

Role of Extension in a Research University

Selected Paper prepared for presentation at the Southern Agricultural
Economics Association Annual Meeting Atlanta, Georgia,
January 31-February 3, 2009

Dr. Cole R. Gustafson

Professor, Biofuel Economics

Dept. of Agribusiness and Applied Economics

North Dakota State University, Fargo

Nov. 11, 2008

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Land grant universities across the country are striving to increase their stature among the nation's top research institutions. Last year, University of Minnesota Board of Regents and President Bruininks announced their goal of becoming one of the top three public research universities in the world. North and South Dakota State Universities have set goals of attaining "Research Extensive" and "National Distinction", respectively. These new emphases will likely have far-reaching effects on Extension, creating both opportunities and challenges. While Extension has always welcomed new opportunities, many faculty and educators are concerned about the overall increasing emphasis being placed on research, relative to traditional Extension activities.

This article analyzes both the opportunities and challenges facing Extension as land grant universities place greater emphasis on research. Strategic actions Extension educators can undertake to prepare for this impending shift are also suggested. While institutions of higher education evolve, Extension faculty with a strong commitment to the Land Grand system will continue to prosper and be rewarded for professional success.

The Opportunities

While Extension educators may have concerns or anxiety about greater emphasis being placed on research at their institution, we need to distinguish between university priorities/goals that "expand the pie" and those that are mutually exclusive with traditional Extension programming. I am not aware of any university administrators that are proposing to shift resources from Extension to expand research activities. Instead they seek to expand the breadth and depth of their institution so that opportunities for both research and Extension increase. It just happens that their top priority area at the moment resides in research.

Why are land grant university presidents so actively seeking to expand their institution's research capabilities? There are several reasons. First, whether the notion is right or wrong, universities with more prominent research programs are often held in higher esteem relative to institutions that emphasize teaching or outreach. Second, increased research activity most often leads to greater external funding support. University administrators benefit indirectly from extramural funding because 1) one component defining institution size is extramural funding, thus administrators have the prestige of overseeing a larger enterprise, and 2) university administrators typically retain a portion of indirect costs generated through increased extramural funding for discretionary spending. Increased discretionary funding permits them to fund special projects and other high priorities of special interest.

While faculty can be cynical of the benefits realized by upper administration, several important positive opportunities accrue directly to Extension as research programs and overall institution funding expands. First, growth of university research programs provides Extension with greater

access to top faculty across the campus. Just imagine being an Extension educator at a top-ranked university. Wouldn't it be wonderful to walk into any office on campus and know that you are obtaining information from a top researcher in that discipline? As an Extension educator, you usually can answer the majority of constituent questions directly given, your experience and education. However, educators periodically receive constituent questions that they are not able to fully answer and need to contact additional campus research faculty to develop a complete response. Wouldn't you have greater confidence delivering that constituent a response if you were assured that it came from the best source possible?

Secondly, as university research programs grow, all programs tend to thrive and benefit as an institution expands. Such expansion fosters a contagious, positive environment of enthusiasm and opportunity across campus. North Dakota State University was stagnant for several years with enrollment hovering around 9,000 students. Following implementation of North Dakota State University President Chapman's growth initiatives, we are now at 12,000 students and have a new research technology park, new buildings on campus as well as a very positive and energetic climate across campus (Chapman, 2007). This new climate has attracted the attention of peers across the nation, improving our ability to recruit new faculty and partner with others on national projects and grant proposals. The additional resources generated through indirect cost recoupment on new extramural funding has been made widely available through \$1,000/faculty of discretionary professional development monies annually, upgrades in computer infrastructure, and creation of new degree programs.

The Concerns

While expansion of university research programs provides a number of Extension growth opportunities, Extension faculty also have concerns. Many Extension faculty feel they are being relegated to a lower status behind research. This perception evolves from the system for ranking the stature of university programs. I am not familiar with any system of ranking Extension programs nationally. However, most disciplines are ranked annually by the Chronicle of Higher Education (2008), including my profession of agricultural economics.

