Associate Deans and Academic Leaders' Perceptions for Promoting Teaching Excellence in United States Colleges of Agriculture[1]

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Abstract

The continually changing demands of the workforce require faculty professional development be designed to improve teaching and enhance skills that stimulate student learning. To meet the educational needs and prepare students enrolled in majors in university Colleges of Agriculture for productive careers a focus on effective teaching should be a priority. This study sought to determine Associate Deans and Academic Leaders' perceptions of the structure and effectiveness of professional development programs in their respective College of Agriculture. A researcher-developed instrument was utilized to collect data from Associate Deans and Academic Leaders of Agriculture Colleges at Land-grant universities and non-land grant Agricultural and Renewable Resources Universities (NARRU) throughout the United States. The vast majority (98%) of respondents indicated that it was definitely important to them to provide opportunities to enhance teaching and improve student learning utilizing three or more professional development programs per year. Respondents considered professional development programs effective in promoting teaching excellence and student learning. Creating a culture of teaching excellence using faculty mentoring and professional development opportunities that are flexible, convenient, provide incentives and rewards, and promote faculty teaching excellence to support student learning were recommended to increase participation in university and college-wide professional development programs.

Introduction

Meeting the educational needs of the student is an important responsibility for post-secondary institutions. Land-grant universities are tasked with increasing academic rigor to stimulate student learning and engagement, and to escalate teaching within Colleges of Agriculture to meet the changing demands of the workforce (Campbell, 1998). Challenges related to a faculty members' ability to teach effectively continue to dramatically increase while the demands of the 21st century workforce require college graduates to be effective communicators, critical thinkers, and active problem solvers (Carnevale, 2013). Some believe colleges and universities nationwide are falling short of employer expectations regarding the preparation of graduates. More than 90% of employers rate written communication, critical thinking and problem solving as 'very important' for job success of new labor market entrants, and yet only a small percent of graduates is excelling in these areas (Arum and Roksa, 2011). If higher education is going to regain public trust, it must embark on a path of reform to restore our education system, (Blickenstaff et al., 2015). The land-grant college and university educational system must commit to a pathway of reform by configuring their services to increase academic rigor, stimulate higher learning and improve teaching within Colleges of Agriculture. Improving teacher effectiveness and the teaching skills of faculty in land-grant institutions has been of interest for some time (Wingenbach and Ladner, 1997). Changes in the teaching and learning approaches towards undergraduate education in Colleges of Agriculture are occurring regarding the skills and competencies, and specific learning approaches used to teach students. Student-centered learning that enables students to be proficient critical thinkers who make informed decisions has been a major focus. In addition, keeping teaching faculty at the cutting edge of technology related to learning has been important (Fields et al., 2003).

The educational needs of a diverse student population can be overwhelming to faculty who are trying to prepare students for future career paths. The

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increased academic rigor should stimulate student learning and engagement but often faculty are not involved with enhancing their own teaching development due to time, pressure to conduct research and few tangible rewards for improving teaching and supporting student learning (Lanier and Little, 1984).

Faculty face stiff competition for their time to improve their teaching skills as the rewards system usually favors research productivity with fewer incentives for teaching accomplishments (Brint, 2009). Tenure and promotion committees often focus on research accomplishments with little concern about teaching effectiveness. In many research-intensive Colleges of Agriculture, the departmental culture neglects to focus on the need for continuous improvement of teaching. There should be frequent discussions and learning opportunities of how best to engage students for effective student learning in lectures and laboratories (Handelsman et al., 2004).

Review of Literature

Research conducted in the area of teaching and learning has surfaced throughout recent years to address the needs of both teachers and students. As higher accountability continues to be placed on educating future generations to be prepared for work in the 21st century, Colleges of Agriculture have developed strategies to prepare their faculty by promoting excellence in teaching.

Myers and Roberts (2004) reported professional development activities for teachers are critical to stay current in their fields. Measuring changes in attitudes, knowledge gained, and behavior modifications are important in developing seminars and workshops that promote teaching improvement. In a philosophical paper, Estepp et al. (2012) proposed creating a faculty professional development model based on the experiential learning process. This model would be highly interactive requiring observation and evaluation of a colleague teaching followed by reflection and application to one's own teaching methodology.

