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All systems ready to grow

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Coupling technical skills with an understanding of business could lead you into the strategically important field of information systems.

The page on the Madison School of Business, University of Wisconsin, website that gives details for their programme on information systems has an attractive flash movie running. It concludes as "...business is information systems". An apt expression, especially if you look at the automation levels in workflow in any organisation across any sector that competes to survive.

The core responsibility of automating workflow and manual information systems lies with information systems (IS) professionals. Such has been the growth in importance of this job function, that leading organisations as well as those aspiring to be leaders have created a senior-level position called the CIO (chief information officer).

In these hugely competitive times, CIOs around the world play an increasingly significant role in shaping the way organisations conduct business and hence work in tandem with the CFO and CEO. This fact, coupled with the growth of the software industry in India, has led to information systems (IS) becoming one of the major areas of specialisation in the MBA curriculum.

Contrary to popular belief, information systems is not computer programming, although systems professionals are supposed to work with programmers. IS, as an organisational function, is that specific point where business meet information technology (IT). As one software company CEO once said, "

Just because you don't know a technology, doesn't mean you won't be called upon to work with it." That's precisely what computers-based information and workflow systems have done world-wide — pushed ordinary, non-technical workers to perform their day-to-day functions using technology.

So while departmental workers interface with automated systems — whether it is an ERP software such as SAP or Peoplesoft in a large manufacturing company or Tally, in a small- or medium-sized trading firm — it is the IS professionals who are responsible for converting organisational processes and management frameworks into automated systems or integrating legacy systems with state-of-the-art software applications.

Dynamic Function

We have all witnessed a huge spurt in computerisation over the past few years. However, an interesting fact is that organisational systems are still trying to keep pace with emerging technology as well as evolving business practices that lead to cutting-edge applications. For instance, let's take the example of the banking industry. Banking systems were largely for internal operations until a few years ago.

As banking evolved and retail banking grew, smarter banks realised that serving customers in a personalised manner at their branches was more costly than giving control to customers (kind of self-service).

This gave birth to ATMs (automatic teller machines) and internet banking — both requiring a sophisticated overhaul of the manner in which traditional information systems ran in the banking industry. The result was competitive edge, lower cost and hence higher profitability for banks who were early adopters of such technology, leading to better returns for their shareholders.

This example only illustrates how IS as a function will be required to serve the evolving business needs of an industry and will keep playing a critical role in ever-increasing globalisation, where the only constant is change.

Who can be an IS professional?

An IS professional is most likely to succeed if she has a master's degree in business administration (MBA). If this is coupled with a degree in information technology, lateral growth in core technology-related areas becomes much easier. Vice versa, an information technology professional having knowledge of business issues is equally likely to succeed as an IS professional.

What roles are available?

When you move along the career path as an IS professional, you will be designated with job titles and positions such as systems or business analyst, database administrator, computer systems auditor, information systems manager, computer consultant or network administrator. The top position is chief information officer (CIO), a role which implies overall operational and strategic responsibilities.

Systems or Business Analyst: As an analyst, you may be working either for an IT consulting firm or in the IT department of a large organisation. In both cases, the key expectation from you would be to identify ways in which IS can be implemented to get higher income, lower cost and greater customer satisfaction for your business. You need to be knowledgeable both in IT and business processes.

You also need to be a good listener, clear minded in execution and great at selling your ideas to the management. The last point cannot be understated as most businesses still view IT and IS as capital-intensive, giving returns only in the long-run

In an ideal situation, your team may be reporting to an impatient CEO or CFO who sees IS as a core function for gaining competitive advantage and may demand quick implementation of cutting-edge applications. Alternatively, you may be working for companies like Infosys and NIIT Technologies who may depute you to their client's site to do a complete systems study and create the computerisation plan.

Data Administrator: Even at current levels of computerisation, data must be the most under-utilised asset in most organisations. Progressive businesses have understood its importance as practices like data-warehousing and data-mining have emerged. The result is better operational speed as well as access to key information required for decision making.

Let's illustrate this with an example for data-warehousing, where data from perhaps two different sources and locations is picked to take an important decision. Let us say that you have an American Express credit card and now decide to apply for a personal loan from the same bank, but a different division.

Using data-warehousing tools, the manager of the PL division decides against offering you any loan as you have skipped your credit card payments for the last two months. All this is possible because an IS professional has created a data warehouse that functions efficiently and allows the end-user to query for her decision-making purpose.

Similarly data-mining can be illustrated with an example of a retail store that has analysed your purchases over the past 12 months and realised that you buy only cotton salwar suits. The marketing department then uses this information to send you personalised direct mails whenever new collection of cotton-suits arrives at the outlet.

As a data administrator, you will be expected to design, maintain and document the business data as per your business rules and policies and in a manner that it is easily available to end-users for query and analysis. You are the custodian of data and are required to understand the sourcing and extraction of data as and when the need arises. You will be working with appropriate data-modelling, warehousing and mining tools.

Database Administrator (DBA): Functional efficiency in a modern organisation is centred on its database. A database in current times is not as simple and manageable as it sounds. Large firms have multi-tier computing architecture with distributed data and applications that support replication of data.

As a DBA, you will be responsible for data modelling and design. It is important to note that this role demands that you understand not just database and computing technology but also business issues as you cannot design a database without an understanding of how it will be used in business. You will need to display data modelling skills that make your database scaleable and independent of technology. These are skills that require a deft and creative mind.

DBA is a leadership role and much in demand. With experience you can command a very high salary in large organisations.

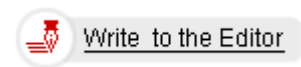
Project Manager: As a project manager, you will be expected to define, plan, schedule and control the project and make sure that it reaches its successful conclusion. Project management skills require the ability to smartly deploy and manage manpower resources to achieve milestones. You need to be good at not only making your team perform but also at managing external contractors and consultants, if required. In an IS role, you need to ensure that knowledge transfer is taking place, especially when deliveries are expected from external vendors.

This is a managerial role and requires an understanding of budgeting and costing skills as well as an ability to map non-conformance and deviation and take quick corrective steps. You will also require interpersonal skills that allow you to recruit and motivate skilled people.

Do you have IS Quotient?

Do you have a passion for computing and at the same time an understanding of the big picture as far as application of technology for real-life business is concerned? Are you articulate, quick and regular in updating your knowledge? Are you good at communicating with people and persuasive enough to make them realise the future benefits of computing? If yes, then take IS as a major in your MBA. With experience, you can surely reach the position of CIO.

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