When I first became aware of this system for ranking University departments, I was quite disappointed. In fact, I had several disappointments. First, I was disappointed that the list of top 10 departments of agricultural economics was even constructed and published. Now, departments will all be clamoring to either get on or move up the ranking. In many cases, departments will be making myopic decisions to increase their classification in the short-run. A second disappoint, albeit a small one, was that my alma mater was not listed. This disappointment was quite temporary as my alma mater is now included in the most recent ranking. A final disappoint, and my greatest concern for Extension was the actual ranking. In my estimation, several departments were very small and very inactive in our profession, I suspect a broad polling of the profession would have resulted in a very different outcome.

To understand how the ranking of top 10 departments was determined, it is instructive to review the criteria employed by the Chronicle, which was also published in the article. It shouldn't be a surprise that 60% of the weight used to determine final rankings was based on journal citations, 30% was based on external funding generated, and the final 10% of the weight was "other" (one could be highly cynical here and consider these points "good 'ole buddy" points for those institutions who are already highly ranked so they can remain on future rankings).

It is noteworthy that two traditional university activities even are considered when these rankings are derived – teaching and Extension. Teaching activity is totally disregarded as the criteria do not include any traditional measures of teaching performance such as measured student credit hours, assessment indicators, or placement success. More importantly for this article, no mention is made of Extension activities or even broader measures of institution outreach. One really has to question how these rankings, which purport to rank entire departments, can focus solely on one function of a land-grant university and be completely oblivious to other university activities.

While Extension faculty have legitimate concern for being paranoid, a more constructive activity is to develop a strategic response to the setting we face.

How Should Extension Respond?

If the Chronicle's ranking procedure were adopted directly by university administrators for promotion/tenure and annual evaluation, it is clear what the new expectations of Extension faculty would be. In summary, they would be expected to place far more emphasis on publication of journal articles, cite the work of other department colleagues in an effort to build citation counts, and obtain more external grant dollars. Any time left over could be used to deliver traditional education programs to constituents. Although I am being somewhat factious, Extension must do its share to assist the University in raising its stature. To the extent that Extension faculty author more journal articles and increase external funding, both activities contribute to higher university totals (e.g. number of articles, grant funding totals) when external evaluation reports are developed. In a sense, Extension must be a "good sister" and pull its own weight within the institution.

Alternatively, Extension could also take a more pro-active approach and work to change the ranking criteria so university outreach receives more weight when ranking determinations are made. In other words, all universities would be required to develop outreach programs that meet constituent needs, and then be evaluated on how well they perform. To implement this approach, national Extension leadership such as NASULGC could petition for change among the ranking organizations. However, this is likely to be quite an uphill battle and require time to change culture in the academy.

It's Up to Extension to Save the Land-Grant Mission

As universities place more emphasis on research, scientists increasingly seek participation in national research and grant opportunities. These national activities provide the opportunity for research results that are more robust and have the potential to be published in higher quality journals. Moreover, federal requests for proposals encourage greater collaboration across institutions which heighten funding chances.

With scarce research faculty time being increasingly dedicated to national research topics, a void exists in the land grant university's capability to respond to local research issues. Likewise, while teaching faculty now offer a wider array of online classes, land grant faculty are primarily campus bound. This is especially true with respect to academic programs as complete online degree programs are still relatively few when compared with traditional on-campus degree programs.

Consequently, a significant void exists in a university's future ability to fulfill its land grant responsibilities and respond to the education and research needs of local citizens. Extension is uniquely positioned to capitalize and fulfill this void.

Figure 1 graphically depicts the impending void in university land grant missions. The horizontal axis displays the continuum of research activity that ranges from a parochial focus on local issues and problems, to a national focus which addresses problems facing the country as a whole. Likewise, teaching activity can also be depicted along the vertical axis which shows the mix of campus and off-campus classes that could be possibly offered. If research faculty increasingly focus on national issues and teaching faculty remain tied to campus class offerings, university activity as a whole becomes concentrated in the lower left hand corner of the diagram as shown by the blue box. The remaining area, shaded in yellow represents the potential void in land grant mission which presents Extension with a great opportunity to fulfill. Fehlis (2005) reminds us that the future of Extension is defined by each of its members. In my view, the future of the land grant university rests with Extension's willingness to fill this void.

