

Report On
Women's Participation and Progression in IT Skill Development
Programs at Creative IT Institute

By

Omama Haque Aditi
19304042

An internship report submitted to the BRAC Business School in partial fulfillment of the
requirements for the degree of
Bachelor of Business Administration

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Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at BRAC University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I/We have acknowledged all main sources of help.

Student's Full Name & Signature:

Omama Haque Aditi
ID: 19304042

Supervisor's Full Name & Signature:

Shihab Kabir Shuvo
Senior Lecturer, BBS

BRAC University

Letter of Transmittal

Shihab Kabir Shuvo

Senior Lecturer,

BBS

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Submission of internship report on women's participation and progression in IT skill development programs at Ccreative IT Institute.

Dear Sir,

With all due respect, I am submitting this letter of transmittal together with my report on women's involvement and progression in IT skill development programs from the perspective of the Creative IT Institute, which I authored while working there. I based my whole report on the knowledge I gathered throughout my time there.

When completing my report, I followed all of the directions provided by my company's administrators as well as the requirements outlined in the BBA Internship Guidelines.

If you could accept this report, I would be thankful. Please email me if you have any queries regarding this report.

Omama Haque Aditi

19304042

BRAC Business School

BRAC University

Date: 19 September 2023

Non-Disclosure Agreement

The purpose of the agreement between Creative IT Institute. and Omama Haque Aditi, a student at BRAC University, is to guarantee that the student won't disclose any sensitive information about the business without authorization.

Omama Haque Aditi

19304042

BRAC Business School

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Acknowledgment

Firstly, I thank Allah (SWT), the Almighty, for His blessings that helped me finish my research.

My utmost gratitude goes to my academic supervisor Shihab Kabir Shuvo sir for his helpful guidance in every step of the report writing. His support was essential for completing this report regardless of all the challenges. Cannot thank enough for his patience and availability.

Besides, I acknowledge the efforts and support of all my faculties from BBS who helped me throughout the course work without which I could not nurture my fundamentals of business studies. Thanks to all my classmates for making the journey enjoyable.

Nonetheless, I thank my work supervisor and colleagues for helping me gather data and all necessities throughout the research process.

Lastly, I am extremely thankful to my parents for their endless support and to myself for staying in harmony with resilience.

Executive Summary

In 2019, I started my journey at Creative IT Institute with an internship, later worked as assistant faculty member, then promoted to faculty member, learning the ropes of Coding for Kids that was later introduced to Creative Juniors, a comprehensive program for school children ages 8–12 and 14-18. I served as an instructor, developing, leading programs and teaching youngsters. The result of my experience was not only rapid improvement in my leadership and pedagogical performance but I also took on this redefining work in the development of the company from an IT-education for adults to an IT-education focused more on children. The job has allowed me to hone my professional skills, particularly in leadership, team management, and multitasking. It has also grounded a problem-solution mindset, adaptive nature. Struggles such as balancing a fast-paced working schedule with full-time schooling and handling expectations of my guardians have taught me to become a better mediator. Yet this job has brought about a different kind of insight into gender in IT. Although more than 50% of the Bangladeshi population is women, their representation in IT is low. Questions about how women do IT skills preparation, the challenges they face, and organizations' initiatives to support it will be investigated in my research. The research project will investigate the reasons underlying this disparity, and provide practical suggestions for how to increase the participation of women in the vital IT sector in Bangladesh, a sector without which the country will not succeed in the 4th industrial revolution.

Keywords: Women's participation in IT, IT Institute, IT development, gender discrimination, leadership, team management disparity.

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List of Acronyms

IT	Information Technology
CITI	Creative IT Institute
CBG	Creative Business Group
QMD	Quality Management Department

Chapter 1:

Overview of Job

1.1 Student Information

Name	Omama Haque Aditi
ID	19304042
Program	Bachelor of Business Administration
Major	Computer Information Management
Minor	Accounting

1.2 Job Information

1.2.1 Company Information

Period	July 1, 2021, till date
Company Name	Creative IT Institute
Department	Web and Software Department
Address	Campus 2, Meher Plaza (3rd, 4th floor) House#13/A, Road#5 Dhanmondi, Dhaka - 1205, Bangladesh
Website	www.creativeit.institute.com

1.2.2 Company Supervisor Information

Name	Md. Shohan Hossain Ean
Position	Head of Web and Software Department

1.2.3 Job Scope

Job Description

Job Title	Faculty Member
Type	Full-Time
Mode	Hybrid
Working Hours	Flexible (8 hours a day)
Weekdays	Monday to Saturday
Job Responsibilities	<ul style="list-style-type: none">● Planning of different courses.● Creating or restructuring course modules based on demand and trend.● Conducting online classes with Zoom.● Conducting monthly offline classes, orientation, and farewells for each batch.● Producing recorded videos for the students.● Staying connected with the student community and solving their problems.● Connecting students to the Career and Placement Department.● Reporting student status to the Quality Management Department.● Collaborating with the Business Development Department to increase sales.● Conducting seminars for sales and awareness.● Working on production work given by the supervisor.

1.3 Job Outcomes

1.3.1 My Contribution to the Company

In early 2019, I did an internship at the Creative IT Institute. Later, for my studies, I could not accept the full-time offer. However, I was always connected with my team and have been learning from them. Although I was involved in different smaller projects casually before, I officially rejoined the Creative IT Institute in 2021 during the pandemic when Universities went online as an Assistant Faculty member teaching Responsive Web Design to students. Amidst the second phase of the Corona pandemic, Creative IT took the opportunity to create

tech awareness among children and make them STEM-ready. They launched a *3-month program* called “Coding for Kids”, which had a huge response as it was announced in a show by RJ Kebria, who is a reliable source for the people of Bangladesh. 500+ kids around the country, as well as Bengali kids living overseas, joined the program. These kids were then divided into 20+ batches and taught by five mentors, including me. Not to mention, from module design to monitoring the classes, I had the opportunity to coordinate the whole “Coding for Kids” program. It was a great success as an experimental project for kids. As a consequence, Creative IT Institute launched its sister concern, “Creative Juniors”, where kids are the only focus, and a variety of courses were introduced for kids. Later, we did extensive marketing for “Creative Juniors”, launching a *3-day IT Awareness Program* where we provided free classes for Graphic Design, Python Programming, Robotics, Web Programming, and Animation. 3000+ students joined the program and enjoyed the competitive environment of the classes. A number of contractual instructors were hired at the moment to conduct the classes successfully. As I already had experience hosting online classes with children, which is a new experience among the instructors at CIT, I got to train them and have been a part of the recruitment process. A huge sales lead was generated from those trial classes. After that, “Creative Juniors” continued educating children with technological knowledge. At the moment, I teach JavaScript Programming to kids through Educode Academy, a Canadian code learning platform that has collaborated with CIT for the expansion in Bangladesh, as well as Frontend Development with React to regular students.

1.3.2 Benefits from the Job

From acclimating to a diversified workplace culture to working effectively towards the organizational goal, I am learning every day. The major upgrade to my interpersonal skillset is leadership and team management, for which I am thankful to my supervisor for giving me scope for that. Undoubtedly, working alongside my education polished my multitasking

skills, and by the time I got to utilize the knowledge of the Eisenhower Decision Matrix or Urgent-Important Matrix, which helped me arrange tasks according to priority.

Before joining the team, I was true-blue to the familiar environment that I am used to or have always pictured in my head. Ever since I joined my team at Creative IT Institute, I have been more flexible in different situations, which is a distinctive trait of the Web and Software department. My supervisor and all my senior colleagues have always taught me how to hold my horses and be imperturbable, which I strongly believe is a great transition to my personality. Not only did it help me to keep my calm, but it also helped me to get used to thinking before I work or make a decision more effectively, and it made me prepared for any stressful situation, which is an inevitable part of work-life that happened to be a big deal for me earlier. Assuredly, it shifted me from being a problem-oriented thinker to a more solution-oriented thinker.

Also, I learned to integrate Kanban-style into my regular workflow by using different tools like Trello, which helped me a lot to keep everything on track. Moreover, teaching children strengthened my interest in child psychology and pedagogy. For instance, I relate to the psychology behind how different students have different needs and require tailored attention to grasp a particular concept. The biggest benefit I have from this job is the learning opportunities. I am always learning new tools and exploring different technologies. Besides, being in the midst of all the industry experts who are constantly researching and debating about the latest technologies, I do not have to do much hard work to stay up-to-date!

1.3.3 The Challenges I Faced During the Job

Although I chose to work full-time while studying and agreed to the fact that I would have divided attention on my education, it troubled me when unplanned work continued to arrive all of a sudden without any warning. Usually, I share my schedule with my supervisor,

including my university class days and timing, exam dates and times, and so on, and he assigns me class schedules and other work according to that. If any unconventional work arrives from other departments, they either discuss it with me or my supervisor prior to assigning it. There were times when the business development team had to arrange immediate seminars without prior discussion with my supervisor or me which might not be a problem if I was solely working there. In the end, I had to attend those going against my choice as the company's reputation is aligned with it which I am loyal to, but in the process, I had to sacrifice my studies and take classes right before my assignment deadlines or even before Finals.

Addressing the concerns of the children's guardians was another significant professional challenge. Frequent phone calls from guardians often occurred during times when I was preoccupied with other responsibilities. The skill of maintaining composure and effectively communicating with these parents, a skill I honed by observing and learning from my more experienced colleagues, particularly my supervisor, proved crucial.

Interestingly, a number of these guardians appeared to have considerable influence and often exhibited expectations of preferential treatment. Initially, this approach seemed outdated to me, but I soon realized it was reflective of broader socio-political dynamics within Bangladesh. Despite being challenging, such experiences have been instrumental in my professional development, teaching me valuable conflict-resolution skills. These challenging situations have also served as a driving force in my continued commitment to my work.

1.3.4 Recommendation to the Company

First and foremost, my recommendation to the company is to build an effective internal communication system. They can acquire Employee Monitoring Software to ensure proper SOP and an efficient work environment; thus, the problem of overlapping worker schedules

can easily be avoided. In such a way, the business development team would not have to call me or my supervisor to check for availability in times of emergency, as mentioned earlier; they could just go through the software and schedule the seminar accordingly.

Another suggestion would be to understand the product first, then analyze the distinguished target audience for individual products and understand their needs properly before going for a campaign. In that way, they can grab the attention of more targets rather than focusing on randomly increasing sales. Utilizing past data and incorporating predictive analysis tools in this regard can be beneficial to tailor future steps accordingly.

Finally, talking about data, I observed that the company has an immense amount of unused data that can be effectively used for the progression of a variety of aspects of the business. This surplus of neglected data has the potential to provide priceless possibilities for improving operational efficiency, obtaining deeper insights into consumer behavior, optimizing resource allocation, and establishing informed strategic decisions. Therefore, by leveraging this scarce data treasure, the company will be able to uncover a multitude of revolutionary possibilities that can propel it forward in a highly competitive market.

Chapter 2:

Organization Part

2.1 Introduction

For this reason, Creative IT Institute is one of the top leading IT training schools in Bangladesh and they provide a new level of method in technology and design industry education. This is its primary aim is to increase the number of software developers and programmers in the country by equipping learners with practical skills through its Full-stack Software Development Course. As an esteemed entity, Creative IT Institute realizes that there is a dire need to stay updated with the evolving technological spectrum through courses and seminars. The courses are designed to equip students with practical skills and broad industry knowledge that evolves alongside the fast-paced changes happening in the tech space. They train in web development, mobile app development, graphic design, digital marketing, animation and cloud computing, to mention but a few. The greatest asset of the Creative IT Institute is that it has experienced instructors who are also professionals in the industry. It ultimately results in students with holistic and concurrent training imparted by teachers who deliver classroom lectures with an industry perspective. In this line, the Creative IT Institute also supports learning experiences and fosters collaboration amongst students, while creating a safe space for creativity and innovation. Also, such occasions give students the opportunity to be amongst members of the tech community. Since it focuses quality education only, the Creative IT institute is, of course, one of the best places for IT entrants in Bangladesh. Therefore, how the technology is shaped in the future of this country depends on how the kids are prepared with the necessary skills. There is no doubt that imparting valuable skill set and information to our students, can greatly helpful in shaping the future of the technology of the country.

2.2 Overview of the company

2.2.1 History

Founding Story: Creative IT Institute Founded in 2008 by Monir Hossain, Creative IT Institute has been one of the principal organizations in the development of creative & IT education in Bangladesh. Creative IT Institute is committed to provide you high-quality training and education in all sectors since its establishment. It has always focused on innovation and creativity, that has been one of the many reasons why its graduates have excelled in the industry. In 2015, this bag the ISO recognition for providing a quality training program to recognize its position in the IT sector. ISO consequently delivers quality service based on performance, customer satisfaction, and other different factors. This accreditation is proof that the institution offers good courses and services. Creative IT Institute is driven by visionary leaders who have a heart for the ever-changing tech culture. The institute has lovingly turned this phrase into reality, and has derived maximum benefits for its students in this tough job market by being able to act as a bridge between Corporate and Academia. Since its inception, Creative IT has changed its selection of courses as technology develops, making it easy to learn and use current technologies. However, the Creative IT Institute is different, here students learn the practice of learning by doing. Apart from acquiring theoretical knowledge, the institute motivates students to engage themselves with project-based assignments and industry collaboration for real-world experience. Creative IT Institute for many years has been well known for bringing out a variety of skilled professionals who have contributed in many forms in different sectors. The alumni community is quite solid due to the prestigious companies that hire from here or have started their own ventures to become thought leaders in tech. Reflecting upon its history, one can safely say that the Creative IT Institute has been a prime mover of its kind of technology

education. Although the institution has more recently emerged as a unifying force in the creative arts industry, its primary focus continues to be innovation, its forward-thinking presence, and its practical training, serving as a beacon to ambitious and talented entrepreneurs.

2.2.2 Vision

CIT aspires to empower the young generation by providing quality training on trendy topics.

2.2.3 Goal

CIT's goal is to be one of the best IT training institutes in the world by providing quality training to learners.

