IOWA STATE UNIVERSITY
Digital Repository

Iowa State University Capstones, Theses and Dissertations

Spring 2019

Program evaluation for agriculture education at Exira-Elk Horn-Kimballton Community School District

Kristen Rutherford

Follow this and additional works at: https://lib.dr.iastate.edu/creativecomponents

Part of the Other Education Commons

Program Evaluation for Agriculture Education at Exira-Elk Horn-Kimballton Community
School District

Kristen Rutherford
Iowa State University
College of Agriculture and Life Sciences
Ames, IA
Fall 2018

A creative component submitted to the graduate faculty in partial fulfillment of the
requirements for the degree of:

MASTER OF SCIENCE
Major: Agricultural Education

Program of Study Committee:
Dr. Scott Smalley, Major Professor
Dr. Michael Retallick, Committee Member
Dr. Robert Martin, Committee Member

Table of Contents

Chapter 1 - Introduction

Introduction

I started my career in Agriculture Education as a Program Coordinator for Iowa State University Extension and Outreach in Shelby County for one year. It became evident very quickly to me Extension work wasn't my cup of tea, but while employed there I was tasked with doing a county wide needs assessment for programing. Although the needs assessment wasn't near as fun as working with the youth though the 4-H program, looking back it taught me the importance of catering to the needs of my audience and that lesson has continued to resonate with me since then.

Background and Setting

Fast forward a few years and I have now been teaching high school agriculture education at Exira-Elk Horn-Kimballton Community School District for nearly 7 and a half years. When I first walked into the District, books were as old as me, the program was predominantly males and everyone seemed to be stuck in a rut. I was greeted by two groups of students: the ones that loved the old teacher and hoped I changed nothing and the others that had a strong desire for something more and a willingness to jump on any bandwagon that I asked of them. The two groups of students, a classroom and agriculture program that was all mine and the support of my administration overwhelmed me.

Needless to say, I was so overwhelmed. I was hired three short days (weekend included) before I had to report to my first day of new teacher classes at my first

teaching job. Luckily, I was greeted at the door by one of the nicest Family and Consumer Sciences teachers and I learned quickly she would be my go-to person at the school and she also served as my mentor. Some of the best advice I received from Nancy Watson, my mentor, and other fellow ag teachers was to take a step back and soak everything in the first year. I decided that was the only option I had without burning myself out and re-creating everything. The first year my focus was on learning the ins and outs of the district and getting to know my students. I taught using the old texts as a resource, used what I developed while student teaching and things that were shared with me from other ag teachers.

My second year was more challenging as both of the other career and technical education teachers had left the district and I was told that I would be in charge of helping to manage the Perkins binder. The Perkins binder was originally designed as the proof that programs were compliant with outlines set forth by the state. To my understanding, our school's plan was to update the binder yearly so when we had a site visit, everything for all the CTE programs was in one place and in order. Included in the binder were Program of Study documents such as advisory council minutes, technical skills assessments, core competencies and plans to share our program with stakeholders. I honestly had no idea what that meant, in fact I didn't even understand what Perkins was. In our Perkins consortium, we all share an advisory council and I had attended our two meetings the year prior, but again didn't really understand what was going on. I felt like it was my only choice, so I agreed to help with the binder.

Once I taught a few years, our consortium group began talking about House file 2392, also known as the CTE redesign, which was signed into Iowa legislation in 2016. The purpose of this law was to improve secondary career and technical education to ensure that students were college and career ready by the time they graduated from high school. Major focuses of the file include creating a regional planning partnership to help assist districts in providing quality CTE programs, encourage alignment of secondary CTE programs to occupations and to reform career and academic planning to ensure students have opportunities to adequately explore and research careers and participate in work-based learning.

