

## Challenges and Directions of TVET in Facing IR 5.0 toward Sustainable Technical Education Environment

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## ABSTRACT

Challenges and directions of TVET in facing IR 5.0, new shifts in the learning environment through assessment of technical education programs were innovations towards universal education sustainability. The sustainable learning environment contains three pedagogical elements which are knowledge, skills, and technology. Sustainable knowledge is the core of sustainable technical education environment which interlinks the sustainable knowledge curricula and the mainstream knowledge curricula. Future sustainable knowledge should have a combined curriculum because the sustainable industry needs to produce sustainable apparel for future environmental societies. Hence, this study was conducted to evaluate Malaysian technical education. A CIPP model was used as a conceptual framework for the study. Research design used in this study was programs evaluation. Stratified random sampling was used to select 335 respondents from national secondary schools in Peninsular Malaysia consisted of 159 administrators and 176 teachers. Questionnaires, interview protocols and observation checklists were used as instruments in this study. Descriptive and inferential statistics were used to analyze the data. The empirical data of the study found that sustainable learning environment should take into account is the knowledge and skills of teachers, staff training and role of administrators. Sustainable technical education environment is the solution for the skill development of skilled workers to make them last longer, have awareness about theirs meeting life expectancy, and thus are adept at preventing garments from being thrown at the landfill faster than they should be. Therefore, proposing TVET education as the solution to human capital development will drive a sustainable industry in the future. Interview and observation data were also presented to support the quantitative findings. Implications and recommendations for teaching and learning as well as for future research are presented and discussed.

Keywords: Technical education, Sustainable learning environment, CIPP model, national schools, Malaysia