2.2.4 Company Values

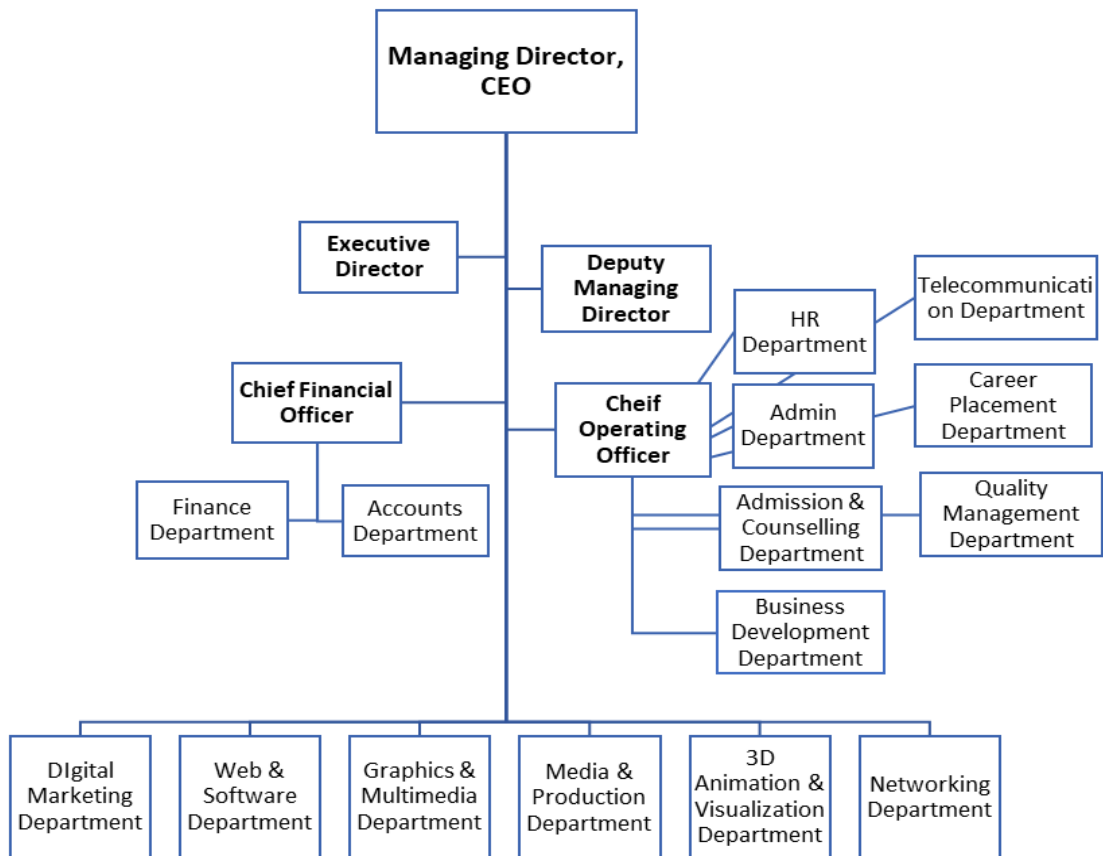
- Practicing Regularly: We strongly recommend that our students practice the lessons on a regular basis. You will be able to contact us at any time and for any reason.
- Developing Future Leadership: Everyone has distinct obligations and responsibilities in order to develop skills associated with leadership.
- Help generate creativity: The responsibility for work should be given to the person who is skilled in a particular specialization. In this way, everyone can give their best at work.
- Encouraging Teamwork: Teamwork is always encouraged at our institution. We flourish as a team because we have mutual respect, friendship, and camaraderie.

2.2.5 Culture

Many people from different backgrounds work in our organization. Creative IT has a diverse culture that appreciates the labor and talent of all the members. Anyone irrespective of their

gender, class, and education would find a great work environment where everyone works in harmony with love and respect.

2.2.6 Organogram



2.2.7 Business Model Canvas of Creative IT Institute

Key Partners	Key Activities	Value Proposition	Customer Relationship	Customer Segment
<ul style="list-style-type: none"> - BSCIC - ICT ministry - Polytechnic Colleges - Schools - National Universities - Universities - Companies who need employee skilled in IT 	<ul style="list-style-type: none"> - IT training - IT product solution - IT awareness 	<ul style="list-style-type: none"> - Prioritizing students - 24/7 Support - Lab allocation - On-campus practice opportunity - Industrial attachment - Internship opportunity - Complete IT solution - Counselling - Free seminar before admission - Career and Placement Guideline 	<ul style="list-style-type: none"> - Weekly Follow-Up - Quality Management - Feedback 	<ul style="list-style-type: none"> - Students - Job Seekers - Unemployed People - Companies who need IT skillset - Companies who need IT solution - Individuals who need IT Solution
	Key Resources		Channel	
	<ul style="list-style-type: none"> - Employees - Qualified Faculties - Industry specialists and tools - Strong Alumni Community 		<ul style="list-style-type: none"> - Campus in Dhaka, Chittagong & Khulna - Zoom Meeting - Web Applications - Mobile Applications 	
Cost Structure		Revenue Structure		
<ul style="list-style-type: none"> - Marketing & Advertisement - Seminars & Events - Utilities - Salary - Training - IT tools Subscription - IT Application production - Sponsorship 		<ul style="list-style-type: none"> - Student Enrollment - Digital Production - Collaboration 		

2.3 Management Practices

Transformational leadership style is what the Creative IT Institute does, which inspires employees and students young and old to set goals via encouraging employee motivation. Strategic human resource planning method of Creative IT Institute we reviewing talent forecasting, succession planning, and skills gap analysis. The Creative IT Institute primarily focuses on recruitment and compensation system to get the best of the best, both in terms of talented student and in the area of diversity and inclusion. The fundamental elements in this framework include job advertisement, salary packages, promotion only on performance basis and initiatives for career growth. The institute conducts leadership programs, performance evaluations, and in-house training sessions to assist employees to grow. Seminars, conferences and many courses are prepared in order to progress their career(paths). Also, senior faculty members provide them with orientation training to freshers who joined the institution. Also include are the leadership development offerings for future managers and performance appraisals that point the employees to areas where work is to be done better and more training is to be provided. Ground realities for Creative IT Institute include online learning along with difficulties in retention of important members. Consequently, overcoming these challenges would involve more and more of the employee involvement which sees them taking advantage of the many ways that recognize their performance. Response to Industry changes while respecting as an individual this is what kept it outstanding in the IT sector.

.2.4 Marketing Practices

Creative IT Institute's marketing mix (4Ps) is estimated as follows:

Product: Product: The key product is educational programs IT courses, and training programs in software development, cybersecurity, and networking.

Price: The company's pricing strategy is comprised of tuition, materials, and additional costs along with scholarships, aid, or payment plans.

Place: Students have access to the educational programs of two campuses in the heart of Dhaka, Chittagong, and Khulna but also the ones run on online platforms.

Promotion: The strategies used for promotions are based on marketing or branding campaigns, social media promotion, presence, or the partners, fairs, and attending educational events. Additionally, the company actively connects with potential students via webinars.

My own final version of the 4Ps structure for CIT is adapted to discuss the marketing of the programs. The Company's key goal is to make their offerings attractive, accessible, and noticeable for their target audience. The place indicates the programs available to students located in Dhaka, Chittagong, Khulna, and online students around the globe. Promotion refers to CIT's efforts to promote its offerings using various channels and platforms. In adjusted 4Ps, promotion also lists connections maintained with potential and enrolled students.

The marketing strategy pursued by Creative IT Institute is entirely customer-focused and based on putting the customer acquisition, satisfaction, and retainment in the first place. The customer segment includes young and adult people and also corporate customers looking for tailor-made IT programs. The primary promotion channels for the Company include 1) Digital Marketing and 2) Traditional Marketing. CIT runs product development, advertising, branding activities, while maintaining high levels of student engagement.

Key marketing issues faced by CIT include competition, the shift online, and student retention. To address these issues, the Company requires performing a gap analysis of competitors and online learning infrastructure for subsequent market capture and maintainment. Being an inherently customer-centric enterprise, the Company will perform additional research and activation to improve student engagement.

2.5 Financial and Accounting Practices

Creative IT Institute relies on sound financial and accounting practices to ensure its fiscal stability and sustainability. This is achieved through an operational financial management system. This system includes planning of a budget each year, controlling expenses, and accounting practices that comply with the best industry standards. Creative IT Institute does not produce publicly available financial reports. Nonetheless, accrual accounting is used to plan the institution's activities and to respond to the outside environment. Unlike the reports, monthly accounting results are available to the leaders of the institute. In addition, Creative IT Institute possesses adequate fiscal reserves to provide for contingencies and to invest in future activities. Meanwhile, an annual audit confirms the degree to which Creative IT Institute has maintained its compliance with fiscal reporting requirements. On the other hand, the greatest financial challenges of this approach are the need to ensure the affordability of tuition fees and entrepreneurial investment in new IT infrastructure and software that could affect financial processes. Although these problems remain, the existing financial and accounting practices help maintain the stability of the institution. This is achieved by observing sound financial management principles, meaning that the Creative IT Institute will continue to be prepared for any future challenges.

2.6 Operational Management and Information System Practices

The high quality of Creative IT Institute's IT education is based on sound operational management and information systems. Operations management includes campus operations, such as class scheduling, facility maintenance, and student support services. Meanwhile, the development and delivery of courses are based on a collaborative effort between academic departments, often arranged by the faculty. The courses also involve Student Services, which establish the admissions standards, conduct registration, counselling, and career provides services for students, helping them to be successful. The Student Management System serves

as the central hub of student data for admissions, enrollment, grades, academic records, etc. The Learning Management System serves to provide course content, assignments and assessment delivered online which enhances the learning experience. Administrative software for finance, HR, and admissions helped streamline administrative tasks and thus increase operational efficiency of work performed. Furthermore, data analytics and reporting provided a good means to making informed decisions furthering the improvement of programs at Creative IT Institute and satisfied required compliance regulations. Scale and type of challenges and or opportunities that invent the offering to currently face at a Creative IT Institute because simply existing, maintaining an educational institution cannot be accomplished without the presence of the very systems that provide the means by which to manage these organizations, are scalability, security, mobility and technological innovation. A Creative IT Institute needs to scale with continued growth, there are basic principles in operation management, in statistics. The institute needs security measures to protect student data and institutional systems. Furthermore, the institute cannot survive in the current market landscape without the use of online learning tools. The advanced technology and innovative trends in the industry of IT education also helps maintain the level of innovation from and to maintain a leading position in this field. Overall, for a Creative IT Institute these systems are operationally critical for the success and survival of a business venture dedicated to providing high quality IT education. The institute learns from technologies as they emerge, so too shall the institute continue to maintain its relevance by adopting best practices in both process and technology as the future unfolds.

2.7 SWOT Analysis

SWOT ANALYSIS OF CREATIVE IT INSTITUTE

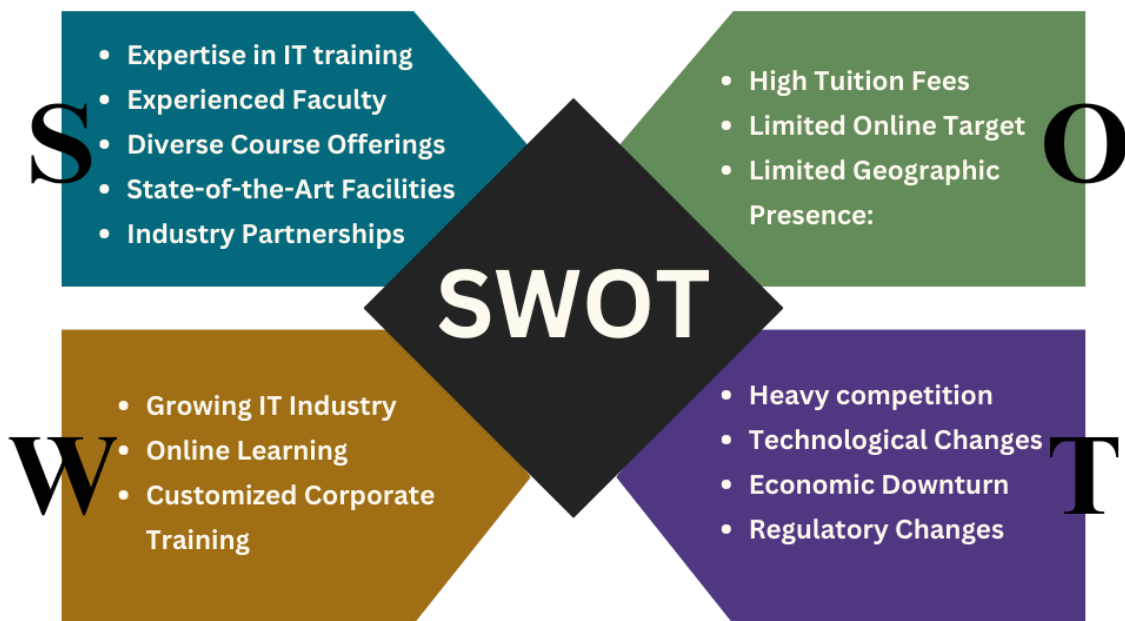


Figure 2: SWOT Analysis of CIT

In summary, it can be said that Creative IT Institute is going through a strategic evaluation the strengths, weaknesses, opportunities, and threats as IT training institution. The SWOT Analysis also facilitates the institute in having a holistic understanding of where it stands within the education market and helps in the making of its strategic decisions.

Key strengths are CIT's long history of offering IT qualifications; extensive and comprehensive courses; substantial investment in modern facilities and equipment; and strong relationships with the IT industry. It exhibits its weakness points in high tuition costs, limited online exposure, and narrow geographic reach. In this way we can create inclusivity and serve a bigger audience.

The market opportunities for Creative IT Institute are the vast and expanding IT industry that creates a substantial expansion opportunity. Diversifying into new courses to cater to the changing demands of this industry, endorsing online learning and opening up discussions about specialized corporate training programs can give a boost to a new revenue stream.

These threats are competitive threats posed by the numerous traditional and online IT training institutions exist, technological threats of the frequent changes of the technology and hence the need to update course content and course materials, economic threats of economic slowdown or recession leading to students not being able to afford tuition fees, and regulatory threats of regulatory changes in the education sector. Better utilize its expertise, introduce a wide variety of courses, fill the loop holes and leverage on high growth of IT Industry and grow in digital space and potentially explore in corporate training market.

In conclusion, this is how the SWOT analysis of Creative IT institute looks like, strengths, weaknesses, opportunities, and threats. Using its strength, diversifying the courses and addressing the weaknesses in the institute, the facility can position itself to tap the opportunities in the exponentially growing IT sector and expanding the online business and also exploring the possibility for the corporate training domain as well. The above-mentioned risks best be mitigated through proactive steps and will help Creative IT Institute to keep up its success in a very dynamic field of IT education.

2.8 Porter's Five Forces Model

Porter's Five Forces Model, a framework widely used for analyzing the competitive dynamics of an industry and also a means to better understand a company's position in the market, can be used to analyze the competitive dynamics of the education and training industries. It is specifically applied in this analysis to the example of Creative IT Institute.

Threat of New Entrants

Low to Moderate Threat: The establishment of a new institution of higher learning, especially one specializing in IT training, requires large investment in faculty, infrastructure, curriculum development, and accreditation. This provides a barrier to new entrants. But if there is a sudden spasm of demand for IT education or the removal of these obstacles, new competitors may emerge very easily.

Bargaining Power of Suppliers

Low to Medium Power: Suppliers in this context can mean educational content providers, software and hardware vendors, or even faculty members. But as there are often multiple sources of course materials and qualified IT instructors available on the market, suppliers' bargaining power may be relatively low. However, if a certain content provider provides all instructors or is solely responsible for IT Institutes' courses, it will have relatively strong bargaining power.

Bargaining Power of Buyers

Medium to High Power: Those who seek education in IT are able to choose between different institutions. While the provision of IT Training is in some places still of a high quality, it may be restricted and this limits the freedom of choice students have but does not give them much bargaining power. Creative IT Institute can attract students by offering unique courses, producing high-quality education, and providing financial aid options.

