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How to prepare young finance & accounting professionals for digital revolution

Clarence GOH
Singapore Management University, clarencegoh@smu.edu.sg

Gary PAN
Singapore Management University, garypan@smu.edu.sg

Chi Kwan YUEN
Singapore Management University, katheriney@smu.edu.sg

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How to prepare young finance & accounting professionals for digital revolution

The scale and complexity of challenges facing the world today call for integrated solutions across a wide range of disciplines.

The rapid advancement of sophisticated technology has brought monumental changes to most professions – and accounting is no exception. Many of the manual, routine-based accounting tasks of the past are now undertaken by non-human support.

Automation will alter the work of accountants in the coming years. However, accountants will always have a central role to play in business.

In order to continue to thrive, the profession will need to position itself to capitalise on the opportunities that automation will bring. This involves identifying areas of work which computers cannot automate, and to focus on deepening contributions in these areas.

This calls for a radical transformation of accounting education in order to equip accounting graduates with relevant work skills that will allow students to navigate a future workplace where computers and technology are the norm.

Some of these important competencies may include business acumen, behavioural competence, digital acumen, data interrogation, synthesis & analysis, and communication. The key is to encourage accounting graduates to learn how to leverage upon new and emerging technologies, work with structured and unstructured data, conduct data storytelling effectively and most importantly, adapt in a fast moving business environment with changing business models and evolving business needs.

To inculcate learning of skills for the future so that students are future-ready, some universities today are embracing teaching pedagogy of ‘learning through doing’ or project-based learning, which allows students to learn theory in the classroom, then apply what they have learned in the field, solving a wide array of business or societal challenges facing organizations, while at the same time, solidifying their own knowledge.

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To embrace this learning philosophy, teaching pedagogy may have to evolve from content teaching, to engaging students in active learning, hence focusing on applying and reflecting knowledge.

An essential feature of project-based learning is that mastery of these skills may require partnership between universities and companies in devising effective solutions to address complex problems. To deepen collaboration and partnerships, one approach is to drive collaboration and knowledge exchange between the academic community and companies. Universities possess the capabilities to help accounting functions transform.

Case study: Developing a financial predictive model for a local SME
An SME had commissioned a team of five accounting students to develop a financial predictive model using data analytics.

The student team was from the Accounting Analytics Capstone (SMU-X) course offered by the School of Accountancy, Singapore Management University (SMU), in January 2018. The Accounting Analytics Capstone is a mandatory course accounting students have to complete in the second major in accounting data and analytics.

The SME, which is in the food manufacturing business, had numerous issues that were impeding its growth. It had to keep track of more than 40 varieties of products in different packaging designs and weight. In addition to the various retail packaging formats were customisations for private labelling, again in different packaging, weight and quantity for different customers.

The permutations resulted in voluminous stock keeping units (SKUs) that were challenging to manage; the company was also holding high quantities of raw materials and packaging materials. In addition, the SME wanted to explore overseas expansion but lacked important supporting information, such as operating costs, return-on-investment, production quantity, and so on.

This information is required to assess the potential risk of investing in different foreign markets, and its absence ultimately impeded the company’s overall expansion strategy.

The accounting profession will need to position itself to capitalise on the opportunities that automation will bring.

Data analytics can be used to examine a company’s historical sales figures, ascertain the seasonal buying patterns, and define the products which are most responsive during certain timeframes. For this SME, data analytics revealed a spike in consumer demand from December to February every year, which coincided with the Christmas, New Year and Chinese New Year celebrations.

With the knowledge gleaned via technology, the SME can manage the supply chain process more efficiently during the festive period by adjusting the procurement of raw materials, and managing production, marketing, distribution and warehousing to cater to the increased demand.

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Using predictive analytics, the company could calculate the likelihood of success when introducing a new product in a new market. The predictive model suggested a few countries that had market potential for the specific item consumption, and based on the preferred manufacturing quantity, it would also calculate the startup costs, sales volume that would enable the company to break even, return-on-investment and expected profit following five years of operations.

The predictive model also helped to quantify the potential reduction in revenue of well-established products upon the market introduction of a new product variant under the same family brand.

