

ACS Mellon Foundation Faculty Renewal Grants Final Report: Producing SASsy Economists: An Intensive SAS Training Program

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Project Title: Producing SASsy Economists: An Intensive SAS Training Program

Dates of Project: June 1, 2009 – May 31, 2010

Amount Awarded: \$8,000

Original Goals and Objectives and Revisions:

There were four primary goals of this project:

1. Provide formal training in SAS for the project members.
2. Host a SAS workshop for the wider Centre Community
3. Organize a session at the Southern Economics Association to discuss undergraduate econometric education.
4. Submit a paper to a referred journal on undergraduate econometrics education for publication.

The core goals of the project did not change. However, as the project developed, specific aspects evolved and become better than we had planned. Details about the evolution for each goal follows.

1. Provide formal training in SAS for the project members.

In the original grant proposal, two specific, on-site training courses for the three faculty members to enroll in were identified. The fees for these courses and the travel associated with attending the courses comprised the entire cost of the project. After the award of the project and detailed discussions with SAS training personnel it became clear that there were other courses that better fit our current needs given the three faculty member's backgrounds. The SAS team suggested that we consider "LiveWeb" courses---courses that are synchronous, online courses identical to "in-person" courses---and eCourses---asynchronous, online courses identical to "in-person courses. The primary advantage of the online courses is escaping travel costs---both in terms of dollars and time. By substituting some online courses for in-person courses, the three project members were able to enroll in an additional training course, which further enhanced the members' SAS teaching and research skills.

The changes are identified below

Original Proposal (all three project members)

1. SAS Programming I: Essentials
2. Statistics I: Introduction to ANOVA, Regression, and Logistic Regression

Actual Classes Enrolled In

A. Bruce K. Johnson

1. SAS Programming 1: Essentials
2. SAS Programming 2: Data Manipulation Techniques
3. Data Mining Techniques: Theory and Practice

B. Marie Petkus

1. SAS Programming 1: Essentials
2. Statistics 1: Introduction to ANOVA, Regression, and Logistic Regression
3. Statistics 2: ANOVA and Regression

C. John Perry

1. SAS Programming 1: Essentials
2. Statistics 2: ANOVA and Regression
3. Survival Analysis Using the Proportional Hazard Model

2. *Host a SAS workshop for the wider Centre Community*

Instead of a "SAS Workshop," the project members hosted a lunch for faculty to discuss empirical methods in disciplines across campus and the statistical packages employed. Sixteen faculty members attended and a very informative and enlightening discussion took place. This discussion included statistical software but went beyond into techniques and goals. Perhaps of most consequence is that from this discussion a greater appreciation of the potential synergies between programs was realized. In particular, a number of the participants (as well as some who were not able to attend) plan to continue to discussion.

3. *Organize a session at the Southern Economics Association to discuss undergraduate econometric education.*

While the project members had intended to organize a session at the 2010 Southern Economics Association Conference around undergraduate econometric education, through communication with other economists planning on attending and organizing sessions related to undergraduate economics education, it was realized that the project would fit nicely in a session already being organized.

4. *Submit a paper to a referred journal on undergraduate econometrics education. For publication.*

The final part of the project involved developing a paper on the state of undergraduate econometric education. The paper is well underway and a team of four undergraduate research assistants are assisting with data collection and surveying over the summer. The paper has generated a good deal of interest as it has been accepted for presentation at the 2010 Southern Economic Association meeting as well as the 2011 American Economic Association meeting---the largest and most prestigious gathering of economists in the world.

In what ways were the goals/objectives met? Please give examples.

By all measures the project has been and continues to be a success. The formal SAS training has already paid dividends to in-class instruction. It has also helped further a handful of research projects the project members are involved.

The workshop/lunch provided an opportunity for a diverse group of faculty members to talk about the state of empirical/statistical methods in their disciplines as well as where there are opportunities for collaboration in research as well as in undergraduate statistical education. One of the themes that

permeated the lunch was that most disciplines are becoming more and more quantitative and formal statistical modeling---and its application---is widely sought after.

That the paper on undergraduate econometric education has been accepted for presentation by two of the top economics conferences is by itself an indication that this topic is of interest. It is anticipated that the paper will find a home in one of the top-tier journals and to potentially have an impact across economics programs.

Describe the evaluation/assessment process used. Summarize the results of this process? Include any instruments used to evaluate/assess your project.

There were no formal assessments used in this project. Completion of the SAS training classes is evidence of success of training. That the research paper on undergraduate econometrics education has been accepted to two conferences for presentation is also an indication of success.

If you were to redesign your project, what would you do differently and why? (What are the "lessons learned?")

The project as a whole was a success however, as indicated, there were significant changes in the course of the project. With 20/20 hindsight, the identified SAS training courses would have been different as well as the mode to take the classes.

How did your project impact other faculty on your campus? If done jointly with one or more institutions, how did it impact faculty on the other campus(es)?

The primary impact of the training component of this project has been to enhance the three project members SAS skills. That is already paying dividends in the classroom. However, given the discussion at the workshop/lunch, there will be future discussions about collaboration in both research and teaching. This will impact not only research opportunities but also teaching---and likely undergraduate research opportunities.

The associated paper has already been successful in generating interest and it is anticipated to generate more interest when it is published.

How did the project impact the institution (s) as a whole?

This project has distinctly enhanced the teaching and research skills of three members of the economics faculty. While the level of empirical training in the economics program at Centre is already exceptionally strong, this project has pushed it further. In addition, as conversations across disciplines (notably Government, Sociology, International Relations, and Psychology) continue, there is the possibility of increased collaboration.

If students were involved, what was the impact on them?

Students (five) were involved in the research aspect of this paper. Four students will work through the summer assisting the project members in surveying the universe of economics programs and drawing an authoritative picture of the state of undergraduate econometrics education. While the work is on-going, such research experience sharpens undergraduates skills and abilities on all levels.

How have you shared the results with ACS colleagues and beyond ACS? What are your plans for dissemination?

The formal sharing of this project will occur through the conference presentations and the published paper.

Did any publications result from this project? If yes, list here.

None yet, but one is expected.

What are the next steps (follow-up) in your project? Evaluations, surveys etc are to be included as a part of this report.

The next step of the project is to incorporate more fully the for SAS training received in our econometrics courses and to complete the research paper.

A complete financial statement, showing original budget (the breakdown of the amount awarded) and expenditures.

Please see attached budget detail on following page.

Please include a summary of your work that may be included on the ACS Faculty Renewal website.

The project “Producing SASsy Economists: An Intensive SAS Training Program” provided funds for three economics faculty members at Centre College to receive formal SAS training to enhance their capacity to teach undergraduate econometrics courses and pursue empirical research both independently and collaboratively. In addition, this project facilitated an investigation into the current state of undergraduate econometrics programs at universities and colleges which will culminate in a paper already accepted to be presented at two national conferences. Following the conferences, the paper will be submitted for peer-reviewed publication. The project also involved hosting a workshop/lunch for faculty on Centre’s campus to discuss empirical methods across disciplines as well as statistical software employed in teaching.