

Table 10. Chi-Square Test Results for H07

Hypothesis	Chi-Square Value	df	p-value	Decision
H07	42.669	9	2.479×10^{-6}	Reject H07

Conclusion

The results show that technical knowledge significantly influences the employability of IT graduates in Goa. Strengthening technical training, aligning curricula with industry requirements, and expanding hands-on learning opportunities can help improve graduate employability and better prepare students for industry demands.

H08

There is no connection between social skills and employers' expectations for team performance.

H18

There is a connection between social skills and employers' expectations for team performance.

Hypothesis Testing for H08

To examine the relationship between social skills and employers' expectations regarding team performance, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The analysis yielded a **Chi-Square value of 66.738**, with **16 degrees of freedom**, and a **p-value of 3.691×10^{-8}** .

As the p-value is well below the significance threshold of 0.05, the null hypothesis (**H08**) was rejected, and the alternative hypothesis (**H18**) was accepted. This confirms a statistically significant association between social skills and employers' expectations for team performance.

The findings indicate that social skills play a crucial role in shaping employers' perceptions of an individual's ability to perform effectively within a team. Graduates with stronger interpersonal and social skills are more likely to be viewed as valuable team members who can collaborate efficiently, communicate clearly, and contribute positively in professional work environments.

Table 11. Chi-Square Test Results for H08

Hypothesis	Chi-Square Value	df	p-value	Decision
H08	66.738	16	3.691×10^{-8}	Reject H08

Conclusion

The results demonstrate that social skills significantly influence employers' expectations of team performance. Strengthening communication, teamwork, and collaborative problem-solving skills can enhance graduates' workplace readiness and improve their employability in Goa's IT sector.



H09

There is no connection between collaboration between colleges and industries and the job opportunities of IT graduates in Goa.

H19

There is a connection between collaboration between colleges and industries and the job opportunities of IT graduates in Goa.

Hypothesis Testing for H09

To examine the relationship between collaboration between educational institutions and the IT industry and the job opportunities available to IT graduates in Goa, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The analysis yielded a **Chi-Square value of 53.089**, with **20 degrees of freedom**, and a **p-value of 7.887×10^{-5}** .

As the p-value is well below the significance threshold of 0.05, the null hypothesis (**H09**) was rejected, and the alternative hypothesis (**H19**) was accepted. This confirms a statistically significant association between college-industry collaboration and job opportunities for IT graduates in Goa.

The findings suggest that stronger collaboration between educational institutions and the IT industry can positively influence employment opportunities for graduates. Initiatives such as internships, industry partnerships, guest lectures, live projects, and collaborative training programs can help bridge the gap between academic learning and industry expectations.

Table 12. Chi-Square Test Results for H09

Hypothesis	Chi-Square Value	df	p-value	Decision
H09	53.089	20	7.887×10^{-5}	Reject H09

Conclusion

The results indicate that collaboration between colleges and industry significantly affects job opportunities for IT graduates in Goa. Strengthening industry partnerships and increasing practical exposure can improve employability and better prepare graduates for the evolving demands of the IT sector.

H010

There is no connection between the growth of the IT industry in Goa and job opportunities for IT graduates.

H110

There is a connection between the growth of the IT industry in Goa and job opportunities for IT graduates.

Hypothesis Testing for H010

To examine the relationship between the growth of the IT industry in Goa and job opportunities for IT graduates, a **Chi-Square Test of Independence** was conducted using **R statistical software** at a **5% significance level ($\alpha = 0.05$)**.

The analysis yielded a **Chi-Square value of 187.14**, with **85 degrees of freedom**, and a **p-value of 1.2×10^{-9}** .

As the p-value is far below the significance threshold of 0.05, the null hypothesis (**H010**) was rejected, and the alternative hypothesis (**H110**) was accepted. This indicates a statistically significant association between the growth of Goa's IT industry and job opportunities for IT graduates.

The findings suggest that expansion within the IT sector has a direct influence on employment prospects for graduates. As the industry grows, it creates more opportunities for skilled professionals, increases demand for technical expertise, and strengthens career pathways for IT graduates in Goa.