Harder et al. (2009) reported on the professional needs of faculty in the College of Agricultural and Life Sciences at the University of Florida. An online survey was administered and contained three primary topics: teaching competencies, preferences towards delivery of professional development, and demographics. The most relevant competency directed to teaching was effective lecturing and the least was undergraduate advising. The study concluded and recommended professional development activities for their teaching faculty were needed in areas such as getting students engaged in learning, teaching critical thinking, effective lecturing, questioning techniques and active learning strategies. Student-centered learning where a shift from lecture-based instruction to more active student learning has also become an important focus to help transition teaching and learning to meet the needs of diverse learners (Fields et al., 2003).

Maxwell et al. (2011) interviewed nine award winning teachers at the University of Missouri and found two major themes they thought contributed to effective teaching. The first theme was a focus on the student requiring dialogue and leading them to think differently about the content that progressed to improve critical thinking. The second theme was continuing to learn from other teachers and learn about the process of teaching and learning. This second theme focused on methods to explore ways to encourage teachers to improve their teaching through professional development opportunities.

Our study sought to build upon the current limited research about the types of professional development programs that have been offered to support faculty to improve their teaching effectiveness. Through the lens of Associate Deans and Academic Leaders in Colleges of Agriculture throughout the United States, we aimed to describe and summarize how Colleges of Agriculture have been promoting and recognizing faculty teaching excellence to in turn help support student learning to meet the growing needs of both teaching faculty and students in the 21st century.

Purpose and Objectives

The purpose of this study was to explore how teaching excellence was promoted to support student learning in Colleges of Agriculture. We specifically wanted to learn about the types of faculty professional development programs, rewards, and incentives used in Colleges of Agriculture throughout the United States to encourage the development of improved faculty teaching effectiveness. The following objectives guided the study:

1. Survey Associate Deans and Academic Leaders in Colleges of Agriculture throughout the United States to determine their perceptions of the structure and perceived effectiveness of professional development programs used to promote teaching excellence in their respective college.
2. Survey Associate Deans and Academic Leaders in Colleges of Agriculture throughout the United States to determine their perceptions of the reward system used to promote teaching excellence in their respective college.

Methods

This study followed a quantitative, non-experimental, and descriptive/survey research design. Our intent was to describe and summarize the beliefs of our target population, Associate Deans/Academic Leaders from Colleges of Agriculture in the United States, both land-grant and non-land grant Agricultural and Renewable Resources Universities (NARRU). Descriptive/survey design is widely used as a source of data collection in social science research (Ary et al., 2010). Leedy and Ormond (2016) define descriptive quantitative research as a method to survey relationships between two or more phenomena.

In the fall of 2015 an instrument was developed by researchers at Clemson University using an on-line survey platform. The instrument was initially reviewed

by a panel of experts at the Association of Public Land-grant Universities (APLU) and then pilot tested for face and content validity by the Associate Deans at Clemson University. Minor edits of clarification were made to the instrument based on expert feedback and recommendations. The university institutional review board determined this research protocol to be exempt under category B1 in accordance with federal regulations 45 CRF 46.101.

We used a purposive sampling technique to identify a representative population (Ary et al., 2010). The population of interest for this study was Associate Deans/Academic Leaders from Colleges of Agriculture in the United States, both land-grant and non-land grant. Associate Deans and Academic Leaders were specifically selected as the population of interest for this study because our intent was to determine the perceptions of those responsible for mentoring and leading faculty within their perspective institutions. Teaching award and professional development programs have traditionally been led by Associate Deans responsible for academic studies. Associate Deans and Academic Leaders were contacted through a list serve provided from APLU. During the February 2016 APLU meeting the initial contact included verbal communication to invite the Associate Deans present at that meeting to participate in the study. Prior notification in advance of receiving the email with the survey link increased the likelihood of response (Dillman, 2000). Two follow-up reminders including the link to the survey were emailed to the APLU list serve giving approximately six weeks for survey completion and data collection.

