Learning today, leading tomorrow- Developing and assessing student learning outcomes in co-curricular agriculture programs

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Learning Today, Leading Tomorrow – Developing and Assessing Student Learning Outcomes in Co-Curricular Agriculture Programs

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Chapter 1

Introduction

While many rural students seek post-secondary education at colleges and universities in more urban areas, there exists a population of young agriculturists who attend rural community colleges for preparation and development of skills to implement on the family farm or agribusiness operation, and consequently, the larger community in which they live and work. Donned “stayders” by Carr and Kefalas (2009), these individuals who participate in community-college agriculture programs and plan to remain in the community are the best subjects for absorption of skills and development as rural leaders.

Northeastern Oklahoma A&M College (NEO) was established in 1919 as the Miami School of Mines and later became Northeastern Oklahoma A&M College. NEO is the only remaining institution of higher education in Oklahoma to maintain “A&M” title in their name. Since its inception, NEO has been dedicated to producing well educated, highly trained graduates who are ready to make a difference in the world. Located in rural northeast Oklahoma, NEO served 35 states, and 15 countries outside the United States. The institution prides itself and focuses resources on three academic programs: allied health and nursing, agriculture, and business and technology.

Specifically, the NEO Agriculture Department offers academic programs in the areas of animal science, agronomy, plant and soil science, as well as agriculture business and economics. In order to promote leadership, professional growth and career success, the NEO Agriculture Department partners with locals industry, Oklahoma State agencies, and members of the regional
agriculture community to promote hands-on learning and student understanding of grassland management, crop and cattle production, and natural resource conservation.

NEO Agriculture is supported by 5 full-time faculty members, 2 adjunct instructors, and a full-time Farm Manager. NEO Aggies are recognized regularly on a national and international level for their achievements in and out of the classroom. Associate level graduates transfer into accredited bachelor programs at a rate of nearly 50%. Others students enter in the work-force with specialized training in equine and ranch management and wildland fire fighting.

In response to an industry that is losing ground in terms of rural leadership, NEO Agriculture offers numerous co-curricular programs intended to complement classroom learning in the fields of agriculture, agribusiness, agricultural education, animal science, equine and ranch management, and natural resource ecology and management including:

- Horse and Livestock Judging;
- Equestrian;
- Rodeo;
- Aggie Society;
- Agriculture Ambassadors;
- Agricultural Education Club;
- Young Farmers and Ranchers;
- Equine Club;
- Fire Dawgs (Wildland Firefighting);
- And Forestry Club.

While some of the aforementioned programs take on a more competitive aspect, all programs are responsible for promoting the mission and values of the greater department and
institutions. Students may participate in college activities such as serving on strategic planning panels, coordinating interscholastic contests for area FFA chapters, representing NEO at state and national conventions, leading community service initiatives, and field trips.

More specifically, the Agriculture Ambassador program at NEO is an agricultural leadership program designed to promote awareness of the institution’s academic and extracurricular activities within agriculture while advocating for the greater agriculture industry through leadership activities. Participants are selected for the leadership program through an application process based on a self-written essay justifying their qualifications for the program. The program was introduced in 2009 and has provided leadership opportunities for 15-20 students per year since its inception. Sponsors of the co-curricular program constantly seek activities where student leaders can capitalize on their own leadership strengths to promote and advocate change for the betterment of their own lives and rural communities. In tandem, the time and resources available to sponsors of NEO’s agricultural ambassador program are limited.

The existence of the Agriculture Ambassador program and other co-curricular programs at NEO, coupled with a declining pool of prepared rural leaders poses an exciting opportunity. An opportunity for improvement that is not limited to a single program or even institution, but an opportunity to develop rural leaders capable of leading and improving their immediate communities.
Purpose

The purpose of this creative component was to develop a case study focused on establishing and assessing the student learning outcomes of NEO student clubs that results in a facilitators guide for other club leaders to do the same. The NEO Agriculture Department has, and continues to play, an important role both on campus and in the community with regards to leadership. Hence, the efficacy and impact of co-curricular agriculture programs is of upmost importance.

Three objectives guided this creative component:

1. Demonstrate the process of developing student learning outcomes using the Ag Ambassadors as an example;
2. Model the student learning assessment process and plan using the Ag Ambassadors club;
3. Develop a facilitator’s guide for NEO club leaders to use in establishing and assessing student learning outcomes.
Chapter 2

Literature Review

The following review of literature begins with an introduction to the curriculum strategy coined backwards design. This type of framework lends itself well to the objectives of this creative component and will support its form and order. The introduction to backwards design connects to literature centered on rural leadership and outlines the desired outcome of students pursuing leadership development at NEO A&M College. The leadership sections provide the current state of rural leadership in NE Oklahoma and existing literature on the topic of leadership development specifically at the community college level. A review of literature and industry best practices with regards to student learning outcome design and assessment follows and serves as support for the subsequent case study and professional development facilitator’s guide.

Backwards Design

It is commonplace for curriculum generation to begin with the development of learning activities and subsequent assessment pieces eventually leading educators on a search for connections between the activities and overarching goals of the content – or in other words, a forward approach. Much unlike the aforementioned process Grant Wiggins and Jay McTighe (1998) posit a more comprehensive and outcome-based process coined backwards design. Curriculum designed this way begins with consideration of the learning goals which embody the knowledge and skills instructors desire students to learn after completion of the course or learning experience. After establishing the desired outcomes, educators then determine appropriate assessments and lastly, the learning activities.
Wiggins and McTighe (1998) argue that backwards design is focused primarily on student learning and understanding and is beneficial to instructors because it encourages intentionality during the design process. Backwards design allows instructors to devise strategies and activities based on a specific purpose rather than creating learning activities just for the sake of it. Furthermore, this design yields instruction that is transparent and explicit (Bowen, 2017). When adopting the backwards design curriculum strategy, designers navigate three steps:

1) Identify desired results;

2) Determine acceptable evidence and;

3) Plan learning experiences and instruction.

