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Development and use of an instrument to measure students' perceptions of a business statistics learning environment in higher education.

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Summary: Statistics is a required subject of study in many academic disciplines, including business, education and psychology, that causes problems for many students. This has long been recognised and there have been a number of studies into students' attitudes towards statistics, particularly statistical anxiety. However, none of these studies investigated the classroom learning environment in relation to students' attitudes towards statistics. This paper describes the development and validation of two new instruments, the Business Statistics Computer Laboratory Environment Inventory and the Attitude towards Business Statistics instrument. The former measures appropriate aspects of the learning environment of a computer-based statistics class, whilst the latter measures students' attitudes towards business statistics. The instruments were administered to undergraduate business students at a university in Southern California. When exploratory factor analysis was carried out, it was found that the items of both instruments loaded onto their a priori scales. All the scales exhibited both internal reliability and discriminant validity. Correlation analysis between the scales of the two instruments demonstrated a strong relationship between aspects of the learning environment and students' attitudes towards business statistics.

Classification: C25 K45 K75 K85 U75

Keywords: attitude; business statistics; computer-based learning environments; anxiety

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