

**Teachers' Perceived Effectiveness of iCEV's Online Curriculum
Utilized in Career and Technical Education (CTE) Classrooms**

Kevin B. Williams
Associate Professor – Agricultural Education
West Texas A&M University¹
Canyon, TX

West Texas A&M University
Department of Agricultural Science
P.O. Box 60998
Canyon, Texas 79016
(806) 651-2500
kwilliams@wtamu.edu

Teachers' Perceived Effectiveness of iCEV's Online Curriculum Utilized in Career and Technical Education (CTE) Classrooms

Abstract

In the 2016-17 school year, over eight-million high school students were enrolled in at least one CTE course (Gewertz, 2018). This constitutes almost a half of our high school population in the United States. Talbert, Vaughn, Croom, & Lee (2007) described curriculum as learning activities and experiences that students have within a designated subject. The online curriculum presentations, iCEV produces, include lesson plans, projects, activities, and assessments to accompany a variety of videos and interactive slides ("iCEV How it Works," n.d.). The iCEV online curriculum is aligned to both state and national standards. The purpose of this study was to identify teachers' perceptions toward the effectiveness of iCEV's online curriculum for use in career and technical education (CTE) classrooms. This research was conducted to establish baseline census data, which might allow iCEV to make curriculum decisions, improvements, and modifications moving forward. A total of 465 CTE teachers who utilize iCEV responded to the survey producing a 18.2% response rate. On the seven initial items the teachers rated for effectiveness, mean scores revealed five items as "effective" (M=3.5-4.49) and two items as "somewhat effective" (M=2.5-3.49). The highest rated item for effectiveness was iCEV's ability to Meet State and National Standards. With teacher satisfaction regarding the use of iCEV as a primary curriculum resource, "satisfied" was the most common answer. Overall results from this study indicate the teachers who contributed to this data perceive iCEV's online curriculum as an effective and valuable tool in preparing students for the workforce.

Introduction/Background

In the early part of the 20th century, vocational education traditionally focused on the acquisition of work related skills through apprenticeship or instructional programs (Talbert, Vaughn, Croom, & Lee, 2007). The purpose of this education was to prepare students for farming or industry. Over a century later, Gewertz (2018) defined career and technical education (CTE) as classes designed to prepare students for work. Scott and Sarkees-Wircenski (2008) stated CTE programs provide learning opportunities for students to both explore career areas and prepare for employment. Although, the goals for vocational education or CTE remain the same, the opportunities for content delivery as well as the industries themselves have changed.

In the 2016-17 school year, over eight-million high school students were enrolled in at least one CTE course (Gewertz, 2018). This constitutes almost a half of our high school population in the United States and it shows growth in CTE programs from the previous year's data. The CTE courses these students take, must offer opportunities to incorporate coursework, work-based learning experiences and hands-on experiences. Further, these experiences should allow students to develop competencies, skills, and attitudes for success beyond high school. Career and technical education curriculum today should include a focus on the development of foundational skills and competencies required for each occupational area (Scott & Sarkees-Wircenski, 2008). These programs should be real-life in nature, experiential, and provide students opportunity to reflect on what they learned and how they applied it.

Talbert et al. (2007) described curriculum as learning activities and experiences that students have within a designated subject. Based in Lubbock, Texas, iCEV is an online curriculum company focused on Career and Technical Education. Curriculum content for iCEV is developed toward seven CTE subject areas. These CTE areas include:

- Agricultural Science
- Architecture, Construction, Transportation and Marketing
- Business, Marketing, Finance, IT & Media
- Career Exploration
- Family & Consumer Sciences
- Health Science
- Law, Public Safety, Corrections, & Security

The online curriculum presentations, iCEV produces, include lesson plans, collaborative projects, lab activities, handouts, and assessments to accompany a variety of videos and interactive slides (“iCEV How it Works,” n.d.). The assessments are both formative and summative. The iCEV curriculum is aligned to both state and national standards. Content is developed through collaboration with industry partners and educators. In addition to class based curriculum, CTE programs can also purchase individual student licenses, which allow for self-

paced and self-guided learning opportunities. To go along with this, iCEV also serves as the testing platform for 15 industry certifications offered by 11 industry partners. These certifications address valued and accepted standards geared toward industry needs and look to validate the knowledge and skills needed to succeed within that industry.

Just as CTE curriculum has evolved over time, so have the responsibilities of CTE teachers. Today, CTE teachers allocate their time at work to a number of tasks beyond traditional teaching (Kitchel, Arnett, Cannon, & Duncan, 2010). Examples of these tasks include supervising CTE based student organizations, maintaining industry connections and advisory committees, and compiling academic and state reports while also managing finances to run these programs. On top of this, CTE teachers are encouraged to integrate core subjects of math and science into curricula while still maintaining state and national standards. With all of this to deal with, a limited amount of time is left for CTE teachers to create and develop engaging, real-world activities and lessons which promote career success while still meeting state and national standards.

Theoretical Framework

Human Capital Theory served as the theoretical framework for this study. According to Oded and Moav (2002), investing in the knowledge and skills, along with health of workers not only benefits them as a person, it benefits employers and their organizations. Becker (1975) believed declaring an investment in human capital through education and training is as important as investment in other tangible forms of capital. Career and technical education is a key to this process by improving the overall skills of program and course completers, human capital can be grown. To further highlight this learning theory, Swanson and Holton (2001) developed the model shown in Figure 1.

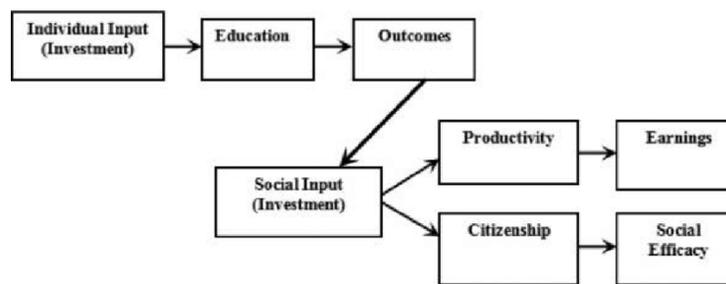


Figure 1. Swanson and Holton’s (2001) model on human capital.

Purpose and Objectives

The purpose of this study was to identify teachers' perceptions toward the effectiveness of iCEV's online curriculum for use in career and technical education (CTE) classrooms. This research was conducted to establish baseline census data, which might allow iCEV to make curriculum decisions, improvements, and modifications moving forward. The specific research objectives were written as follows:

1. Identify selected demographics of survey participants relative to content area and teaching experience.
2. Identify the perceived effectiveness of iCEV's online curriculum for use in a CTE classroom.
3. Identify overall teacher satisfaction with the use of iCEV's online curriculum in a CTE classroom.

Methodology

The target population of this study consisted of career and technical education (CTE) teachers who utilize iCEV online curriculum within their CTE classrooms (N=2,557). Specifically this group was identified as those CTE teacher's who have had a minimum of 500 logins to iCEV since obtaining a license to the product. This list of teachers along with their emails was generated by staff from iCEV and was provided to the university researcher.

The survey instrument was a self-administered questionnaire developed by the researcher. In all the survey contained three sections. Section One of the instrument consisted of eight items that were rated on a five-point Likert-type scale. These items were an attempt to measure overall effectiveness as perceived by the individual teachers toward iCEV's varied components. Section Two of the survey included two satisfaction questions along with one agreement question. Again, a five-point Likert-type scale was used to capture the information. Also in this section was one multiple choice question which asked teachers if they preferred iCEV online curriculum or traditional text books for use in their classrooms. The teachers could select either iCEV, a text book, or neutral as a response. Section Three included two demographic questions over years of teaching experience and area of CTE currently taught. A panel of one university researcher and three iCEV staff members reviewed the instrument to establish content and face validity. Chronbach's alpha was used to calculate reliability for the instrument at .97 (Gliem and Gliem, 2003). Review of the survey instrument by the Institutional Review Board (IRB) at the university was required. The chairperson of the university's IRB approved the research.

Prior to the survey being administered, an introductory email was sent to prospective survey participants by an iCEV staff member. This email instructed the target audience to look for a follow up email from the researcher, which would be soliciting their feedback relative to use

iCEV’s online curriculum. According to Dillman (2000), repeated contact with respondents will increase response rates by 20 – 40 %. The university researcher sent a second email inviting CTE teachers to participate in the study. It was noted in this email that participation was voluntary, and there were no direct benefits for their participation. A direct link to the survey was included in this email. If a CTE teacher chose to participate in the study he or she could complete the survey at any time within a designated time period. If a CTE teacher wished not to participate, he or she could simply choose not to complete the survey, or he or she could also opt out of the email list completely. The university researcher did send a second email thanking participants for completing the online survey, but also asking other non-respondents to complete the survey if they were so willing. A total of 465 CTE teachers who utilize iCEV responded to the survey producing a 18.2% response rate. Data were analyzed using the SPSS® statistical package for Windows™. For the objectives of this study, means, standard deviations, frequencies, and percentages were used for description of the data. Only the university researcher had access to this individual data.

Results/Findings

Objective One

From the list of 2,557 teachers who were sent a request to participate in this study, 465 career and technical education teachers completed the survey for a response rate of 18.1%. From this group the largest majority of teachers had taught 11 to 20 years (23.4%, $n=109$) followed next by teachers who had taught 6 to 10 years (18.7%, $n=87$). The smallest group of teachers to respond had taught 0 to 1 years (7.3%, $n=34$). Table 1 shows all responses relative to number of years taught.

Table 1
Teachers according to number of years taught

Years Teaching Experience	<i>n=465</i>	
	<i>f</i>	(%)
0-1	34	7.3
2-3	74	15.9
4-5	58	12.5
6-10	87	18.7
11-20	109	23.4
20+	81	17.4
Not Reported	22	4.7

Next, teachers were asked to indicate the CTE area they currently teach. The largest representation of teachers taught Agricultural Sciences (37.2%, $n=173$). The next largest CTE area was Business, Marketing, IT & Media (20.9%, $n=97$) followed by Family & Consumer Sciences (14.8%, $n=69$). Table 2 has a full listing of teachers according to CTE area of instruction.

Table 2
Teachers according CTE area of instruction

CTE Area	$n=465$	
	f	(%)
Agricultural Sciences	173	37.2
Architecture, Construction, & Manufacturing	6	1.3
Business, Marketing, IT & Media	97	20.9
Family & Consumer Sciences	69	14.8
Health Sciences	19	4.1
Law, Public Safety, Corrections, & Security	28	6.0
Career Exploration	13	2.8
Split between Multiple CTE Areas	34	7.3
Not Reported	26	5.6

Objective Two

Teachers had the opportunity to rate seven items on perceived effectiveness relative to utilizing iCEV online curriculum in a CTE classroom. The highest rated item by the participants in this study was Meet State and National Standards ($M=4.22$, $SD=0.73$). Next was Enhance Student Comprehension and Learning ($M=3.87$, $SD=0.79$) closely followed by Meet Classroom Needs ($M=3.84$, $SD=0.88$). Table 3 provides all mean scores for perceived effectiveness on the seven items.