Threat of Substitute Products or Services

Moderate Threat: In this context substitutes may comprise online IT courses, self-study materials, or other institutions offering similar programs. As technology progresses, online learning and self-study methods are becoming more and more accessible and competitive. Creative IT Institute must continuously innovate its course offerings and teaching methods so as to be different from and better than the alternatives.

Rivalry Among Existing Competitors

Medium to High Competition: In IT education and training, competition can be intense. Numerous institutions offer similar courses, which leads to competitive pricing and marketing efforts. To succeed, the Creative IT Institute must be distinguished by the quality of its education, partnerships with industry, an advanced curriculum and a strong job placement service.

In summary, While Creative IT Institute enjoys the benefits of barrier to entry, it is faced with competitive pressures and substitution threats in the IT education market. To maintain its competitive edge and position in the industry, high-quality education must be provided using only the best resources at any given time—including industry trends not seen elsewhere. In addition, a targeted approach tailored specifically to meet the expectations and requirements of its rivals is also required for Creative IT Institute. Moreover, keeping up with changes in education More widely because this e-learning and distance learning develops is of great importance in the face of a threat usually considered equivalent to substitution.'

2.9 Recommendations

Mainly, the integration of Management Information System (MIS) tools will enhance the operation of Creative IT Institute through more efficient data management and making informed decisions on data. MIS tools recommended are the Moodle Learning Management System (LMS), Ellucian Banner Student Information System (SIS), Data Analytics and Reporting Software, and QuickBooks Financial Management Software. They should utilize the software they have for interclass communication instead of social media.

Moodle LMS helps streamline repetitive tasks to eliminate time-consuming manual work, the potential for human error, enabling staff to instead reallocate their effort towards strategic priorities and enhancing student journeys. Tableau gives you real-time data accessibility and

offers very insightful data-driven decisions. An add-on to the Ellucian Banner SIS, Ellucian Banner Student helps provide top-notch student services by simplifying the application, registration, and course selection process, which adds to student happiness and retention rates. It streamlines your financial management, accuracy and compliance all in one using QuickBooks.

To ensure the effective implementation of these MIS tools, a project team needs to be identified, faculty and personnel needs to be thoroughly trained, they should be presented with an implementation plan along with a time and budget to support the deployment plan, and assessments should be carried out at regular intervals to evaluate their effect on operational performance.

Integrating these particular MIS tools at Creative IT Institute is a smart decision, as these tools combined will bring immense advantages, such get high quality education delivery right on time, reduce overhead administration cost and last but not least – make the institute remain competitive in IT education field. The evaluation and implementation of these MIS tools are processes they should start today, so that they can transition smoothly between different platforms and use the advantages they provide.

Chapter 3:

Project Part

Project Title: Women's Participation and Progression in IT Skill Development Program at Creative IT Institute.

Hypothesis: At Creative IT Institute, the gender gap for enrollment in IT skill development programs is high with a smaller number of females than male. Factors such as socio-cultural taboos, gender bias, and support mechanisms of different demographics may influence this disparity.

3.1 Introduction

The field of information technology (IT) has seen a phenomenal boom and revolutions and the consequent requirement of well-skilled IT professionals has increased. The twenty-first century workforce has been impacted by these to both good and bad outcomes. So, the question of gender diversity and a broader role of women in the formation of IT competencies is very important for modern education. Without a doubt, for an esteemed institution that specializes in the provision of IT education and training, Creative IT Institute have been invaluable in enlightening and equipping the populace; in the areas projected to be relevant to making an IT career. The institute, though, will also have to probe into the range of gender gap present in admissions and completion in its skill development programs. The over-representation of men in IT-related occupations is a serious issue that spills over into IT education and speaks to gender disparities in IT education. The variations among these subgroups have been noted in numerous studies in various nations, including the United States, Europe, and Asia. We struggle still with these lingering inequalities and their monumental, nuanced challenges. Understanding the gender dynamics in IT education and training institutions such as Creative IT Institute is important because these may offer a view

of broader gender trends in the Bangladeshi IT industry from an examination of their student registration trends and academic performances. We used evidence related to the data available on female participation in the Creative IT Institute program to identify those factors which are responsible for these gender gaps in IT education. For instance, we believe that women are underrepresented in both IT skill development programs compared to men in Creative IT Institute. This disparity could be affected by such things as program access, gender bias, and support structures. The objective of this study is to use a data-driven approach to understand how women transition through IT skill building programs offered at the Creative IT Institute. This desk research on women's participation in IT skill development endeavors to influence the policy level decisions through the research methodology, data sources, analytical tools and findings so as to bring about the desired impact. The way that this issue has been resolved is reflective of equity and inclusion values, further increases both the longevity and competitiveness of the IT industry. The significance of the study, as it becomes clear, points not only to social justice, but also to strategic necessity for economic and technological development in addressing the gender disparities in IT education. Increased Participation of Women in IT Programs & Technologies Diversity in the Workforce Different cultures are also associated with different ways of looking at the world, and that means a diversity of perspectives—something that can fuel creativity, spur greater degrees of problem solving, and result in tech advancements that better serve and reach a wider swath of society. Women, for example, are more likely to stick with and succeed in IT programs when an inclusive environment that is conducive to everyone's needs prevails and they feel supported and valued. Targeted recruitment measures, mentorship programs and financial assistance designed specifically for female students can help institutions like Creative IT Institute (CITI) bring gender equality and balance to the educational landscape. These engagements benefit both the students and help boost the credibility of the institute as a leader in creating an

environment of diversity and inclusivity. These findings provide evidence which may be useful for national policy formulation. This will help policymakers and lawmakers in designing and enforcing interventions that reduce gender stereotypes and provide equal opportunities in the field of education and employment. There is great potential to create systemic change that strengthens equitable opportunities for women and girls in many domains other than IT. Gender differences in IT skill development: A study at Creative IT Institute highlights a pressing issue that needs urgent notice and actions. Identifying the reasons behind the gender gap as well as its solutions may create a path toward a more diverse and fairer IT sector. That, in the process, benefits not only women but also the economy and society as a whole, by realizing the entire potential of every member of society. An adherence to gender diversity in IT education will lead to a brighter and more innovative future, for all.

3.1.1 Background

Females constitute a significant portion of Bangladesh's population, making up approximately 50.4% of the total population (Kemp, 2023). Interestingly, while their presence in the realm of social media is growing rapidly, the idea of pursuing a career in Information Technology (IT) remains relatively less popular among women in Bangladesh. Despite this, the evolving landscape of the modern world, especially with the advent of the Fourth Industrial Revolution, necessitates active female participation in the IT sector. To meet this demand, women in Bangladesh need to acquire and enhance their IT skills through participation in training programs.

As an instructor in the Web and Software department at Creative IT Institute, I am intimately involved in this domain and have noticed a striking disparity in the gender composition of students and colleagues. I am currently the only female among a group of 16 people in my

department. This circumstance has compelled me to embark on this research journey in order to discover the underlying causes of this significant gender gap. Understanding the factors that contribute to the disparity will not only shed light on the challenges that women face but will also provide actionable insights for the institution to address and rectify this imbalance.

This gender gap in the IT industry must be investigated and addressed since it is crucial to Bangladesh's competitiveness and success in the rapidly changing global economy. Women's active participation in IT careers is important not only for equality but also for strategic reasons, such as maximizing the workforce's potential.¹ In order to help Bangladesh's IT sector become more diverse and profitable, this research tries to identify the underlying causes of this gender disparity.

The disproportionate underrepresentation of women in IT-related occupations raises concerns about gender disparities in IT education. Studies have repeatedly brought attention to these differences in a number of nations, including the United States, Europe, and Asia. These inequalities continue to be difficult problems demanding sophisticated solutions. It is crucial to comprehend the gender dynamics in IT education and training facilities like Creative IT Institute since their student enrollment patterns and academic results can act as a microcosm for more general gender trends in the IT industry in Bangladesh. Analyzing data on women's involvement in Creative IT Institute's programs can help identify the causes of gender differences in IT education.

Hypothesis and Research Focus

We hypothesize that women are considerably underrepresented as both enrollment and progression of IT skill development programs at Creative IT Institute. This discrepancy could

¹ Dohmworth, Carla, and Markus Hanisch. "Women's active participation and gender homogeneity: Evidence from the South Indian dairy cooperative sector." *Journal of Rural Studies* 72 (2019): 125-135.

be due to factors such as ease of access to the program, gender bias, and support mechanisms. This study was conducted in a systematic way using data provided through the IT skill development programs from the Creative IT Institute for women. The study seeks to understand and support initiatives to enhance female participation in IT skill creation by the end of this research methodology and the types of data sources, analytic tools and conclusions. This resolution is in accordance with the principles of fairness, equal opportunities and inclusion, to ensure the continued sustainability and competitiveness of the IT sector.

3.1.2 Objectives

The primary objectives of this research are two-fold. Firstly, to investigate the state of women's enrollment and participation levels in IT skills development curriculum at Creative IT Institute with emphasis on the enrollment rates, program completion rates, and academic achievements. Secondly, to understand how and why women do or do not progress through the IT education pipeline within the institution. Ultimately, our goal is to unpack the layered aspect of how gender inequities may arise in IT skills development.

3.1.3 Significance

The significance of this research cuts across social, economic and institutional facets. These findings give far-reaching implications that understanding and taking action against the existing gender gap in technology skill development programs of Creative IT Institute. Social Empowerment– From a social perspective it is a wider aspect as it deals with Gender Equity, Types of barriers for women for participating and advancing in IT education and how justice has a role to play. The goal of this type of research is to provide a more equitable society where stereotypes about women and their incompatibles with technology are unclear. From an economic perspective, increasing women in IT leverages an untapped source representing

half the population currently missing from tech roles. By unlocking the talent of women, the economy can capitalize on a broader and more creative talent pool, which will propel technological breakthroughs and economic development. Increased female participation can help address these skill shortages in the IT industry, delivering the skilled professionals the industry needs to improve productivity and global competitiveness. In this respect, analyzing the gender dynamics at Creative IT Institute can be used as a yardstick for other educational institutions who wish to strengthen gender diversity within their programs. These research findings can help shape the best modalities and practices to use to ensure that more women were retained in their programs and were successful. It, in turn, adds value to the institution and its own profile. Moreover, the findings will help policymakers in the field of education and workforce development, giving them with a knowledge base which is important for providing evidence-based recommendations for the promotion of gender equality in education and the labor market. Emphasizing women in IT has an additional benefit of encouraging more girls and young women to pursue STEM education, ideally creating a vibrant pipeline of well-trained female workers prepared to succeed in the IT workforce. Overall, this study focuses on an important challenge that lies at the intersection between gender equity, educational progress, and economic development begets it. It aspires to build a more inclusive and equitable IT industry to the benefit of all, individuals as well as institutions and society at large.

3.2 Methodology

- Conduct Analytical Research: Performed in-depth analysis using the vast student information that is available in the Creative IT portal database. Advanced analytical solutions (SQL, MS Excel + Tableau) to analyze data for — Women enrolment patterns and progression rates with respect to all the metrics relevant to women in IT Skill Development programs.

- Secondary Data: Used the papers and studies which are already existing on the internet to support the research, book and articles. Then, this secondary data is utilized to establish theoretical framework and direction based on a larger view of gender disparities in the IT industry.
- Collect Primary Data: Develop and distribute a survey measuring the participation and the preference of people, especially women, who are considering an IT occupation. This mode of first-hand data collection provides experiences from the earliest voices, providing a richer description of the circumstances which affect women's involvement in IT education and careers.

3.3 Findings and Analysis

3.3.1.1. Analysis of different aspects students' data based on gender

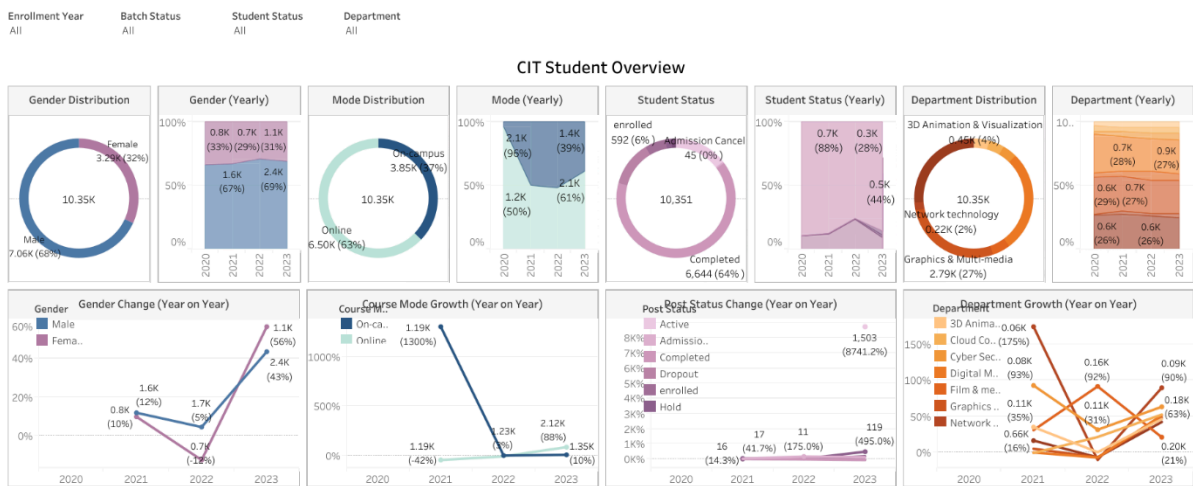


Figure 3: Tableau Dashboard

This Tableau Dashboard analyses some metrics related to a set of 10,351 students of CITI over 3 years Gender, Course Mode, Student Status and Department wise. Individually, they will be explained in following parts:

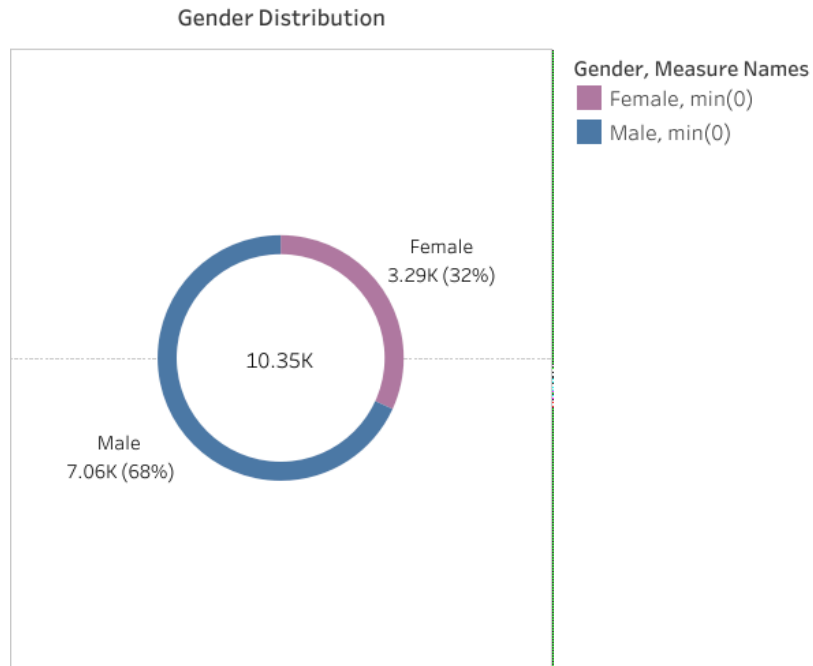


Figure 4: Male-Female percentage

Overall, the percentage of students stands to 68% male (7,060) and 32% female (3,291) which refers the female to male ratio as 8:17 students which is less than half and utterly disappointing.