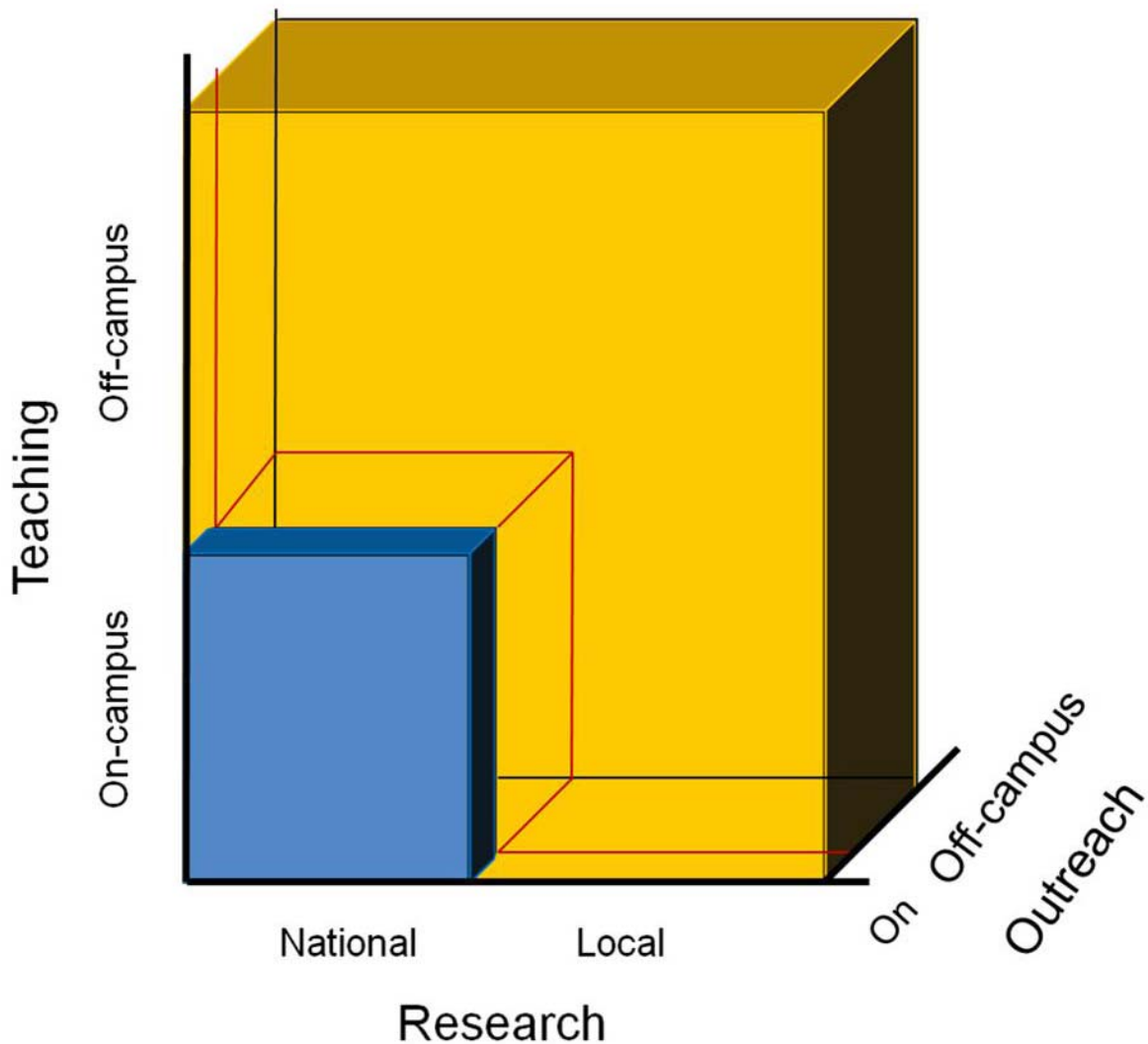


Figure 1. Void in University Land Grant Mission

Filling the Void

In recent years, Extension has been urged to develop more original programming that is supported by research findings. In their article, “Excellence in Extension”, Archer et al. (2007) develop a matrix outlining the criteria for excellence in Extension. One dimension of this matrix is Discover/Scholarship which has its outcome documented through peer review. This original programming, being developed in an academic institution and subject to peer review, closely aligns with applied research activity – highly desired by university administration. However, given the void being left by traditional research faculty as they increasingly focus on national research issues, Extension faculty have the opportunity (and responsibility?) to fulfill this void and delve even further into this realm of applied research area.

CSREES formally defines applied research as an expansion of basic research findings to uncover practical ways in which new knowledge can be advanced to benefit individuals and society (About Us, 2008). Davis et al. 2007 developed an applied research initiative and then demonstrated how scholarship arising from the project could be used to document excellence in Extension programming. A couple examples of applied research activity that could be assumed are crop yield test plots, livestock feeding trials, and environmental resource assessment. Historically, Extension faculty have traditionally partnered with research faculty in these activities. Research faculty previously provided leadership for study design and analytical methods for summarizing data while Extension faculty had a responsibility for disseminating results. Now, Extension faculty may have to step up and provide leadership for aspects of these studies. Such activity could provide an even stronger foundation and compliment their traditional programming.

Blaine (2005) argues that applied Extension research conducted at the local level can keep the organization relevant and vital in this new era of devolution.

It is striking to note that while Extension is being asked to conduct more applied research, researchers are being urged to become more involved in applied Extension. Researchers who participate in CSREES regional research projects must now provide a detailed dissemination plan before each regional project is approved (The Hatch Act of 1887 (Multistate Research Fund, 2008)). While regional projects are encouraged to partner and invite Extension faculty to join and disseminate their results, this is not a requirement. Regional research projects have the liberty of developing their own dissemination plans that have only limited Extension involvement. Disseminating results of research activity is essentially an applied Extension activity. The line between traditional Extension and research activities is becoming increasingly blurred.