Table 3
Perceived effectiveness of iCEV's online curriculum

	Rank	Mean	SD
Meet state and national standards	1	4.22	0.73
Enhance student comprehension and learning	2	3.87	0.79
Meet classroom needs	3	3.84	0.88
Prepare students for the workforce	4	3.73	0.88
Prepare students for end of course exams	5	3.55	0.97
Prepare students for standardized tests in core subject areas (math, science, language) within your CTE classroom	6	3.39	1.01
Capture your students attention and responses	7	3.38	0.96

Scale: 1=not effective; 2=somewhat ineffective; 3=somewhat effective; 4=effective 5=very effective

One additional question asked participants to rate the perceived effectiveness of iCEV's individual student licenses in enhancing student learning. A selection was included for those who do not utilize this feature of iCEV. Of the 361 CTE teachers who do utilize student licenses, a mean score of 3.70 ($SD=0.88$) was generated.

Objective Three

CTE teachers were next asked to rate their satisfaction on two items utilizing a five-point Likert-type scale. The descriptors ranged from very satisfied down to not satisfied with three options in-between. When asked how satisfied they were with using iCEV's online curriculum as a primary resource, the most common choice was satisfied (33.2%, $n=154$). This was next followed by Very Satisfied (29.3%, $n=136$) and then Somewhat Satisfied (23.4%, $n=109$). Only 3.4% ($n=16$) of participants indicated they were not satisfied. When asked how satisfied they were with the rigor of iCEV's online curriculum, most respondents indicated they were satisfied (38.3%, $n=178$). Next was somewhat satisfied (26.1%, $n=121$) followed by very satisfied (18.5%, $n=86$). Table 4 shows full responses for the two questions above.

Table 4
Satisfaction level in utilizing iCEV online curriculum

	<i>n=465</i>									
	Very Satisfied		Satisfied		Somewhat Satisfied		Somewhat Dissatisfied		Not Satisfied	
	<i>f</i>	(%)	<i>f</i>	(%)	<i>f</i>	(%)	<i>f</i>	(%)	<i>f</i>	(%)
Using iCEV as a primary curriculum resource	136	29.3	154	33.2	109	23.4	50	10.7	16	3.4
The rigor of iCEV's Online Curriculum	86	18.5	178	38.3	121	26.1	58	12.4	22	4.7

Two final questions were asked in association with Objective Three. The first of these two questions asked participants to indicate their level of agreement with the statement "Utilizing iCEV increases the possibility of students earning an industry recognized certification at the completion of a program of study." The CTE teachers again used a five-point Likert type scale for their responses. The choices to select were from strongly agree to disagree. The majority of teachers selected the option of agree (36.5% $n=170$). The least selected option was disagree (5.3%, $n=24$). Table 5 shows full responses provided to this agreement item.

Table 5
Level of agreement with "Utilizing iCEV increases the possibility of students earning certifications"

	<i>n=465</i>									
	Strongly Agree		Agree		Somewhat Agree		Somewhat Disagree		Disagree	
	<i>f</i>	(%)	<i>f</i>	(%)	<i>f</i>	(%)	<i>f</i>	(%)	<i>f</i>	(%)
iCEV as a primary curriculum resource	86	18.5	170	36.5	139	29.9	46	9.8	24	5.3

Finally, CTE teachers were asked to indicate their preference toward utilizing iCEV's online curriculum versus a traditional textbook. The survey participants were given three choices of using iCEV online curriculum, using a traditional textbook, or neutral. Most CTE teachers selected iCEV online curriculum at 66.3% ($n=309$). Neutral was selected second at 24.8% ($n=115$). The choice of a traditional textbook was third at 8.9% ($n=41$). Figure 2 illustrates these results.

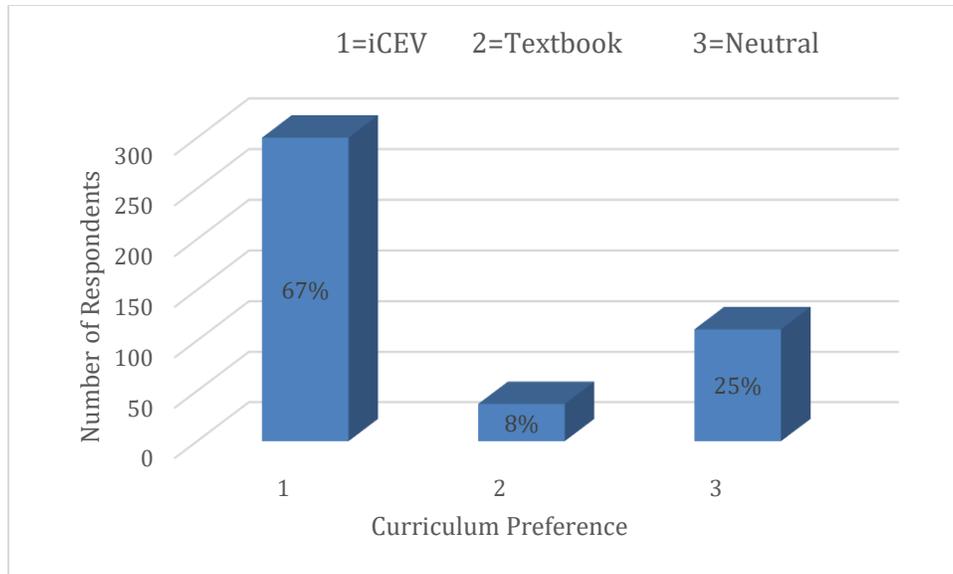


Figure 2. Teacher’s choice of iCEV versus traditional textbook.

Conclusions/Summary

The purpose of this study was to identify teachers’ perceptions toward the effectiveness of iCEV’s online curriculum for use in career and technical education (CTE) classrooms. This research was conducted to establish baseline census data, which might allow iCEV to make curriculum decisions, improvements, and modifications in the future. On the seven initial items the 465 teachers rated for effectiveness, mean scores revealed five items as “effective” ($M=3.5-4.49$) and two items as “somewhat effective” ($M=2.5-3.49$). The highest rated item for effectiveness was iCEV’s ability to Meet State and National Standards. This was followed by Enhance Student Comprehension and Learning, Meet Classroom Needs and Prepare Students for the Workforce. An additional effectiveness item was specific to the 362 teachers who use individual student licenses. Mean scores from this item rated iCEV’s student licenses as “effective” in enhancing student learning.

With teacher satisfaction regarding the use of iCEV as a primary curriculum resource, “satisfied” was the most common answer recorded. “Satisfied” was also the most common response relative to the perceived rigor of iCEV’s online curriculum. Less than 5% of teachers were “not satisfied” with either of the two items above. When asked for a level of agreement to the statement “Utilizing iCEV increases the possibility of student earning and industry recognized certification,” the most common response was “Agree.” Only 5% of teachers disagreed with this statement. Finally, CTE teachers were given choices of preference toward iCEV’s online curriculum, traditional textbooks, or neutral. Almost two-thirds of teachers chose iCEV and less than 10% chose a traditional textbook.

Recommendations/Discussion

The target population of this study consisted of career and technical education (CTE) teachers who utilize iCEV online curriculum within their CTE classrooms (N=2,557). Specifically this group was identified as CTE teacher's who have had a minimum of 500 logins to iCEV since obtaining a license to the product. A total of 465 surveys were completed for a response rate of 18.1%. Caution should be utilized in interpretation of results and generalizations to other populations should not occur due to the descriptive nature of this study. However, based on this benchmark data it is recommended the parties involved consider the following.

1. The CTE teachers in this study perceived iCEV effective relative to eight items. The highest rated item was tied to iCEV's ability to meet state and national standards. According to Talbert et al. (2007), national, state, and local bodies require certain standards to be met. The teachers in this study believe iCEV's online curriculum fulfills this required need.
2. Ultimately, CTE programs are tasked with preparing students for the workforce (Gewertz, 2018; Scott & Sarkees-Wircenski, 2008). According to the teachers who participated in this research, utilizing iCEV's online curriculum is an "effective" tool in doing so. With a high number of tasks being required of CTE teachers beyond traditional teaching (Kitchel et al., 2010), iCEV might a valuable resource so that sound and engaging curriculum can be taught in the classroom. This online resource therefore might better equip teachers in preparing students for the workforce.
3. The teachers who completed the survey indicated they were satisfied with their use of iCEV's online curriculum. This curriculum includes lesson plans, collaborative projects, lab activities, handouts, and assessments to accompany a variety of videos and interactive slides. Along with their satisfaction, these teachers also believed iCEV's online curriculum met their classroom needs. Further two-thirds of teachers preferred iCEV as a primary curriculum resource while only one in ten participants preferred traditional texts. With this, iCEV appears to be an effective teaching tool that is meeting a need.
4. With an increased emphasis for CTE courses to incorporate core subjects of math and science into curricula (Kitchel et al., 2010) as well provide students opportunities to obtain industry approved certifications, iCEV's online curriculum appears to be meeting a need in these areas. Teachers in this research agreed iCEV's online curriculum was effective in helping students earn industry recognized certifications. Also teachers perceived this same curriculum to have value toward preparing students in math and science.
5. This descriptive study provides baseline data regarding the perceptions of CTE teachers who utilize iCEV's online curriculum as a teaching resource. More in-depth research with CTE teachers should be performed to add to this pool of data. Potential studies with both this

audience as well as those teachers who have less than 500 iCEV logins has merit. Specifically, this study could be replicated with the users who have less than 500 logins for comparisons relative to perceived effectiveness and satisfaction. Further, qualitative research methods such as one on one interview and focus groups should be considered as well.

Literature Cited

- Becker, G. S. (1975). *Human capital: A theoretical and empirical analysis, with special reference to education*. (2nd ed.). National Bureau of Economic Research. New York, NY: Columbia University Press.
- Dillman, D. A. (2000). *Mail and internet surveys: The tailored design method* (2nd ed.). New York, NY: Wiley & Sons.
- Gewertz, Catherine. (2018, July 31). Career and Technical Education. *Education Week*. Retrieved from <http://www.edweek.org/ew/issues/career-technical-education/>
- Gliem J., & Gliem, R. (2003) Calculating, interpreting, and reporting Cronbach's Alpha Reliability Coefficient for Likert-Type scales. *Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education*, Columbus, OH.
- iCEV How It Works (n.d.). Retrieved from <https://www.icevonline.com/how-it-works>
- Kitchel, A., Arnett, S., Cannon, J., & Duncan, D. (2010). Program management needs of family and consumer sciences teachers in Idaho. *Journal of Family and Consumer Sciences Education*, 28(2), 48-59.
- Oded, G. & Moav, O. (2002). "Natural selection and the origin of economic growth," *Quarterly Journal of Economics*, 117, 1133-1192.
- Scott, J. & Sarkees-Wircenski, M. (2008). *Overview of Career and Technical Education* (4th ed.). Homewood, IL: American Technical Publishers.
- Swanson, R. A. & Holton, E. F (2001). *Foundations of Human Resource Development*. San Francisco: Berrett-Koehler.
- Talbert, A. B., Vaughn, R., Croom, D. B., & Lee, J. S. (2007). *Foundations of agricultural education* (2nd ed.). Danville, IL: Professional Educators Publications, Inc.

