

STATISTICAL CURRICULUM DEVELOPMENT AND EVALUATION

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This report reviews two research studies on developing and evaluating a curriculum unit on descriptive statistics for the mathematics curriculum at high school level. This report presents a model of curriculum development and evaluation. Statistical topics that are interesting are identified.

The process of curriculum development is curriculum design, writing curriculum materials, and implementing, including testing and disseminating, the materials and ideas of curriculum and instruction. Curriculum evaluation plays an important role in monitoring process, evaluating products and programs, assessing instruction and learning, and even advising the development. Several procedures that can be used for evaluating products and programs are interview, discussion, classroom observation, using questionnaire, and achievement assessment, including testing and inquiring.

Students think that the stem-and-leaf display is interesting and easy to remember. The steps and key points to make the display should be stated clearly in the content and interpreted during instruction. Comparing several tallies, including the slant tally and Tukey's tally, students prefer the Chinese tally because it can keep from confusion. Therefore, the Chinese tally is recommended to be included in the statistics curriculum. Some techniques of exploratory data analysis, such as the stem-and-leaf plot and box plot, should also be contained. It is worth providing a summary of the content to help students' learning.

Calculators should be used to reduce the complication and difficulty of computations. Statistical activities can be part of instruction to enhance learning. Authentic statistical problems, including those in business, technology, or daily life, should be used as examples and exercises to make the context realistic. Problem solving should be the focus of the curriculum.

On the other hand, a descriptive statistics curriculum unit is all right to be integrated in the mathematics curriculum for students at high school level, especially for vocational schools. However, the presentation of the content has impact on the students' learning and their interest. It is essential to decide what and how to present in the

curriculum and instruction. The teacher's manual has to provide supplementary materials and sufficient guidance for teaching. The classroom teachers ought to make use of the manual in the best way.