Adopting Robotic Process Automation Technology in Problem-Based Learning: A Student Discovery Approach

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Abstract:

New technologies, such as big data, machine learning, automation, internet of things, etc., are swiftly transforming the accounting profession. But current accounting education, a prerequisite for all business students, is failing to meet both employer's needs and the needs of digitally native, millennial students in such a trend. On the employers' side, they express their shortage of tech-savvy business graduates and urge us to reform our current curriculum to catch up with the technology trend. On the students' side, they often perceive such new technologies to be "too technical" (i.e. requiring computing science background and coding skills) to master for business majored students. This proposal aims to address the above pain points by incorporating the Robotic Process Automation (RPA) technology in solving real business problems in the current curriculum. RPA refers to the use of business intelligence software to automate user-defined routine tasks. RPA software usually integrates different functional modules and allows users to design their own solutions via the combination of different modules to automate repetitive, labor-intensive tasks. While being very powerful, the application of RPA requires minimal coding skills and is thus very user-friendly to business major students. Seeing the potential of RPA in improving work efficiency, reducing operational costs, and freeing professional talents' time for more value-adding activities, the demand for RPA skills in finance, accounting, and other business sectors is growing rapidly. In addition, automating routine tasks via RPA is essentially a business process reengineering, requiring comprehensive business skills including understanding the business environment, problem identification and analyses, solution analyses and implementation, and inter-department communication, making it a suitable scenario for a problem-based learning approach.

We propose a student discovery approach in helping students to adopt RPA skills and to develop real business ideas of RPA application. Students will be asked to identify routine tasks that can potentially be automated from their past courses, internships, and tasks solicited by industry experts. Students will explore the functions of various RPA tools such as UiPath to automate the task. A reformed evaluation framework based on both the project outcomes and students' entrepreneurial spirit (i.e., how they sell the automation idea to industry experts) will be used. Innovative solutions will be disseminated to RPA vendors. RPA vendors can cite these solutions when promoting their products, which also promotes CityU students. Selected outputs will be disseminated in student admission fairs to change the students' perception of the accounting major and boost DSE admission scores.