Case Study Research

The Study

Brazosport Independent School District (BISD), encompassing Brazoria County, Texas, places a strong emphasis on Career and Technical Education (CTE). Starting with career exploration in 7th grade, students have access to the tools and resources that help them explore career choices well before they enter high school.

Although BISD places importance on CTE, it's a challenge to stay current with relevant curriculum and supplementary exercises for CTE programs and career exploration.

“We really needed a Career and Technical Education curriculum that was up-to-date and responsive to our teachers’ needs,” said BISD Director of Career and Technical Education Jennifer Edenfield. “Resources available through the Texas Education Agency are upwards of 10 years old, and it has become cumbersome and time consuming for our teachers to supplement these same old resources with online searches of how to keep old curriculum fresh.”

That’s why the district chose iCEV, a tool that educators rely on to teach updated CTE courses. According to Edenfield, this comprehensive curriculum suite gives new and veteran teachers the resources they need to plan and execute pertinent CTE classes.

“One thing we really like about iCEV curriculum is that when you implement a package, you get everything available for the career cluster,” Edenfield said. “From that, my teachers can pick and choose any topics or materials under a specific career cluster and customize their class plans and goals as they see fit.”

Suited for Experienced Teachers & New Teachers Alike

For BISD, which enrolls more than 12,000 students in any given year, this customization enriches the learning environment. More than that, iCEV offers support and guidance that new teachers often need.

“My brand new teachers absolutely love iCEV,” Edenfield said. “It has everything they need, including lesson plans and curriculum requirements, which is a comfort to new teachers who can feel overwhelmed or unsure since they are new in their career.”

Likewise, veteran CTE faculty benefit greatly from using iCEV. Edenfield said that iCEV resources can add new spark to lesson plans as a supplemental resource for teachers who have been with BISD for a long time.

“iCEV is constantly updating the curriculum and units of study to reflect what’s going on in Career and Technical Education, which is hugely advantageous for our teachers,” Edenfield said. “In fact, teachers can even sign up for notifications when new plans or information is added to the iCEV program - fitting the needs of our district well.”

“ One thing we really like about iCEV curriculum is that when you implement a package, you get everything available for the career cluster. ”

Hacking Student Motivation

Students respond well to iCEV in their CTE classrooms, too. Completing CTE certifications while still in high school gives BISD students a sense of pride and accomplishment.

“When students have a tangible certificate to show all of the hard work they’ve put into a class, it really makes them feel good,” Edenfield said. “In fact, with these certifications, I often see those students hold the CTE courses in higher regard because of the end result of certification. It gives them an extra boost and keeps them going until completion, and often facilitates them moving onto post-secondary educational opportunities.”

Beyond student success, having students complete accredited certifications keeps teachers motivated, and like their students, they have a sense of validation in the work they do.

BISD has set a goal of 500 student-held certifications – specifically the SouthWest Airlines Professional Communication certification – by the end of the 2015-2016 school year, and feels that through iCEV, its goal can be met.

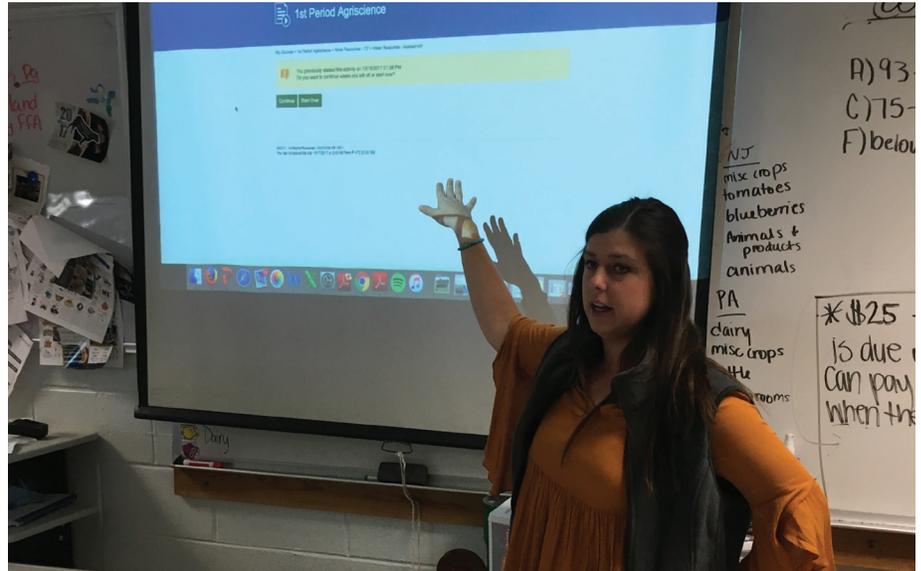
“It’s really important for us at BISD to give students the tools and resources they need to succeed in elementary and secondary school and beyond, and using iCEV and reaching a goal of 500 certifications by the end of the year will let everyone see what CTE really offers students,” Edensfield said.

“ It has everything they need, including lesson plans and curriculum requirements, which is a comfort to new teachers who can feel overwhelmed or unsure since they are new in their career. ”

Cumberland County School District Embraces Shifting CTE Trends with iCEV Online Learning Platform



After passing a thorough vetting process by Director Chris King and the teachers at Cumberland County, the iCEV online curriculum platform and industry student certifications have become invaluable to the Cumberland CTE program.



Terra Davis, Agriculture Education teacher/FFA Advisor demonstrates iCEV assessments in her first period Agriscience course.

The Study

School districts across the United States face the challenge of finding resources to sustain their Career and Technical Education (CTE) programs. The Cumberland County School District in rural Tennessee is better positioned than many of its peers when it comes to resources and funding for CTE. The district currently has the 13th largest CTE program in the state, teaching courses in all 16 nationally recognized career clusters and using the latest curriculum and technology on the market.

Curriculum at Cumberland County goes through a thorough review by teachers to ensure it meets the needs of the CTE program and provides students with a comprehensive learning experience. CTE Director Chris King explained the curriculum should align closely to state academic standards, while matching students' ability to develop new skills. The iCEV online learning platform met all the requirements on King's checklist, and the platform quickly became a staple in many of the district's CTE courses.

Striving Forward

"We're fortunate to have great facilities and the appropriate amount of equipment for every course we teach," King said. "Some courses rely heavily on a particular text or two, but iCEV is the best match, closely aligns to Tennessee state standards and provides information that can be incorporated into the experiential portion of a class or lab."

“ The most important features vary by teacher, but as a comprehensive resource for our courses, teachers are able to give our students a multidimensional view of their chosen career paths. ”

— Chris King

Many of King’s teachers were familiar with iCEV through previous work and often complimented on how the platform provided students with the ability to pursue courses at their own pace that catered to their career interests. By being able to supplement their instruction with iCEV, teachers at Cumberland County School were able to present more meaningful and actionable lessons describing potential career fields. Along with the robust courses, the teachers noted that they appreciated having the lessons, videos and tests streamlined in one central location.

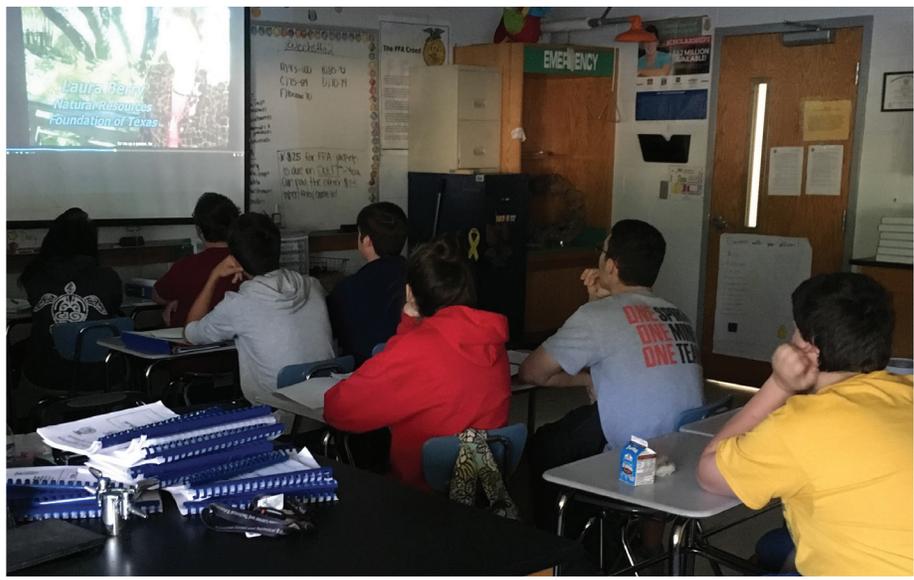
“Our teachers take full advantage of the iCEV platform, and it’s been incorporated into most of our classes this year,” King explained. “The most important features vary by teacher, but as a comprehensive resource for our courses, teachers are able to give our students a multidimensional view of their chosen career paths.”

A Call for Certifications

Finding opportunities outside the classroom has quickly become a critical component for the majority of CTE programs – an approach that’s proved to be extremely valuable for students. The advantage of robust, standards-aligned instructional materials is amplified by industry-backed certifications which allow students to pursue their college and career goals simultaneously. King stressed the importance of partnering with industry professionals and the need for states to recognize industry-backed certifications that increase exposure to fields in need of highly skilled workers.

“It’s important for the state to recognize those students who get the experience they need for a career or post-secondary education,” King said. “It’s our responsibility to understand that we need to introduce our students to multiple tracks so that each of the new skills they learn has a direct purpose and impact on where they’re headed after high school.”

