

# Foundational Value of Statistics Education for Management Curriculum

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## Summary

The purpose of this paper is to propose a unique and distinct value of statistics education for management. The 1986 inaugural conference on *Making Statistics More Effective in Schools of Business* (MSMESB) proposed valuable guidelines for reforming statistics education in schools of business. However, a survey conducted by McAlevy & Everett (2001) identified that their impact has been minimal, and argued that structural problems many business schools have are the potential cause. We argue these structural problems exist because the value of the body of statistical tools for management is ambiguous and has not been made explicit. The *unique and distinct value* of statistics for management can be identified as the body of tools necessary to meet the *inherent needs* of a manager charged with making predictive judgments facing data. The need arises because *human information-processing capacity* is quite limited, as the findings of researchers in cognitive psychology testify. These findings also affirm that the basic statistical concepts needed for processing data cannot be learned from management experiences.

The model of a manager faced with data, while considering the evidence of inherent limitations of human information-processing capacity, establishes the foundational value of statistics training in the management curriculum. Statistics education in business schools will be made more effective when management educators recognize such value of the discipline, lend their support and reward the ownership commitment for continuous improvement and innovations of the business statistics curriculum.

*Key words:* Human information-processing; education; decision making; predictive judgment; statistical modelling.

## 1 Introduction

Statistics and its development in university education have a distinguished history. As soon as statistics was recognized as a formal discipline in the university curriculum, a key concern of the statistics profession was to establish proper venues for dissemination of its core concepts and techniques. This is no surprise in view of the wide applicability of statistics as a body of *scientific tools* for solving real-world problems. The Institute of Mathematical Statistics (IMS) Committee on the Teaching of Statistics was formed in 1948 to address the issue, and consisted of such illustrious scholars as Harold Hotelling (Chair), Walter Bartky, W. Edwards Deming, Milton Friedman and Paul Hoel. The committee's report is worth reading, its resolution is clear and fundamental: identify groups of students with different needs for statistics education, design