One has to also ask where does teaching fit in? There has been so much innovation in the classroom in recent years as instructors have widely adopted new computerized learning tools, audience response systems, and developed online courses to meet the diverse learning styles of future students. I would argue that Extension would benefit greatly if they also considered adopting an applied teaching role and these new technologies. One opportunity for collaboration is the delivery of online classes. Extension, with its vast geographical presence, provides convenient local contact points for students enrolled in distance education programs. Likewise, classroom students would benefit from the service learning contacts and projects rooted in Extension programs.

To illustrate these opportunities, consider when campus students are now doing most of their work. I have taught several online courses for the past five years. When I first started teaching these classes, I was struck when students contacted me with questions about the course. I received emails and phone messages from them nearly 24 hours a day/seven days a week. This really surprised me and lead me conduct a small study (Gustafson, 2007) that tabulated when

students in one course actually completed online exams that were assigned. The course I choose to evaluate was an introductory economics course that was offered both fall '06 and spring '07 with 300 total students. Students in each section had to complete 20 chapters and an online exam following the end of each chapter. Students were able to take their online exams anytime they wanted to, 24 hours a day, seven days a week. The software I used to administer the online exams enabled me to tabulate what time of day and day of week students completed all of their exams (300 students x 20 exams) over the course of the semester.

Patterns of exam completion by day are depicted in Figure 1. The data show that most students completed exams just prior to the deadline. A total of 1,185 and 1,471 exams were completed on Mondays and Wednesdays. Exams were due at 9:00 a.m. before Tuesday and Thursday class. Therefore bars shown for Tuesday and Thursday are actually students who are working ahead while bars for Monday and Wednesday are students who are completing their exams just before the deadline. Interestingly, the fewest exams were completed on Friday and Saturdays with only 194 and 181 exams, respectively. More exams (308) were completed on Sunday, which is considered a day off work.