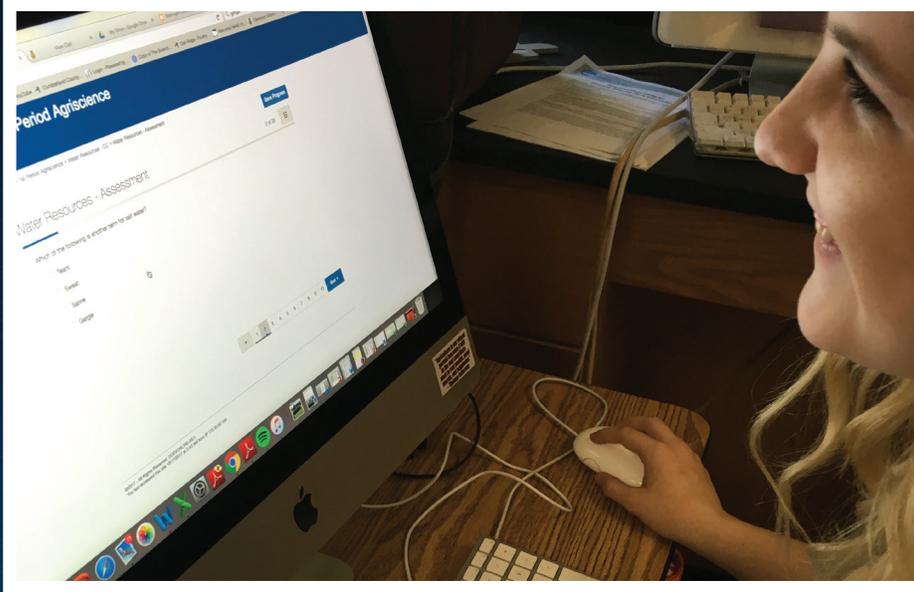
King sees the advantage of continuing to use and



Students at Cumberland County High School view video lessons on the iCEV platform.

“...we need to introduce our students to multiple tracks so that each of the new skills they learn has a direct purpose and impact on where they’re headed after high school.”

– Chris King



Cumberland County High School student completes an interactive activity on the iCEV platform.

expand upon the offering of iCEV's industry-backed certifications to his students. The certifications are curricula created by CEV Multimedia for iCEV with esteemed industry partners such as Southwest Airlines, Elanco and Bayer CropScience. The rigor and breadth of the certification process demonstrates the student's expertise in the field through robust lessons and a comprehensive

assessment. In addition to the knowledge gained from the certification coursework, several local professionals serve as advisers for the Cumberland County CTE program which allows students to gain real-world knowledge and connections that best position them for their future careers.

Statewide, Tennessee recognizes a number of certifications, but King believes adding more credentials can benefit students' understanding of their field and provide proof of qualified competence to prospective employers. Cumberland County hopes it can work with state policymakers to recognize the opportunities iCEV certifications can provide for local businesses and students.

"We're seeing funding flow in a way that has showed more and more people that we have focused far too long on how many kids we're going to send to college, rather than how many kids we're going to send to the workforce with the right training and right skills," King said. "It's become more important for Tennessee to promote a mentality and thought process that causes schools to take a Kindergarten-through-jobs approach by exposing students to potential career paths earlier than before so they can begin to focus on a path sooner to become more prepared for their future career."

Looking Forward

King is hopeful and happy to see where the CTE program in Cumberland County is headed. Over the past 25 years, he's faced the challenge of making CTE worthwhile for every student and not just for

“ It’s become more important for Tennessee to promote a mentality and thought process that causes schools to take a Kindergarten-through-jobs approach by exposing students to potential career paths earlier...”

— Chris King

a few. The district plans to graduate 55 to 60 percent of its students in CTE concentrations every year.

“We want to not just grow for the sake of growing, but grow in quality so that our students are well-rounded and receive additional training that will directly translate into real-life experiences,” King said. “It’s rewarding to see companies like CEV Multimedia take an idea and help districts understand what needs to be done to help improve CTE instruction, and nice to know there’s a collective body of people that see the importance of jobs that matter for everyone.”

“ We want to not just grow for the sake of growing, but grow in quality so that our students are well-rounded and receive additional training that will directly translate into real-life experiences...”

— Chris King

Preparing the Next Generation of Marketers Through CTE



Most parents have to tell their students to get off of social media to do their homework. For Rochelle McMillon's classes at Mesquite ISD in Texas, the school has to tell parents that when their student is using social media at home, they might actually be doing homework.

Blossoming Career Field

Rochelle McMillon, a marketing instructor at Poteet High School with over nine years of experience, has seen the classroom and the marketing industry transform and is now merging the two to prepare students for a blossoming career field.

“When I look for jobs for my students, I see that a lot of companies don’t have social media strategies in place,” said McMillon. “iCEV’s new Social Media Marketing course provides students with the skills to fill these gaps in the industry, and take advantage of this area of growth in marketing.”

“ The new social media marketing course from iCEV provides students with the skills to fill these gaps in the industry, and take advantage of this area of growth in marketing. ”

— Rochelle McMillon
Marketing Instructor

Designing a New Course

Over the course of her teaching career, McMillon, the 2017 Career & Technical Education of Texas (CTAT) Marketing Instructional Council Teacher of the Year, has taught every marketing course that Texas offers. Three years ago, she was presented with the opportunity to serve on the Texas Essential Knowledge and Skills (TEKS) committee for the Texas Education Agency (TEA). In that position, McMillon guided the committee through creating and adopting standards for social media marketing to become a TEKS-approved course.

“The most important thing for me was to make sure the course delivered outcomes for the students,” said McMillon. “That focus helped design the course and draft the knowledge and skills statements.”

As an avid user of CEV Multimedia in her classes, McMillon was delighted to see the iCEV Social Media Marketing course on the list of new materials to be reviewed for state approval.

“The social media marketing course from iCEV was exactly what I had in mind when I was helping write the TEKS,” said McMillon. “It helps teach students about the basics of social media, social law and ethics, mobile marketing, implementation and more.”

Understanding the Platform

“When students first heard of the class, they were very excited. They heard social media, but didn’t understand it was a business class,” McMillon explained. “Our students are not familiar with how to use social media for business, they just know how to post photos and statuses for their friends. When we talk about the capabilities of the platforms, they aren’t aware. Through our courses, students build understanding of how social media can help fuel a successful business.”

McMillon's marketing classes teach students how to create a social media marketing strategy and the role it plays in a successful business plan for both large and small organizations. The end goal of her classes is to provide students with tools and skills they can utilize in the workforce.

Mesquite ISD uses iCEV, an online learning platform from CEV Multimedia as a part of the practicum in their marketing courses to provide online activities, assessments, videos and a curriculum. The combination of these materials with guest speakers, field trips and real-world experience enable students to walk away from the course with a strong understanding of social media marketing.

Finding Success

A key part of a student's experience in marketing courses at Mesquite ISD is applying their classroom knowledge to an actual business environment. McMillon encourages her students to offer to help with their workplace's social media strategy, especially if it is a small business.

Her students have been able to conduct marketing research, aid in the development of a mobile application, create a social media marketing strategy to help boost a lunch program and much more.

"We have seen students get additional responsibilities at their jobs because they have been able to apply what we are talking about in the classroom to their work," McMillon shared. "By doing this, they are able to prove to their supervisor that they can move up from an entry-level position. For us, that's the dream scenario."

Building for the Future

After the success with the course at her district, McMillon sees an opportunity for more marketing courses in schools and wants to help teachers navigate that process.

"I'm working with TEA to do new teacher training at conferences to help educators learn how to improve their professional development, get guest speakers in their classes and learn what's important to teach," said McMillon. "There are a lot of schools that know these courses are now available for their students and I'm excited to help them navigate the process of getting these courses started."

For Texas marketing teachers, graded projects are beginning to shift from papers and presentations to key performance indicators and strategic

“ Through our courses, students build understanding of how social media can help fuel a successful business. ”

— Rochelle McMillon
Marketing Instructor

proposals. This shift in instructional practices gives students a better sense of what a marketing career really looks like, and opens the door for future career exploration in the marketing and social media industries.

Rochelle McMillon is a marketing teacher at Mesquite ISD. Last years she was named the 2017 Career & Technical Education of Texas (CTAT) Marketing Instructional Council Teacher of the Year. She recently served on the Texas Essential Knowledge and Skills (TEKS) committee for the Texas Education Agency (TEA). As a marketing teacher for the past nine years, she has been committed to deepening her students' knowledge of applicable marketing skills through CTE.

“ We have seen students get additional responsibilities at their jobs because they have been able to apply what we are talking about in the classroom to their work. ”

— Rochelle McMillon
Marketing Instructor

Kentucky School Fosters Career-Readiness Through Certification

The image displays the My iCEV online education platform. On the left, a tablet shows the course overview for 'Advanced Animal Science', listing various lessons and settings. In the center, a laptop displays a video player for 'Advanced Animal Genetics' with a play button and a video thumbnail of cows. On the right, a framed 'Industry Certification' document is shown, certifying that Jane Smith has successfully completed the 'Fundamentals of Animal Science Certification' on the 28th day of October in the year 2015. The certificate is signed by Mike Simpson, Business Manager U.S. Beef Corporate, and is powered by iCEV.

After implementing the iCEV online education platform, Adair County High School has found students are more driven and successful at achieving career-readiness when they earn certifications.

“ Ensuring students are provided with the skills necessary for a successful transition to postsecondary education or work is crucial for students. ”

— Matt Chaliff
Agriculture Education Consultant

Ensuring a Successful Transition

The Kentucky Department of Education places a high level of importance on college and career-readiness by ranking school districts through accountability index ratings. While college readiness is determined based on ACT scores and college placement scores, students are determined to be career-ready when they pass the Kentucky Occupational Skills Standards Assessment (KOSSA). Students can also be considered career-ready through WorkKeys, ASVAB or earning a state-approved industry certification.

“Ensuring students are provided with the skills necessary for a successful transition to postsecondary education or work is crucial for students,” the Agriculture Education Consultant for the Kentucky Department of Education, Matt Chaliff, said. “An important piece of this work means giving students the opportunity to obtain industry-recognized certifications, licensures and other credentials.”

Certifications Fill the Gap in Career-Readiness

At Adair County High School, student certifications have become a defining factor when classifying students as career-ready. By implementing the industry certification program powered by iCEV, Randy Rexroat and Kirby Hancock, Agriculture Educators at Adair County High School in Columbia, Kentucky, are filling a major gap in their career-readiness goals.

“We were lacking an accurate guide for instruction to prepare students for prior assessments,” Hancock said. “However, the lessons, videos, activities and quizzes within iCEV do a really good job preparing students for the final certification exam.”

Through the iCEV platform, students have the opportunity to earn certifications such as the Bayer CropScience [Plant Science Certification](#), the Elanco [Fundamentals of Animal Science Certification](#) and the American Meat Science Association’s [Food Safety and Science Certification](#). All three certifications are state-approved and meet the requirement for career-readiness. Additionally, students can earn the certifications while they complete their regular coursework and gain concrete, evidenced skills to include on their résumé.

“Students are more easily motivated to learn and achieve a certification because it is something they may use to obtain employment in the future,” Hancock said.

After using iCEV’s certification platform for only one year, Adair County is already seeing results. During the 2016-17 school year, Adair County had 40 students earn an industry certification through iCEV.

Seeing Success

Adair County has dramatically increased their career-ready success rates because students are more driven to earn a tangible certification as opposed to simply passing a test. In fact, many of Hancock's students are putting their skills to use in jobs they've gained from earning a certification.

"I have several students who are now working for local veterinarians and livestock operations as a direct result of their receiving the Elanco Fundamentals of Animal Science Certification," Hancock said.

