Faculty Professional Development Grant Final Report

Grant to attend DSI Conference

46th Decision Sciences Institute Annual Meeting

Nov.21-24

Seattle, WA.

Dr. Zhi Tao

Dep. of Management and Business Data Analytics

College of Business

409 Rothwell Hall

ztao@atu.edu

Restatement of Professional Enhancement Opportunity

The professional development grant I applied and received was to attend the 46th Annual Meeting of Decision Sciences Institute in Seattle, Washington, Nov 21 -24, 2015. The theme of Decision Sciences Institute (DSI) conference in 2015 is "Decision Sciences in the 21st Century: Theoretic Impact and Practical Relevance". It provides opportunity for scholars and practitioners to exchange ideas, collaborate among different disciplines, and network with others. The annual conference is the primary meeting in field of management sciences/ operations management and my primary area is operations management. Attendants from different countries in this field have the opportunity to get together, share research ideas and learn effective teaching methods.

Brief Review of the Professional Enhancement Opportunity

I participated the meeting as planned to present my paper titled "Two Stage Supply Chain with Carbon Emission", collected feedback on my paper, exchanged ideas with other scholars who are close to my area and have different perspectives to see the topic of sustainability. I also attended the New Faculty Development Consortium where the panel, mixed with faculties in different disciplines at different career stages from different universities, talked about their experience on teaching effectiveness, tenure experience, balance of life with work. To fully use the opportunity, I also attended the keynote speaker section and participated curriculum development workshop for Business Data Analytics.

Summary of Findings, Outcomes, or Experiences

My paper titled "Two Stage Supply Chain with Carbon Emission" integrates the carbon emission reduction into the traditional operation management model called Joint Economic Lot Size Economic (JELS) model and investigates the joint decisions on lot size if carbon emission is considered by the carbon responsible buyer and the carbon responsible vendor which forms a two stage supply chain. The optimal solution for the two stage supply chain is derived. Numerical examples are used to illustrate the results. The research further examines the impact of carbon regulations on joint lot size and on the cost of the supply chain.

Conclusions and Recommendations

The green supply chain emerges with awareness of environmental impact of business on planet. The finding of this paper sheds light on lot size decisions both in supply chain management and in carbon emission regulations. By attending the conferences, I have the opportunity to be inspired by other scholars' work that has different focus or uses different models to approach sustainability. By attending the conference, I learn new teaching techniques to improve teaching effectiveness and learn new research ideas to keep myself current in the discipline. In summary, I gain experience and knowledge from the conference on research, teaching and curriculum development which I can use in my research for scholarship, in my classroom for teaching and in curriculum development for building and assessing programs for college of business at Arkansas Tech University. Therefore, I highly recommend this conference to other professors in the field.