A backwards design approach is simple, yet logical, and clearly defines the outcomes desired from a learning experience while being supported with calculated and relevant learning activities. As a result, priority is shifted from teaching to learning.

Rural Leadership

Rural communities across America are losing ground in more ways than one. In a physical sense, the number of farms in Ottawa County (northeast Oklahoma) has decreased 12% between the year 2007 and 2012, according to the 2012 Agriculture Census (USDA, 2012). Subsequently, the number of inspired and prepared rural leaders is also dwindling. In Carr and Kefalas (2009) article “The Rural Brain Drain”, the term hollowing out is used to describe the loss of young talented people amongst a growing and changing industry, leaving rural communities susceptible to extinction.
The Center for Rural Affairs posits the success or failure of community development efforts is greatly influenced by the degree of leadership local citizens are willing to provide (CFRA, 2015). Communities rooted in agriculture are dependent upon a younger generation of not only farmers, but leaders. As economics and society change the demographics of rural America, communities must make efforts to embrace and educate young adults who are committed to agriculture and working for the greater good of the community.

As defined for this project rural leadership development embodies the enhancement of capacity among local people to solve problems. Many social scientists, business leaders, and others recognize that the key to addressing rural problems is the “capacity building” of local leaders and citizens (Hustedde and Woodward, 1996). Moreover, rural leadership focuses on shared leadership and community building. In contrast to leaders in more urban or populated areas, rural leaders are responsible for a variety of issues and unfortunately, fewer resources for support and development. Hence, rural communities, dating back to 1965 and the Kellogg Farm Study Program (KFSP), have recognized the need for effective rural leaders and worked to develop citizens’ abilities to understand and solve local issues. The KFSP founders believed that skills in the social sciences were essential for solving the increasingly complex problems of the agricultural industry (Miller, 1976). Like the KFSP, programs created and guided towards the development and support of agricultural leaders are termed agricultural leadership programs. According to Kaufman and Carter (2005), participants in agricultural leadership programs gain increased self-confidence, broadened horizons, improved interpersonal relationships, and improved skills for leadership in group action.

There exists a great discussion, and related scholarly work, identifying the processes by which leaders are created. The aforementioned literature presents a strong case for the uncertain
viability of rural communities in wake of underprepared leadership. Issues facing rural communities include decline in areas such as the loss of family farms and small farming communities resulting in populations that may not be able to actively support a community to rapid growth (Brown, Swanson, & Barton, 2003). Agricultural communities need leaders to effectively address such situations; the success of the industry depends on leaders who are facing these challenges daily (Diem & Nikola, 2005); however, rural citizens may lack social capital or individual leadership skills (Kaufman & Carter, 2005).

Community colleges have long had a reputation for being flexible, accessible, and responsive to community needs (AACC, 2013). According to Miller (1995), rural schools, when working in partnership with local leaders and residents, can have a positive impact on community viability. Evaluations of agricultural leadership programs suggest that graduates experience in such program increased community involvement, increased awareness of the value of their time, and improved business and decision making skills (Black, 2006). In addition, community college leadership development programs offer an opportunity for individuals to work together or “network”, promoting civic engagement and the creation of social capital (Kaufman & Carter, 2005). Siemens (2005) poses that due to the evolution and growth of knowledge, learning becomes a process of analyzing what information is needed, and more importantly accessing the new knowledge. Society and education alike, are well connected and highly networked – providing a framework and pipeline for the flow of knowledge. While the applications of “networking” vary between Kaufman, Carter and Siemens, it cannot be argued that information flow, and exposure to similarly guided individuals, aid in comprehensive attainment of knowledge and goals.

Servant Leadership
While servant leadership is a timeless concept, the phrase “servant leadership” was coined by Robert K. Greenleaf (1970) in his essay titled “The Servant as Leader”. In that essay, Greenleaf said:

“The servant-leader is servant first… It begins with the natural feeling that one wants to serve, to serve first. Then conscious choice brings one to aspire to lead. That person is sharply different from one who is leader first, perhaps because of the need to assuage an unusual power drive or to acquire material possessions…The leader-first and the servant-first are two extreme types. Between them there are shadings and blends that are part of the infinite variety of human nature.”

“The difference manifests itself in the care taken by the servant-first to make sure that other people’s highest priority needs are being served. The best test, and difficult to administer, is: Do those served grow as persons? Do they, while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society? Will they benefit or at least not be further deprived?”

A servant-leader focuses primarily on the growth and well-being of people and the communities to which they belong. While traditional leadership generally involves the accumulation and exercise of power by one individual at the top of the organizational ladder, servant leadership is different. The servant-leader shares power, puts the needs of others first and helps people develop and perform as highly as possible.

It has become commonplace for various institutions to adopt the theories and principles related to servant leadership as a foundational component of their professional development program. Non-profit corporations, for-profit corporations, churches, universities, and health care
entities are specific examples of groups relying on servant leadership to replace the existing and outdated hierarchal pyramid (Spears, 2002).

**Assessment**

Schuh and Upcraft (2001) define assessment as “an any effort to gather, analyze, and interpret evidence which describes institutional, departmental, and divisional or agency effectiveness”. Methods of assessment can vary; direct measures of student learning assess what students know and can do, while indirect assessment measures focus on perceived changes in attitudes, knowledge, and skills. Examples of tools used to measure learning outcomes may include:

- Surveys;
- Journaling;
- Interviews;
- Reflection;
- Or Skills tests.

