

SOCIOMETRICS PROJECT No. 139

USING STATE-OF-THE-ART TECHNOLOGY, REAL WORLD DATA, AND INTERESTING STORIES TO TEACH MATH AND SCIENCE CONCEPTS

This Small Business Innovation Research Phase I project developed a design and prototype of an innovative educational product called *Data Stories* aimed at introducing math, statistics, and science concepts to high school students using current, real-world data from national samples of adolescents. *Data Stories* was conceived as a set of self-contained CD-ROM-based teaching modules, each focused on one key concept or procedure included in math courses taken by secondary career and technical education (CTE) students. A prototype module was developed consisting of three parts. Part 1 was a *multimedia presentation of research facts* on adolescent health topics of interest to high school students. Part 2 housed *data and documentation* from five exemplary national studies. Part 3 was an *interactive statistics tutor* that used the data and documentation in Part 2 to derive select research facts presented in Part 1 using the math or science concept being taught. To engage students' interest, the research facts and problem sets focused on family, health, education, and work-related topics of interest to CTE students. The Phase I investigation: (1) produced Tables of Contents, capabilities specifications, user interface designs, and one illustrative teaching module; and (2) field tested the usability and effectiveness of the prototype module.

Sponsor: U.S. Department of Education
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Grant or Contract No: ED-02-PO-2434

Project Officer: Mary Lovell

Duration: 09/03/02—03/31/03

Budget: \$75,000

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