In order to achieve the goals set forth in the CTE redesign legislation, three sub-focus areas were outlined. These areas included Regional Planning partnerships, Career Academy Components and Program Approval Requirements. The Regional Planning Partnership is composed of many individuals which represent secondary schools, community colleges, careers in the area of interest and other stakeholders. The main goal was to create a yearly plan which included reviewing CTE programs and allocating funds with the main goal of ensuring all students have access to high quality CTE programs. Career academies are the second sub-focus area which includes providing high school students with skills and specific employment skills. Last is the program approval process. This process is a way for the Regional Planning Partnership (RPP) to ensure effort is being made by the district to provide high quality CTE programs. The program approval process is an elaborate self-study which requires numerous documents of support that gets completed once every five years. Part of the self-study

is an action plan to improve upon things that are ranked below satisfactory. Each year a different CTE program within a school is asked to complete the program approval process. Once completed, a member from the RPP reviews the documents and a teacher has five years to make improvements before completing the process again.

Chapter 2 – Literature Review

According to the May 2018 issue of The Condition of Career and Technical Education that is published by the Iowa Department of Education the number of CTE programs in Iowa showed and "an increase over the five year period: Agriculture, Food and Natural Resources; Architecture and Construction' Health Services; Hospitality and Tourism; and Manufacturing" (Wise, 2018). Despite the increase in the number of five of the sixteen programs, "the total number of CTE courses and programs offered and taught was generally steady" in the past five years (Wise, 2018). The report also showed "overall enrollment in secondary CTE and secondary CTE participation rates remained steady, there was significant growth in student participation in college-credit contracted CTE courses" but showed in smaller districts, like Exira-Elk Horn-Kimballton, had high CTE enrollments (Wise, 2018).

When looking solely at the Wise publication in terms of Agriculture a bit of a different story is told. In the past five years, there have only been an additional seven agriculture programs added in Iowa making the total 261 programs for 2017 (Wise, 2018). Enrollment in Agriculture courses has increased 12.7% in the past five years now making it 16,735 (Wise, 2018). Iowa FFA membership has also grown to 14,754. These numbers show students are re-discovering the importance of being involved in agriculture classes to explore future occupations. The Exira-Elk Horn-Kimballton Community School District is close to Iowa Western Community College (IWCC). The counties surrounding the school district and IWCC has had an agriculture employment outlook rating range from four to a six meaning growth is about average (Iowa Western

Community College Program Career Outlook, 2018). Students seems to be understanding the importance of taking agriculture courses in high school. It is important for districts to also understand their importance and to continue to provide them with funding and support.

Based on the numbers, having students more prepared for jobs and careers in high school will be very beneficial to them as long as they are obtaining a high quality CTE Education. The self-study focuses on seven sections of indicators: program overview, effective teaching and learning, student assessment, advisory council, partnerships and stakeholder engagement, access and equity, and facilities, equipment, operational and related program functions (Secondary Career and Technical Education Program Self-Study Template, (2018). Under each of the seven sections, there are numerous indicators of the tenets for each section that allow a chance for the teacher to rate their evidence as yes, yes, but needs improvement and no. As you read through the indicators it becomes evident that a lot of them to instruction of problem-based, project-based and work-based learning.

Problem-based learning is a student-centered type of learning in which students learn standards by solving open-ended problems. Teaching in this fashion is a huge change for teachers because they have to change the way they "conceive, design, deliver an assess the curriculum" (Wood, 2008). Although it's a new challenge for teachers, those that utilize problem-based learning in their classes see "acquisition of content knowledge and the development of thinking skills and strategies" (Burris & Garton,

2007). In today's workforce "critical thinking, decision making, problem solving, and reasoning" are important skills for employees to possess (Burris & Garton, 2007).

Project-based learning is another form of real-world instruction in which students use what they have learned and apply it by solving a real-world problem over a period of time. Just like problem-based learning, project-based learning encompasses many 21st Century Skills like "responsibility, independence and discipline" (Bell, 2010). One unique characteristic of project-based learning is the ability for learning to be unique to each student's interest and ability level. By using project-based learning students are motivated by learning something they are interested in and do it by using appropriate reading material and technology for them specifically (Bell, 2010).

The third focus of the CTE self-assessment is work based learning. Work based learning is a type of instruction that allows students to utilize their knowledge and skills in a work place environment while gaining employability skills. Beyond gaining a better understanding of how to apply skills learned to a career, students gain skills in "punctuality, communication skills, honesty, teamwork, quality orientation, and customer orientation" (Planning and Developing Work-Based Learning Programs, (n.d.)). Work-based learning programs are also "effective in increasing adult participation in higher education" (Lester & Costley, 2010).