The overall goal of assessment is improvement; the evidence gathered through the assessment process may also be used for other institutional decisions, such as policies, budgeting, staffing, and strategic planning (NEO A&M College, 2017). Whether one is assessing learning outcomes or objectives for an academic or co-curricular program or for a single course, it is important to remember that assessment is an iterative process (The George Washington University, 2018). Although specifics stages within assessment cycles vary among programs and institutions, the use of a cyclical process is considered a best practice of assessment. Figure 1 is an example of an assessment cycle created by co-curricular leaders at
the Portland State University for the purposes of assessing co-curricular learning (Spalding, Williams, Wise, 2014).

Figure 1. Example of co-curricular assessment cycle.

In addition to supporting student learning, co-curricular programs can benefit from designing assessment plans and specifically learning outcomes in many ways (Spalding, Williams, and Wise, 2014). These benefits include:

- Refining programs and activities;
- Recording impact within the campus and community;
- Identifying a connection between program initiatives and institutional mission;
• Gaining student perspective to ensure relevance to student population;
• Collecting student success stories to share and advertise student experiences;
• Clarifying departmental goals and priorities;
• And justifying program continuation and resources.

Learning Outcomes

The term learning outcomes has its origins in outcomes-based education, a model of educational structuring that involves clear and explicit identification, statement and assessment of student learning and outcomes-based systems organize curriculum and activities around detailed student outcome statements (Adam, 2004).

While evidence of learning can be measured both directly and indirectly most direct evidence of student learning focuses on learning outcomes (Suskie, 2009). Outcomes describe what the student actually achieves, as opposed to what the institution intends to teach (Allan, 1996). Typically summative, or measured at the end of program, student learning outcomes (SLOs) are defined as the knowledge, skills, attitudes and habits that students have and take with them after completion of the program or course. While early assessment of learning outcomes is most beneficial to current students, assessment of student learning outcomes at the end of the program is formative and should be used to make changes affecting subsequent students (Suskie, 2009).

In an effort to fill a void in the formal development of learning outcomes and assessment processes that specifically measure learning in co-curricular programs, leadership professionals at Portland State University used a case-study format to share a place-based framework for designing and assessing co-curricular student learning outcomes. The study provides a cyclical
model that depicts the iterative nature of the assessment process and provides six steps to allow for ongoing reflection and improvement. Furthermore, the study shows a holistic approach to learning outcomes framework that allows departments to create outcomes that are based on research and relevant to their institutional context. After an extensive literature review and application to my intended purpose, it is logical to apply the methods of Spalding, Williams, and Wise with regards to this creative component.

**Chapter Summary**

Beginning with a presentation of literature on backwards design, followed by a highlight of works pertaining to rural leadership, and finally, a review of literature on design and assessment of learning outcomes, this comprehensive literature review serves as the foundational knowledge used to build this creative component upon. The backwards design theme will carry through this work as a guiding principle for both the case study and the related professional development opportunity.
Chapter 3

Organization of Creative Component

For the purposes of creating opportunities for rural, agriculturally guided students, and in fulfillment of the Master of Science in Agricultural Education degree through Iowa State University, I, McKenzie Nygren, have developed this original creative component. As a sponsor of the co-curricular Agricultural Ambassadors leadership program at NEO A&M College, I have continuously sought out opportunities where Ambassadors can apply and develop their own leadership skills while also aiming to grow and strengthen the program. Research has shown that involvement in agricultural leadership programs and exposure to civic leaders correlates with an individual’s motivation and ability to serve their community. I have focused my efforts towards the development of student learning outcomes and related measurements.

Careful thought and consideration was given to the creation of this project; it is my hope that it serves as a testament to my development as an educator and also as a reference for other individuals seeking strategic development within co-curricular programming. The initial introduction provides the context and situation, and is followed by a literature review supporting the project’s purpose and framework used to achieve the set objectives. A place-based, holistic case study is provided to illustrate the process of designing and assessing learning outcomes within a specific co-curricular program at NEO A&M College. It is followed by a presentation created for use in a professional development setting and an accompanying facilitator’s guide. A compilation of references and a personal reflection of the creative component process concludes this work.
Chapter 4

Agriculture Ambassadors at Northeastern Oklahoma A&M College: A Case Study

The following is the case study that was developed to address objectives one and two of this creative component. It will be used as a model when other club sponsors use the facilitator’s guide to develop student learning outcomes and assessments for their club.

Background

The Agriculture Ambassador program was created at NEO with the mission of promoting awareness of the institution's academic and extracurricular activities within agriculture while advocating for the greater agriculture industry through leadership activities. NEO’s mission statement reads, “Northeastern Oklahoma Agricultural and Mechanical College is dedicated to providing opportunities that promote excellence in learning, service and leadership in a global society.” Furthermore, NEO’s vision statement reads, “NEO seeks to become a national leader in rural, residential community college education by developing nationally competitive programs in academics, intercollegiate athletics, co-curricular activities, student development and campus facilities.” This organizational context provides the support necessary to further develop and improve co-curricular learning within NEO Agriculture.

Like many programs within the department, the Agriculture Ambassador program is funded partially through student organization funds and the NEO Development Foundation. Organizationally, the program reports to the Vice President for Enrollment and Student Affairs. This placement within the institution allows natural partnerships to form among similarly guided and organized co-curricular programs and participating students. NEO serves students from 52 Oklahoma counties, 32 states and territories, and 16 countries. Because of the diversity of NEO’s
student body, similar diversity is represented among co-curricular agriculture programs providing an unmatched learning environment for students poised to become leaders. Many ambassadors serve in other leadership capacities such as Student Body Government, honor society officers, resident assistants, and various student advisory boards.

