

## Documents

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**DIGITAL TRANSFORMATION IN OCCUPATIONAL SAFETY EDUCATION: FORMULATING COMPONENTS OF VIRTUAL REALITY IN TVET HOSPITALITY PROGRAMS BY USING TPACK THEORY**

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**Abstract**

Technical and Vocational and Educational Training (TVET) hospitality programs are related to practical training in culinary programs. Graduates are expected to implement safer and healthier practices in commercial kitchens, making them pioneers in adopting correct work attitudes during their education. This study recommends a tool for safer and healthier workplaces using Virtual Reality (VR) as a transformative tool in Malaysia's TVET hospitality programs, aligning with IR 5.0 principles to enhance human capital for the foodservice industry. Malaysia's TVET sector faces challenges in integrating industries and fostering workplace culture. The two-fold objectives of this study are: 1) to formulate a VR-based kitchen safety framework for kitchen safety in TVET's hospitality programs and 2) to validate a VR-based kitchen safety framework for kitchen safety in TVET's hospitality programs. This study employs a Design and Development Research (DRR) approach, using qualitative methods with industry experts—kitchen educators/trainers, Safety and Health officers (SHO), Instructional Designers (ID), and IT experts in VR—to develop and validate a VR-based kitchen safety framework. The results of Fuzzy Delphi from industry experts yielded six components: virtual automation with technological knowledge, content knowledge, content determination, coaching content and virtual assessment, and pedagogical expertise. Twenty industry and academic professionals consensually agreed that the ranks position of six constructs and validated the framework. The study emphasizes the importance of VR development by suggesting ideas for identifying and incorporating the necessary parts for VR development into the framework. © 2024 Malaysian Institute Of Planners. All rights reserved.

**Author Keywords**

Content Knowledge (TPACK); Fuzzy Delphi; Kitchen Safety; Pedagogy; Technical and Vocational Education and Training (TVET); Technology; Virtual Reality (VR)

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