

## **Underlying reasons for different learning approaches in statistics in Argentina**

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One of the main problems concerning teaching statistics at university is why students use a surface learning approach and miss the opportunity to develop statistical skills and useful knowledge for their professional careers, whereas others adopt a deep approach strategy, enabling them to critically analyze and understand course materials, build on prior knowledge and experience, and determine to what extent conclusions may be reached from a basis of evidence and reasoning. This study presents the results of an investigation carried out in Argentina to explore the relationship between some student demographic characteristics and preferences, and three learning strategies. Research was conducted in three non-statistical programs of Buenos Aires University, Argentina. We surveyed 430 students and used the ASSIST questionnaire together with a demographic questionnaire. Students had previously taken a general knowledge math test. The ASSIST questionnaire was validated for administration in Argentina. Preliminary findings showed a significant positive correlation among deep strategies, math test scores and the perceived usefulness of statistics for future work. Those students who had disliked mathematics at high school adopted a surface strategy, whereas those who had liked it adopted a strategic approach. Academic performance at the statistic course was directly related to the strategic and deep approaches and negatively to the surface approach. We also found out that those students who were considering enrolling in postgraduate courses showed deeper or strategic approaches. Conversely, those who were no considering continuing their studies adopted a surface approach. Female students utilized a more strategic approach than male students. Finally, this questionnaire might represent a valuable tool for researching attitudes towards learning since the diagnosis and the understanding of learning factors pave the way for sound teaching strategies.

**Key Words:** Learning strategies, ASSIST questionnaire, statistics courses.