Chapter 95
The Usage of Artificial Intelligence Applications in Vocational Education Students' Projects

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ABSTRACT

With the popularization of artificial intelligence (AI) in life, understanding and learning related knowledge and operation has become one of the learning trends in the tertiary education field. Following the learning trend, vocational education has also begun incorporating AI-related learning elements into the curriculum. This chapter aims to illustrate the possibility of infusing AI-related concepts into students' projects. The authors use the students' group projects at the higher diploma level to show how it works in the vocational education context.

INTRODUCTION

Artificial Intelligence (AI) related applications are the hottest topic right now. All business behaviors and daily life in modern society can have a great relationship with the application and linkage of AI. AI platforms that assist daily life, from data collection to data analysis, etc., are everywhere (Takaoka et al., 2019). The continuous development of technology has led to a new interest in AI and how it can continue to change our understanding of how we live, learn, and work.

Research has pointed out that the use of AI technologies can help lead to success, whether in the learning process (Chen et al., 2023) or in different daily business operations (Kruse et al., 2019). So, what is quite clear is that developing students' capabilities and developing their interest in AI has become a necessity to prepare them for their jobs of the future. Therefore, higher education institutions in the

world, including Hong Kong, also respond to social trends and incorporate AI-related applications into formal curriculum learning (Southworth et al., 2023) to equip students for future work needs.

At the same time, with the advancement and popularization of AI-related technologies, the application and learning of AI-related technologies have begun to be integrated into vocational education (Feng & Huang, 2023) in line with the trend of the times. This is a transformative shift that will increase digital skills training opportunities for all students (Widayanthi, 2024).

In line with the development of innovative technology and smart cities and conforming to the world's vocational education trends, local vocational education institutions have also begun to offer different courses that include AI elements to cultivate students to master the skills they will need in the future and ensure the availability of talent development knowledge and capability structures (Zeng et al., 2019). Various subject areas such as Information Technology, Engineering, Business, and Hotel Tourism of Higher Diploma Programmes also include learning and using AI technologies to enhance students' competitiveness and lay a solid foundation for their further studies and employment (Vocational Training Council, 2020; VTC Higher Diploma in Human Resources and Talent Analytics, n.d.; VTC Department of Hotel and Tourism Higher Diploma Programmes, n.d.).

Higher education in Hong Kong has generally included AI teaching and learning content. As the main author is a frontline teacher at a local vocational education institution, we aim to explore whether AI-related knowledge can also be helpful in the vocational education environment.

LITERATURE REVIEW

Use of AI in Higher Education

The education system needs to adapt and include teaching elements related to AI and ensure that it can help young people prepare for the future life of AI. And most importantly, the education system needs to equip these young people with the skills that the job market will demand in the future so that they will be competent and competitive in the relevant jobs (Wang & Cheng, 2021). In response to the trend and the needs of the working environment in the whole world, most universities now provide AI elements and professional programs and courses specially designed for AI so that young people can learn relevant knowledge in formal education and equip them to cope with related problems in the workplace. Research has demonstrated that university students make significant progress in understanding AI concepts and feel empowered to work with AI after taking an AI course (Kong et al., 2023). Facing the challenge of AI in Higher education, some educators attempt to establish policies that respond to its use in teaching and learning. The Education University of Hong Kong (2023) proposes a teaching strategy for Artificial Intelligence (AI) generation tools, and they believe that AI can help cultivate students' independent and innovative thinking. It is recommended that relevant teaching staff should regard AI as an essential teaching tool. The University also encourages front-line teaching staff to use it to enhance teaching efficiency.

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