CAREERS IN INFORMATION TECHNOLOGY: THEN, NOW AND BEYOND
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Abstract

This is a study on the fast changing jobs in the world of Information Technology aims to draw a career roadmap of an IT professional.

Introduction

Today's modern life has become synched with information technology. Computers whether mainframes or personal, hand held or obiquitous have impacted the way of life of the very young to the most senior in our society. Information Technology is now analogous with every step we make, decisions we take, and beliefs we embrace.

Information technology has become an indispensible part of modern life. Our quality of life has leaped forward with the development in computer literacy. Computers, that used to be a dreaded word for people wary of intelligent machines, now take center stage in our lives embedded with information at our beck and call. The Internet and the World Wide Web has brought connectivity everywhere. It was only yesterday that connections with the world can only be done while sitting at the computer desk. Today's mobile computing technology keeps us connected anytime, anywhere, with real time streaming data and video images to boot.

Computer technology has occupied a prominent place in living ordinary lives that without it may lead to personal withdrawal syndrome, a major social upheaval or a massive economic breakdown. Computer applications technology can be seen from conception to

entombment. From the ultrasound machines, the intelligent baby toys and gadgets, the household appliances, the machines of commerce and industry, the cars, the airplanes, the ships and up to the computer controlled furnaces of crematories, we can see the footprint of Information Technology.

The so-called computer jobs have evolved so rapidly in the past few years. The last two decades defined a revolution in electronic technology that saw several major changes in teaching the basic requirement to build a career in Information Technology. While IT job opportunities are increasing globally every year, the professional skill set demands which have remained varied. What governs the professional development in Information Technology? How do we keep up to speed up our reliability to cope with the rapidly changing world of computer technology?

A Study in Contrast – Computer Jobs Before vs. IT Jobs Today

In the mid 70's, Alvin Toffler stated the evolution of society will hit an age of Information Overload. Toffler argued that the society is undergoing an enormous structural change, a revolution from an industrial society to a "super-industrial society". This change overwhelms people. He believed the accelerated rate of technological and social change left people disconnected and suffering from "shattering stress and disorientation"—future shocked. While his book, Future Shock, predicted mass production and disposable goods, he was wrong about disconnectivity.

Those days were the age of mainframe computers and it was predicted that millions of computer key punchers or data encoders will be needed. But in the turn

of the decade, there was no demand for keypunchers anymore. The Personal Computer has become the single-most powerful force shaping the structure and functioning of governments, work organizations, factories, offices, and executive suites. To cope up with the rapid technological advancements, the computer science course has been drastically changed to fit the age of the Personal Computers and their peripheral operating systems.

In the 90's, Ray Kurzweil, in his books The Age of Intelligent Machines and The Age of Spiritual Machines predicted artificial intelligence, new computer languages, fuzzy logic, intelligent robotics and ubiquitous computers. In the span of another decade, Computer Science became the science of Information Technology.

The Course Outline for the Degree of Bachelors of Science in Information Technology in the Philippines Today.

"The Bachelor of Science in Information Technology (BSIT) program prepares students to be IT professionals who are able to perform installation, operation, development, maintenance and administration of computer applications. The goal of the program is to gear up students as "information technologists" who can assist individuals and organizations in solving problems using information technology (IT) techniques. The BSIT program equips students with the basic ability to conceptualize, design and implement software applications. It also provides experience in the development of office support (word processing, spreadsheet, database and accounting), intranet and internet and specialized professional software (multi-media, website development and eCommerce). It also offers background in mathematical and computing

principles.

The teaching methods used are classroom discussions, practicum exercises spent in computer laboratories and on the job training or internships."

A few years back: BSIT was taught in specialized branches namely: BSIT Software Development, BSIT Network Administration and BS Information Management which evolved from BS in Computer Science and BS in Computer Engineering.

Today, the generalist approach in teaching the course in Information Technology is governed by the predominant industry provider for operating systems or computer applications. Depending on the capability and alliances made by the educational institution, IT 101 is taught based on proprietary or open source operating systems.

Information Technology is considered a profession, because the skills and knowledge acquired in this course are specific and familiar only to those who study this course or similar courses. But IT profesionals are required not only computer development or applications skills but also industry certifications and approved licenses.

Today's IT Professional career revolves around the Software, Hardware, Network, Data and IT Training Resources. The content and process of which is very much affected by the latest technology available to the public.

Career Opportunities for BSIT Graduates Today

- **Information Technology jobs:**

  - **Applications Developer** – designs, develops and implements specific software codes that enables computer systems to perform a variety of tasks; translates business requirements into technology terms to satisfy a client's specification through technologically enabled means.

  - **Database Administrator** – creates effective methods to organize, track and store information for businesses and organizations; responsible in safeguarding computer database

  - **Technical Support Specialist** – assists customers in troubleshooting computer systems; provides instructions over the telephone or assist the customer in person.

  - **Test Engineer** – responsible in testing software applications and programs for organizations prior to releasing it into the market

  - **Web Administrator/ Web Master** – maintains client's websites by writing computer codes and updating links to other websites.

  - **Web Developer** – creates computer languages ranging from HTML to more complicated scripting languages that makes use of databases.

- **Network Administrator** – keeps network functioning at optimal levels; they also supports hardware and software applications that are part of the network.

- **Information Technology Instructor** – teaches students on computer skills, internet use, and digital technology

- **Information Security Administrator** – implements softwares to protect important data stored in computers to be tampered or stolen; makes sure that system back-ups are in place; creates recovery procedures in times where critical information is lost.

- **Network Engineer** – designs, installs and supports computer systems in an organization.

- **Systems Analyst** – analyzes data processing problems and provides solutions by programming software changes, implements software upgrades or develops new programs.

- **Non related jobs that BSIT graduates can work in:**

  - **Call center agent** – answers phone calls and inquiries of clients and provides customer support usually to people from other countries.

  - **Administrative Staff** – performs office duties and tasks; positions that include

office secretary, personal assistant and office clerk.

o **Freelancer working online** – does online jobs for clients abroad, such as data entry, article writing, SEO, customer support , administrative support etc., which mainly depends on skills.

Note that in that three decades back, IT career revolves only around computer repair, installation, helpdesks and maintenance, assembly and training.

Conclusion and Recommendation

Building a career in Information Technology has three distinct entry levels, the pledging practitioner can start Upstream – invention and development of systems or applications; Midstream- testing, product reliability applications; or Downstream in user training applications or systems security. Many software developers started with an entrepreneuring spirit and ended up successfully like Microsoft, Apple, Facebook, etc. Even in the field of film and entertainment, computer skills have shown their weight in gold.

Unlike Accounting Course or Engineering courses that is based on long years of tried and tested theories, the Information Technology is sitting on an everchanging body of knowledge that brings forth new products and applications in the blink of thought. It is recommended that the Information Technology Curriculum be reviewed annually to find the best industry fit, in terms of software, hardware, data and network global standards. The advent of Mobile Commerce in the Cloud will leave behind the wired E-commerce of yesterday and will drastically set a change of skills and ethical practice for future IT Professionals.

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