With data analytics, the company is now able to collect data and analyse its spending patterns. Such data include purchase orders, card transactions, employee claims relating to travel, and medical and flexible benefits. The information provides answers to questions like, “Who is buying?”; “Who is selling?”; “What is being bought?”; “How many?”; “When is the transaction?” and “What is the mode of payment?”, among others, all of which are the very questions that revolve around the work that Procurement does, to add value to companies.

In risk management, text analytics can help classify transactions into “high risk”, “medium risk” and “low risk” using classification methods like decision trees, k nearest neighbours and neural networks to analyse historical records. Using the analysis findings, these algorithms can predict whether a transaction is likely to be “high risk”, and Procurement can step in to block such a payment.

Case Study: Digitalisation of the Accounting Function of a Company in LAOS
As part of SMU-X overseas student consulting programme, a group of 29 undergraduate accounting students from SMU embarked on a study trip to the Laotian cities of Vientiane Capital and Luang Prabang in December 2018.

A key highlight of the trip to Laos involved having students work with K.P. Company Limited (KP) – a prominent Laotian conglomerate – to examine how data analytics could be applied on accounting data to help the company make better strategic business decisions. With university faculty and company executives acting as mentors, students worked on a variety of projects which took large amounts of accounting data that the company had in its accounting systems and built sophisticated management dashboards and valuation models for several business units within KP.

Faced with real-world problems, constraints, and commitments, students had to take learning outside of the classroom and learn how to navigate uncertainty and adapt to changes. They had to combine academic knowledge with experiential learning, and to use their disciplinary knowledge in accounting to tackle practical problems through inter-disciplinary approaches to deliver meaningful solutions to KP.

KP had allocated significant resources from its Information and Communications Technology (ICT), Human Resources (HR), and Accounting departments to work with the students to ensure that their projects were practical and sustainable. Even as students learned from working with KP on their projects, these projects also delivered tangible benefits to KP.

Some important competencies include business acumen, behavioural competence, digital acumen, data interrogation, synthesis & analysis, and communication.

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Senior managers of KP found the dashboard and valuation models developed by students to be relevant and useful for the company, particularly as it is in the midst of adopting new sets of Key Performance Indicator (KPI) tracking systems to comprehensively evaluate the performance of staff and also seeking to expand its business both organically and inorganically.

Khemsath Philaphandeth, President of KP, further added: “In today’s increasingly competitive market, real-time and objective data is crucial to aid in the business making-decision, and identify and grow talents in the company. The projects embarked on by the SMU students exactly helped in these matters and point out the areas KP needs to improve on in order to stay competitive in the market. Moreover, these projects also demonstrate the importance of collaboration, which KP hopes more companies in Laos can consider to embrace.”

Through the study trip to Laos, students learnt about the social, economic, cultural, and political setting in Laos and also had the chance to collaborate with a large Laotian enterprise to gain valuable experience in solving meaningful problems faced by the company. At the same time, the disciplinary knowledge, technical know-how, and fresh perspectives which students brought to the collaboration also led to tangible benefits for the company in an area where it needed help.

Value of real-world education
The real-world education model is mutually beneficial as students can be involved in the process such that they apply what they have learned in the classrooms and also gain practical experience, while companies can tap on new ideas and views.

Such collaboration may even lead to more co-creation and innovation. Some of these partnerships may also go beyond local shores to include partners in different geographical locations. By integrating industry experience with knowledge in classroom, universities are able to partner businesses and adapt their curricula to meet the rapidly evolving needs of the industry.

From an education standpoint, developing good working partnerships between industry and academe, if done effectively, could provide a well of opportunities to bring educational value to new heights. We foresee such collaboration between industry and universities to grow in the years to come.

With real-world education, accounting graduates would be able to develop the ability to make sound business judgments that fully leverage on the available technologies to maximise the efficiencies of technology-enhanced business processes.

Clarence Goh, Gary Pan, and Katherine Yuen
The authors are from the School of Accountancy, Singapore Management University. Clarence Goh is Assistant Professor of Accounting (Practice) and Director (Professional Development). Gary Pan is Professor of Accounting (Education), Associate Dean (Undergraduate Admissions and Student Development), and the Academic Director of SMU-X. Katherine Yuen is Senior Lecturer of Accounting.