



When will I ever Use this? Mathematics Education Workshops

Instructors: Kenneth Chelst and Thomas Edwards
Auckland, Wellington and Christchurch, New Zealand

Thomas Edwards and Kenneth Chelst are co-authors of numerous articles in teacher journals *Mathematics Teaching*, *Mathematics Teaching in the Middle School* and *Mathematics Teacher*. They organized and published much of their curriculum in book form: a) *From Percentages to Algebra: Using Authentic Contexts*, b) *Mathematical Modeling with Algebra* and c) *When will I ever use this: Probabilistic Decision Making*. The last two textbooks were created as part of Project MINDSET, a six-year \$3.3 million NSF project that developed and implemented mathematics courses for Years 12 and 13 that are driven by authentic real-world scenarios.



Kenneth Chelst: Professor of Operations Research (OR) and Director of Engineering Management Master's Program (EMMP) in the Department of Industrial and Systems Engineering at Wayne State University in Detroit, Michigan. He received the Ph.D. degree in operations research from MIT, a master's degree in operations research (OR) from NYU and a bachelor's degree in mathematics and physics from Yeshiva College.

Professor Chelst's research interests include: K-12 mathematical analytics and operations research, decision and risk analysis applied to engineering management, emergency service management and globalization of engineering and manufacturing. In 2011 Professor Chelst was honored with the INFORMS Presidents' Award for his work in high school mathematics and for the application of OR to public safety management. Dr. Chelst is an INFORMS Edelman Prize Laureate as a result of a project he directed for Ford that saved an estimated \$250 million in annual capital expenditures. He is a member of the INFORMS Roundtable of analytics executives from leading companies and organizations in the US (Accenture, Bank of America, Boeing, Booz Allen Hamilton, Chevron, Disney, Ford, IBM, Mayo Clinic, McDonald, Proctor & Gamble, UPS, Verizon, etc.)



Thomas G. Edwards: Professor of Mathematics Education and Interim Associate Dean for Teacher Education in the College of Education at Wayne State University in Detroit, Michigan. He completed his Ph.D. in mathematics education at the Ohio State University in 1994. He has an MS in Education from Canisius College, NY and BA in mathematics from SUNY Buffalo.

He has been involved with the Detroit Public Schools Urban Systemic Initiative/Program, serving as an evaluator of mathematics programs. Prior to obtaining his Ph.D., he taught for more than 20 years in Buffalo's public high schools. His original area of interest was the process by which teacher's change their instructional practices in response to current calls for reform in mathematics education. Currently, Dr. Edwards's primary research interests are teaching school mathematics in the context of real world problems, the integration of technology, especially graphing calculators, in school mathematics instruction, and how students of all ages acquire mathematical understanding across a number of grade levels.