Table 13. Chi-Square Test Results for H010

Hypothesis	Chi-Square Value	df	p-value	Decision
H010	187.14	85	1.2×10^{-9}	Reject H010



Conclusion

The results confirm that the growth of the IT industry significantly impacts job opportunities for IT graduates in Goa. Continued investment in infrastructure, industry expansion, and supportive government policies can further enhance employment prospects and contribute to the long-term development of Goa's IT ecosystem.

X. DISCUSSION OF FINDINGS

This study examined the employability of IT graduates in Goa through the perspectives of students, academicians, and industry professionals. The findings show that employability is shaped by a combination of technical skills, soft skills, industry exposure, and broader ecosystem factors such as collaboration and industry growth.

From the **student perspective**, the results indicate that awareness of the IT job market significantly influences students' confidence in securing employment in Goa. Students who were more familiar with industry trends, available job roles, and employer expectations reported higher confidence in their career prospects. Participation in career fairs and recruitment activities also had a significant impact on how students perceived job opportunities. Such exposure appears to improve career awareness and provide practical insights into industry demands. In addition, students' perceptions of the quality of IT education were strongly linked to their confidence in finding employment. This highlights the importance of curriculum quality, practical learning, and industry-relevant education in building career confidence among IT students.

From the **academic perspective**, the findings present a more nuanced understanding of graduate readiness. Curriculum preparedness, used here as a proxy for soft skill training, did not show a significant relationship with graduates' readiness for industry roles. Likewise, graduates' adaptability, measured through analytical capability, was not significantly associated with workplace readiness. These findings suggest that curriculum design alone may not be enough to improve employability. However, communication skills emerged as a highly significant factor in job readiness. This underscores the importance of effective communication as a core employability skill valued by employers. Strong communication skills support professional interaction, teamwork, and workplace integration, making graduates better prepared for employment.

From the **industry perspective**, technical knowledge emerged as one of the strongest predictors of employability. Employers placed considerable importance on domain knowledge and technical competence when evaluating candidates, indicating that graduates need strong industry-relevant technical skills to remain competitive. Social skills also showed a significant relationship with employers' expectations of team performance. Employers increasingly value candidates who can collaborate effectively, communicate clearly, and contribute positively in team-based environments. The results further revealed that collaboration between educational institutions and industry significantly affects job opportunities for IT graduates. Stronger industry-academia partnerships can help bridge the gap between classroom learning and workplace expectations through internships, live projects, and skill-based training. In addition, the growth of Goa's IT industry showed a strong positive association with employment opportunities for graduates. As the sector expands, it creates greater demand for skilled professionals and opens new career pathways for local talent.

Taken together, these findings show that employability is shaped by multiple interconnected factors rather than a single variable. While technical expertise remains essential, employability also depends heavily on communication skills, social competence, industry exposure, and institutional support. The study highlights the need for closer alignment between academia and industry to ensure graduates develop both the technical and professional skills required in today's workplace.

Overall, improving the employability of IT graduates in Goa requires a collaborative effort from educational institutions, industry stakeholders, and policymakers. Strengthening curriculum relevance, expanding practical learning opportunities, promoting soft skill development, and supporting the growth of Goa's IT ecosystem can collectively improve employment outcomes for IT graduates.



XI. SUGGESTIONS AND RECOMMENDATIONS

Based on the findings of this study, several recommendations are proposed to improve the employability of IT graduates in Goa and strengthen the alignment between academic outcomes and industry expectations.

1. Strengthen Industry-Oriented Curriculum

Educational institutions should regularly review and update their IT curriculum to keep pace with changing industry demands. Emerging areas such as Artificial Intelligence, Machine Learning, Cloud Computing, Cybersecurity, and Data Analytics should be integrated into academic programs. A curriculum that reflects real-world requirements can better equip graduates for evolving job roles.

2. Enhance Technical Skill Development

Technical knowledge emerged as a key factor influencing employability. Institutions should therefore place greater emphasis on practical skill development through coding labs, project-based learning, hackathons, technical workshops, and certification programs. Hands-on learning can strengthen problem-solving abilities and better prepare students for industry challenges.