The survey was comprised of 26 questions with a mix of single response questions with drop down items and open-ended questions. The questions were structured to obtain specific information that would benefit the researchers in determining the total picture of faculty professional development that occurred at each institution. A Likert scale was used to rate levels of importance and effectiveness to calculate mean scores (not at all important=1, very unimportant=2, neither important nor unimportant=3, very important=4 and extremely important=5; very ineffective=1, ineffective=2, neither effective nor ineffective=3, effective=4, and very effective=5. The main research question of the study was "Is it important to you as an Associate Dean/Academic Leader to promote and provide opportunities for faculty of your college to enhance their teaching and improve student learning". Sub theme questions/objectives were a) What are you doing to enhance teaching and learning in your college? b) Are teaching awards or incentives effective in rewarding teaching excellence? c) What types of professional development programs are available for teachers? d) How do you encourage faculty participation in teaching and learning professional development activities? Additional questions regarding demographics (gender, race, ethnicity, and years of experience), number of college faculty and total student enrollment, teaching awards, incentives, structure and effectiveness of professional development, and faculty participation in professional development were included in the survey. The APLU list serve provided email addresses for 90 Colleges of Agriculture Associate Deans/Academic Leaders. Of those contacted, 45 completed questionnaires were returned for a 50% response rate. Quantitative data were analyzed using means and frequencies, while qualitative responses were organized into categories and or themes based on the open-ended responses provided by the respondents.

Results and Discussion

The demographics of the 45 administrators who responded to the survey are as follows. Males represented nearly three quarters of the respondents (73%, n=33) and females represented slightly more than one quarter of the respondents (27%, n=12). The race and ethnicity of the respondents included Non-Hispanic White (91%), Asian or Asian American (5%), Black or African American (2%), and Hispanic or Latino(a) (2%). The majority of the respondents were non- Hispanic white males with an average of 18 years of faculty experience. In order to understand the frame of reference for the colleges, data were collected to determine the number of faculty and students in the colleges. The number of faculty reported within the Colleges of Agriculture ranged from 25 to 500 with an average number of faculty reported as 177. The median number of faculty were 158. The number of students reported ranged from 493 to 5,408 with an average number of students reported as 2,335. The median number of students were 2,042.

All of the respondents indicated it was important to them to promote and provide opportunities for faculty to enhance and improve teaching effectiveness to ultimately support student learning. Many Associate Deans/Academic Leaders (84%) reported having staffed and effective university teaching and learning centers that provided a wide array of resources to assist faculty with improving their teaching and learning outcomes. Resources ranged from specific seminars and workshops to classroom visits and personal counselling to improve instructor effectiveness. Various degrees of faculty participation in the programs were reported from low to high. Most respondents (f =26, 59%) indicated moderate participation and the majority (f =31, 70%) considered the teaching and student learning activities and programs from the University Teaching and Learning Centers to be effective.

When asked to report "What are you (the Associate Dean/Academic Leader) doing to enhance teaching and learning in your college" the most common responses included: 1) the development of college-wide professional development seminars, 2) workshops, 3) teaching enhancement symposiums, 4) support groups, 5) brown bag lunch discussions; 6) online training programs. The six previously mentioned activities to enhance teaching and learning were reported being sponsored by the Colleges of Agriculture in addition to the activities supported by the University's Teaching

and Learning Centers. Previous studies also concluded that training in the form of professional development for their teaching faculty were needed (Harder et al., 2009; Maxwell et al., 2011; Roberts and Myers, 2004).

Faculty expected support to participate in professional development, particularly when travel was required to attend regional or national teaching and learning conferences. Resources or incentives mentioned by 28% of the respondents as important factors for encouraging faculty engagement in activities to enhance teaching and learning were to provide faculty funding to attend teaching conferences and pay membership dues to various teaching organizations. The North American Colleges and Teachers of Agriculture (NACTA) and the Global Community for Academic Advising (NACADA) were the only two organizations specifically mentioned. College supported grants and mini-grants were also used to improve existing courses or integrate new or innovative teaching methodologies into courses and curricula. Some Colleges of Agriculture have a peer teaching and mentoring system that assist new teachers in developing courses and a mindset toward excellent teaching thereby fostering a college culture for teaching excellence. Respondents reported a strategy to strengthen teaching was through the curriculum review process that investigated student and curricula needs thereby providing opportunities for faculty to develop ways to foster active student learning as a part of curricula revitalization.