The Agriculture Ambassadors are led by two co-sponsors who also serve as full-time faculty within the Department. Students who are selected as Ambassadors play a vital role in the success and impact of their leadership team. Each spring, a new group of ambassadors are selected as the outgoing Ambassadors near completion of their two-year degree. Because of the rotating nature of participants, it is imperative that frequent assessments are completed and used to make immediate improvements.

Although the ambassadors wear a plethora of hats throughout their stint as a departmental leader, the current program centers on several core activities as depicted in Figure 2.

<table>
<thead>
<tr>
<th>Agriculture Ambassador Core Activity</th>
<th>Description of Activity</th>
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</table>
| Community Service Program           | Students volunteer frequently within the community. Organizations include:  
- Ronald McDonald House of Four States  
- Miami Public School District Teachers Toolbox  
- Regional Chamber of Commerce  
- Arts and Humanities Council |
| Leadership Lunches                  | Students meet monthly to engage in conversation with local leaders. Topics include:  
- Policy and legislation  
- Leadership development  
- Animal Rights and Welfare  
- Generational challenges |
| Ambassador Representative           | Students prepare promotional and educational material to present at local, state, and national recruiting events including:  
- 6-8 High School FFA visits in the 4-state area per year  
- Joplin FFA Ag Expo |
This case study focuses primarily on the design and assessment of learning outcomes within the Agriculture Ambassador program core activities as outlined in Figure 1. In combination, these individual learning activities offer ambassadors opportunities to work alone (volunteer), as an equal voice (leadership lunch participant), and as a member of a team (representative). While not entirely intentional, the activities presented to ambassadors encourages the development of additional learning communities within the overarching Agriculture Ambassador program. For example, students are presented with opportunities to work with community organizations, network with distinguished leaders, and travel to state and local industry events – each of these instances represent ideal environments where students can, and have, landed internship and jobs, joined community-based initiatives, and made life-long friendships. It is this self-directed movement and growth within the program that an assessment plan aims to measure.

**Creating Student Learning Outcomes for the NEO Agriculture Ambassador Program**

Although NEO has been at work to develop a sound and comprehensive general education assessment plan, there has been little focus on the learning outcomes or core competencies for co-curricular clubs and teams. Still yet, the experiences of current sponsors and the reported outcomes (informal) of current and past ambassadors provides an inventory of outcomes to be measured and ideal starting point for outcome development. In addition, the
program co-sponsor participated in NEO’s institution-wide initiative around assessment. This included participation in the Assessment Academy hosted by The Higher Learning Commission in Chicago, Illinois, participation in institutional professional development workshops, and overall, an inside look at the goals and components of assessment. Although the context within the previously described experiences varies somewhat from that of the Ambassador program, there is undeniable value in the exposure to assessment related language and processes; specifically, the carry-over of knowledge and an appreciation of the assessment process.

While exploring and designing institutional general education learning outcomes and reviewing literature in the area of student learning outcomes generation and assessment, the co-sponsor identified several key processes that can support the development and design of learning outcomes within co-curricular programs. The following guidelines, as adopted from Heather Williams, Dilafruz R. Williams and Vicki L. Wise in their work, *Designing and Assessing Learning Outcomes: A Framework for Co-Curricular Sustainability Programs*, have been applied herein to determine learning outcomes in a rural, co-curricular agriculture program. First the guideline will be presented and then a description of how that guideline was applied for the Agriculture Ambassador program is explained.

1. **Use the design process to uncover the unknown.** Designing and implementing learning outcomes can be daunting; however, there is much to gain from the process. By utilizing the perspectives and input of campus faculty/staff, students in the program, students outside the program, and other albeit, distant individuals, sponsors can learn about their program from the outside-in.
Application of Guideline 1. The Agriculture Ambassador co-sponsor held “campus-conversations” during the design process to uncover information preceding her role as sponsor. Included in the campus conversations were academic and student affairs officers, as well as support staff and departmental faculty. Informal conversations were scheduled with current and past ambassadors as well as vested community leaders – this dialogue was helpful in determining the history and direction of the program as well as expectations for the development of students in the program.

2. Establish a working group. A supportive team is essential to the success of the assessment process. This team may include other program sponsors from within the department, faculty partners well versed in general assessment, institutional staff who are skilled in curriculum design, or possibly community and industry leaders who employ program participants.

Application of Guideline 2. Collaboration and buy-in throughout an assessment cycle has been deemed critical within the aforementioned literature. There is no shortage of teamwork among the greater NEO community and a group to assist the ambassador sponsors with their goals was naturally formed. Each chosen for their specific skill-sets, the following individuals were invited to join the Co-Curricular Agriculture Assessment (CCAA) team: Vice President for Student Affairs and Enrollment; Amy Ishmael; Assistant Vice-President of Academic Affairs, Dustin Grover; Academic Advisor and Career Specialist, Ryan Orcutt; Agriculture Instructor and club sponsor, Alisen Anderson; Equine Judging and Equestrian Coach, Amanda Jones; Miami Convention and
Visitors Bureau Director, Amanda Davis; and local Farm Bureau agent, Stacey Satterwhite.

3. **Clarify program purpose.** In some instances, the purpose of a co-curricular program may be obvious. However, in other cases it may not be as easily identified. In order to strengthen and improve the efficacy of programs, the depth of experience that is offered to students must be reviewed.

**Application of Guideline 3.** Since its inception nearly a decade ago, the NEO Agriculture Ambassadors have rose to a highly-respected position on campus and in the community. The group’s purpose as a beacon of leadership and service was clearly evident to and supported by the CCAA team during the initial meeting. Ambassador sponsors discussed the desire to develop more specific and measurable outcomes for the program, but specifically the participants. The CCAA team was challenged to think beyond the immediacy of students’ NEO experience and work towards the development of transferable and life-long leadership skills.

