

Research and Education of SSME in Japanese Universities

Hideaki Takagi
University of Tsukuba, Japan
takagi@sk.tsukuba.ac.jp

Group members: Y. Kanazawa, M. Koda, R. Sato, H. Suzuki
S. Watanabe, F. Kondo, M. Mizuno, and H. Takagi

Service Sciences, Management and Engineering

Education for the 21st Century

IBM Palisades Conference Center, New York

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Research of SSME

- Potential Contributions from Academia
 - Engineering approach to service management
 - Application of mathematical sciences
 - Application of statistical sciences
 - Psycho-metrical / behavioral scientific approach
 - Research Projects in the University of Tsukuba
 - Customer-centric business innovation models
 - Quantitative characterization of customers
 - Marketing models based on customer behavior
 - Association between sales and employee's traits
 - Managerial accounting for service processes
 - Obstacles to SSME Research (in Japan)
 - Service is viewed as personal attitude or price discount.
 - Invention/innovation is not open.
 - Limited interaction/mobility between industry and academia
 - Little appreciation of industrial contribution in academia
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Science of Services: Theory and Practice

MBA Program in the University of Tsukuba

Fall Quarter, 2006

- A course of 2.5 hours x 5 weeks
 - Audience: about 50 students with non-math background and few business experiences
 - Contents
 - Week 1: Introduction (motivation, approach, trends)
 - Week 2: Service innovation based on ICT
 - Week 3: Quantitative analysis and design of the quality of service (Little's law and queuing theory)
 - Week 4: Resource optimization in service (applications of mathematical programming and network flow)
 - Week 5: Practical examples: innovation in health care service and school education
 - Comments by students
 - Realized the importance, - Interesting but vague
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Recommendations for SSME Education

- ❑ Should be Taught in Graduate/Professional Program
 - ❑ Prerequisites:
 - Interests in Innovation in Services and Marketing
 - Some familiarity with calculus, linear algebra, and statistics
 - Computer literacy and skills in data processing
 - ❑ Topics to be Covered
 - Increasing significance of services in the 21st century
 - Merits of mathematical approach to service management
 - Illuminating examples of mathematical/statistical methods
 - Term project on practice and/or internship
 - ❑ Call for Collaboration of the Course Material Development
 - By “engineering” and “management” people
 - By academia and industry (with governmental support)
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