

Digital Workforce Readiness in Supply Chain Management Determinants: Evidence of a Malaysian TVET Institution.

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Abstract

Industry 4.0 is causing a significant change in the global supply chain sector, creating an urgent need for a workforce that is both technologically competent and dynamic enough to meet the demands of the upcoming digital transformation. This study examines whether the Malaysian Technical and Vocational Education and Training (TVET) students are ready to support the digital transformation of the logistics and supply chain sector. Specifically, it evaluates the student's digital literacy level, investigates the relationship between digital literacy, training development and curriculum alignment with workforce readiness, and compares readiness across students' cohorts. Using a purposive sampling approach, data were collected using a structured questionnaire administered to 169 students enrolled in the Diploma in Logistics and Supply Chain Management at Polytechnic Seberang Perai. Descriptive results revealed that the respondents demonstrate a high level of digital competency. Pearson correlation analysis indicated a strong positive correlation between all independent variables and workforce readiness, with curriculum alignment emerging as the most significant predictor ($r = .755$, $p < .001$). A one-way ANOVA also showed no statistically significant differences in preparedness across semesters ($p = .162$) suggesting consistent competency levels among the student groups. These findings highlight the need for TVET institutions to implement real-time simulations of the supply chain into learning and evaluation. Comprehensively, this study provides empirical evidence to support the development of a resilient, technology-oriented supply chain workforce in alignment with the National TVET Policy 2030.

***Keywords:* Curriculum Alignment; Digital Literacy Skills; Future Workforce Readiness; SCM;**