4. **Build on existing knowledge.** With the working group previously discussed, engage in discussion focused on what is assumed and perceived about the program at hand. Be open to ideas that complement, connect or even appear to contradict each other. Be realistic about the human and financial resources available to the program.

**Application of Guideline 4.** In an effort to gain valuable insight from the community and industry leaders on the CCAA team, ambassador sponsors posed the following
specific questions related to the qualities and skills sought by leadership teams and employers when considering a team-member or employee:

1. From your perspective, what is the purpose of the Agriculture Ambassador program?

2. What skills/qualities/behaviors do Ambassadors exhibit? What skills/qualities/behaviors do you expect Ambassadors to exhibit?

3. In what specific instances have you seen the aforementioned skills/qualities/behaviors being carried out or applied?

4. List any other thoughts you may have related to what Ambassadors should know/be able to do at the conclusion of their Ambassador experience.

Three CCAA team members have first-hand experience with former NEO Agriculture Ambassadors in a professional setting (workplace) and their insight drove the development of specific student learning outcomes. NEO administrators likely brought the most historical value to the working group. Changes in institutional funding and human capital availability within the NEO Agriculture Department were discussed at length. Sponsors used this dialogue as an opportunity to absorb outside assumptions and perceptions that would play a vital role in the assessment planning process.

5. **Mirror institutional goals and vision.** Fluidity and coordination should exist among co-curricular program goals and those of the greater Department or institution. Solicit the guidance of individuals responsible for designing and assessing campus learning outcomes to ensure that specific program goals tie to general learning outcomes. Program participants will benefit from this marriage.
Application of Guideline 5. Building on the experience of the ambassador co-sponsor with institutional assessment planning and implementation, and coupled with the institutions newly revamped assessment plan, the CCAA used a Venn diagram type activity to link ambassador (student) learning outcomes to program, departmental, and institutional goals and overall mission. This activity resulted in a greater understanding of the Agriculture Ambassador Programs purpose and intended outcomes.

6. Seek contextual commonalities. It is not necessary to reinvent the wheel. A review of the literature in a specific program area or simply a compilation of similarly structured programs will catapult the design process. Keep in mind that learning outcomes should be tailored to fit the program at hand.

Application of Guideline 6.

As previously noted, the extent of literature regarding rural leadership development program is limited. A brief literature review of co-curricular assessment was provided to the CCAA team. Student learning outcomes for several co-curricular programs at NEO have been successfully developed and were presented to the CCAA team for review and for use as a template for ambassador learning outcomes. These examples were especially helpful in terms of linkage to institutional goals and vision.

7. Combine institutional and contextual findings. Using the contextual findings from step six, begin to supplement the original brainstorm list of competencies identified in steps four and five. The use of a Venn diagram or other comparison tool may be helpful in analyzing potential learning outcomes.
Application of Guideline 7.

Using word cloud generating software, the responses from the CCAA guiding questions were combined to provide a visual representation of common words (see Figure 3.) used by CCAA team members to describe the purpose of the ambassador program as well as key skills and habits expected of participants during and after their experience. The largest words indicate their frequency among responses and represent the contextual findings needed to analyze student learning outcomes.

Figure 3. A visual representation of common descriptors of NEO Agriculture Ambassadors as described by the CCAA.

8. **Refine until learning outcomes result.** Engage in pointed conversation with the working group to arrive at three or four student learning outcomes.

Application of Guideline 8.
Based on the provided responses to the guiding questions presented to the CCAA, clarification was needed to outline the desired student learning outcomes of program participants. Based on the frequently used descriptors as illustrated in Figure 2. and continued conversations with the CCAA working group, the following overarching outcome areas resulted: campus and community engagement, servant leadership, and leadership development and growth. These three ideas were further developed by the sponsor resulting in the specific student learning outcomes presented in Figure 3.

<table>
<thead>
<tr>
<th>Overarching Theme identified by CCAA</th>
<th>Student Learning Outcomes</th>
</tr>
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<tbody>
<tr>
<td>Campus and Community Engagement</td>
<td>- Develop a more vibrant network and community</td>
</tr>
<tr>
<td></td>
<td>- Connect to the local agriculture industry</td>
</tr>
<tr>
<td></td>
<td>- Assert confidence as a leader on campus and in the community and industry</td>
</tr>
<tr>
<td>Servant Leadership</td>
<td>- Explore successful practices of servant leaders</td>
</tr>
<tr>
<td></td>
<td>- Identify ways to incorporate servant leadership into their daily lives</td>
</tr>
<tr>
<td></td>
<td>- To reflect and share individual understandings of how to implement servant leadership</td>
</tr>
<tr>
<td>Leadership Development and Growth</td>
<td>- Demonstrate knowledge of personal beliefs and values</td>
</tr>
<tr>
<td></td>
<td>- Demonstrate commitment to continuing personal reflection and reassessment</td>
</tr>
<tr>
<td></td>
<td>- Show a record of leadership experiences in preparation for future leadership opportunities</td>
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</tbody>
</table>

Figure 3. Student Learning Outcomes for Agriculture Ambassadors

Summary

The creation of student learning outcomes for the Agriculture Ambassador program as described above aligns closely with the backwards design model and will serve as a building block for the following assessment development. Valuable input from the CCAA combined with contextual knowledge yielded from previous ambassador groups, presented a holistic vision of
the qualities and skills desired by young, rural leaders. From this point, step two in the backwards design model, evidence of learning, will be emphasized.

Assessing Learning Outcomes

Selection and implementation of assessment measures should be carefully approached as learning outcomes may require differing methods of assessment. It is also important to keep in the mind the cyclical nature of assessment and also the sequential outline of the backwards design method. In application, the assessment of learning outcomes will repeat as each new class of Agriculture Ambassadors is selected and findings will be used to improve and further develop the program. Included are descriptions of various assessment methods intended for use in assessing the identified student learning outcomes that resulted from the work of the CCAA group and program sponsor. The corresponding student learning outcomes are also include to support the selection and purpose of each assessment tool or method.