Senior Brady Baker, one of these students, is directly translating the knowledge he gained while earning his certification to his current co-op job.

"Because of what I learned while earning my certification, I better understand many of the problems we work with when I go on calls with the veterinarian I work for," Baker said. "I also have been able to learn a lot of things that I can put to use on my family's dairy farm."

Additionally, the skills students gain while earning certifications often benefit them in other classes.

"I use the information that I learned while completing my certification even now in all of my other classes. My certification also prepared me for my future in college and in a career," junior Abby Dykes said of her experience with certifications.

Students who earn certifications are honored at a special dinner where they are recognized for their accomplishments in front of parents and classmates. "Students as well as their parents are very happy with the success rate." says Rexroat.



Randy Rexroat and Kirby Hancock with Students who achieved certifications during the 2016-2017 school year.

“Because of what I learned while earning my certification, I better understand many of the problems we work with when I go on calls with the veterinarian I work for.”

— Brady Baker
Student

Teachers who have students earn certifications also feel a sense of pride for their students. “As the students pass the final examination and receive their certificates, I have a feeling of accomplishment because I am confident they have mastered the content,” Hancock said.

Leading the Way

iCEV lends a helping hand to districts across the state looking to increase career-readiness for their students with certifications and curriculum that equips the next generation with skills that can easily apply to modern industry expectations.

“This is the best curriculum and assessment package I have experienced in my 20+ years of teaching,” Hancock said. “The iCEV courses are rigorous, yet the students stay interested because the information in the modules is up to date and they know it will help them in the future.”

Adair County High School is leading by example with their implementation and promotion of industry certification to prepare Adair County students for college and careers.

“ This is the best curriculum and assessment package I have experienced in my 20+ years of teaching.”

— Kirby Hancock
Agricultural Science Teacher

Wisconsin School's Career and Technical Education Program Utilizes Leading Online Platform



In recent years, major changes in today's workforce landscape have created new demands within the classroom. Walter Taylor and Plymouth High School have addressed those challenges head-on through the use of the iCEV online curriculum platform.

“ Through a collaborative effort by teams of educators, community volunteers and industry partners, we strive to develop a strong curriculum and use the most relevant materials for our students. ”

— Walter Taylor



Plymouth High School FFA member Andy Helmer was named National Winner in Dairy Production Placement at the National FFA Convention. With him are, from left, National FFA Eastern Region Vice President Wesley Davis and his Plymouth FFA advisors Tracy Heinbuch and Walter Taylor.

The Study

When Walter Taylor started teaching agriculture at Plymouth High School in Wisconsin, he used VHS tapes to demonstrate real-world skills and scenarios to his students. Since then, the school has seen a major shift in the resources and infrastructure needed to meet the demands of today's 21st century industries. With support from the community, the school has updated many key components of its Career and Technical Education (CTE) program to help students thrive in their chosen career path.

“This is truly a lifestyle choice – a choice our school is proud to support by offering career training classes as well as opportunities for community engagement,” Taylor said. “Through a collaborative effort by teams of educators, community volunteers and industry partners, we strive to develop a strong curriculum and use the most relevant materials for our students.”

In an effort to reinvigorate its courses, Plymouth High School upgraded its culinary rooms and automotive shop, added a Science and Technology Center, and added a Food Science and Agriculture Center. The school also implemented iCEV, an online learning platform that delivers comprehensive CTE resources to students and educators. As an educator and the school's FFA Advisor, Taylor uses the platform's many digital resources, including video modules, hands-on instruction and practice schedules for in-class instruction and FFA competitions.

The Importance of Community

While educators play a key role in preparing students for college and careers, Taylor stresses that opportunities outside the classroom are equally important. Community partnerships and industry-backed certifications offer students additional experience needed to succeed in the evolving global workforce.

“You will find students and local business working together from the early morning until late in the evening, striving to ensure that all learners meet their aspirations,” Taylor said. “Through community collaborations, we’re eager to try new methods of education in the ever-changing educational landscape.”

Industry-backed certifications address many new requirements for students entering postsecondary education programs or a career. Employers and industry partners seek highly qualified candidates entering the field and support the high level of training students seek when looking for opportunities within CTE.

“Local and regional industry partners are assisting more and more, which is extremely humbling for the school and educators, both monetarily and professionally,” Taylor said. “We’ve been able to upgrade our facilities and programs through generous contributions from students, faculty and our community, which demonstrates the level of support that people and business have in future generations.”

Addressing A Changing Classroom Environment

As Taylor continues to incorporate resources from iCEV into his lessons, he has noticed a shift in how students want to learn and access materials from their courses. As technology advances, students are looking for more visual learning opportunities through videos and interactive assessments so they learn and understand the materials before the next lesson or work experience.

“I see all types of students in today’s classroom, and I feel that I can more easily facilitate learning for their varied interests and learning styles,” Taylor said. “I always try to build activities that include multiple ways of presenting the knowledge for a learning target, and ultimately matching state and national standards through the end results.”

More CTE programs are adopting a flipped learning environment, allowing students to learn in their own way and explore interests

“ I always try to build activities that include multiple ways of presenting the knowledge for a learning target, and ultimately matching state and national standards through the end results. ”

— Walter Taylor

within their chosen field. As the workforce evolves, it has become even more important to ensure students are receiving relevant information that addresses challenges they will face after high school. An online learning platform, like iCEV, encourages students to use its many resources to learn and grow in an ever-changing environment.

“ We do not buy into curriculum, rather we as educators develop our own. With my philosophy of utilizing various methods for students understanding, iCEV aids my curriculum design and teaching methods, ”

— Walter Taylor

“We do not buy into curriculum, rather we as educators develop our own. With my philosophy of utilizing various methods for students understanding, iCEV aids my curriculum design and teaching methods,” Taylor said. “Education is not a secret and curriculum is never set in stone, allowing students to learn about new developments within the workforce.”

Tech Academy's Career and Technical Education Program Utilizes Leading Online Platform



In recent years, major changes in today's workforce landscape have created new demands within the classroom. Cathy Slagle and Ben Barber Career Tech Academy have addressed those challenges head-on through the use of the iCEV online curriculum platform.



Cathy Slagle, Career and Technical Educator, utilizes the ICEV online platform in her marketing classes to customize course content and engage her students.

“ In today’s workforce, it’s so important for students to learn from a variety of tools and experiences while they’re still in school ”

— Cathy Slagle

The Study

After owning a business for 15 years, Cathy Slagle returned to the classroom as an educator at the Ben Barber Career Tech Academy in Mansfield, Texas to share her marketing experience with students looking to enter a competitive and ever-changing industry. Twelve years later, enrollment in Ben Barber’s Career and Technical Education (CTE) program has increased, and the district is implementing new resources and building facilities needed to meet the demand and interest in a career-focused program of study.

“In today’s workforce, it’s so important for students to learn from a variety of tools and experiences while they’re still in school,” Slagle said. “As educators, we learn from our experiences and want to share that with students interested in pursuing a similar path so they can succeed and grow personally and professionally in their chosen career.”

Ben Barber is one of six high schools within the Mansfield Independent School District, which is home to more than 32,000 students. With a student population of 4,000, the tech academy is one of the first schools in Texas to pull all core technology courses under one roof to accommodate the growing interest in CTE-related courses.

In an effort to enhance the quality of the program, the district is building additional classrooms and labs, and has implemented iCEV, an online learning platform that delivers comprehensive CTE resources to students and educators. As a teacher and the school’s Distributive Education Clubs of America (DECA) advisor, Slagle uses the platform’s many digital resources, video modules and online assessments in her marketing classes.

The New Classroom

There's a growing trend that facilitates the use of technology in a classroom setting. Resources like textbooks are quickly becoming obsolete as students look for alternative ways to learn and engage with the materials assigned. With a digital resource like iCEV, Slagle notes that it's easy to customize her courses with new and relevant information daily.

"Purchasing textbooks for our students is really going the way of the dinosaur in that by the time they are adopted, purchased and in the students' hands, they're already outdated," Slagle said. "The process takes too long, and in a field like marketing or other CTE industries, time is of the essence because resources and knowledge often change so quickly."

The nature in which students learn is also quickly shifting, as Slagle notices that her students would rather work independently than sit through a lecture. With increased technology use and districts embracing Bring Your Own Device (BYOD) policies, CTE programs are adopting flipped learning environments and encouraging students to learn in a way that allows them to explore their interests at their own pace in order to receive the best possible educational experience.

"iCEV and the resources it brings really give my students what they need in and out of the classroom, and gives them a sense of accomplishment when they do well and understand what they're learning," Slagle said. "It's a great classroom enhancement for both the students and myself, and gives my students more confidence in their work."



The Ben Barber Career Tech Academy/Mansfield ISD DECA team advance to the 2013 Texas DECA State Career Development Conference after wins at the career development district contest.

“ iCEV and the resources it brings really give my students what they need in and out of the classroom, and gives them a sense of accomplishment when they do well and understand what they’re learning, ”

— Cathy Slagle

Real-World Experience and Post-Secondary Education

As a former business owner, Slagle understands the importance of having the support of other business owners and industry partners. These relationships, especially in the context of education, strengthen a program of study and offer valuable opportunities for students to learn and gain experience from professionals currently working in the field.

“ Career and Technical Education really takes everything students are learning in core subjects like math, science, social studies and English and makes it relevant. ”

— Cathy Slagle

“Our business partners play an instrumental role in our CTE program and lead our students to the proper information and education they need to further themselves as young professionals,” Slagle said. “We’re educating them in a way that meets the needs of the job market, and we hope the training they receive makes our partners want to hire our students after they graduate.”

Industry partners and the experiences they provide are vital for students as they train for opportunities outside of the classroom, but Slagle also stresses the importance of pursuing an education after high school, whether in a four-year university or through a two-year technical certification.

“Everyone needs some kind of degree, and it’s becoming more and more important to show that you have some kind of experience or education other than high school.” Slagle said. “Career and Technical Education really takes everything students are learning in core subjects like math, science, social studies and English and makes it relevant. This is where they figure out that they actually need to know the material if they want to succeed.”

Colorado School Implements Leading Online Platform for Career & Technical Education Program

CASE STUDY

Olathe High School prepares students for careers with CEV Multimedia and iCEV

“ Whether they go into a technical industry or not, it’s so vital to teach students life skills and send them out into the public to educate others. ”

— Erin Martinez

The Study

As a vocational educator at Olathe High School in Colorado, Erin Martinez understands that the nature of career training and education has changed drastically over the past few decades. Today, Career and Technical Education (CTE) programs require students to develop a variety of professional and trade skills that prepare them for the ever-changing global workforce.

“Whether they go into a technical industry or not, it’s so vital to teach students life skills and send them out into the public to educate others,” Martinez said. “As teachers, we’re faced with a big task to train our students to make educated decisions for the future of their chosen fields.”