3. Strengthen Soft Skills and Communication

Communication and social skills were identified as critical employability factors. Colleges should incorporate structured training in communication, presentation, teamwork, leadership, and interpersonal skills. Activities such as group discussions, seminars, mock interviews, and presentations can help students develop confidence and professional readiness.

4. Foster Stronger Industry–Academia Collaboration

Closer collaboration between educational institutions and the IT industry is essential to bridge the gap between academic learning and workplace expectations. Partnerships through internships, industrial visits, guest lectures, mentoring, and live projects can provide students with meaningful exposure to real-world work environments.

5. Expand Internship and Placement Opportunities

Internships and recruitment activities play an important role in shaping students' career awareness and job confidence. Institutions should strengthen placement support and actively collaborate with companies to create more internship and campus recruitment opportunities for IT students in Goa.

6. Improve Career Guidance and Market Awareness

Students need greater awareness of job market trends, employer expectations, and emerging career opportunities. Colleges should organize career counseling sessions, placement training, industry interaction programs, and job fairs to help students make informed career decisions and prepare effectively for employment.

7. Strengthen Goa's IT Infrastructure and Innovation Ecosystem

The growth of Goa's IT sector directly affects employment opportunities for graduates. Government bodies and policymakers should invest in stronger IT infrastructure, startup incubation centers, innovation hubs, and digital ecosystems to attract more technology companies and generate employment for local talent.

8. Encourage Policy Support for IT Sector Growth

Supportive government policies, investment incentives, and industry-friendly regulations can accelerate the growth of the IT sector in Goa. Public–private partnerships and targeted skill development initiatives can further strengthen employment generation for IT graduates.

9. Promote Continuous Learning and Upskilling

Given the rapid pace of technological change, graduates must embrace continuous learning. Institutions should encourage students to pursue online certifications, industry-recognized training, and ongoing skill development to remain competitive in the evolving IT job market.

10. Develop an Employability Assessment Framework

Educational institutions can adopt data-driven employability assessment models to continuously evaluate student readiness. Integrating learning analytics and AI-based monitoring systems can help identify skill gaps early and enable targeted interventions to improve graduate employability.



XII. CONCLUSION

This study examined the employability of IT graduates in Goa through the perspectives of students, academicians, and industry professionals. The findings reveal that employability is shaped by multiple interconnected factors, including technical knowledge, communication skills, social skills, industry exposure, and the overall growth of the IT sector.

From the student perspective, awareness of the IT job market, participation in career-related activities, and perceptions of the quality of IT education were found to significantly influence confidence in securing employment. These factors play a meaningful role in shaping students' career expectations and readiness for the job market.

From the academic perspective, communication skills emerged as a significant factor influencing graduates' job readiness, while curriculum preparedness and adaptability showed comparatively weaker associations. This suggests that academic knowledge alone is not enough; graduates must also develop strong professional and interpersonal skills to succeed in today's competitive work environment.

From the industry perspective, technical knowledge, social skills, industry-academia collaboration, and the growth of Goa's IT sector were found to significantly influence employability and job opportunities. These findings highlight the importance of aligning educational outcomes with industry expectations to reduce skill gaps and strengthen workforce readiness.

Overall, the study demonstrates that improving the employability of IT graduates in Goa requires a collaborative effort from educational institutions, industry stakeholders, and policymakers. Strengthening industry-relevant curricula, expanding practical learning opportunities, enhancing soft skill development, and supporting the continued growth of Goa's IT ecosystem can collectively improve employment outcomes for graduates.

This study offers valuable insights into the challenges and opportunities surrounding IT graduate employability in Goa. It also provides a strong foundation for future research, policy development, and strategic initiatives aimed at building a skilled, adaptable, and industry-ready workforce capable of meeting the evolving demands of the digital economy.

XIII. FUTURE SCOPE OF THE STUDY

This study provides valuable insights into the employability of IT graduates in Goa by capturing the perspectives of students, academicians, and industry professionals. While the findings offer a meaningful understanding of the current employability landscape, several areas warrant further exploration.