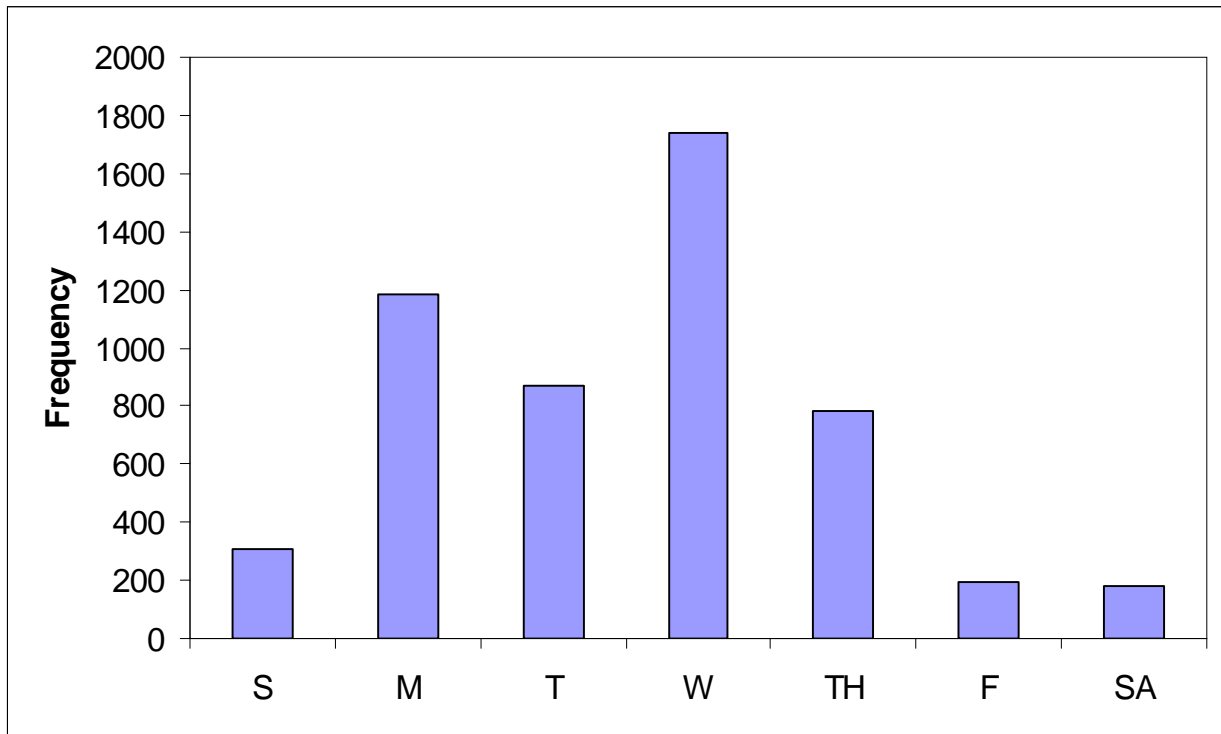


Figure 2. Exam Completion Frequency, by Day of Week

Figure 2 shows the distribution of pretest and chapter exam completion by time-of-day. Students completed an exam each hour of the 24-hour period. The least popular time for taking exams was from 2:00 a.m. until noon with only 8% of all exams taken during this morning time period. Yet, the most popular time for offering college classes, and traditional in-class exams, is forenoon. Competition with other classes may partially explain the lower frequency of exam completion before noon. Interestingly, few students completed exams immediately before the time they were due (9:00 a.m.).

During the normal workday (8:00 a.m. to 5:00 p.m.), only 25% of exams were completed. When given complete flexibility, nearly half (46%) of students chose to take exams between 9:00 p.m. and 2:00 a.m. A distinct, unexplained, dip in exam completion exists between 7:00 - 9:00 p.m. Perhaps this is dinner or recreational time for students. In addition, this time period is used by many campus groups for meetings. The study habits of these students have significant implications for future delivery of Extension programs. The students in this class are the future customers of Extension. In fact, they are the current customers of Extension. They are on all hours of the day seeking Extension information to complete term papers and other student projects. Are existing Extension materials available to meet this student need? How can Extension adopt the most innovative applied teaching methods to improve their programming efforts? Results of this study align closely with those reported by Herring (2008) who found online Extension resources brought in new clients, reached people across many regions and interests, and raised Extension's profile with metro audiences.