With a student population of nearly 270 students, Olathe High School is based in a rural, middle-class community in western Colorado. Martinez teaches agriculture classes to 60 students enrolled in the school’s CTE program and serves as a Future Farmers of America (FFA) Advisor.

To better incorporate technology and digital resources into its career training curriculum, Olathe implemented iCEV, an online learning platform that delivers comprehensive CTE resources to students and educators. Martinez utilizes the many functions and materials the platform offers in both her classroom and at FFA events.



Olathe FFA Chapter - 2014 National FFA Silver Rated Livestock Evaluation Team (left to right) Advisor/Coach Erin Martinez, Aaron Lenihan, Cassie Franks, Talisha Marchbanks, Kurik Mattics, and Coach Fayanna Flick



Olathe FFA Chapter - 2013 National FFA Gold Rated Horse Evaluation Team (left to right) Wade Rowley, Talisha Marchbanks, Cassie Franks, Trace Axtell, and Advisor/Coach Erin Martinez

Interactive Learning Environment

While many CTE programs rely on educators to train students for a future in the global workforce, the coursework itself plays a large role in helping students develop their skills. Using online tools like iCEV, educators often adopt a flipped learning model to allow for a more individual learning environment.

“My students can easily access assigned resources on their home computers or mobile devices and be prepared to discuss the material the next day,” Martinez said. “The functionality allows students to interact and apply the concepts in their own way as they continue to learn and discuss the subject material in the classroom.”

Martinez notes that the ease and accessibility of iCEV is a huge benefit to her and her students. The functionality of the online platform allows students to access the resources and assignments through a variety of mobile devices, including phones, tablets and laptops.

“It’s daunting to see how much information there is, which is a great problem to have when you’ve been teaching for a while,” Martinez said. “iCEV makes it easy to find supplemental resources that augment my teaching in and out of the classroom. As the industry continues to change, iCEV allows me to discuss the latest trends and topics with my students during each lesson.”

“ My students can easily access assigned resources on their home computers or mobile devices and be prepared to discuss the material the next day. ”

— Erin Martinez

Addressing Careers for the Future

Martinez stresses the importance of training students for technical careers, especially for the agricultural sciences. The average age of farmers in the United States is 58, creating a concern on who will take over the industry in the future.

“ At Olathe, we’re sending young people out into the world with a deep understanding of agriculture and the opportunities within the field. ”

— Erin Martinez

“Without having the necessary programs and resources, schools are not able to reach students who want to make a career in a particular industry like agriculture,” Martinez said. “At Olathe, we’re sending young people out into the world with a deep understanding of agriculture and the opportunities within the field.”

In addition to providing iCEV in her classroom, Martinez uses the platform as a supplement to FFA judging and stresses that it is an excellent resource that can be used for a variety of subjects, including agriculture mechanics, meats, livestock, equine and safety. The platform is updated constantly with new material to help both educators and students success in these fields.

Of the 60 students that participate in Olathe’s CTE program, Martinez notes that approximately 75 percent of seniors will pursue postsecondary education through a university or technical school. With the help of iCEV, the skills her students learn in high school will translate into their postsecondary education experience and will only continue to grow as they enter the workforce.

Texas District Builds Bridges Between Students and Prospective Employers

The image displays a certificate of completion for Jane Smith, who has successfully completed the Professional Communications Certification on the 20th day of November in the year 2014. The certificate is signed by Linda Rutledge, Endorsed by Southwest Airlines. The certificate also features the ICEV logo and the Southwest logo.

The background shows a laptop and a tablet displaying the MyICEV website interface. The laptop screen shows the "Southwest Airlines Professional Communications Certification" page, which includes a video titled "Introduction to Career Clusters" and a "View Lesson Plan" button. The tablet screen shows the "Lessons" page, which lists various lessons and their completion status.

Lubbock Independent School District implements advisory committees to incorporate employer voice in CTE programs

“Certifications are more than just receiving a passing grade in a class, they show potential employers what a student can do.”

— Jill Berset

Executive Director of Career & Technical Education

The Study

Career and Technical Education (CTE) offers students the ability to build concrete skills while fulfilling learning requirements in their K-12 education. In an increasingly skills-driven economy, CTE has expanded to cover curriculum such as social media, instructional practices and more. As each curriculum is built, it's critical for CTE leaders to make decisions that are guided by employer insights and needs.

Serving 30,000 K-12 students, Lubbock Independent School District (ISD) in Texas needs a structured system in place to successfully execute its CTE programming for middle school and high school. At the center of it all is Jill Berset, executive director of career and technical education at the district.

“As far as participation, we have an exceptional number of students following coherent CTE sequences,” Berset said. “Out of our 7,200 high school students, we have approximately 5,400 that are following CTE pathways. As a district, our commitment to CTE is very strong.”

Lubbock ISD's robust CTE program utilizes impactful resources both in and out of the classroom. Courses are guided by iCEV, an online learning platform from CEV Multimedia, which features online activities, assessments, videos and curriculum. Outside of the classroom, Lubbock ISD collaborates with community advisory committees of employers within each CTE career cluster.

“We formed these committees because we believe it's important to have employer input in our programming,” Berset said.

With a four percent unemployment rate in Texas, Berset aims to build mutually beneficial connections between students and employers to fill the gap. The iCEV curriculum and advisory committees ensure students get jobs and that employers find qualified and skilled employees.

Employers Drive Programming Decisions

Lubbock ISD has 17 advisory committees with 175 individuals from the business community and post-secondary education. As a direct pipeline to employment, Berset emphasizes how important it is that CTE programming reflects what is actually going on in each industry.

“Advisory committees provide student presentations, internships for senior students and insights about the equipment being used in their field,” Berset said. “This has been especially important for our Advanced Technology Center to mimic the work being done in labs.”

Beyond guiding programming decisions, employers obtain a valuable understanding of how future employees are being trained. Berset says when committee members first partner with the school, they often don't fully recognize the value of industry certification. Now, she says each committee member understands that the skill-based certifications set students up to successfully transition into their careers.

"Certifications are more than just receiving a passing grade in a class, they show potential employers what a student can do," Berset said. "Working with these committees to educate employers and improve our own programming takes a lot of time, but we think it's important enough to make that time investment."

Curricular Resources Drive Instruction While Providing Flexibility

Many Lubbock ISD teachers use the iCEV curriculum to deliver CTE lessons. The resources guide teachers in lesson planning, grading and more.

"They really like the iCEV curriculum because it lays out easy-to-follow steps for teachers," Berset said. "It's also very flexible, so teachers can add their own information and customize their lessons as needed."

With the curriculum, teachers receive access to assets like time-saving lesson plans, engaging video content, thought-provoking student activities and more. Teachers at Lubbock ISD vet the available videos prior to delivering lessons to gauge which areas they'd like to focus on.

The district's CTE courses cover a range of topics, including agriculture, culinary and building construction. With such broad CTE programming, a consistent curriculum provider makes the CTE experience consistent across classes, while still targeting specific skills in each course.

"It benefits us to have everything in one place. Overall, iCEV has what we need," Berset said.

“ They really like the iCEV curriculum because it lays out easy-to-follow steps for teachers. It's also very flexible, so teachers can add their own information and customize their lessons as needed. ”

— **Jill Berset**
Executive Director of Career &
Technical Education

Filling the Employee Pipeline

The ultimate goal of Lubbock ISD's CTE programming is to give students the knowledge and skills they need to step into their careers after graduation. Currently, Lubbock ISD has students working in IT, automotive, auto collision, welding, audio/visual production and more. Employers are in need of employees with these specialized skills, and the district's CTE programs help fill those employment gaps.

"The caliber of learning taking place in our CTE programs truly impresses the employers that partner with us," Berset said. "For both our district and the industry experts working with us, the benefits of preparing the future generation of workers is well worth the time investment."

“ It benefits us to have everything in one place. Overall, iCEV has what we need. ”

— **Jill Berset**

Executive Director of Career &
Technical Education

Dual Credit Program Incorporates Online Career and Technical Education Platform



Today, CTE training programs are seeing more interest from students at the secondary, post-secondary and professional levels. Universities, like Murray State University in Kentucky, are taking notice of the importance of such programs and developing curriculum to ease the transition between high school and college.

“ CTE programs are meant to gauge the interest of current and prospective students and give them confidence after high school, whether they end up in a university environment or in a career. ”

— David Black
Coordinator of RACER Academy



The Racer Academy of Agriculture reaches out to the secondary system through numerous activities held on the Murray State University campus throughout the year. These career development events will bring thousands of CTE students to the campus and expose them to the post-secondary education environment.

The Study

The nature of Career and Technical Education (CTE) in the United States is quickly evolving to meet the needs of a growing global economy. Widely known as vocational education for many years, training programs were offered to students seeking a career-focused education following high school. Today, CTE training programs are seeing more interest from students at the secondary, post-secondary and professional levels.

Universities, like Murray State University in Kentucky, are taking notice of the importance of such programs and developing curriculum to ease the transition between high school and college by offering updated CTE resources, industry-backed certifications and dual credit courses to students.

“Too many students leaving high school are afraid of what comes next at the university level,” said David Black, coordinator of the Racer Academy at Murray State University. “CTE programs are meant to gauge the interest of current and prospective students and give them confidence after high school, whether they end up in a university environment or in a career.”

Murray State University developed the Racer Academy, a program that offers dual credit at the high school and university levels through courses in the university’s Hutson School of Agriculture, as a way to bridge the gap for students seeking quality CTE courses relevant to today’s industries. The implementation of iCEV, an online learning platform that delivers comprehensive CTE resources to student and educators, further supported the university’s desire to update its technology to complement instruction and learning.

Bridging the Gap

The Racer Academy of Agriculture and its dual credit program were originally developed under a grant from the USDA with an initial enrolment of 25 students. The curriculum is designed for use by qualified high school teachers to serve as instructors and facilitators for high school students to earn college credit before they graduate. Students enrolled in these courses are offered valuable insight on the transition between high school and college.

“One of the reasons students feel like they can’t succeed in higher education is that they don’t see a relevancy in what they’re learning, or they may be scared that they can’t do the work,” Hutson School of Agriculture Dean Dr. Tony Brannon said. “We’re bridging the gap to prevent and change these fears through many of our introductory courses and resources like iCEV.”

iCEV is used widely in the Racer Academy as a tool for educators and students to rely heavily upon to learn the material. Students are encouraged to use the platform’s vast resource database in and out of the classroom as a supplement to a traditional classroom environment.

“High school dual credit courses can tend to be very lecture-oriented in comparison to the traditional university level courses,” Black said. “We’re seeing a lot more engagement from our students as our university and dual credit courses incorporate iCEV technology and hands-on experiences. Students learn better if they have a visual and can actually experience what they are learning.”



The Racer Academy of Agriculture program at Murray State University promotes student involvement on the secondary level through a variety of methods. Inquiry-based learning is one way to encourage growth of an individual's intellect while growing in the learning process.

