



From classroom to workplace

WITH the extensive growth of information and communications technology (ICT) and computing applications, a postgraduate qualification within these fields will prove beneficial to students irrespective of industry.

Postgraduate asks two professionals from non-ICT and computing backgrounds their reason for studying a master's in information and communication technology management (both specialised in project management) and how it has helped them.

gave me a broad overview on management and leadership skills.

I believe the future of education will embrace a lot of changes and ICT will be an essential part of the delivery platform.

Technologies have become an integrated part of our work processes and having ICT skills will not only give us a competitive edge but will enable us to predict new economic and societal challenges ahead.



Mohd Faiz Alias,
director of industry relations at KRU Academy Sdn Bhd.

As a lecturer in animation and visual effects, I had seen technology grow to become an important tool for teaching and learning such as learning management systems and massive open online courses.

Higher learning institutions began to emphasise digital literacy and independent learning as these would better prepare graduates to work in an era of digital economy and network societies.

I soon realised that my experience and technical expertise would not be sufficient for me to perform my new management and leadership role effectively.

My postgraduate course at Asia e University (AeU) gave me access not only to ICT knowledge to better understand the social contexts of technology but also



Alice Chang Li Chin,
manager of casino operations.

With a background in business studies, I discovered my interest in ICT in my workplace and found it important for the future. I enrolled in the course at AeU to pursue my interest and upskill at the same time.

I now have a wider perception and understanding of ICT concepts. During the course, I got to meet people from different fields, share my ICT-related work experience and widen my business and social network.

The knowledge I acquired improved my work performance tremendously and I no longer feel stressed when I am assigned ICT-related projects.

I am no longer restricted to using old work processes that were used by my predecessors as I can now create new systems that are more effective to the needs of the projects assigned to me.

By IAN JEROME LEONG

ACCORDING to the *Gartner Worldwide IT Spending Forecast 2016* released by the world's leading information technology (IT) research and advisory company, the overall IT expenditure for this year is expected to hit US\$3.54 trillion (RM13.88 trillion), 0.6% higher than the total recorded spending for last year, which suffered a whopping US\$216bil (RM847bil) drop compared with 2014.

This rise in global expenditure forecast, which covers spending and acquisitions on data centre systems, software, devices, IT services and communication services, is largely due to the pertinence of information and communications technology (ICT) and computing in the ever-evolving business landscape.

The adoption of ICT and computing is widely accepted as a natural and necessary step towards modernisation, calling on the need for professionals, including those from non-ICT or computing backgrounds, to pursue relevant postgraduate programmes.

Strong industry demand

Assoc Prof Dr Roshayu Mohamad, dean of the School of Information and Communication Technology at Asia e University, says, "IT awareness becomes a necessity for every knowledge worker regardless of education background as ICT is needed to build better business opportunities and stay on top of the business world."

Expanding horizons

As organisations of all sizes across industries turn towards IT solutions for a competitive advantage, there is a massive demand for ICT graduates who can help bridge the gap faced by companies in reaching their operational targets.

Deputy dean and head for computer science at Quest International University Perak Asst Prof Dr Pong Hon Keat says, "The demand for ICT graduates is growing fast. From software architects and network engineers to game programmers, good ICT and computing graduates are highly sought after in the job market."

He believes only 60% of the demand for ICT graduates is met and that a great deal of importance must be placed on meeting this demand so that the current ICT-driven economy is able to move forward smoothly.

Climbing the ladder

"With the prevalence of mobile devices, social networks, the cloud and mobile applications, ICT and computing skills are no longer the preserve of computing professionals but are now open to those who wish to enhance

their careers," says Assoc Prof Dr Yau Kok Lim of the Department of Computing and Information Systems at Sunway University.

As ICT and computing programmes are widely implemented and ever-expanding, employees holding managerial positions are expected to have in-depth understanding of the computing applications in the market as well as their pros and cons.

Professionals of any education background are encouraged to have ICT-related postgraduate qualifications to remain relevant in the workforce, keep abreast with modernisation and make meaningful contributions to their organisations.

Dr Chew Esyin, Master of Business Information System coordinator and senior lecturer at Monash University Malaysia, agrees with Assoc Prof Yau. He says, "People from non-ICT backgrounds who gain ICT knowledge and skills at the postgraduate level will advance their competitiveness and facilitate broader career prospects."