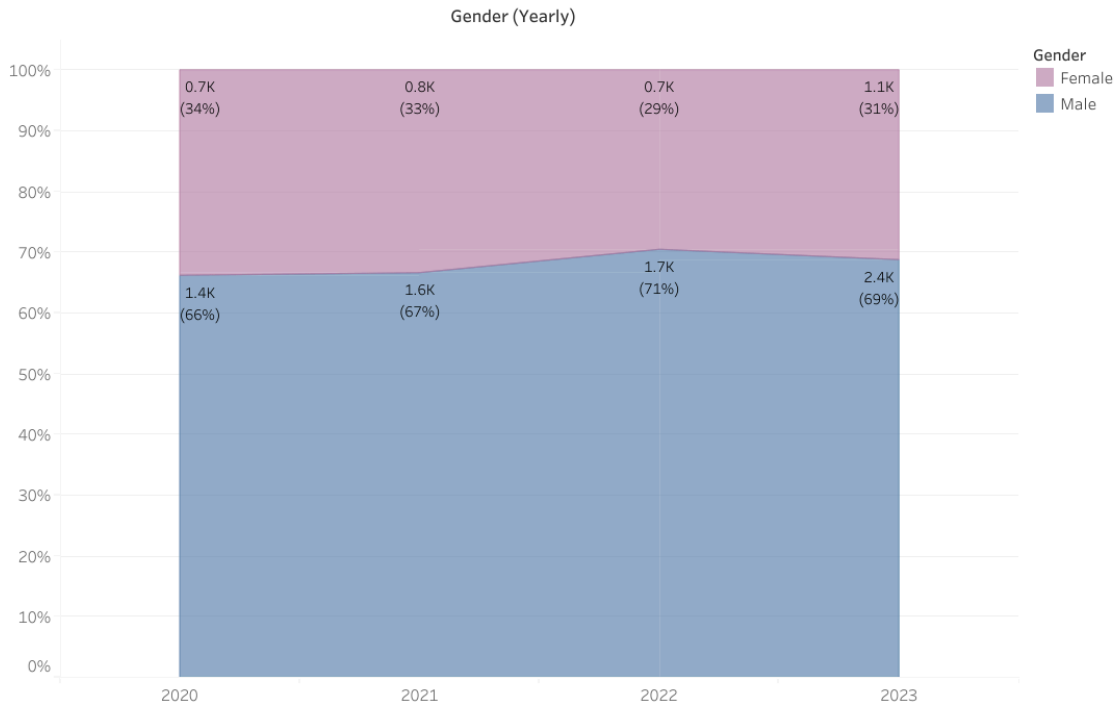


Figure 5: Gender Distribution over the Years

Over the years, males have virtually always represented 67% in 2020, 69% in 2021, 71% in 2022 and 69% in 2023; whereas females represented 33%, 31%, 29%, and 31% respectively. We have to keep in mind that the data was collected on mid-2023. Whatsoever, the ratio of male to female has no drastic change over the years.

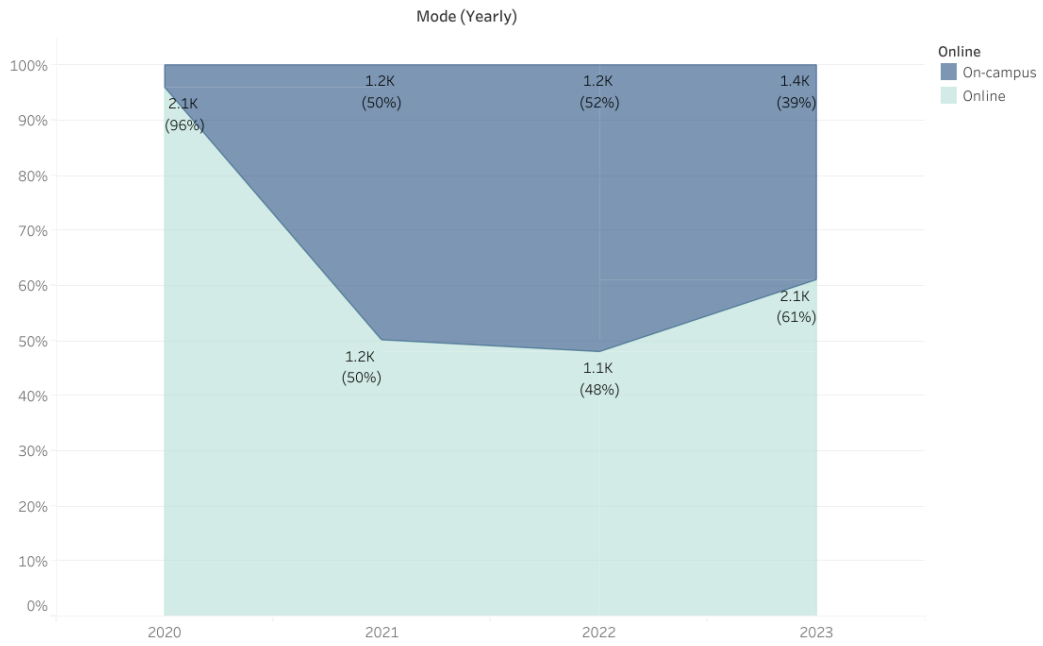


Figure 6: Mode of Course over the years

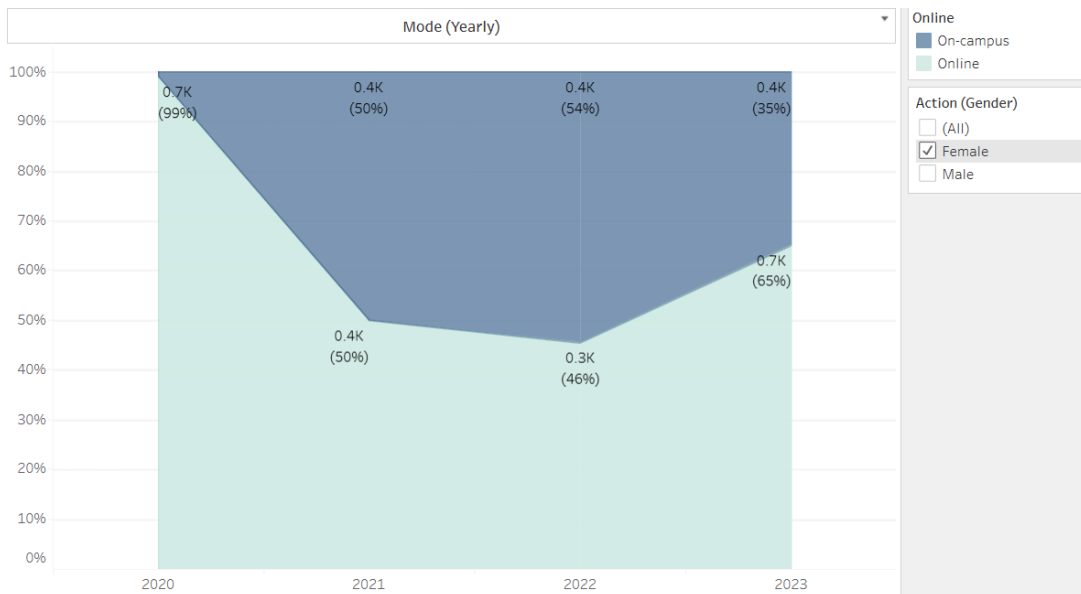


Figure 7: Female-Mode of Course over the years

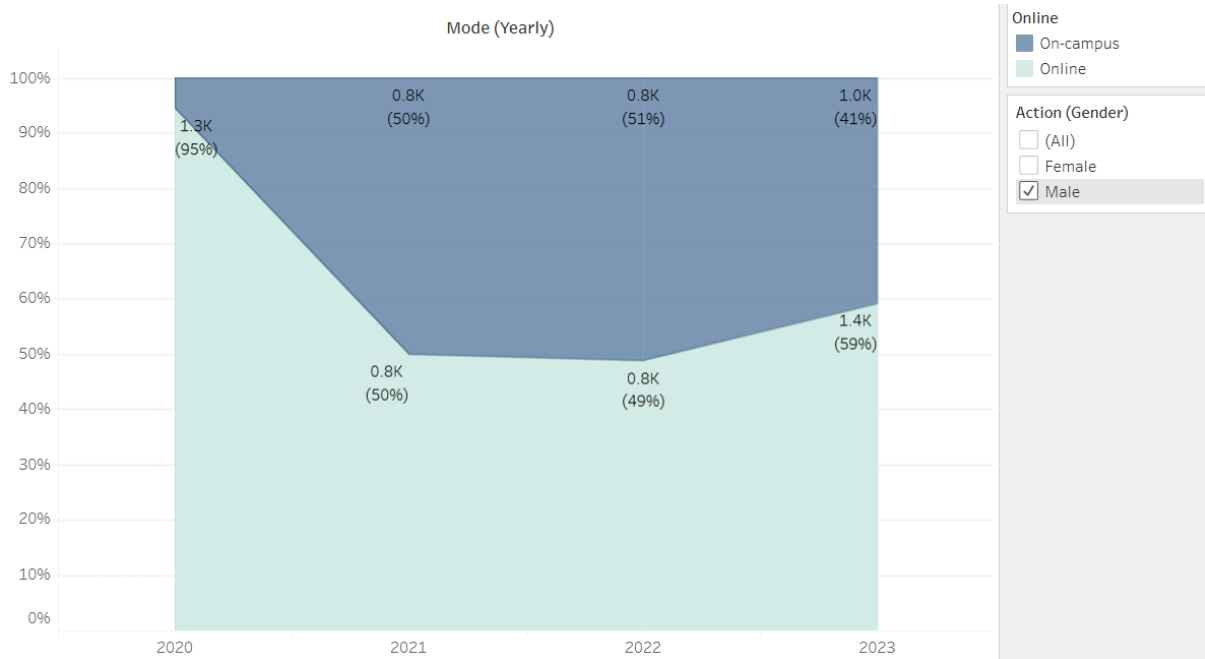


Figure 8: Male - Mode of Course over the years

Mode of course distribution illustrates 37% (3,851) are On-Campus and 63% (6,500) are Online. There is a major change in the yearly mode distribution: 96% were online in 2020, dropping to 50% in 2021 and 48% in 2022 and down further to 61% in 2023 again, 2023 has half yearly data so this will eventually differ at the end of the year. There was a dramatic uptick in course mode growth with online courses increasing 1,190% year-over-year from 2020 to 2021 and on-campus courses increasing 88% year-over-year in 2022. This drastic spike of was basically affected by external factor which is Corona pandemic when most of the courses were online and some of the courses of networking and film making were running offline. However, according to the faculty members and the management during pandemic female participation increased online as people were more aware of the online education and earnings. Hence, overall female participation increased in post pandemic years than before. As we do not have access to pre pandemic years it is a limitation of data for us to prove that with evidence.

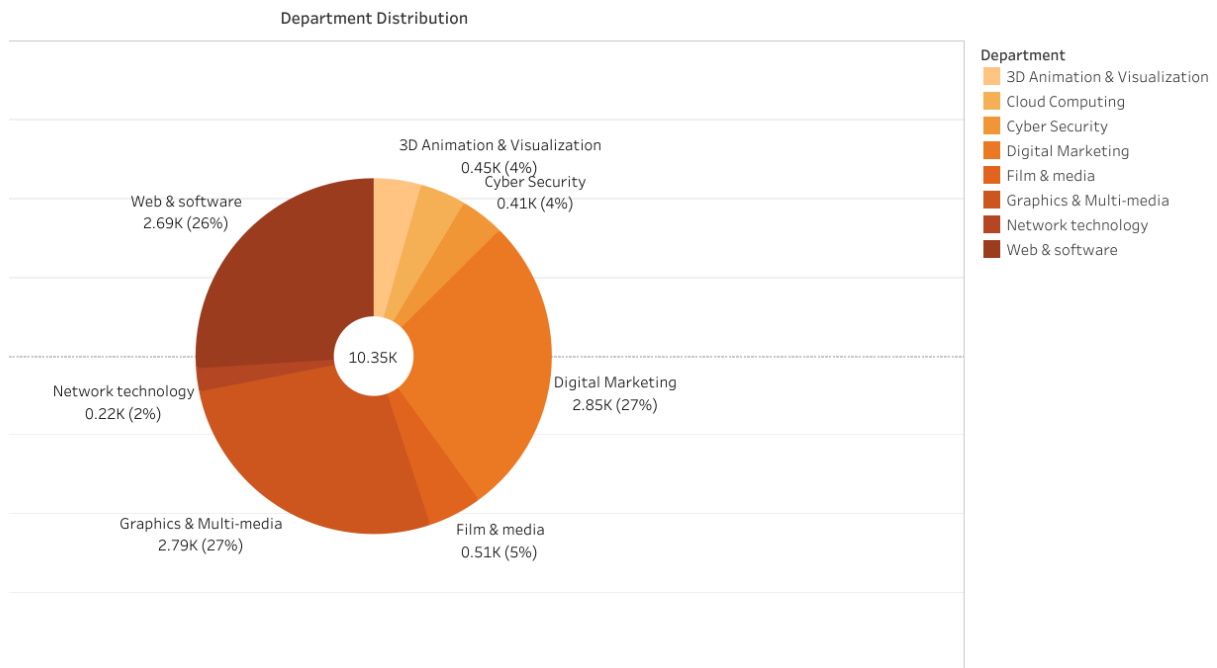


Figure 9: Student-Department

Above pie chart shows the student distribution in different departments. We can see Graphics & Multimedia and Digital marketing has the highest percentage of students which is 27%. Up next comes Web & Software Department with 26% of the total students. After that Film & Media, 3D Animation & Visualization, Cloud Computing, Cyber Security and Network Technology have consecutively 5%, 4%, 4%, 4% and 2% students. This illustrates the popularity among graphics design, digital marketing and web & software courses.