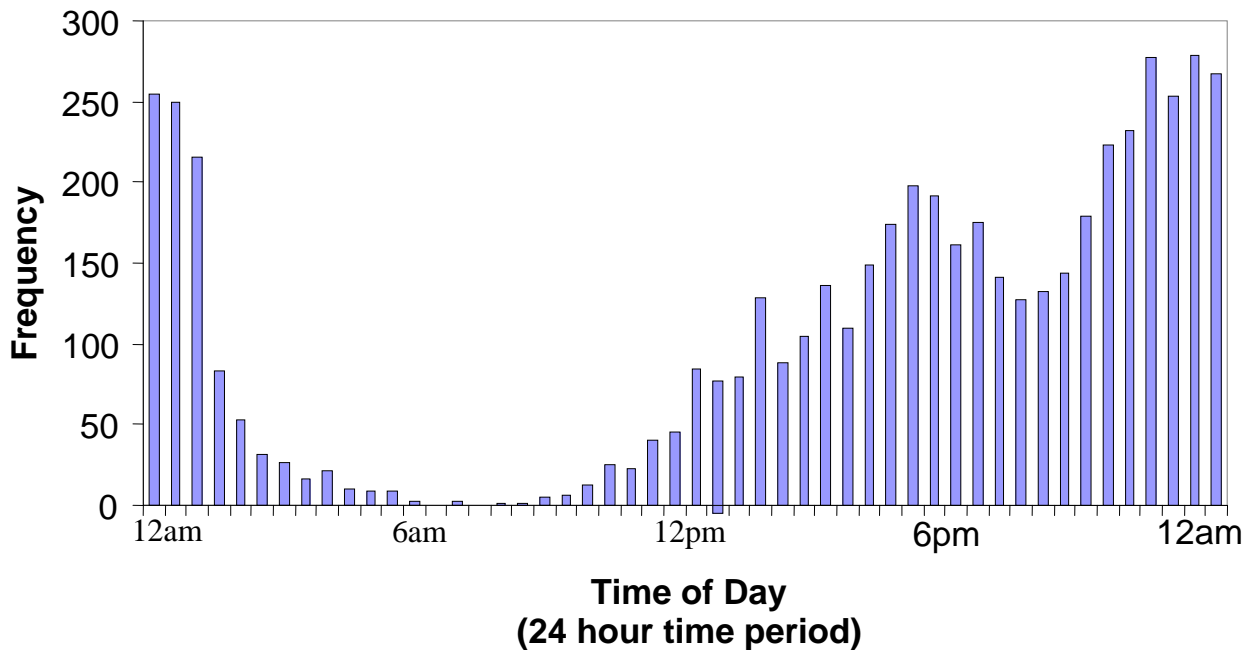


Figure 3. Exam Completion Frequency, by Time of Day

Conclusion

Extension faculty and staff have legitimate concern about increasing emphasis being placed on research activity across university campuses. While all universities should be urged to place greater weight on outreach programs of education and dissemination of research results, it will likely take time to change a deep-rooted culture. As research and teaching faculty become more concentrated, the resulting void in land grant mission creates an unprecedented opportunity for Extension. Additional responsibilities in both the realm of research and teaching will complement and strengthen existing Extension programs while creating new synergies that secure the future of the land grant mission.

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Abstract

University administrators are placing greater emphasis on research and extramural funding in an effort to raise their stature among peer institutions. While Extension faculty could feel threatened, they actually have an opportunity to fill the void in land grant mission being vacated by research and teaching faculty. Assuming great roles in applied research and teaching activities will strengthen traditional Extension programs and provide new opportunities for growth.