“ We’re seeing a lot more engagement from our students as our university and dual credit courses incorporate iCEV technology and hands-on experiences. ”

— David Black
Coordinator of RACER Academy

The online platform is helping students enter their careers with an open mind. From an early stage many high school students may not have direct experience working in their field. Through iCEV they gain a greater understanding of what their field of study requires and gives them the resources they need to be successful as the program progresses.

“Having the structure and depth of iCEV and the instruction in our classrooms has made all the difference for our cooperating high school teachers and students,” Brannon said. “Giving them the ability to visualize what they are learning through video and interactive activities is very important to increasing engagement, grades and retention among students.”

To date, the Racer Academy serves over 400 students in 50 plus high schools across the state of Kentucky. High school students can earn up to 27 hours of agriculture college credits through Murray State before they graduate and, in combination with other university dual credit or AP classes, many have entered as a sophomore at the college level. Black also noted that in the future, students may be able to earn certifications in specific areas of agriculture and possibly use their hours of college credit toward an associate’s degree.

“ Giving them the ability to visualize what they are learning through video and interactive activities is very important to increasing engagement, grades and retention among students. ”

— Dr. Tony Brannon
Dean, Hutson School of Agriculture

Canyon CTE Program Employs Online Digital Learning Platform to Boost Student Success

The image displays the MyICEV online learning platform interface on a tablet and a laptop. The tablet shows a course overview for 'Advanced Animal Science' with a list of lessons and settings. The laptop shows a video player for 'Advanced Animal Genetics' with a play button. To the right is a framed 'Industry Certification' document for Jane Smith, certifying her completion of the 'Fundamentals of Animal Science Certification' on October 28, 2015. The certification is signed by Mike Simpson, Business Manager U.S. Beef Corporate, and is powered by ICEV.

Businesses are looking to hire professional individuals with the ability to communicate effectively. Canyon Independent School District (CISD) Director of Secondary Programs Marc Hamil sees Career and Technical Education (CTE) as a way to provide students with both the technical and communication skills necessary to excel in their future careers.

“What I respect about iCEV is that CTE is their niche and where their expertise is. In a lot of other companies, it is one aspect of a larger business.”

— Marc Hamil
Director of Secondary Programs

A Larger Part of The Big Picture: CTE's Role

Businesses are looking to hire professional individuals with the ability to communicate effectively. Canyon Independent School District (CISD) Director of Secondary Programs Marc Hamil sees Career and Technical Education (CTE) as a way to provide students with both the technical and communication skills necessary to excel in their future careers.

“We have iCEV in the programs at both high schools now,” Hamil said. “What I respect about iCEV is that CTE is their niche and where their expertise is. In a lot of other companies, it is one aspect of a larger business.”

Hamil says he supports CTE because it offers kids the avenues to learn life skills, especially in the competitions and student organizations that run alongside classes. A portion of these are spearheaded by agricultural science teachers Jett Mason, Jeff Klose and D'Arcy Roberts.



Canyon ISD Agricultural Science Teachers (L to R): Jett Mason, Agricultural Science & Technology, D'Arcy Roberts, Agricultural Science & Floral Design, and Jeff Klose, Agriculture Science

“CTE does it better than anyone else,” Mason said. “The leadership training and opportunities offered through CTE student organizations is second to none and gives students the opportunity to hone their skills. It teaches basic, yet integral skills that aren't specific to a certain job and span across any career they may choose, whether it be introducing themselves, interviewing skills and public speaking skills.”

Klose promotes the use of iCEV in the classroom as a way to give students a problem-based, hands-on way to learn the same material that they receive in their classrooms from a theoretical standpoint.

“Not every student plans to go to college,” Klose said. “iCEV gives them valuable insight into various careers they can explore if they don't choose to pursue higher education.”

While it can provide the building blocks for a student's transition into the workforce directly after high school, for those who wish to take the plunge into higher education, CTE can also lay a foundation for students to build on during their time at a trade school, two-year college or four-year university. They can then use the combination of higher education and the knowledge acquired in high school to thrive in the workplace.

"Career skills and training is a basis for why we use iCEV, and there is a growing need for skilled laborers in the United States, the global economy and the world," Mason said. "CTE is providing those skilled students with hands-on experience and training in high school to prepare them for immediate entry into the workforce.

FFA: Focused for Achievement

A part of CISD's CTE program, Canyon High School's Agriculture Science Program has seen success through the use of iCEV. The program, which encompasses 350 students, has used iCEV to train competition teams, facilitate classroom instruction and keep students on track during the mayhem of spring semester. Canyon High School Agricultural Science teachers have used iCEV since its inception and have utilized it to catapult Canyon Future Farmer's of America's (FFA) continued growth throughout the years. As a result, it is leading the state of Texas as one of the top performing FFA programs.

"I've seen my students utilize prior skills to grasp abstract concepts as the coursework becomes more advanced and rigorous," Mason said "They understand the theory behind the skill and are more likely to master that skill, but on the flip side, they actually learn and remember the theory behind it better."

Canyon High School is one of two high schools that make up the Canyon Independent School District in Canyon, Texas. In the past three years, the Canyon FFA program has grown at warp speed; going from one agricultural science teacher, a 2,300 square ft. learning center and 67 enrolled students, only 13 of which were FFA members in 2013, to presently having three agricultural science teachers, a 14,000 square ft. learning center and 350 students enrolled in the program, all of which are FFA members.

"This year, with the new lesson plans, projects and activities that have been included in the welding course, I have utilized the curriculum in a holistic manner in the classroom," said Canyon High School Agricultural Science teacher Jett Mason. "I really appreciate the relevance and rigor that the lesson plans have brought in addition to the projects and activities already being used in the classroom."

“ I really appreciate the relevance and rigor that the lesson plans have brought in addition to the projects and activities already being used in the classroom. ”

— Jett Mason
Agricultural Science
& Technology Teacher

Accommodating Diverse Learners

With the rising use of technology in the classroom, the Canyon Agricultural Science Team has found iCEV to be helpful in covering a wide span of learning styles in the classroom. The traditional method of teaching often leaves students behind as they quickly become bored with traditional teaching styles and classroom structures.

“The lessons are self-paced, so it really accommodates students with different learning speeds. Students that are gone a lot have the ability to do their work online, and that’s really beneficial.”

— **Jeff Klose**
Agricultural Science Teacher

“The lessons are self-paced, so it really accommodates students with different learning speeds,” Klose said. “Students that are gone a lot have the ability to do their work online, and that’s really beneficial. They can work on it from home if need be.”

iCEV helps students stay up to date on their course work and gives them peace of mind because they don’t need to worry about falling behind in class due to their involvement in extracurricular activities like FFA. In addition, iCEV has revolutionized the use of technology in CTE classrooms, providing rigor and relevance to the Canyon program.

“It’s amazing in four years how far we’ve come in terms of using the technology resources we have,” Mason said. “Students expect to use technology in a way that will help them grasp and understand the concepts better, and iCEV plays an important role in implementing that digital aspect of learning in the classroom.”



D'Arcy Roberts, Agricultural Science & Floral Design Teacher, conducting a floral design class using the iCEV curriculum platform at Canyon High School, Canyon, TX.

Because it incorporates both audio and video, Mason says iCEV is the next best thing to actual hands-on activities and learning experiences.

“Students are able to see the activities firsthand through iCEV, and that really helps visual learners focus on the curriculum,” Mason said. “Before we go to the shop in a welding class, I can show them a clip on iCEV about a particular welding process so they know what to expect, what they need to replicate and what it needs to look like. Instead of starting from scratch, they have a good direction and idea of what the project or assignment is supposed to look like.”

Business & Industry Evaluations

Southwest Airlines Co.
Linda Rutherford
VP & CCO
Communications & Outreach
2702 Love Field Drive, HDQ 1PR
Dallas, TX 75235
214-792-4625
Linda.rutherford@wnco.com



September 15, 2016

To Whom It May Concern:

Education and experience are two of the most important tools required in today's world. The earlier a person can decide on the areas of interest for a career the better chance they have of achieving the most success.

The Southwest Airlines Professional Communications Certification is an example of a tool that can help high school students explore careers and get ahead. The certification is built to allow a high school student to explore communications expectations in various careers as well as those "soft skills" that come into play in the work place.

Southwest Airlines, a company known worldwide for its dedication to multiple stakeholders, understands the importance of connecting with many different audiences. Whether giving a speech to local community leaders, or writing a letter of support to a regulatory agency, our People understand the importance of presenting with impact, articulating points of view with clarity and precision, and possessing effective written and oral communications skills.

The certification training includes course study that provides students with substantial knowledge and various skills in several aspects of professional communication with assessments given during the program and an examination at the end of the course that validates the knowledge gained by the student.

Southwest opted to get involved and endorse this communication program because we believe that a certification recognized by an established industry or company would provide the students with skills and abilities they need to succeed in a high-skill career. We also believe the certification signals to a potential college or hiring agency that this student has been intentional in his/her learning in this important and dynamic skills area.

We believe it is part of our mission to support the emerging workforce and up and coming leaders in our country. The opportunity to endorse a Certification program in communication skills at the high school level contributes to that goal and we are proud to be involved.

Sincerely,

A handwritten signature in black ink that reads "Linda Rutherford". The signature is written in a cursive, flowing style.

Linda Rutherford



550 BOWIE STREET, AUSTIN, TEXAS 78703
WWW.WHOLEFOODS.COM
AMERICA'S HEALTHIEST GROCERY STORE

5/18/18

To Whom It May Concern,

I am the head of Global Learning and Development for Whole Foods Market based in Austin, Texas. I also led the training functions for other Texas companies including Pier 1 Imports, RadiosShack Corporation and FleetPride.

I am writing this letter to advocate for the enhanced use of specialized certifications to better prepare our future workforce. The primary role of learning and development in corporate America is to prepare employees to function at high levels in all aspects of his/her role. This includes functional expertise and competencies often referred to as "soft skills."

Based on my 25-years' experience in the talent field, I am confident that candidates possessing certifications such as Career Preparedness and Professional Communications are better equipped to join the workforce. The certifications will give them a leg-up in the interview process and then allow them to expedite their speed to proficiency. For these reasons, hiring managers and employment recruiters will see certifications as a candidate differentiator.

I appreciate your consideration to support the expanded use of specialized certifications with students.

Sincerely,

A handwritten signature in black ink that reads "Mike Van Lente". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Mike Van Lente
Senior Global Director of Learning & Development



May 11, 2018

To Whom It May Concern:

I am writing this letter in support of the Livestock Selection & Evaluation Certification endorsed by the National Collegiate Livestock Coaches' Association. I am a former member of the South Plains College and Texas Tech University livestock judging teams. Fortunately, my teams were able to achieve a number of great successes, none more memorable than receiving the honor of 2011 National Champions while at Texas Tech. Additionally, I was named to the All-American livestock judging team in both junior and senior college. After the completion on my undergraduate education, I completed a M.S. and Ph.D. program in Animal Science with a focus in ruminant nutrition.