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Harness new skills

She adds that ICT postgraduate degree holders have better performance and promotion opportunities in the workforce and their knowledge has a wider spectrum of industry application as the qualification prepares them for roles as senior business managers, business analysts, system analysts, project leaders, information managers and many others.

Career change

Besides being able to make a vertical step in the corporate ladder, a postgraduate ICT or computing qualification enables one to make a switch at a horizontal level – opening avenues for a career change into a different industry or exploring IT-related sub-fields.

"The convergence of ICT with various fields, such as education, psychology, healthcare, transportation, marketing and agriculture, has added considerable diversification," says Assoc Prof Yau.

Sub-fields such as mobile applications, wearable technologies, big data, data science and data mining, for example, allow postgraduate degree holders

the opportunity to explore areas such as business intelligence and knowledge management, IT governance and software development methodologies, research, image processing and robotics.

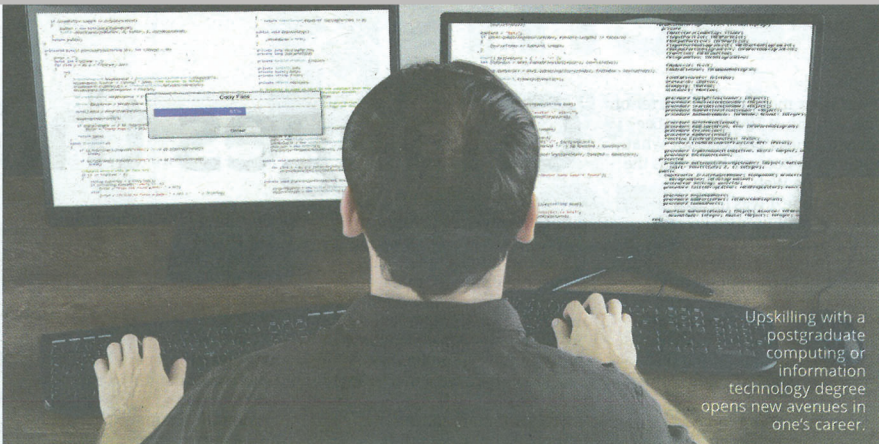
Dr Chew cites a master's degree in information systems as among the best postgraduate qualifications for jobs (according to a 2013 *Forbes* article) and that computer and information managers are currently among the highest paying positions in many countries in the world.

Dr Amna Saad, deputy dean (academic) at the Malaysian Institute of Information Technology in University Kuala Lumpur, says, "Many organisations have historical data that are left untouched in their servers.

"These huge data sets hold significant importance to companies and a postgraduate with ICT and computing skills can extract good industry practices from this information."

Specialised programmes

"Being equipped with an ICT and computing postgraduate qualification enables the individual to develop cutting-edge solutions with potential economic impact,"



Upskilling with a postgraduate computing or information technology degree opens new avenues in one's career.

says Assoc Prof Yau.

Assoc Prof Roshayu says, "Organisations have a need for high-calibre personnel who not only have in-depth skills in their fields of knowledge, but also a broad general knowledge of the range of skills needed to design and deliver new innovative services."

Postgraduate ICT and computing degree holders are able to create and confidently apply the best programmes, techniques and practices that will maximise productivity while operating with limited resources.

Dr Amna believes that those with different prior education backgrounds or hybrid knowledge will have an added advantage over their peers in terms of

implementing ICT solutions to day-to-day industry problems.

With a distinct skill set and in-depth understanding of their respective industries, postgraduate degree holders are the best candidates to identify technological gaps, key areas or trade practices that require ICT or computing improvements – leading to the creation of industry-specific and bespoke software.

Countless opportunities

Based on *Digital Dividends*, a world development report released this year by the World Bank Group, there is great potential in the information and communications sector.

Countries that complement

technology investments with broader economic reforms will reap digital dividends in the form of faster growth, more jobs and better services.

As such, regardless of the shifts in economy that can occur from time to time, ICT and computing will forever be relevant across the many industries with the only variable being the extent of its growth rate.

The high demand for ICT and computing professionals in modern industries plus the skills and knowledge one can learn from postgraduate study within these fields equal to a win-win situation for any individual who intends to take the next step in their career.