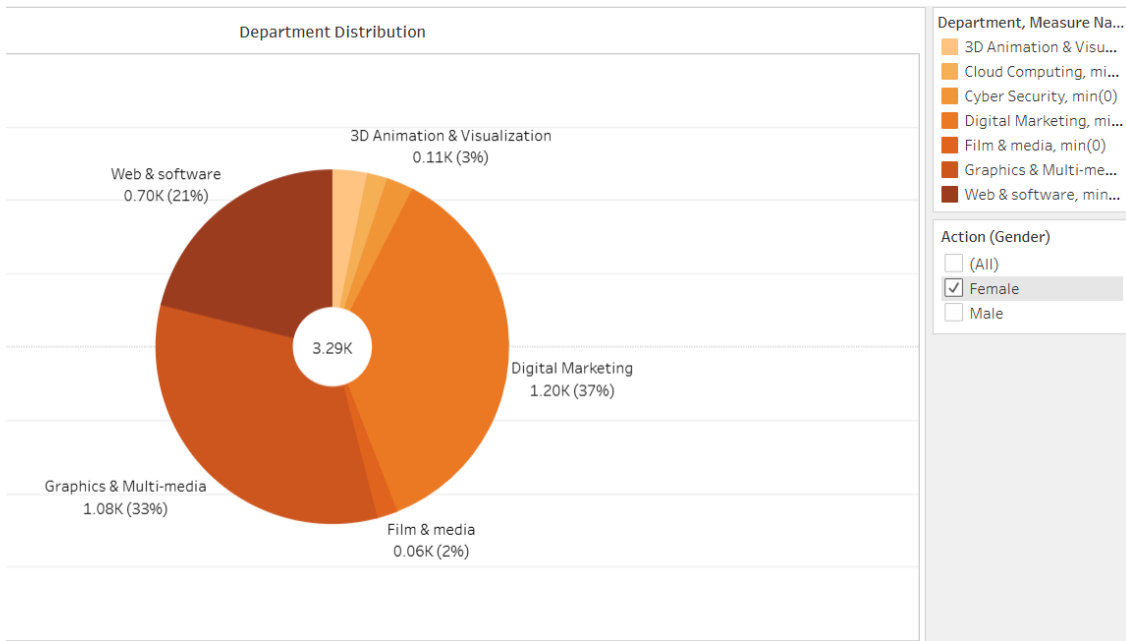


Figure 10: Female Student - Department

The picture here in the female student distribution among the departments is different from the previous scenario. Here we can see a significant change of percentage among the departments Which shows most women are into digital marketing than other technical courses.

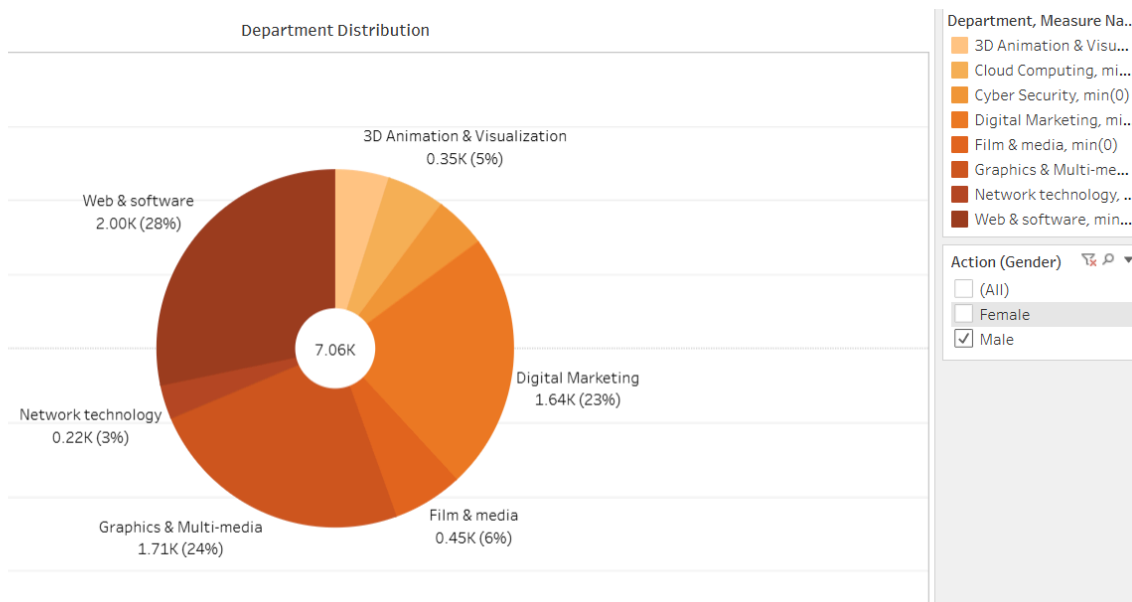


Figure 11: Male Student - Department

Similarly, male student distribution in different departments has different picture as well. We can clearly see Web & Software department's courses are most popular among male students.

A more transparent picture of gender distribution in individual departments are given below:

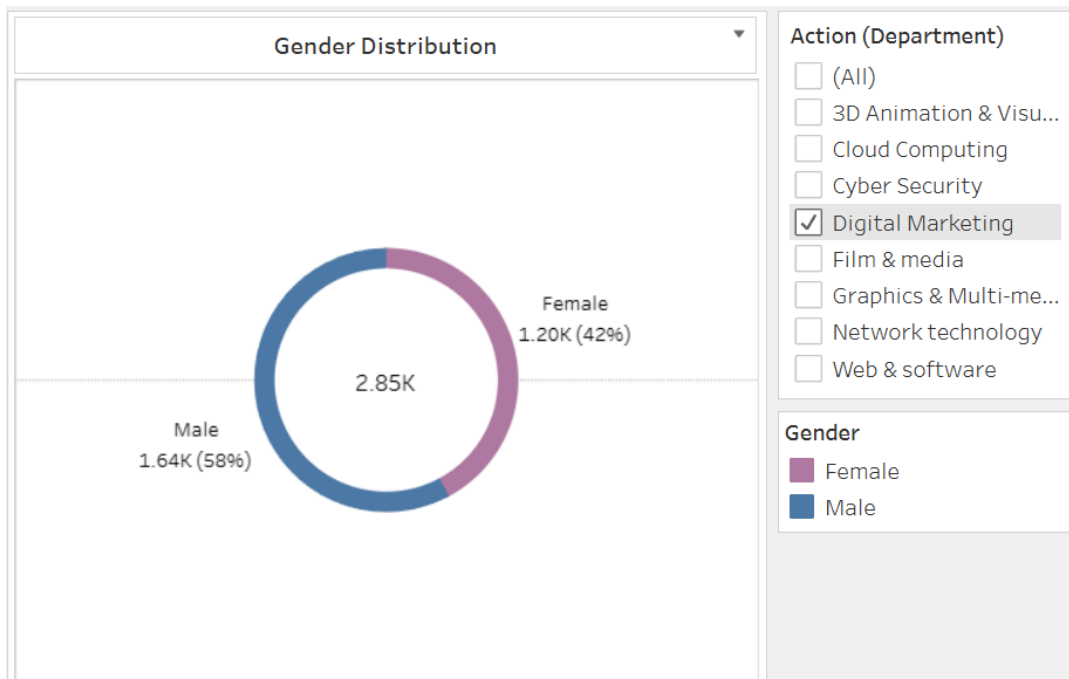


Figure 12: Digital Marketing Gender Distribution

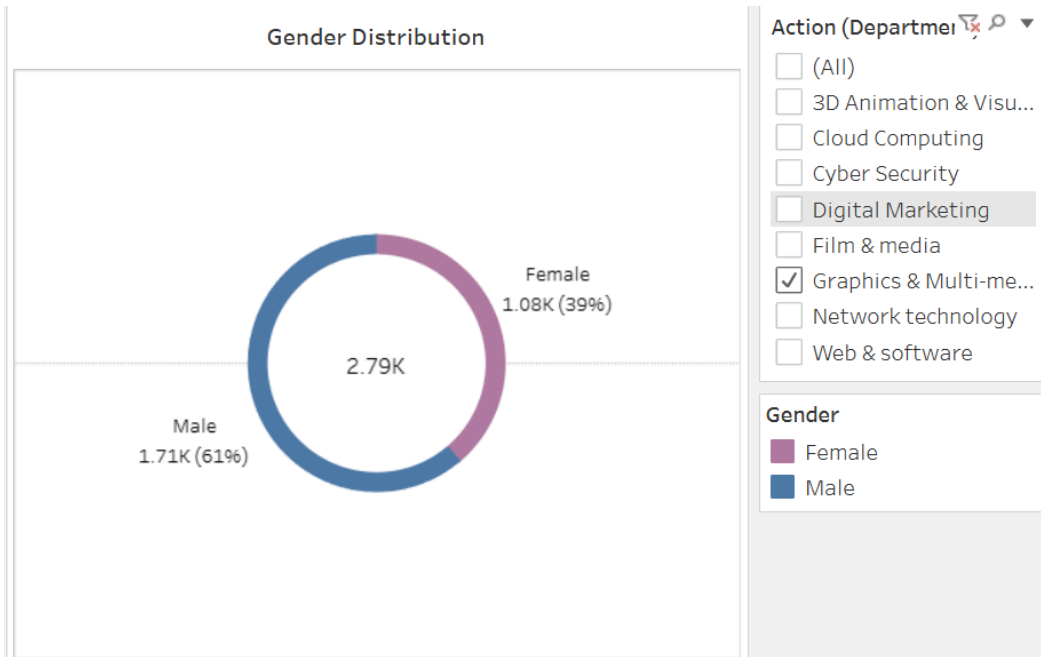


Figure 13: Graphics & Multimedia Gender Distribution

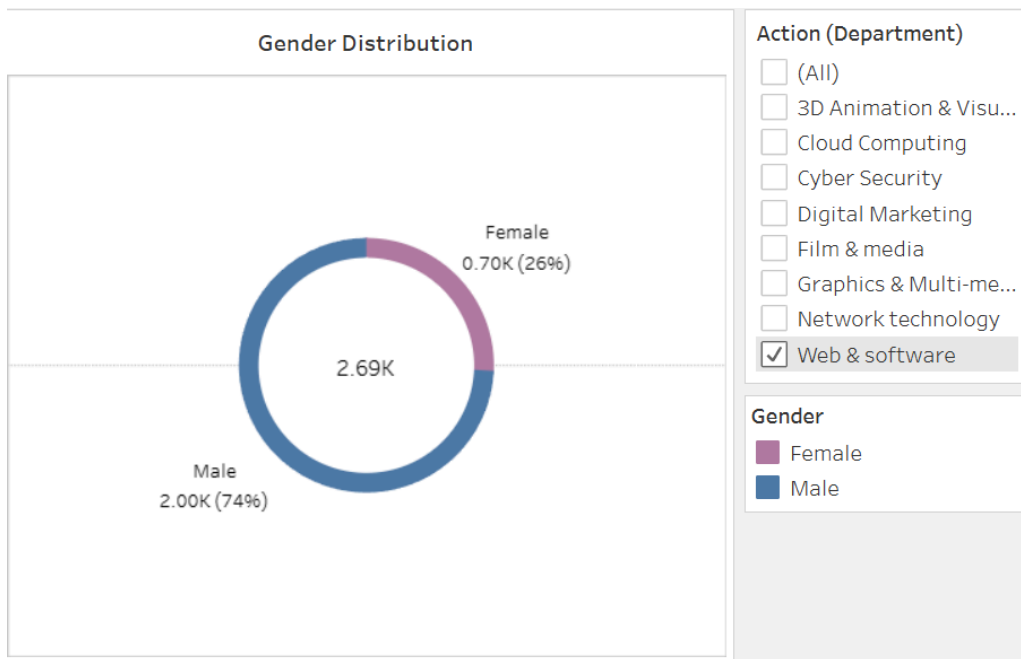


Figure 14: Web & Software Gender Distribution

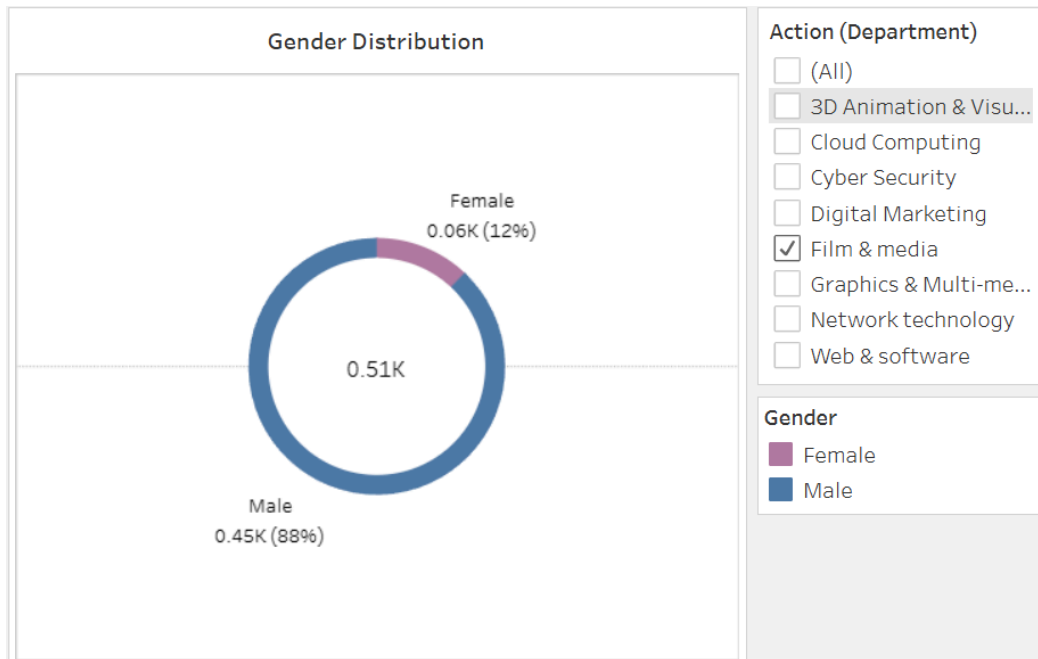


Figure 15: 3D Animation & Visualization Gender Distribution

In above pictures we can see that Digital marketing has almost 50-50 ratio, if we round up, among the male-female students. Graphics & Multimedia has 60-40 ratio, Web & Software has 75-25 ratio, 3D Animation and Visualization has 90-10 ratio and goes below and beyond with other departments. If all the other departments had similar interest like Digital Marketing from female students the IT industry would have flourished by now. The reason for this disparity is somewhat related to social taboos that female students cannot grab heavy programing or such skills. Whereas, the faculty members have a totally different perspective, both male and female students are equally eligible to enroll for all the harder courses, even in some cases moving forward female students leads the classes. Following pie charts represent the student completion status whether they completed the course, dropout from the course, canceled the admission or kept it on hold.