Future research could expand the scope of this study by including a larger and more diverse sample across multiple states or regions. Such broader coverage would enable stronger comparisons and improve the generalizability of the findings. Comparative studies involving Goa and other emerging IT hubs may also provide deeper insights into regional variations in employability challenges and opportunities.

As this study primarily relied on survey-based data and statistical analysis, future research could benefit from mixed-method or longitudinal approaches to examine how employability trends evolve over time. Incorporating qualitative methods such as interviews, focus group discussions, and case studies may offer richer insights into the experiences, expectations, and challenges faced by both graduates and employers.

Given the growing influence of emerging technologies, future studies may also explore the application of Artificial Intelligence, Machine Learning, and Learning Analytics in employability assessment. Predictive models could help identify skill gaps, forecast career readiness, and recommend personalized interventions for students. In addition, AI-driven dashboards and intelligent decision-support systems could support educational institutions in monitoring student progress and improving employability outcomes.

Further research may examine additional factors affecting employability, including internship quality, entrepreneurial mindset, digital competency, remote work readiness, and evolving industry skill demands. Exploring the impact of government policies, startup ecosystems, and investments in IT infrastructure could also provide a broader understanding of employment generation within Goa's technology sector.



Overall, future studies can build on this research by integrating advanced analytical techniques, larger datasets, and technology-driven frameworks to develop more effective strategies for enhancing the employability of IT graduates and preparing them for the changing demands of the digital economy.

REFERENCES / BIBLIOGRAPHY

- [1]. Sehgal, N., & Nasim, S. (2018). *Total Interpretive Structural Modelling of Predictors for Graduate Employability for the Information Technology Sector*. Higher Education, Skills and Work-based Learning, 8(4), 495–510. Emerald Publishing. DOI: 10.1108/HESWBL-08-2017-0047.
- [2]. Vlachopoulos, D., & Tsitiridou, O. P. (2026). Preparing university graduates for the labour market through employability skills development and university–industry collaboration: A systematic review. *Education Sciences*, 16(3), 426. <https://doi.org/10.3390/educsci16030426>
- [3]. Awadhiya, A. K. (2025). Employability skills in IT sector: What matters most for graduate success? *International Journal of Changes in Education*, 3(1), 1–8. <https://doi.org/10.47852/bonviewIJCE52024010>
- [4] Misra, R. K., & Khurana, K. (2017). Employability skills among information technology professionals: A literature review. *Procedia Computer Science*, 122, 63–70. <https://doi.org/10.1016/j.procs.2017.11.342>
- [5] Reddy, P., & Kumar, S. (2024). Analysing information technology industry expectations on expected skills from engineering graduates to gain employability. *International Journal of Innovative Research in Engineering and Management*, 11(3), 45–52.
- [6] Kajale, A. S., & Shaikh, A. (2023). Analysing information technology industry expectations on expected skills from engineering graduates to gain employability. *European Economic Letters*, 13(4), 405–414.
- [7] Rahman, M., & Karim, A. (2025). Bridging the career readiness gap: A structured review of interventions for IT undergraduates in developing-country contexts. *Journal of Information Technology Education and Research*, 18(2), 112–126.
- [8] Pradeep, R. M. M., et al. (2025). Bridging the career readiness gap: A structured review of interventions for IT undergraduates in developing-country contexts. *Proceedings of IEEE Conference on Career Readiness and Employability Technologies*, 1–6.
- [9] Kholifah, N., Nurtanto, M., Sutrisno, V. L. P., Majid, N. W. A., Subakti, H., Daryono, R. W., & Achmadi, A. (2025). *Unlocking workforce readiness through digital employability skills in vocational education graduates: A PLS-SEM analysis based on human capital theory*. *Social Sciences & Humanities Open*, 11, 101625. <https://doi.org/10.1016/j.ssaho.2025.101625>
- [10] Kholifah, N., Nurtanto, M., Sutrisno, V. L. P., Majid, N. W. A., Subakti, H., Daryono, R. W., & Achmadi, A. (2025). *Unlocking workforce readiness through digital employability skills in vocational education graduates: A PLS-SEM analysis based on human capital theory*. *Social Sciences & Humanities Open*, 11, 101625. <https://doi.org/10.1016/j.ssaho.2025.101625>.