Nominating teaching faculty for the United States Department of Agriculture (USDA) excellence in teaching award was reported by some respondents as a method to promote teaching excellence. Other teaching awards were also reported as an incentive for promoting effective teaching. A summarized listing of college teaching awards that were listed by the respondents is presented in Table 1. Respondents indicated that most Colleges of Agriculture with awards for teaching usually categorized them by length of teaching (years) or level of courses (undergraduate versus graduate) and some included advising award recognitions. One time cash rewards from $500 to $1500 were reported as a portion of the annual award recognition. The most lucrative incentive reported for teaching excellence was a $5000 addition to the base salary of the award-winning teacher. Many respondents also reported providing assistance to help faculty with nomination packets for university and USDA teaching awards as a means of supporting and recognizing teaching excellence. Similarly, Fields et al. (2003) found rewards for teaching faculty to be an effective means of providing recognition for teaching compared to providing recognition of research by providing faculty balance with all expectations for

Table 1. Top ten reported teaching awards or incentives provided by United States Colleges of Agriculture to encourage or reward teaching excellence as reported by Associate Deans/Academic Leaders (n=44).

	Award Description
1.	Participation in conferences at North American Colleges and Teachers of Agriculture (NACTA), the Global Community for Academic Advising (NACADA), and United States Department of Agriculture (USDA) award programs
2.	Annual college teaching awards with cash stipends ranging from $500 to $1500 one-time awards. One college reported awards that include adding $5000 to base salary.
3.	Certificates of Teaching Excellence
4.	College of Outstanding Teachers
5.	College Undergraduate, Graduate and Advising Awards
6.	Dean's Award for Teaching, Teacher/Advisor of the Year
7.	Distinguished Teaching Award
8.	Innovative Teaching Award
9.	Lifetime, Senior, and Early Career Awards
10.	Golden Apple, RM Wade Teaching Excellence – other teaching awards named for various individuals

teaching, research, and outreach, and for motivating faculty to place higher priority on teaching.

Additional survey questions enquired about the significance of teaching awards as perceived by the Associate Deans/Academic Leaders. The majority of the respondents (f =27, 60%) indicated that teaching awards were very important for promotion and tenure decisions whereas 33% (f =15) indicated that teaching awards were neither important nor unimportant for promotion and tenure decisions. This finding may reflect a department/college culture that is more focused on other measures usually related to research for tenure and promotion decisions.

Reported effectiveness of incentives and teaching awards for improving faculty skills as perceived by Associate Deans/Academic Leaders of United States Colleges of Agriculture (n=44) were investigated by determining the perceived value of those incentives and teaching awards for a variety of categories which included increased motivation to teach, improved instructional effectiveness, improved student learning, success towards tenure and promotion, success after tenure and promotion, and improved course evaluations. Finding were summarized and reported in Table 2. Mean scores on a five-point scale (5=very effective, 4=effective, 3=neither effective nor ineffective, 2=ineffective, and 1=very ineffective) ranged from 3.5

Table 2. Associate Deans/Academic Leaders of United States Colleges of Agriculture perceived effectiveness of incentives and teaching awards (n=44)

			Perceived Effectiveness				
Category	Total responses		Very ineffective	Ineffective	Neither effective nor ineffective	Effective	Very effective
	n	Mean	f	f	f	f	f
Increased motivation to teach	44	3.5	0	4	15	24	1
Improved instructional effectiveness	43	3.8	0	1	10	28	4
Improved student learning	44	3.8	0	1	11	28	4
Success toward tenure	44	3.8	0	3	8	26	7
Success after tenure	44	3.7	0	2	14	23	5
Improved course evaluations	44	3.7	0	2	14	24	4

Note: Likert scale of 1- 5 used to determine mean score. Very ineffective = 1, Ineffective = 2, Neither effective nor ineffective = 3, Effective = 4, and Very effective = 5

to 3.8. With a mean of 3.8, respondents considered three categories (teaching effectiveness, student learning, and success toward tenure) effective as an outcome of incentives and receipt of teaching awards. Respondents also indicated they perceived incentives and receipt of a teaching award by their faculty effective for continued success after tenure (M=3.7), improved course evaluations (M=3.7) and increased motivation to teach (M=3.5).