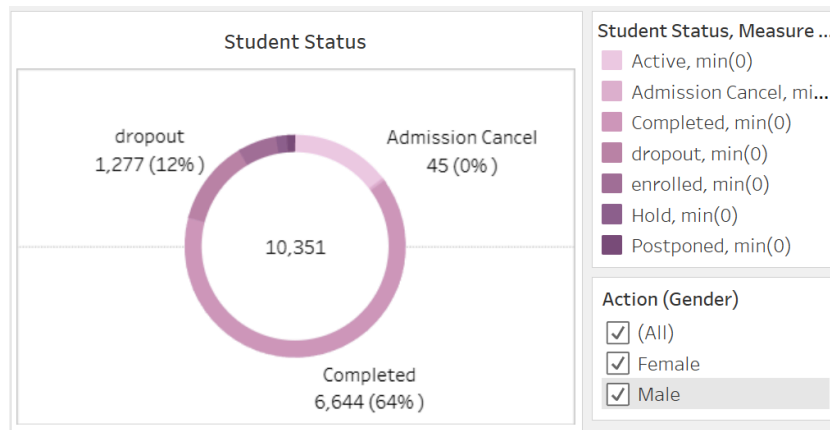


Figure 16: Student Status

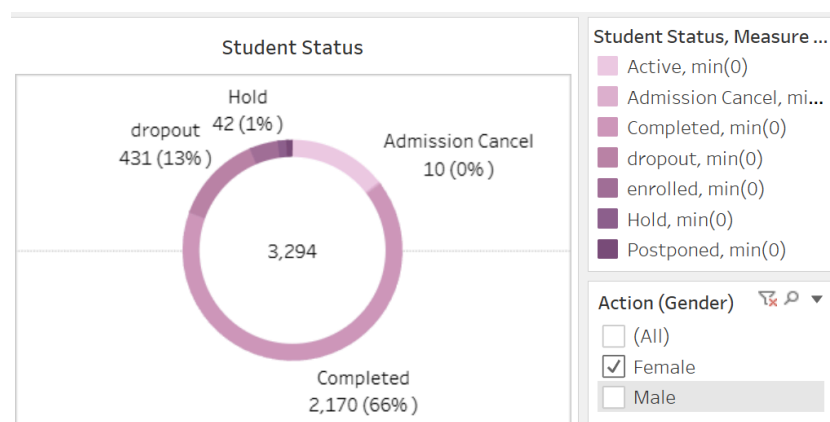


Figure 17: Female Student Status

From two above pie charts we can see that the dropout to completion ratio is not very different for women than general student ratios. So, it's not that, women students are dropping out more than men. The enrollment is lower in the first place. So, CIT should work on increasing women enrollment.

3.3.1.2. Analysis of Student Status based on gender and reasons

Count of Student ID	Column Labels				Female Total	Male				Male Total	Grand Total							
	Female	2020	2021	2022		2023	2020	2021	2022			2023						
Active					479					17	1024	1041	1520					
All good					470					17	990	1007	1477					
Freelancing					3						31	31	34					
Job Placed					6						3	3	9					
Admission Cancel					10					3	4	11	17	35				
Financial Problem										1		1	1					
Illness					1					1		1	2					
Lost Interest											5	5	5					
Personal Problem					9						1	16	17					
Time Management Issue										1	3	6	10					
Completed					647	694	526	303		2170	1223	1330	1351	570	4474	6644		
Freelancing					286	327	223	126		962	476	570	668	256	1970	2932		
Illness					18	11				29	16	7			23	52		
Job Placed					95	131	124	87		437	290	362	362	159	1173	1610		
No Update					248	225	179	90		742	441	390	321	155	1307	2049		
Time Management Issue												1			1	1		
Dropout					73	95	164	99		431	171	227	248	200	846	1277		
Family Problem					18	5	6			29	15	4	6		25	54		
Financial Problem					3					3		3			3	6		
Freelancing							2			2		7			7	9		
Illness					1	21	17	8		47	5	27	47	19	98	145		
Lost Interest							3	2		5	3	3			6	11		
Moving Abroad							2			2		3	2		5	7		
No Update					4	3	21	13		41	5	16	44	45	110	151		
Not Understanding							2	7		9		4	7		11	20		
Personal Problem					9	3	8	3		23	22	14	8	12	56	79		
Pregnant					12	7	3			22		2			2	24		
Study/Exam					10	32	46	22		110	54	82	56	36	228	338		
Time Management Issue					2		8	7		17	10	13	15	8	46	63		
Unreachable					14	24	46	37		121	57	66	53	73	249	370		
enrolled														138	138	454	454	592
All good														138	138	454	454	
Hold					1	3	2	36		42	13	13	18	83	127	169		
All good								3						3	3	6	9	
Family Problem								5						1	1	1	1	
Financial Problem								5						10	10	15	15	
Illness					1	3	2	12		18	13	13	18	32	76	94	94	
Personal Problem														2	2	2	2	
Pregnant								4		4					4	4	4	
Study/Exam								9		9				21	21	30	30	
Time Management Issue								3		3				11	11	14	14	
Postponed					1	1	2	20		24	11	16	17	36	80	104		
Family Problem								6		6				3	3	9	9	
Illness								7		7	5	8	9	10	32	39	39	
Personal Problem								4		4				5	5	9	9	
Study/Exam					1	1	2	3		7	6	8	8	18	40	47	47	
Grand Total					722	793	694	1085		3294	1421	1590	1662	2384	7057	10351		

Figure 18: Pivot table showing current status of the enrolled students of different gender

The above Pivot Table visualizes the current situation of the enrolled students from year 2020 to 2023 based on their studentship status in the batch that represents if they finished the course or currently studying or postponed for some reason. It also shows the reasons behind those status. These are all segregated by gender to portray a clear picture of the difference. Here is a descriptive summary given below:

Active Students:

Of the students still active, 479 are female and 1,041 are male. Most of them, both men and women, are categorized as "All good," meaning they are likely progressing through their studies without major issues. Only a few have freelancing or job placements recorded, but this seems pretty balanced across both genders.

Admission Cancellations:

When it comes to students who canceled their admission, 35 males did so compared to only 10 females. For both groups, personal problems were the main reason, but males also dropped out more due to things like losing interest or having trouble managing their time.

Completed Students:

In terms of who completed their studies, about 2,170 females and 4,474 males made it to the finish line. Interestingly, many of them, both men and women, finished while also freelancing. However, there are a lot more males who ended up with "No Update" statuses, which might mean they're hard to track or didn't provide their next steps after completing the course. Job placements were also more common for men than women.

Enrollment and Hold:

As for students who are still enrolled, but possibly facing some difficulties, there are 138 females and 454 males in that situation. Additionally, some students have their education on hold for various reasons, with 42 women and 127 men in this category. Illness and exam pressures seem to be the most common reasons for being placed on hold for both genders.

Postponed:

Lastly, 24 females and 80 males have postponed their studies. Health concerns and exams are once again the key issues here, with a higher proportion of males delaying due to illness.

In short, even though there are far more male students, many of the challenges faced by students—like health issues, exam pressures, and time management—seem to impact both genders similarly. There are some notable differences though, with pregnancy being a key reason for female dropouts, while males seem more affected by family issues and sometimes just becoming unreachable.

Dropouts:

Unfortunately, 431 females and 846 males dropped out. For women, health issues were one of the most common reasons, along with exams and study-related challenges. For men, the same factors played a big role, but they were also more likely to drop out because they couldn't be reached or dealt with family problems. Women also faced unique challenges like pregnancy, which led to some leaving their studies.

The overall insights highlight major trends and transformations in both demographics and course selection, as well as completion and departmental distribution by the period analyzed.

3.3.2 Overall Analysis

The analysis of women's participation and progression in IT skill development programs at Creative IT Institute, we see that there is a significant gender gap in participation and progression of women in IT skill development programs. Upon discussion with Quality Management Department who handle students and Faculty Members, we can say the major factors that lead to such differences in employment are socio-cultural restrictions, gender bias, and insufficient support systems. Women may be discouraged by cultural stereotypes of IT being a male discipline, lack role models and mentors, and be excluded from academic and financial support. To mitigate that Creative IT Institute might coordinate its outreach and recruitment, provide targeted financial aid for female students, build up support mechanisms, promulgate gender sensitivity, operationalize inclusivity, and trigger awareness campaigns to

question and shift social norms. These measures are intended to increase the participation of female workforce, by making the sector more inclusive and diverse which will in turn be advantageous to the IT industry by making the utmost use of female workforce.

3.3.3 Findings

This study explored the gender dynamics within Creative IT Institute's IT skill development programs. The analysis revealed several key points those are given below: -

1. **Gender Inequality:** There is a clear gender gap in enrollment, data suggests that there is a substantial gender difference in enrollment at the Creative IT Institute, where 68% of students are male, and only 32% are female. This discrepancy suggests that women are vastly underrepresented in these programs.
2. **Increased Female Enrollment during Covid:** During Covid more female students enrolled than usual, according to QMD due to WFH women were getting helps in household chores and duty towards their family, also due to the popularity of idea of online learning this happened. Not only that, even both male and female students were actively doing courses in that time. Covid consequentially made us realize the importance of skills development.
3. **Departmental disparity:** Women prefer non-technical fields like Digital Marketing (50-50 gender ratio), while men dominate technical courses like Web & Software Development (75-25 male-female ratio). Digital Marketing, Graphics & Multimedia are the most popular departments among female students. Units like Web Development, App Development, Cloud Computing are still continued to be male-dominated, although women study more physics than men, relatively few women have joined these departments.

4. **Completion and dropout rates:** These are similar across genders when adjusted for the overall distribution, indicating that once enrolled, women perform similarly to men. Going through the reasons behind them shows similar problems like health issues, study pressure, busy schedule among all the genders. However, female-specific issues like pregnancy still pose unique challenges.
5. **Cancellation and hold rates:** Men tend to cancel admissions and put their studies on hold more frequently, often due to personal, time management or family issues, while women face fewer such issues but still drop out due to health or family pressures, including pregnancy.
6. **Challenges Faced by Women:** Women face many challenges contributing to their lower enrollment and higher dropout rates. These challenges are socio-cultural taboos, gender bias, and inadequate support mechanisms. People often discourage women from pursuing careers in IT, there are fewer female role models, mentors, and women have less access to academic and financial support.
7. **Popularity of Freelancing among women:** Female students show a stronger inclination toward freelancing, with over one-third engaging in flexible work, while male students demonstrate a greater focus on securing formal job placements. Notably, 33.6% of total females and 31.7% of total males opted for freelancing, highlighting its broad appeal. However, males lead in job placement, with nearly 19% of total males placed in roles compared to 15.3% of total females. This data suggests that while freelancing remains a popular option, traditional employment is still more dominant, especially among male students, reflecting varying career priorities across genders.

8. **Competitive Career orientation:** We can see the variance of male to female ratio of working students is much less than that of total student number. From that we can say, once the female students get enrolled and overcome the barriers they shine as much as male students. Females balanced between freelancing and job placement, while males shifted focus more toward securing jobs.
9. **Need for Interventions:** The results accentuate the need for targeted interventions to tackle these gender differences and increase student retention. These efforts, some of the strategies are to multiply outreach and recruitment measures for girls, design financial aid programs only for girls improve student support systems, gender sensitization, and setting inclusive policies in place.
10. **Economic and Social Impact:** The potential economic and social benefits of boosting women's involvement in IT education are enormous. It can help in producing professionals with employable skills, push technology boundaries and thereby add to the economic prosperity. In terms of sociality, it contests and amends obsolete socio-cultural traditions, which increasingly adapting a forward-looking society.
11. **Policy Implications:** The Results from this study have important implications for policy makers and educational institutions in efforts to achieve gender equity in both education and employment. As we have already noted, taking on these issues at the systemic level can bring about social changes on a wider scale.

Results of the study suggest a necessity to address gender disparities in Creative IT Institute amongst IT skill development programs. Strategic interventions can help to create a richer and more equitable learning environment that ultimately can benefit all students — and it can also contribute to the advancement of the IT sector as well.

3.4 Conclusions and Summary

3.4.1 Summary

The project titled “Women Participation and Progression in IT Skill Development Program at Creative IT Institute” has tried to explain such wide gender disparity among the IT skill development programs with the secondary research aiming women under-representation in both participation and progression level comparing to men. Several factors are responsible for this, including social and cultural taboos as well as subtle biases due to gender and the lack of appropriate support channels. The need for gender diversity and the role that women play in the field of IT education have been underscored by the IT sector as one that is rapidly growing. Creative IT Institute is one of the most renowned IT educations cheap-accomplished by a prestigious organization training centers in Bangladesh, that provides a reliable source for IT-based knowledge, and also offers credible IT training which that you will need to secure big success in the IT industry. But the institute must also urgently look into and interrogate the dimensions between gender when it comes to skill development programs.

This study posits that there are gender differences in registration and continuation within the context of IT skill development at Creative IT Institute and thus, less count of female than male. According to the study, programmatic access, gender bias, and support mechanisms are potential reasons for this much lower percentage. That the institute employs a data-driven approach to examining how women advance through IT skill development programs. The goal is to both investigate gender dynamics in IT education and training (where the student enrollment patterns and academic outcomes at Creative IT Institute may be indicative of broader gender trends in the IT industry in Bangladesh), and provide recommendations on

how to encourage more women of all backgrounds to pursue and succeed in a career in the IT industry.

According to background data, women make up about 50.4% of the population in Bangladesh. Although she has a blossoming career on social media, the idea of becoming an IT expert is not as common among women from Bangladesh. The rapidly changing modern world, especially in the era of the Fourth Industrial Revolution, requires women not only to get involved in the IT sector but also to be active in this sector. Women in Bangladesh must be trained in IT skills to effectively address this demand. Observations of the department within Creative IT Institute in Web and Software department proved gender discrepancy to be most extreme — of sixteen colleagues, there was just one female instructor. This observation has prompted the researcher to highlight the reasons in general for why this gender gap is so high.

This research intends to achieve two objectives: (1) to begin with, examining the current portrait of women in respect of enrolment, retention, and success at the Creative IT Institute, in computer skill-based education programs, and (2) to identify the factors and challenges in association between women and their progression within the Institute in the field of IT education, are largely based. This paper studies multifaceted aspects of gender disparities in IT skill development to inform efforts to amplify women presence in IT education.

This has far-reaching social, economic and institutional implications of this research. At the societal level, it contributes to high-level objectives such as gender equity and social justice by empowering women and challenging the overarching socio-cultural constructions that hinder women from engaging in tech-related professions. On one hand, increasing the participation of women in IT education will open up a huge untapped resource for technological advancements and corresponding economic growth. On the institutional side,

the research provides a blueprint for other academic institutions that want to advance gender diversity in their clinics. The findings can inform strategies and policies to promote inclusivity and support for female students in IT education to foster increased retention and success rates. Moreover, the results are useful for professionals who are involved in education and workforce development policy, offer empirically-driven policy recommendations to foster gender equality in education and employment.

The methodology consists of an analytical research on student information based on the data that are available on the creative IT portal, using SQL, MS Excel and tableau as tools and secondary data from available papers and primary data from a survey about involvement and interest for pursuit in IT professions. Results from a Tableau dashboard panning data for the last three years across 10,351 students have also revealed a very clear gender gap, with 68% of the total student community made up of males, and 32% female. In the gender analysis, male supremacism is the rule, with minor annual fluctuations maintaining the trend. Changes in course mode distribution showing a significant increase in online enrollments from 2020 to 2021 Unfortunately, the completion rates dipped from just 88% in 2020 to just 28% in 2022 which makes retaining learners a headache. Although certain streams such as Digital Marketing Graphics & Multimedia have gained popularity, the gender disparity that exists across the streams has not ostensibly caught the attention. The 2022 enrollment is also of interest, as a substantially larger cohort of both male and female students entered school in that year, indicating that enrollment trends may be changing. This rise, but with it a spike in dropout rates (thereby evidencing retention strategies to be broader)

The broader analysis also finds substantial gender imbalances, with women discouraged by socio-cultural norms, the absence of examples, and a paucity of institutional and financial support. Creative IT Institute hence should improve its outreach, promotion method, establish a dedicated financial support system for female students, reinforce support mechanisms,

make it safe for female students, compatible with gender sensitive-counteracting socio-culture, implement inclusion policy and make these practices visible to challenge the existing narrative. The initiatives are designed to support and nurture the next generation of female talent in technology and will deliver valuable outcomes for the IT industry by harnessing the full power of the female workforce.