Journaling. Ambassadors will be prompted to maintain a personal journal of reflections and leadership experiences. They will be given time at the completion of each monthly Leadership Lunch, and at other times as applicable, to journal and discuss reflections with their fellow Ambassadors, sponsors and community leaders. This method of assessment will provide qualitative data that is used to track portions of the following themes prioritized by the sponsor and CCAA: campus and community engagement, servant leadership, and leadership development and growth. Journals will be collected at the close of each semester and reviewed by the sponsor. Each student’s specific response will be reviewed and entered into a spreadsheet using a “met” or “not met” indicator of the intended student learning outcome. Over the course of one year, the sponsor will have a summative assessment of students learning including a mid-
year (fall) and end-of-year (spring) journal review. Below are examples of the intended student learning outcomes and correlating journal prompts:

**SLO: Connect to the local agriculture industry.**
**Prompt:** The speaker at today’s Leadership Lunch represents one of many agribusinesses in our region. In what ways does this company engage in agriculture? In what ways does this company support the local community?

**SLO: Explore successful practices of servant leaders.**
**Prompt:** The speaker at today’s Leadership Lunch is an example of a servant leader. What types of things does this person do that makes him/her a successful leader?

**SLO: Show a record of leadership experiences in preparation for future leadership opportunities.**
**Prompt:** The close of this month (October) marks the end of a jam-packed month of Ambassador activities. Reflect on the month’s activities by listing your participation and discussing how each activity might help you in a future leadership role.

**Surveys.** Surveys will be used to collect quantitative and qualitative data about students’ experiences and their changes in perspective. A pre-program survey and post-program survey will be given to Ambassadors. The pre-program survey will serve as a baseline to determine if students have acquired specific skills and knowledge as a result of participation in the program. Quantitative questions (based on a 1-5 scale where 1=not at all; 5=very much) could read as follows:

- As a result of your experience, are you more confident as a leader on campus? How confident are you as a leader in the community?
- Do you believe you are more connected to NEO and the surround community?
- Can you identify common practices of servant leadership?
- Did you have the opportunity to practice servant leadership?
- Would you consider yourself dedicated to continuous growth as leader?
As mentioned above, the pre-program survey and post-program survey will collect qualitative data in addition to quantitative information. To achieve the desired qualitative data, students will be asked to explain their Likert score. For example, after noting their score on the Likert Scale, students will be asked to provide detailed explanations of the acquisition of their personal knowledge or skills. They also may be prompted to quantify or list specific experiences or events where personal growth emerged.

Surveys also offer an opportunity for Ambassadors to provide feedback on the program itself and/or provide general reflections. These thoughts will be used for improvement of the program by sponsors. Furthermore, sponsors will utilize the data to prioritize activities indicated by students as impactful or relevant, create new learning opportunities in low-scoring areas, and possibly restructure program design. In addition, survey responses can be used as testimonials for use in program brochures, websites, and when justifying program continuation and funding.

**Interviews.** As is the case with many agricultural leadership development programs, the NEO Agriculture Ambassador Program has a solid base of support institutionally and within the community. As participants prepare for transition to a 4-year University or enter the workforce, they will be asked to complete an exit-style interview with campus leaders and members of the local agriculture industry. The interview is designed to evaluate the acquisition of knowledge and skills as a result of participation in the Ambassador program. It also serves as a vehicle to further develop relationships between program sponsors and individuals who have witnessed the Ambassadors growth and progress. General findings resulting from the interviews will be reported to program sponsors for use in updating student learning outcomes and the general assessment of program efficacy.
Chapter Summary

Completion of steps one and two of the assessment cycle allowed the program sponsor to identify learning goals consistent with the values and mission of the program and the institution. The process prompted a deeper investigation into the purpose and importance of the NEO Agriculture Ambassador program and the activities therein. Opportunities were presented in the process that will be beneficial to the greater Agriculture Department in the development and assessments of learning goals in other co-curricular programs. This case study is evidence of the completion of the first two objectives of this creative component:

1. Demonstrate the process of developing student learning outcomes using the Ag Ambassadors as an example;

2. Model the student learning assessment process and plan using the Ag Ambassadors club.

The following chapter is intended to serve as a guide for fellow club sponsors and coaches on their quest to design learning outcomes and appropriate assessments strategies. Tools for successful completion of a learning session are included. This final chapter pools information from the previous chapters and satisfies the final objective of this creative component:

3. Develop a facilitator’s guide for NEO club leaders to use in establishing and assessing student learning outcomes.
Chapter 5

Learning Today, Leading Tomorrow –
An Assessment Planning Guide for Co-Curricular Agriculture Programs

Based on the successful development of learning outcomes and related assessment methods for the Agriculture Ambassador program, a professional development opportunity arose. The intent of the following planning guide is to support other co-curricular educators in their assessment journey and illustrate manageable steps associated with the assessment cycle. To enhance ease of use by others, a facilitator guide has been created and included herein. The previously presented case study will accompany this guide when presented as an illustrative reference.
Learning Today, Leading Tomorrow

A professional development opportunity in the area of co-curricular assessment

Facilitator Guide

Note: This document is intended for use by co-curricular educators when delivering the Learning Today, Leading Tomorrow professional development session. It is not to be distributed to participants. Hand-outs are included and will be provided.
SECTION I: FACILITATOR NOTES

A. Overarching Goal

This session is designed to provide participants with a focused professional development opportunity on assessment planning within co-curricular agriculture programs. Participants will develop a personalized assessment plan for their program.