Having a better understanding of problem-based learning, project-based learning, and work-based learning explains why they are large components of the CTE redesign and

self-study tool. Employability skills align directly with the goal or ensuring our students are college and career ready so using these techniques in CTE instruction is one way in which teachers can help their students be successful. Fortunately for agriculture educators there are great curriculums like Curriculum for Agriculture Education or CASE that promote problem and project-based learning. FFA members are also encouraged to take advantage of work-based learning through Supervised Agriculture Experiences.

Chapter 3 - Methods and Procedures

The purpose of this creative component was to obtain documents and rate how to improve the Exira-Elk Horn-Kimballton Community school district's agriculture education program. Information gathered will be used to create an action plan that will focus on enhancing the program.

Objectives

The following objectives were used to guide this project

1. Gather documents needed for the self-study

2. Complete evaluation for the self-study

3. Develop an action plan for the Exira-Elk Horn-Kimballton program

With my experience, I was asked to pilot the new program assessment/needs assessment at the beginning of the 2017 school year. I completed the new Secondary Career and Technical Education program self-study template with a group of other CTE teachers. I was asked to complete the self-assessment and keep notes on things to provide feedback. Once the Iowa Department of Education held a face to face meeting with the individuals to participate in the pilot, edits were made and in my Perkins consortium, agriculture was the first to actually go through the newly created Secondary Career and Technical Education Program Self-Study.

After receiving the changes to the self-study document, our Perkins consortium worked as a large group for two days deciding what documents of support we could use for the

self-study. Some documents like Program of Study paperwork needed to be updated so I also worked with Des Moines Area Community College. Some documents were harder than others to track down and at times it was difficult to find any support documents. Documents were collected and converted into electronic PDF files so they could easily be shared.

Once documents were ready to go, I went through each section of the self-study document and, using the support documents, decided how to appropriately rate the program. I also included any comments necessary to explain my ratings. The self-study then walked us through choosing the top three things we needed to work on in each section, the whole document and then create an action plan or our plan for what we would do better before our next self-study.

Once the documents were completed, they were electronically shared with a representative from our Regional Planning Partnership and they went through the self-study and support documents to provide us feedback.

Chapter 4 - Product

Due to the individualistic nature of my self-study I have decided to not share Exira-Elk

Horn-Kimballton's specific document at this time.

Chapter 5 - Reflection

Looking back, agreeing to help manage the Perkins binder for our school was one of the best things I committed to in my early years as a teacher. I worked extremely hard to understand the ins and outs of our Perkins binder which included the competencies, technical skills assessments, how we were sharing our program and how to have a good program in general. It was critical to understanding the information as I began to look into changing curriculum and making the Exira-Elk Horn-Kimballton Ag Department my own.

After completing the self-study, I believe I have a strong understanding of what I can do differently and were I can focus my efforts for the next five years. The first thing I plan to do is join the safety plan committee. It is my understanding that schools are soon going to be required to create an Emergency Operations Plan. I believe this could tie directly into the facilities, equipment, operational and related program functions. I think keeping my students safe in the lab or shop has to be my number one priority. My second priority relates to offering my students industry certifications and licenses. I am currently collaborating with other agriculture teachers to make sure I am offering these credentials to my students so they are more prepared for their futures.

The next three priorities relate to stakeholder engagement. I believe since starting at Exira-Elk Horn-Kimballton I have tried to share chapter happenings with our stakeholders through newspaper articles, social media accounts and by starting an FFA Alumni Chapter. I learned through the self-study how I need to properly be informing

and utilizing this audience. One priority is sharing program data with stakeholders. Again, I am collaborating with other ag teachers, but for this year am going to work with FFA Officers to send out a stakeholder's report to our Alumni, School Board and families. Ideally this historic data will be housed on the internet and be accessible to the general public. The other two priorities include asking for input in regards to course competencies and having these people interact with students by helping with problem, project and work-based learning opportunities. Since our whole Perkins consortium shares an advisory council we have made recommendations to our AEA CTE Consultant, Murray Fenn, who leads the meetings. Murray also helped us walk through our self-studies so he understands what changes need to be made. I think along with this I need to remember that I have a lot of great people in our small community. I have realized how I should be utilizing our local FFA Alumni members more and plan to have them help with more classroom instruction in the future and will add it to our next meeting's agenda to get feedback from them.