To summarize, "Women's Participation and Progression in IT Skill Development Programs at Creative IT Institute" studies that the highlighted gender disparity in IT program enrolment and progression indicates fewer women than men enrolled and passed in IT programs. This is due to various socio-cultural taboos, gender biases and lack of support mechanisms. Though shrinking gender gaps in enrollment have been trailed by a leap in dropout rates, underlining continued struggles. The solution to these problems lies in reaching to such students, providing them financial assistance, engaging them with mentoring programs and psychological support systems, training the society to be gender friendly, and in following inclusive policies and awareness programs to reconfigure the established socio-cultural norms. These steps are critical for establishing a more inclusive and diverse learning environment, ultimately helping the IT sector to tap into the value of the entire female workforce while also fostering gender equity in education and the workplace.

3.4.2 Conclusions

Less women than men were enrolled and progressed through the IT skill development programs according to the study on "Women's Participation and Progression in IT Skill Development Programs at Creative IT Institute". These are shaped by deeply ingrained socio-cultural taboos, gender inequalities and lack of supportive mechanisms. Women are also discouraged by society, lack positive role models, and have limited access to the academic and financial support needed for them to be participants and have success in

IT-related work. Where there is a rise in female enrollment as an apparent welcome change, the dropout rates have been on a high too, suggesting the problem of retention remains acute. Situations like these can only be solved through targeted outreach, financial assistance, support systems, gender sensitivity training, enabling policies, as well as campaigns forcing us to question socio-cultural realities. She believes these initiatives are necessary to develop the wider talent pool available in the female workforce and subsequently, benefitting the IT industry as a whole as well as contributing to greater gender equity in education and employment.

3.5 Recommendations

The study reveals some gender disparities, these recommendations are made for Creative IT Institute (CIT) to work on the disparities:

- CIT must establish gender-inclusive policies and campaigns that seek to draw more women participation in IT skills development. This may include placing focus efforts in recruiting, by creating special scholarships, mentor programs, and radio waves promoting education in IT, and especially for women.
- Strengthen support mechanisms for female students in order to increase retention rates. CIT to address this needs to collaborate: through a partnership of designed academic advising, counseling services, and networking opportunities to give female students who study IT a chance to break this glass wall.
- Incorporation of gender balance in curriculum is key. Through a more inclusive perspective on learning, CIT is open to implementing a greater variety of perspectives, case studies and examples that illustrate the significant roles that women have played in the field of IT.

- Establishing industry partners, professional organizations and community stakeholders' partnerships to support the creation specific and targeted internship programs, job placement programs and mentored initiatives to female students in IT education and employments opportunities.
- Scholarships, grants, and tuition waivers to reduce financial constraints by offering financial assistance to female students from those underrepresented groups to help lower the financial accessibility barriers to IT education.
- Investments in campus resources and facilities that help build a supportive and inclusive environment for female students are part of creating good female-committed spaces. This includes study areas, daycare services, and gender-neutral toilets to meet the needs of the students.
- Promoting the advancements and success stories of ladies in IT and previous understudies can help with their motivation Guest lecturing, panel discussions, and networking opportunities with established female IT sector leaders can drive inspiration within current students.
- Encouraging awareness programs in schools, communities and rural areas to establish more women in IT education and thus increase the educational and vocational participation of women. CIT can engage other local organizations, educational institutions to hold workshops, seminars, Career fairs targeting female students.
- Creating a sophisticated monitoring and evaluation framework for gender diversity initiatives and tracking the advancement and results is critical. Therefore, collecting data in an intersectional manner on enrollment, retention, graduation rates, and career outcomes that disaggregates results by gender will be useful for identifying specific focus areas where measures could be concentrated, and by which the effects of interventions can be tracked.

Creating environments which support women, while providing them opportunities to learn and grow in their careers remains more critical because every female deserves an equal chance to succeed. Altogether, promoting collaborative learning, teamwork and peer support initiatives may better female students' engagement and success in IT skill development programs at CIT.

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Appendix A.

1. Combined Student Dataset Link:

https://docs.google.com/spreadsheets/d/1_wr_HiSn1LaKUfO_8LEIOf20JYkH3_aggLKvyuYRU/edit?usp=sharing

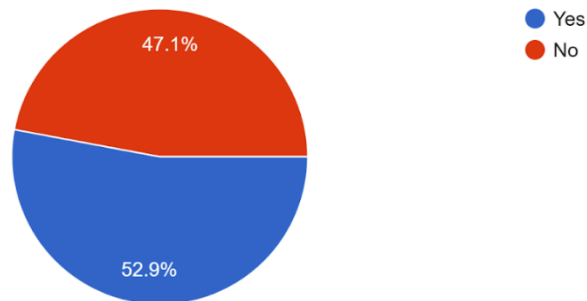
2. Pivot table of students categorized by year, gender, and various academic statuses

Count of Student ID	Column Labels				Female Total	Male				Male Total	Grand Total
Row Labels	Female					Male					
	2020	2021	2022	2023		2020	2021	2022	2023		
Active				479	479			17	1024	1041	1520
All good				470	470			17	990	1007	1477
Freelancing				3	3				31	31	34
Job Placed				6	6				3	3	9
Admission Cancel				10	10	3	4	11	17	35	45
Financial Problem						1				1	1
Illness				1	1	1			1	2	3
Lost Interest								5		5	5
Personal Problem				9	9		1		16	17	26
Time Management Issue						1	3	6		10	10
Completed	647	694	526	303	2170	1223	1330	1351	570	4474	6644
Freelancing	286	327	223	126	962	476	570	668	256	1970	2932
Illness	18	11			29	16	7			23	52
Job Placed	95	131	124	87	437	290	362	362	159	1173	1610
No Update	248	225	179	90	742	441	390	321	155	1307	2049
Time Management Issue							1			1	1
Dropout	73	95	164	99	431	171	227	248	200	846	1277
Family Problem	18	5	6		29	15	4	6		25	54
Financial Problem	3				3			3		3	6
Freelancing			2		2			7		7	9
Illness	1	21	17	8	47	5	27	47	19	98	145
Lost Interest			3	2	5	3		3		6	11
Moving Abroad			2		2		3	2		5	7
No Update	4	3	21	13	41	5	16	44	45	110	151
Not Understanding			2	7	9			4	7	11	20
Personal Problem	9	3	8	3	23	22	14	8	12	56	79
Pregnant	12	7	3		22		2			2	24
Study/Exam	10	32	46	22	110	54	82	56	36	228	338
Time Management Issue	2		8	7	17	10	13	15	8	46	63
Unreachable	14	24	46	37	121	57	66	53	73	249	370
enrolled				138	138				454	454	592
All good				138	138				454	454	592
Hold	1	3	2	36	42	13	13	18	83	127	169
All good				3	3				6	6	9
Family Problem									1	1	1
Financial Problem				5	5				10	10	15
Illness	1	3	2	12	18	13	13	18	32	76	94
Personal Problem									2	2	2
Pregnant				4	4						4
Study/Exam				9	9				21	21	30
Time Management Issue				3	3				11	11	14
Postponed	1	1	2	20	24	11	16	17	36	80	104
Family Problem				6	6				3	3	9
Illness				7	7	5	8	9	10	32	39
Personal Problem				4	4				5	5	9
Study/Exam	1	1	2	3	7	6	8	8	18	40	47
Grand Total	722	793	694	1085	3294	1421	1590	1662	2384	7057	10351

3. Survey result:

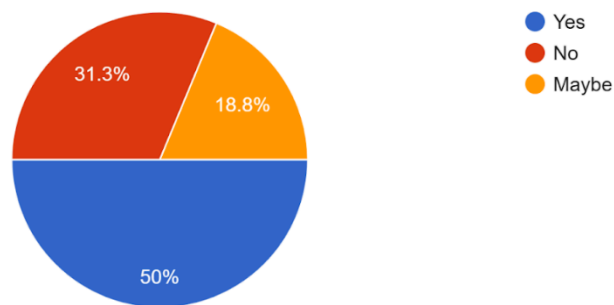
Are you involved in any IT skill-based profession?

34 responses



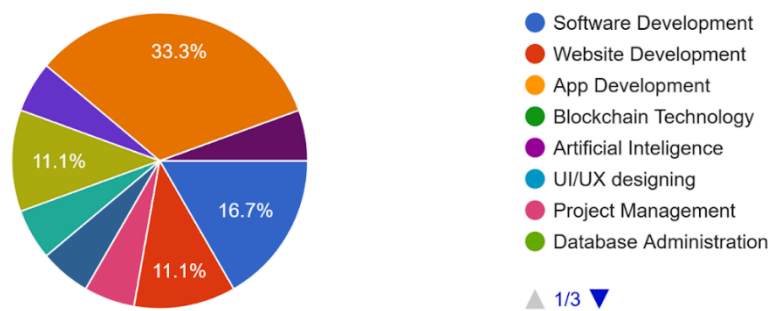
Are you interested to build your skill in IT?

16 responses

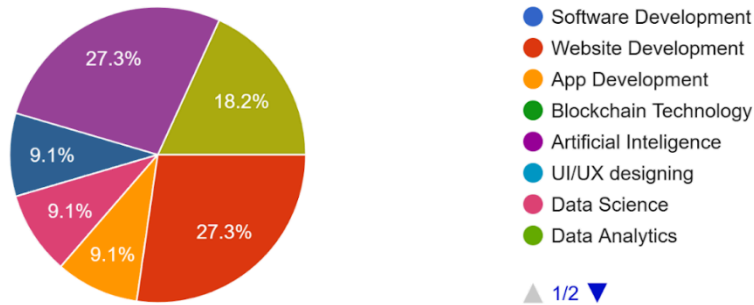


Which of the following profession you are involved in?

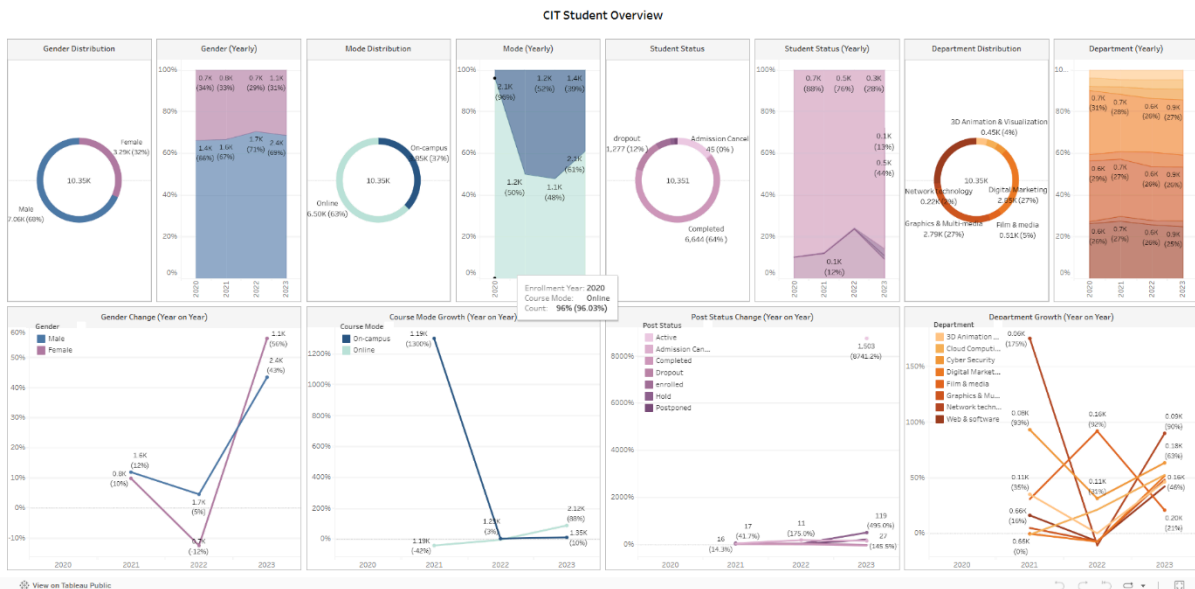
18 responses



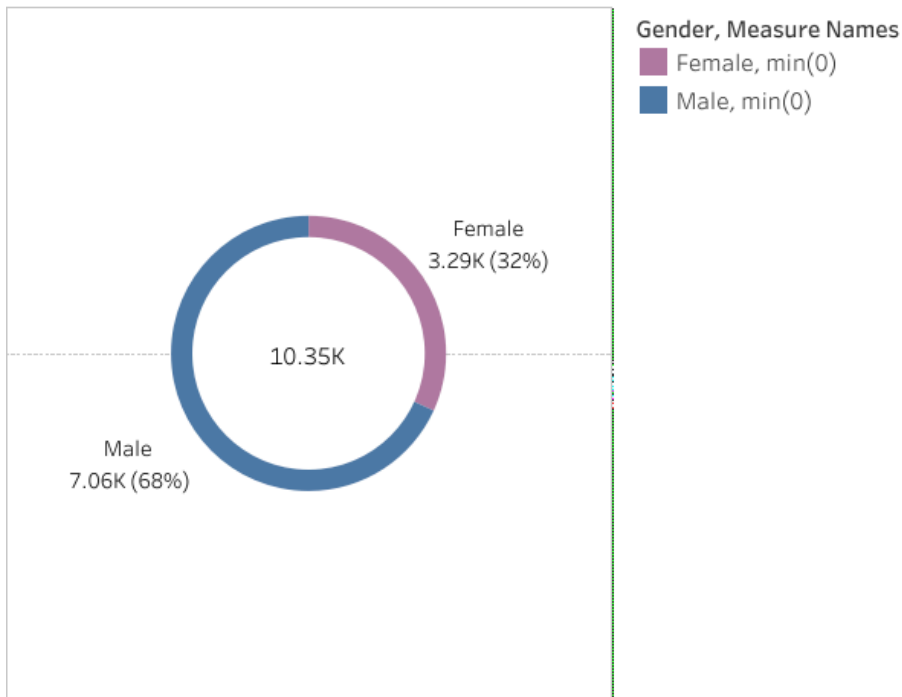
If you had to choose a skill to acquire, which of the following would you be interested in?
11 responses



