

## The challenge of teaching information technology

---

Regardless if you are an Apple, Linux or Microsoft fan, the amount of data coming at you today is overwhelming. The viral growth of technology is immeasurable. Less than ten years ago, you could teach computer basics, computer repair and upgrade, basic networking, basic security and cover laptops and you would cover the information needed to start an IT career.

In this day and age, you have to teach mobile devices, all of the above in great detail, except that there is the growth of new devices and technology that cannot be measured – and you must cover the fact that there is no true convergence of technology. Being a technical school, it is our job to turn out IT professionals with the maximum amount of knowledge in information technology in a balanced amount of time.

So what does a typical help desk employee need to know how to repair in today's professional environment?

- Mobile Computing (Phones, tablets, netbooks, laptops and other devices) -Not just mobile computing – a well-rounded knowledge of Windows Phones, Basic Phones, Android and iPhones. How to configure these devices, secure, recover these devices, backup, deploy, track, maintain, sync with cloud computing, local computing and how to select secure apps that meet enterprise level needs. With the hundreds of thousands of apps, IT personnel have to help evaluate and make sure they are secure and meet the needs of end users.
- Desktop Support – Desktop support includes the maintenance of all operating systems, awareness of Linux, Apple, and Windows. Although these computers may be decreasing in sales, help desk personnel need to be aware of how to support these devices. Support for PCs is not the generic support of two years ago. Techs will have to support OpenSource, main stream, and cross platform applications. With the thousands of configurations available for computers today and the society of mobile workers we are creating; security is more important than ever. The amount of accessories and configurations is endless.
- Server Support – Today the basic file server is a tiny portion of what your help desk support team needs to have a working knowledge of. With data servers, application servers, DHCP, DNS, NAP, Firewall, and the plethora of other servers that are available, your server administrators have their work cut out for them and your help desk staff have to be well educated with the correlation and importance of these servers and how these servers are meshed into the complex networking makeup of enterprise systems today.
- Networking and Wireless Technology – It's not just about making wireless available today for laptops but it merges into bandwidth and the needs of mobile computing. Today the needs assessment falls into the mobile devices and the extreme need for tons of bandwidth. If your company has several hundred employees, you may need to look at the need (bandwidth) for three or more devices per employee. By adding these devices (mobile) to your network, your needs could triple or quadruple because of the need for collaboration with other users and to the cloud. Wireless today covers TVs, DVDs, projectors, mobile devices, netbooks, laptops, desktops, NAS systems and hundreds of other devices. Networking is more complex than ever. With virtualization used in industry, even the new IT professional needs an understanding of this technology and how it integrates into their organization.
- Security – Typical help desk personnel today don't just reset passwords. They have to understand the need to protect mobile devices, understand encryption, remote computing, hardware firewalls, policies, laws, disposal of equipment, websites, viruses, malware and hundreds of other devices, services and topics.

- Cloud Computing – Here’s a mystery. As the cloud forms, the storms brew on how the cloud will be used and which type of cloud is right for your company. With the dozens of options available, security, use and controlling the cloud are becoming the problems and solutions IT personnel need to be able aware of.

While the above topics only represent a ***tiny fraction of what needs to be covered today***, the basic understanding of technology needed for entry level into the IT industry is becoming astronomical.

So how do you teach all of this? Classrooms need to have access to every type of device and service available. Not all devices or services – but a common ground that is general enough to cover the topic yet broad enough to help students have an understanding of how to configure, use, and resolve issues with technologies of today.

***Curriculum in the classroom has to be dynamic*** and meet standards with competencies. Advisory committees must be diverse and willing to work with staff and personnel that train young IT professionals. Motivation, Drive and experience is needed in the classroom along with live projects and not just labs.

Companies will need to accept the fact that finding IT support is as good as the education the student receives and that many skills are learned in the work place.

Students today ***need to be trained in an 18 month period or less before their skills expire*** and need to continue their education and training as their careers advance.