Evolution of Educational Taxonomies: From Cognitivism to Vocationalism − the Need for Vocational Taxonomy

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Abstract

Taxonomy is crucial for mapping scientific knowledge. Since Aristotle, numerous taxonomies have been developed and used in varied knowledge domains. Evolution of taxonomies from botany and biology to psychology, sport, medicine, education, arts, and humanities has been documented in diverse literature. In education, the Bloom taxonomy has been used since 1956 to describe educational goals, objectives and outcomes. In fact, Bloom taxonomy has been focusing on cognitive aspect of human learning such as remembering, understanding, applying, analyzing, synthesizing, and evaluating. However, affective and psychomotor domains have been sidelined by the Bloom taxonomy. Dichotomy of academic and vocational education has made vocational teachers at the disadvantage when it comes to design the goals, practical hands-on activities, and vocational assessment due to the cognitive nature of the Bloom taxonomy. Hence, the purpose of this study was to determine the need and the domains for a new taxonomy in the field of vocational education and training (VET) – vocational taxonomy. Based on Delphi technique, a panel of seven vocational experts were selected to identify the needs and the domains of vocational taxonomy. The experts were interviewed and the qualitative data were analyzed based on thematic analysis. The empirical results showed that the majority of the experts agreed that a new taxonomy was needed to cater for psychomotor and vocational domains. In other words, vocational taxonomy is important for classifying vocational domains at various learning stages – from the lowest to the highest. They suggested a six-level of the vocational taxonomy comprised vocational knowledge, gross motor skills, fine motor skills, visualization skills, problem-solving skills, and inventive skills. In conclusion, vocational taxonomy is perceived as an important tool for vocational teachers and practitioners to map vocational objectives, practical tasks, and vocational assessment.

Keywords: Bloom taxonomy, needs analysis, psychomotor domain, vocational education, training (VET), vocational taxonomy