B. Key Understandings

Participants will develop a working understanding of how to design and assess student learning outcomes based on best practices of other institutions and the presented case study. This guide is designed to provide support to facilitators of this session.

C. Session Objectives

- Identify opportunities within co-curricular Agriculture programs to improve student learning.
- Understand benefits of designing student learning outcomes and determining effective assessment measures.
- Understand cyclical nature of assessment.

D. Evidence of Learning

- Participants will be able to identify benefits of assessment in their program.
- Participants will demonstrate knowledge of assessment cycle and timeline.
- Participants will prepare a personalized assessment plan for their program.

E. Timing: 2 hours

F. Suggested Participants: coaches of co-curricular competitive teams and sponsors of NEO Agriculture clubs, institutional academic officers, and institutional assessment committee chair. Limit: 10

G. Pre-requisite knowledge and materials:

- Team or club vision, mission, constitution, bylaws, etc.
- Existing working group roster (if applicable)
# SECTION II: SESSION AT A GLANCE

<table>
<thead>
<tr>
<th>TIMING</th>
<th>ACTIVITY</th>
<th>MATERIALS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 minutes</td>
<td>Introduction and Overview</td>
<td>PPT Handout</td>
<td>• Introductions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Review of session purpose and objectives</td>
</tr>
<tr>
<td>10 minutes</td>
<td>Aggie Tradition and co-curricular environment</td>
<td>PPT Handout</td>
<td>• “Bridge the gap” between classroom learning and co-curricular learning</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Establish need for effective teams and clubs</td>
</tr>
<tr>
<td>20 minutes</td>
<td>State of co-curricular assessment at NEO</td>
<td>NEO Academic Assessment Update (2017)</td>
<td>• Reveal lack of concrete assessment evidence</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Project assessment activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Present assessment as a tool for improvement</td>
</tr>
<tr>
<td>20 minutes</td>
<td>Assessment Cycle and Timeline</td>
<td>PPT Handout</td>
<td>• Place emphasis on Stages 1 and 2 – subsequent stages address in future sessions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Ease participants into assessment process by navigating tasks sequentially</td>
</tr>
<tr>
<td>20 minutes</td>
<td>Create Measurable Student Learning Outcomes</td>
<td>PPT Handout Case Study</td>
<td>• Encourage critical thinking and application of guidelines presented in case study to individual programs</td>
</tr>
<tr>
<td>20 minutes</td>
<td>Determine Measures of Assessment</td>
<td>PPT Handout Case Study</td>
<td>• Differentiate direct and indirect assessment</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Present proven methods of assessment (best practices)</td>
</tr>
<tr>
<td>20 minutes</td>
<td>What’s Next?</td>
<td></td>
<td>• Facilitate discussion/questions</td>
</tr>
</tbody>
</table>
Learning Today, Leading Tomorrow

AN ASSESSMENT PLANNING GUIDE FOR CO-CURRICULAR AGRICULTURE PROGRAMS

OVERVIEW

• Summary and importance of co-curricular environment within NEO Agriculture
• Benefits of designing learning outcomes and assessing co-curricular programs
• Assessment cycle and explanation of Stages 1 and 2
NEO Agriculture – Outside the Classroom

• The following programs exist to complement classroom learning:
  • Horse and Livestock Judging
  • Equestrian
  • Rodeo
  • Aggie Society
  • Agriculture Ambassadors
  • Agricultural Education Club and Equine Club
  • Fire Dawgs (Wildland Firefighting)

NEO Aggie Tradition

• Longstanding leader in rural agricultural education
• Nationally recognized co-curricular programs
• Aggie participation in campus-wide leadership
• Extensive and on-going community involvement
Assessment – Current

• To date, no formal learning assessments are in place for co-curricular learning
• Internal assessment by program sponsors varies in depth and approach
• Co-curricular programs are deemed central to institutional mission and vision

Assessment – Future

• Reduction of state appropriations and reorganization of academic programs threatens continuation of co-curricular offerings

• Need for concrete evidence of efficacy and impact within existing programs
Assessment - Benefits

• Refine programs
• Record impact within the campus and community
• Identify relationship between program initiatives and institutional mission
• Gain student perspective to ensure relevance to student population

Assessment - Benefits continued

• Collect student success to share and advertise participant experiences
• Clarify departmental goals and priorities
• Justify program continuation and resources
Assessment Cycle

• Cyclical in nature
• Emphasizes fluidity among components
• Requires continuous transparency among working group (students, faculty, program sponsors, administration, accreditation body)
• Cycle will mimic institutional assessment practices
### Assessment Timeline

<table>
<thead>
<tr>
<th>Activity</th>
<th>Timeline</th>
<th>Responsible Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meet with co-curricular program sponsors to introduce assessment plan</td>
<td>January 2019</td>
<td>VPAA/Department Chair</td>
</tr>
<tr>
<td>- small group lecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- provide case study/example</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meet with sponsors by program</td>
<td>March 2019</td>
<td>Department Chair</td>
</tr>
<tr>
<td>- review/revise existing learning outcomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- determine measures of assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentation of assessment plan to working group (Steps 1 and 2)</td>
<td>April 2019</td>
<td>Program Sponsors</td>
</tr>
</tbody>
</table>

### Step 1: Create Measurable Learning Outcomes

- Learn from the process
- Establish a working group
- Clarify program purpose
- Build on existing knowledge

*Refer to pages 15-22 of Case Study*
Step 1: Create Measurable Learning Outcomes

• Mirror institutional goals and vision
• Seek contextual commonalities
• Combine institutional and contextual findings
• Refine until concise learning outcomes result

• Refer to pages 15-22 of Case Study

Step 2: Determine Measures of Assessment

• Direct assessment
  • What do participants know?
  • What can participants do?