A number of professional development programs were offered at the college level. The majority of respondents (f =39, 87%) perceived these programs to be either effective or very effective in promoting teaching excellence and 91% (f =41) indicated that these programs were effective or very effective in promoting student learning. There were a wide range of effective programs listed to assist in the development of faculty for teaching and student learning in Colleges of Agriculture across the United States and those findings are described in Table 3.

The most common format of professional development programs was a workshop conducted over a one to three hour time period and offered three or more times per year. Another interesting program style reported was a Teaching Enhancement Symposium which consisted of five – 75 minute workshops in three concurrent sessions. The concurrent sessions offered a variety of topics and provided an opportunity for participants to select specific areas of interest. Summer workshops were also listed which involved three weeks of classes that resulted in the development of an on-line teaching improvement course. Two-day workshops were also reported with half day sessions on specific topics. Some off campus professional development programs were offered and supported by mini grants offered from the colleges.

A major emerging issue with professional development programs was the participation of teaching faculty. Many respondents (f =26, 59%) indicated moderate faculty participation in their teaching and learning professional development programs. Many pressures have been placed on faculty and priorities for teaching professional development opportunities might not be as high as actually needed. Associate Deans indicated allocating time to participate in professional development without major perceived reward or incentives was a major barrier and factor preventing faculty participation.

Table 4 provides a description of the themes, subthemes and a potential barrier related to another question of interest "How do you encourage faculty participation in professional development programs". The responses (n=38) followed two themes. Theme one focused on building a culture of teaching excellence with faculty leaders encouraging attendance to teaching and learning activities. Establishing the expectation that new faculty will attend professional development programs with department chairs considering professional development participation important in annual evaluations and in promotion and tenure documentation.

The second theme was centered on convenience, flexibility and incentives. It was suggested that annual planned events were important, so faculty can count on programs at certain times of the year. Scheduling events on multiple days to provide an opportunity for most of the faculty to attend regardless of individual teaching schedules was a suggested strategy to increase participation in professional development programs offered by Colleges of Agriculture. Also, sending many program reminders and having enjoyable interactive programs with free materials, food and funding to assist faculty to attend other teaching and learning professional development meetings such as the NACTA annual conference were indicated to be important factors to increase participation. Nearly three quarters of the respondents (f=33, 74%) indicated no financial rewards were associated with participation in the teaching and learning professional development programs in their colleges.

Table 3. Common types of professional development programs offered at the college level to enhance effective teaching as reported by Associate Deans/Academic Leaders in United States Colleges of Agriculture (n=38).

	Type of Professional Development Program
1.	Professional development programs at the University level
2.	Teaching seminars, workshops, day long retreat, teaching book discussion groups
3.	Helping faculty with day to day teaching issues e.g. syllabi, grade disputes
4.	Teaching Assistant training workshops and programs to prepare graduate students for future faculty roles
5.	Development and mentoring programs for new/early career faculty
6.	Faculty learning communities and teaching fellows' program for early, mid and senior faculty
7.	Support NACTA membership, conferences and travel to other teaching conferences

Table 4. Themes, subthemes and a potential barrier related to encouraging faculty participation in the teaching and learning professional development programs as reported by Associate Deans/Academic Leaders in Unites States Colleges of Agriculture (n=40).

