

Predicting Wearable Technology Readiness in a South African Government Department: Exploring the Influence of Wearable Technology Acceptance and Positive Attitude

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Abstract : Wearables are one of the technologies that will flourish within the fourth industrial revolution and digital transformation arenas, allowing employers to integrate collected data into organisational information systems. The study aimed to investigate whether wearable technology readiness can predict employees' acceptance to wear wearables in the workplace. The factors of technology readiness predisposition that predict acceptance and positive attitudes towards wearable use in the workplace were examined. A quantitative research approach was used. The population consisted of 8 081 South African Department of Employment and Labour employees (DEL). Census sampling was used, and questionnaires to collect data were sent electronically to all 8 081 employees, 351 questionnaires were received back. The measuring instrument called the Technology Readiness and Acceptance Model (TRAM) was used in this study. Four hypotheses were formulated to investigate the relationship between readiness and acceptance of wearables in the workplace. The results found consistent predictions of technology acceptance (TA) by eagerness, optimism, and discomfort in the technology readiness (TR) scales. The TR scales of optimism and eagerness were consistent positive predictors of the TA scales, while discomfort proved to be a negative predictor for two of the three TA scales. Insecurity was found not to be a predictor of TA. It was recommended that the digital transformation policy of the DEL should be revised. Wearables in the workplace should be embraced from the viewpoint of convenience, automation, and seamless integration with the DEL information systems. The empirical contribution of this study can be seen in the fact that positive attitude emerged as a factor that extends the TRAM. In this study, positive attitude is identified as a new dimension to the TRAM not found in the original TA model and subsequent studies of the TRAM. Furthermore, this study found that Perceived Usefulness (PU) and Behavioural Intention to Use and (BIU) could not be separated but formed one factor. The methodological contribution of this study can lead to the development of a Wearable Readiness and Acceptance Model (WRAM). To the best of our knowledge, no author has yet introduced the WRAM into the body of knowledge.

Keywords : technology acceptance model, technology readiness index, technology readiness and acceptance model, wearable devices, wearable technology, fourth industrial revolution

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