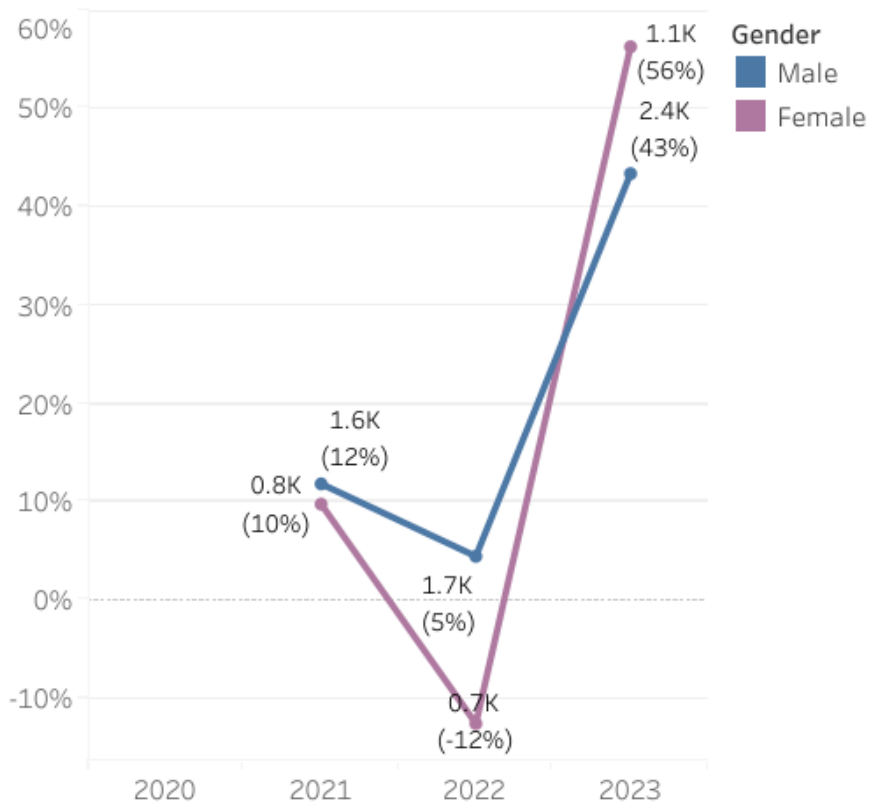
4. Tableau dashboard visuals:

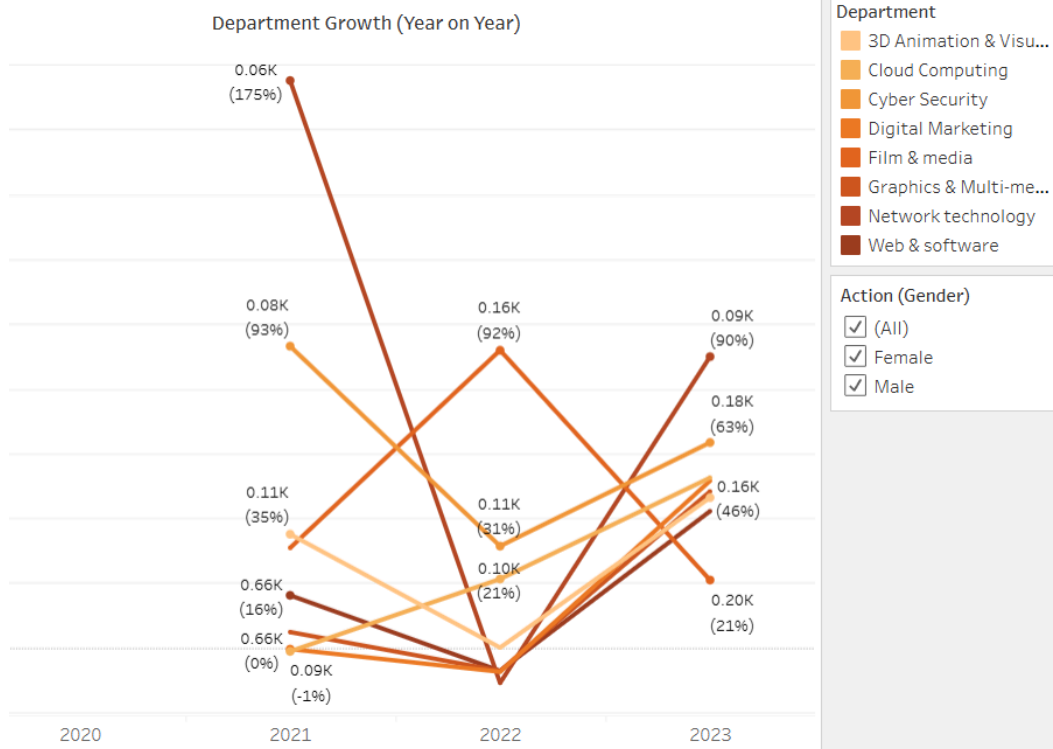
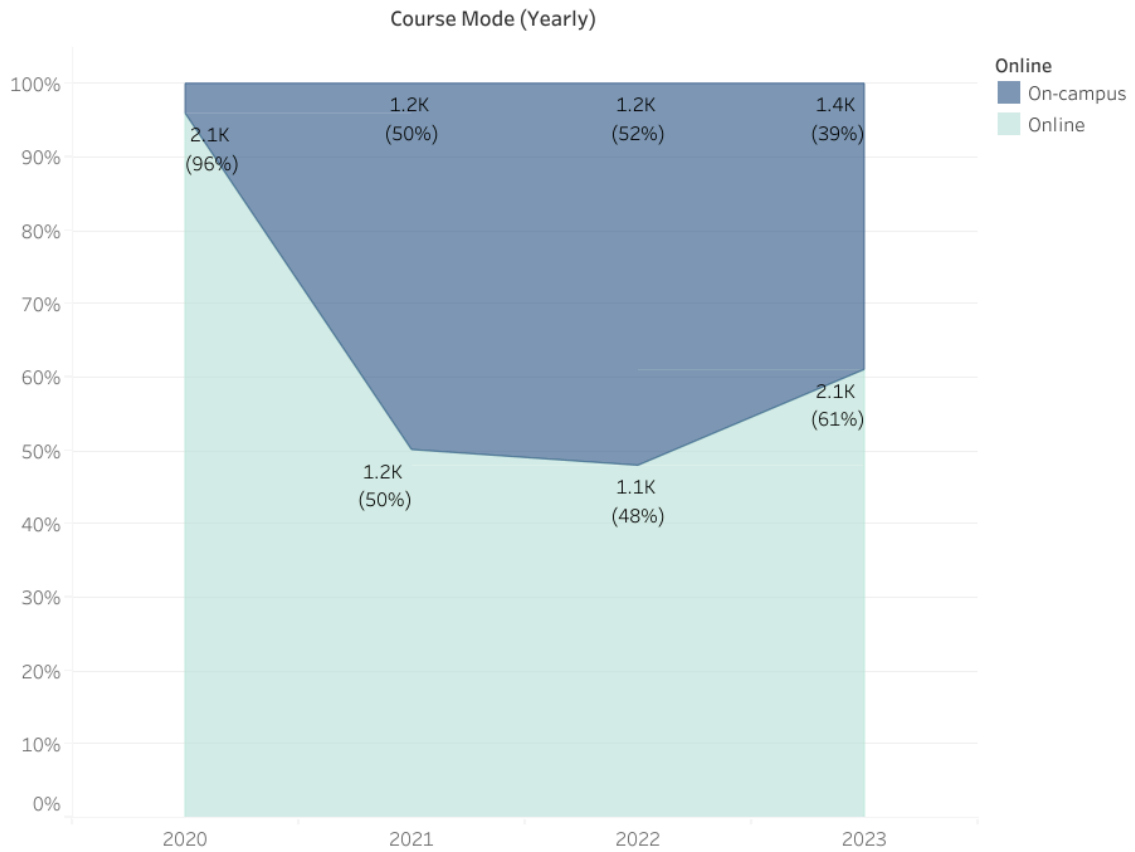


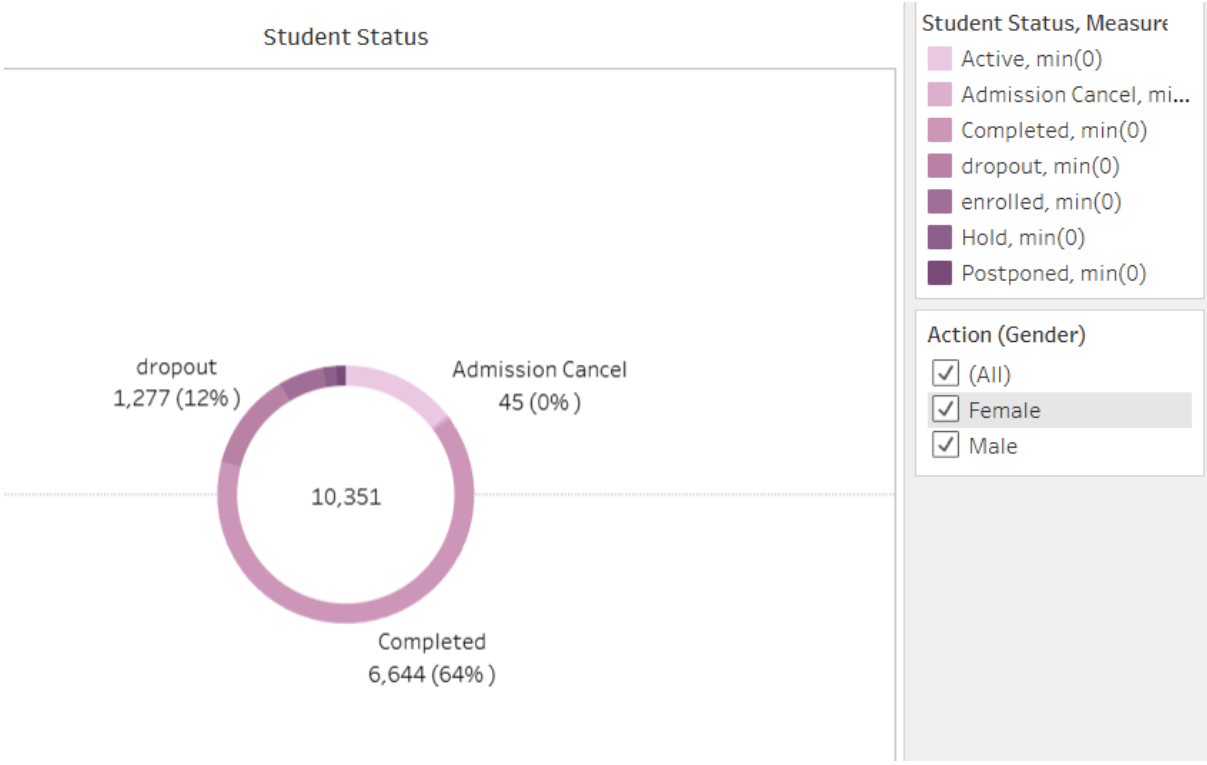
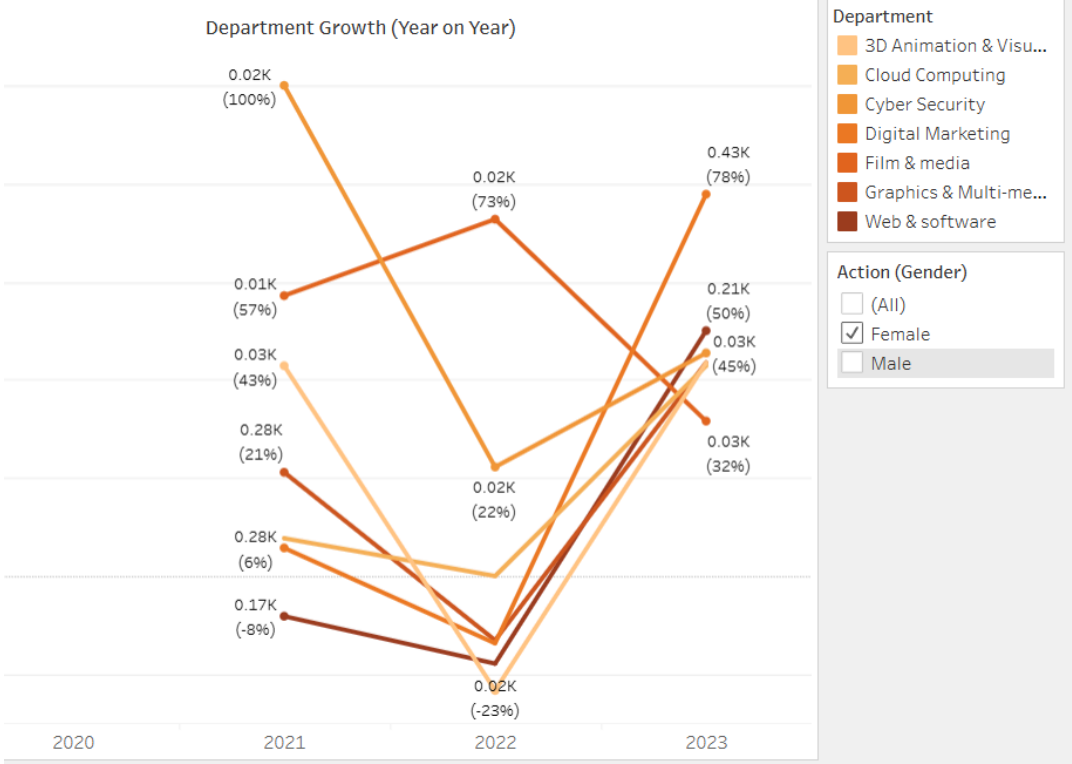
Gender Distribution



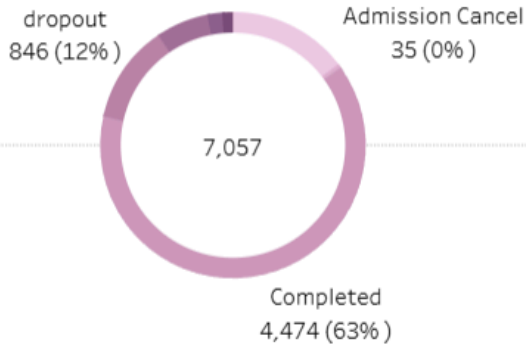
Gender Change (Year on Year)







Student Status



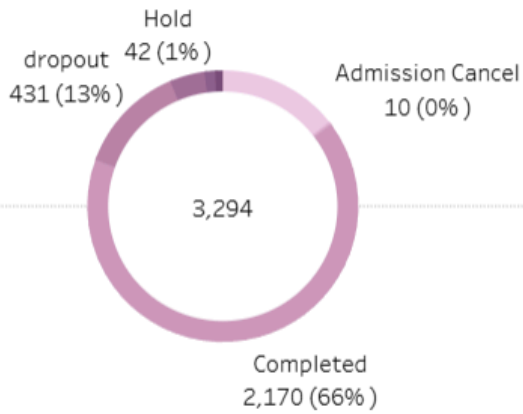
Student Status, Measure

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- Admission Cancel, mi...
- Completed, min(0)
- dropout, min(0)
- enrolled, min(0)
- Hold, min(0)
- Postponed, min(0)

Action (Gender)

- (All)
- Female
- Male

Student Status



Student Status, Measure

- Active, min(0)
- Admission Cancel, mi...
- Completed, min(0)
- dropout, min(0)
- enrolled, min(0)
- Hold, min(0)
- Postponed, min(0)

Action (Gender)

- (All)
- Female
- Male