• Indirect assessment
  • How have participants’ attitudes changed?
  • How have participants’ knowledge and skills changed?
Step 2: Determine Measures of Assessment

• Applicable Examples
  • Surveys
  • Reflections
  • Journaling
  • Photos

• Refer to pages 22-24 of Case Study

What’s next?

• Draft assessment plan for Stage 1 and Stage 2
• Attend follow-up session

• Upon completion of Stages 1 and 2:
  • Attend professional development opportunity focused on Stages 3-6

• LEARN TODAY, LEAD TOMORROW!
References


Greenleaf, Robert K., *The Servant as Leader*. Retrieved from


Reflection

June 2014 marked the beginning of my Master’s degree in Agricultural Education. At the time, I was in my second year as an agriculture instructor at NEO A&M College. I was teaching a variety of classes including: Introduction to Agricultural Economics, Microcomputer Techniques in Agriculture, Equine and Livestock Business Management, Equine and Livestock Sales, and Agriculture Capstone. In addition to my course load, I sponsored the NEO Agriculture Ambassadors and Aggie Society, served on two institutional committees, and oversaw NEO’s one-hundred stall equine facility.

Prior to beginning my career in education at NEO, I worked as an inside sales coordinator for Bestway Concrete and Aggregate, a concrete and aggregate company in Northern Colorado. I had moved from Oklahoma to Colorado (where I was raised) after the loss of my fiancé in 2012. We had a young son; and I sought the comfort and guidance of my family in that time of grief. Soon after I started at the concrete company, I knew that I would not be satisfied working in an industry aside from agriculture; that was what I knew and loved. I took a leap of faith and applied for the open faculty position at NEO, my alma mater.

I embarked on my teaching career with little preparation in the areas of curriculum development, teaching and learning strategies, assessment, educational research, etc. Luckily, I was surrounded by a supportive and motivating cohort of faculty and administrators who guided my search for an online Master’s program. Each semester, I tacked on at least six hours of graduate credit to my workload as an instructor and a mother – a task that challenged me to say the least. Still yet, with each course completed, I felt as if I was truly pursuing a worthwhile effort that yielded results, both personally and for my students. I completed necessary
coursework for my degree in May of 2016. Soon thereafter, I accepted the Department Chair of Agriculture position at NEO.

Much like my faculty role, I entered the supervisory and management role of Department Chair with little applicable experience. My time over the last four semesters has been spent navigating budgetary issues attributed to dramatically reduced state appropriations for higher education in Oklahoma; preparing for an accreditation site-visit by The Higher Learning Commission; managing three separate phases of a $1 million renovation to our campus farm and facilities; and somewhere in the midst of all that, the completion of this creative component. Through my institutional work on strategic planning, curriculum and articulation, assessment, and program review committees I gained invaluable knowledge focused on the mission and vision of NEO. It was evident that many of these areas could merge beautifully with my overdue creative component.

While my timeline for completion has fallen victim to the aforementioned circumstances, I have confidence that through my juggling-act, clarity has emerged. I have seen improvement in students’ learning experiences as a result of my studies in curriculum development and instructional strategy. For example, I have used the backwards design model to “rethink” student learning outcomes in my Introduction to Agricultural Economics class. After studying the process and benefits of such, I realized my approach to this course was all wrong. I had fallen victim to the common “teach for the test” philosophy. Currently I am in the process of establishing new student learning outcomes and building learning opportunities from there. This process is simultaneous with the conversion of the course to a hybrid (50% face-to-face, 50% online) delivery method.
I have easily applied concepts of program planning and evaluation and general higher education in efforts to develop and maximize impact of rural agricultural education. Possibly the greatest feat, is my own personal development as an educator and change-agent. The absence of this opportunity to grow and learn would have been detrimental to my career and happiness.

The process of obtaining my Master’s degree has undoubtedly presented challenges – none of which were unsurpassable with time. It is my hope that this work can be used for years to come as a reference and guide for individuals equally unprepared and tasked with sustaining effective co-curricular programs. I remain committed to educating the next generation of rural leaders and agriculturalists, and am grateful for the opportunity to learn and grow with the people of Iowa State University.
NEO Agriculture Ambassador Application

Please submit the following documents to the NEO Agriculture office for committee consideration:

- Application
- Resume
- Copy of Schedule (Fall 20 _) including class and work if you’ve enrolled

Minimum Requirements of being an Agriculture Ambassador:

- Minimum GPA requirement of a 3.0
  - Will take midterm grades into consideration
- Agriculture or Natural Resource Major
- Commitment to participating in agriculture department events and agriculture ambassador activities.
- Able to attend NEO Ambassador Retreat

Applicants will be notified by letter of acceptance or rejection.

Name: __________________________
Major: __________________________
Hours completed: __________
GPA: __________
Home address___________________________________________________
Phone number___________________________
Email___________________________________

In your own words, define an Ambassador and list the qualities they should possess.
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

______________________________________________________________________________
How have your past leadership activities prepared you to be an Agriculture Ambassador at NEO?

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______________________________________________________________________________

How have your awards/honors/recognition prepared you to be an Agriculture Ambassador at NEO?

______________________________________________________________________________
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Being an Agriculture Ambassador is an enormous time commitment. Not only will you be asked to attend high school visits, recruitment events, conventions, but you will also you will be required to fulfill many other duties as an Agriculture Ambassador. How do you plan to manage your academic and extra-curricular activities in addition to your duties as an Agriculture Ambassador?

______________________________________________________________________________
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☐ If selected, I am agreeing to commit the necessary and required time to be an Agriculture Ambassador. I also understand that if I miss two or more requirements I will forfeit my position of Agriculture Ambassador.

Applicant Signature: ______________________________