The Development and Construct Validation of Scientific Epistemological Beliefs Inventory

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Abstract
Objective - Based on Schommer theory, the present study was conducted to construct and validate epistemological beliefs inventory for science (EBIS) in Malaysian context. Type the brief purpose of the paper and illustrate the direction that is taken, whether it is empirical or theoretical testing in analyzing the research subject.

Methodology/Technique - The survey data from 450 matriculation students and 350 degree students were collected in two phases to facilitate both exploratory factor analysis (EFA), parallel analysis and the confirmatory factor analysis (CFA). Furthermore, the reliability analysis of the scores and convergent discriminate, and subgroup validity coefficients were examined.

Findings - Finding suggested that the inventory measures five constructs, namely, the innate ability, the structure of knowledge, the source of knowledge. The certainty of knowledge, and the speed of knowledge acquisition.

Novelty - EBIS is a valid and reliable instrument which may serve as useful in guiding future research aiming to understanding students’ epistemological beliefs about science. EBIS is the first scale in the local level measuring epistemic beliefs about science according to multi-dimensional model.

Type of Paper - Empirical paper

Keywords: ability, Certain of knowledge, Source of knowledge, Speed of knowledge acquisition, Structure of knowledge.