Effects of integrating a computerized information system on decision making processes in school management

Computerized information systems have been developed and applied in schools throughout the world, yet there is a lack of professional literature examining the effects of these systems on administrative and other activities in the school.

There is a need for systematic empirical research on this subject, not only because of its inherent scientific value but also in order to expand the basis of knowledge in this field, and thus perhaps facilitate the introduction of computerized administration systems in schools, leading to more effective administration and management.

The present research examines the effect of integrating a computerized information system in a school management’s decision-making process in planning the teaching-learning system.

The aim was to plan a learning environment with diverse and flexible learning options that would take into account the students’ preferences and choices, and to examine whether the integration of a decision support system (DSS) would improve the decision making process.

The research assumption was that integrating a DSS would facilitate the processing, control, and analysis of the information, and assist in making decisions conducive to the improvement of teaching-learning processes in the school.

The research described here is a case study of the type known as quasi-experimental, with a nonequivalent control group design. The data analysis is qualitative.

The research examined and analyzed the decision-making process of a school staff management engaged in constructing a learning environment for 10th grade students at a technological high school in Israel over a consecutive period of two years. In the first year, the decision-making process in planning the teaching-learning system followed the pattern that had existed in the school for many years. In the second year, the decision-making processes were implemented with the assistance of a decision support system that was developed for the purpose of the research.

The results indicate a significant improvement in some of the features of the decision-making process: transition from a mechanistic process in which the structure of the teaching-learning system was predetermined to a cybernetic process, in which the learning environment was determined on the basis of information yielded by the system; improvement in the accessibility and characteristics of the information at the disposal of the decision makers, in terms of quantity, quality, control, availability, data processing and analysis, and integration of structural, pedagogical and social decisions.