I hope by keeping the indicators of the self-study in the back of my mind I am able to make small daily changes as well as high priority changes to make the Agriculture Program at Exira-Elk Horn-Kimballton better. As I have mentioned, some very positive and impactful changes have been made in the past seven years, but I know things are ever changing and always improving. I hope I am able to provide an opportunity for my students to be prepared for whatever they chose to do after they graduate high school.

My Master's coursework has greatly influenced the way I teach. My required coursework that included the foundations, theory and methods of agriculture education allowed me to gain a deeper understanding of agriculture education. I was also able to take four courses that were individualized to the program that I teach in. I was awarded three Governor STEM Scale-Up Grants for CASE, Curriculum for Agricultural Science Education, and spent a weekend learning welding methods which greatly helped me improve my Metals and Welding course. Another course I took focused on educational presentations which taught me that its imperative to know the audience that I am teaching. The most important class to me and my Master's journey was my Research class. I took college level English in high school, so it had been quite a long time since I had done research or written papers. This class reminded me of skills that I possessed and taught me how to do research in education which allowed me to continue to research and better the Exira-Elk Horn-Kimballton Agriculture Education Program and to work on the self-study document.

Recommendations

My recommendations to other teachers who are beginning the self-study process are as follows:

1. **Don't be afraid to admit you aren't doing something. -** Throughout the self-study process, it can feel like you aren't being a good teacher if you aren't currently doing something. It's ok to not checked on the tool, and you won't be punished. Having something to improve on is a good thing.

2. **Take your time. -** Don't rush through the process. Taking the time to understand the indicator and find evidence is part of the reflection process of the self-study. Rushing through it won't give you a good understanding of where you are and what you can improve.

3. **Get your administration involved. -** Some of the indicators are actually out of the teacher's control. Sit down with your administration to get their opinion on these indicators. Administrators may also have evidence that you will need for some indicators.

4. **Collaborate with colleagues. -** Often times CTE teachers know each other. Reach out to other teachers that are currently working on or have completed the self-study tool for questions when you are feeling lost.

5. **Write attainable action plans. -** Be realistic when developing your action plans at the end. Remember you have five years to show improvements and as busy as CTE teachers are having attainable goals will make it less of an undertaking.

References

Bell, S. (2010) Project-Based Learning for the 21st Century: Skills for the Future, The Clearing House: A Journal of Educational Strategies, Issues and Ideas, 83:2, 39-43, DOI: 10.1080/00098650903505415

Burris, S., & Garton, B. L. (2007). Effect of Instructional Strategy on Critical Thinking and Content Knowledge: Using Problem-Based Learning in the Secondary Classroom. Journal of Agriculture Education, 48(1), 106-116. DOI:10.5032/jae.2007.01106

Iowa Western Community College Program Career Outlook [PDF]. (2018). Council Bluffs: Iowa Western Community College.

Lester, S., & Costley, C. (2010) Work-based learning at higher education level: value, practice and critique, Studies in Higher Education, 35:5, 561-575, DOI: 10.1080/03075070903216635

Planning and Developing Work-Based Learning Programs. (n.d.). Retrieved December 27, 2018, from https://www.educateiowa.gov/sites/files/ed/documents/Planning and Developing WBL Program.pdf

Secondary Career and Technical Education Program Self-Study Template [Doc]. (2018, August 14). Iowa Department of Education.

Wise, R. (2018, May). The Condition of Career and Technical Education: Secondary Courses, Programs, Students, and Faculty. Retrieved December, 2018, from https://www.educateiowa.gov/sites/files/ed/documents/Condition of CTE final for web.pdf

Wood, D. (2008). Problem Based Learning. *BMJ: British Medical Journal, 336*(7651), 971-971. Retrieved from http://www.jstor.org/stable/20509616