Theme	Build a culture of expectation for teaching excellence
Subtheme	
	Good reputation and strong faculty leaders help encourage faculty attendance
	Make teaching excellence a part of the culture and set professional development attendance as an expectation of new faculty
	Faculty committee on Teaching plan programs and encourage colleagues to attend
	Important for annual evaluations and promotion/tenure considerations
Theme	Convenience, flexibility and incentives
Subtheme	
	Have annual programs so faculty will plan and anticipate
	Hold events on multiple days to allow all teaching faculty to attend regardless of teaching schedule
	Send out many reminders and make them engaging and enjoyable to read
	Have interactive programs, certificates, free materials, free lunch/food and door prizes
	Provide funding: travel and registration funds, financial incentives with stipends, mini grant, encourage participation in NACTA
Potential Barrier	Incentives difficult to provide if lack of finances for raises and other support is not available

Summary

Although the findings of this study cannot be generalized beyond the 45 respondents, Associate Deans/Academic Leaders that provided their perceptions and personal insight, the results of this research clearly demonstrated that excellence in teaching and support for student learning should be considered as a priority of the Administration in Colleges of Agriculture. Most of the Associate Deans/Academic Leaders who responded indicated promoting teaching effectiveness was an important part of their positions. The findings also indicated many professional development opportunities for faculty to strengthen their teaching skills have been utilized. Many universities have existing and perceived to be effective Teaching and Learning Centers that provide professional development to support teaching and learning. The respondents reported they have encouraged their faculty to attend and participate in the professional development activities conducted at their University Teaching and Learning Centers.

In addition to the programs conducted by University Teaching and Learning Centers, Colleges of Agriculture should develop an effective teaching and learning program that meets the needs of their faculty and promotes teaching excellence to support student learning. The importance of meeting the needs of faculty was an important finding and recommendation of previous research related to teaching and learning (Harder et al., 2009; Myers and Roberts, 2004). Respondents in this study also suggested that resources may be needed to provide funding and financial rewards to faculty who participate in professional development programs including support for travel and membership dues to teaching and learning conferences such as NACTA. College-wide mini-grant programs were mentioned as an effective way to support improvement, innovation, and undergraduate research in teaching and learning. Financial support and resources might be directly correlated with increased participation in professional development programs.

Emphasis was placed on the importance for the Associate Dean/Academic Leader of a College of Agriculture to establish a culture within the college that focuses on teaching excellence through mentoring, peer review/evaluations, and stresses the importance of scholarship towards reaching promotion and tenure. Faculty look to be mentored and tend to prioritize their efforts based on the culture within the college. The role of the leaders within a college, especially the department chair who sometimes directly reports to the Associate Dean of a college is vitally important. Faculty need to feel supported by their leaders (i.e. administration, deans, associate deans, department chairs, and colleagues) when embarking upon efforts to improve their teaching effectiveness (Barrett and Burkholder, 2000).

Additionally, a system for regularly rewarding and recognizing faculty for their outstanding accomplishments in teaching and learning is critical to maintain an emphasis on teaching excellence to improve student learning. When faculty do not feel supported projects related to teaching excellence might suffer, while attempts at professional development programs might fail to be represented by faculty who feel they are overburdened by obligations towards a greater focus on research rather than teaching (Barrett and Burkholder, 2000). Clearly the Associate Deans/Academic Leaders who responded to this survey consider teaching awards to be valuable for multiple reasons other than solely recognizing excellent teachers.

Recommendations

In order to assure that Colleges of Agriculture are providing support for teacher effectiveness that promotes student learning five specific recommendations for Associate Deans/Academic Leaders of Colleges of Agriculture were determined from our research:

1. Excellence in teaching and support for student learning should be a priority of college level administration;
2. Utilize the resources available in your University Teaching and Learning Center and encourage your faculty to attend those events or collaborate with the center to provide specific training for your teaching faculty based on individual/departmental needs;
3. Develop an effective teaching and learning program that can promote faculty teaching excellence and support student learning to meet the needs of the faculty in your college;
4. Consider resources for providing funding and financial rewards to faculty who participate in professional development programs. Include support for travel and membership dues for your faculty to attend teaching and learning conferences such as NACTA and NACADA;
5. Design or enhance the system within your college for regularly rewarding and recognizing faculty for their outstanding accomplishments in teaching and learning by providing support and recognition of their teaching excellence.

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