I currently serve as a consulting nutritionist for Purina Animal Nutrition, LLC. I represent a company that is well established as the leader in livestock nutrition. My primary responsibility is to provide technical support for the sale beef cattle products in West Texas, New Mexico, and Arizona. I have been blessed to work with some of the most prestigious ranching entities in the country to drive cattle performance with sound nutrition.

The skills that I developed while involved with livestock judging provided a foundation for success in my personal and professional life. There is no doubt, the Principles of Livestock Selection & Evaluation Certification, developed in collaboration with CEV Multimedia, provides tremendous opportunities for students. The curriculum promotes career-readiness skills and provides students with knowledge of the livestock industry. Students that utilize this tool develop the ability to select and evaluate livestock, understand the physiology of animal growth, and apply the concepts of "market readiness" to the food product industry.

The development of competent, career-ready agricultural students is imperative. With a world-wide focus on sustainable agricultural systems, we must equip students with the skills necessary to address the challenges ahead. We must train students to effectively evaluate and manage production systems of domestic livestock in order to promote a sustainable system that will feed our growing population. Students earning this certification will be well positioned to make an impact on production agriculture.

Sincerely,

Clay Burson

Clay Burson, PhD

Beef Cattle Consultant

Purina Animal Nutrition, LLC.

212 East Harvard St.

Lubbock, TX 79403

Email: WCBurson@landolakes.com

Phone: 325-260-8484

Engine & Equipment Training Council (EETC)
Erik Sides
Executive Director
3880 Press Wallace Drive
York, SC 29745
888-406-1810
eetc@eetc.org



April 24, 2018

To Whom It May Concern:

The Engine & Equipment Training Council (EETC) is a recognized trade association with a membership made up of dedicated industry professionals from manufacturers, distributors, dealers, education institutions and associations. Our primary goal is to address the shortage of qualified technicians in the outdoor power equipment industry.

Because of this shortage, we understand the need to provide relevant and meaningful training opportunities for students, as we know recruiting at an early age is very important. We view the Principles of Small Engine Technology Certification, developed through collaboration with CEV Multimedia, as a tool to provide these meaningful opportunities and aid in the recruitment of skilled technicians for our industry.

The certification is designed to introduce students to imperative skills needed to enter the power equipment industry. Specifically, the certification coursework lays a foundation for a better understanding of four-stroke engine components and operation, as well as basic servicing, troubleshooting and repair. Students earning this certification will be better positioned to fill the employment needs of our industry. This certification can also serve as a stepping stone for a student to further his/her career at a technical college or to obtain additional certification such as the EETC Technician Certification.

These students will be a step ahead and will no doubt help raise the level of qualified technicians in our industry.

Sincerely,

A handwritten signature in black ink that reads "Erik Sides". The signature is written in a cursive style with a large, stylized 'E' and 'S'.

Erik Sides



May 24, 2018

To Whom It May Concern:

I am writing this letter in support of the Culinary Meat Selection & Cookery Certification endorsed by the American Meat Science Association.

For over six decades, Pilgrim's has produced healthy, high-quality food products that go into some of the world's finest recipes. As the second-largest chicken producer in the world, Pilgrim's supplies more than 8.1 billion pounds of chicken products worldwide annually, and approximately one in every five poultry eating occasions is provided by Pilgrim's U.S. operations.

Based on consumer demand, the U.S. Pilgrim's R&D team is increasingly developing more easy-prep products to accommodate the diminishing landscape of consumers with time devoted to cooking from scratch or who may be intimidated by cooking proteins at all. Additionally, our customers (restaurant operators, retail delis, etc.) are seeking fool-proof options to delivery great tasting products while utilizing an untrained workforce relative to food preparation.

It is my firm belief the Culinary Meat Selection & Cookery education series establishes an important baseline understanding of meat cookery and preparation methods which is not taught broadly to our younger generations as in the previous generation. This series can establish essential culinary awareness and protein cookery confidence in our students and highlights for them a potentially fruitful career path in the food and restaurant industry, an industry with approximately \$2 trillion in sales. This series can be used as a building block for career establishment, whether a student chooses to continue into secondary education or enter directly into the workforce.

It is imperative we have a pipeline of skilled workers for current and future positions in the food/restaurant industry. With regards to food safety and quality alone, a skilled workforce is vital for proper food handling and preparation techniques. Additionally, students who earn the Culinary Meat Selection and Cookery Certification have proven that they are more qualified for food handling employment than candidates without certification, thus leading to a higher likelihood of industry employment.

Your consideration of this endorsement is greatly appreciated

Sincerely,

Marcia Reeves
Head of R&D



1770 Promontory Circle
Greeley, CO 80634-9039 USA

970-506-8128
Marcia.Reeves@pilgrims.com
www.pilgrims.com



November 1, 2016

Elanco Animal Health
2500 Innovation Way
Greenfield, IN 46140 USA
www.elanco.com

To Whom It May Concern:

The mission of Elanco is to provide those who raise and care for animals with solutions that empower them to advance a vision of food and companionship enriching life. Therefore, Elanco is committed to investing in tomorrow's leaders through support of the Veterinary Medical and Fundamental Animal Science certification program.

Pursuing animal science and veterinary educational tracts provides valuable experience for students who are passionate about transforming animal health and maintaining the well-being of our food supply and our pets. Participation in the program strengthens the industry through targeted curriculum and career exploration opportunities.

We believe there is also benefit to students as they prepare for college and begin to choose their career path in areas which have high demand. In addition, the certification signals to colleges and potential employers that these students have shown dedication and commitment to learning about a specific field.

The certification training includes a course of study that provides students with substantial industry knowledge and various skills. The assessment given during the program and the examination at the end of the course validate the knowledge gained by the student.

Supporting an emerging workforce that is interested in raising awareness about global food security and celebrating the human-animal bond is another reason Elanco decided to get involved. We hope our support and endorsement of the certification programs will provide even greater opportunities for students and reinforces our commitment to develop future industry leaders.

Sincerely,

Larbi van Lier
Senior Director, US Beef and Swine Business Unit



CERTIFICATION AND AUDIT (FSNS C&A)

FSNS Certification & Audit, LLC.
199 W. Rhapsody Drive
San Antonio, Texas 78216

To Whom It May Concern:

I am writing this letter in support of the Food Safety and Science Certification endorsed by the American Meat Science Association.

I started working for Food Safety Net Services right out of college four years ago. I was active in AMSA, participated on a National Champion Meat Judging Team at Texas Tech and graduated with a degree in Animal Science. I also grew up with an agriculture background from judging and showing livestock through 4-H and FFA.

Even though I have a strong agriculture background and graduated with a degree related to my profession, there was a large learning curve once I was in the industry. I truly believe the skills learned through this program will prepare students to join the work force with a strong background in Meat Science and help companies decrease the training time needed for new hires. Students who earn this certification have demonstrated that they have a mastery of understanding federal and state food industry safety standards and practices and demonstrating HACCP practices and implementation procedures. Both of these are crucial to a position like mine in a third party food safety auditing company. The training time for a new auditor is a minimum of six months. I have no doubt the lessons taught in this program will decrease that time. Through my position, I interact with several QA type positions in processing facilities. I believe this Certification will also improve the knowledge of people in those positions. I wish that I would have been able to participate in this type of training prior to my employment.

Sincerely,

A handwritten signature in black ink, appearing to read "Mandy-Jo Laurent".

Mandy-Jo Laurent
Audit Coordinator
FSNS Certification & Audit, LLC.

199 W. Rhapsody Drive | San Antonio, Texas 78216 | 888.525.9788 | www.FSNSaudit.com



Clayton Franklin
CEV Multimedia, Ltd.
1020 SE Loop 289
Lubbock, TX 79404

Subject: Plant Science Certification

Dear Ms. Franklin:

One of the most important challenges facing the world today is feeding and clothing an ever-increasing population in a sustainable manner with dwindling resources. Bayer is one of the leading companies providing innovative seed and crop protection solutions to agricultural producers around the globe so that they can meet this challenge. As we look to the future, both industry and academia will need passionate, young minds with a firm foundation in plant science to provide continued innovation for addressing agriculture's demands.

The Plant Science Certification, developed through the collaboration between CEV Multimedia and Bayer, is designed to provide students with an introduction to critical plant science topics, including: scientific classification; plant anatomy and physiology; plant genetics; natural resources; plant nutrition; and pest management. Students obtaining a Plant Science Certification will be well-positioned to fill employment needs throughout the agricultural sector or be poised to further their education at the collegiate level. Regardless of the path chosen, the Plant Science Certification will be an asset to students interested in contributing to feeding and clothing the world.

Yours sincerely,

A handwritten signature in black ink that reads "Ginger G. Light".

Ginger G. Light, Ph.D.
Trait Introgression and Greenhouse Manager

September 16, 2016

Ginger Light, Ph.D.

Crop Science, a Division of
Bayer

Postal address:
Box 45037
3315 9th Street
Lubbock, TX 79409
USA

Tel. +1 806-730-4503
ginger.light@bayer.com

www.cropscience.bayer.us



American Meat Science Association

April 23, 2018

To Whom It May Concern:

The core purpose of the American Meat Science Association (AMSA) is to foster community and professional development among individuals who create and apply science to efficiently provide safe and high-quality meat. AMSA strongly endorses the CEV Culinary Meat Selection and Cookery certification which enhances and expands education for a future generation of chefs.

The Culinary Meat Selection and Cookery Certification provides students with a broad understanding of culinary techniques and meat selection and preparation. In addition, concepts such as food safety, food quality and palatability, carcass grading, retail cut identification, and poultry evaluation are covered. The certification was reviewed by AMSA member meat scientists who are experts in the field of meat science and meat evaluation.

There is an increasing need for those who work in the culinary field to understand how food science, meat science and culinary arts are all connected. Going through this certification process can provide valuable insight into the selection and preparation of protein dishes. We believe students who earn this certification will have a solid foundation that they can build upon in college or apply directly in the workforce.

Sincerely,

A handwritten signature in blue ink that reads "Thomas H. Powell".

Thomas H. Powell
Executive Director, AMSA

May 21, 2018

To Whom It May Concern:

The *Certified Angus Beef*[®] brand team continually provides basic beef education to chefs with a wide range of experience, giving them a behind-the-scenes look of beef's journey on its way to their kitchens. Because of my experience with these educational sessions, I, resident meat scientist for the *Certified Angus Beef*[®] brand, strongly recommend the AMSA Culinary Meat Selection and Cookery Certification, which aids in the communication between the culinary arts and the meat industry.

The Culinary Meat Selection and Cookery Certification not only provides culinary students with a superior understanding of food safety, meat quality, meat selection and preparation, but it also provides the meat science students with basic culinary terms and techniques. After reviewing the content of the certification, I was confident it could efficiently, and effectively, educate many future chefs about the meat industry – an area that is not a focus for culinary schools.

The gap between the meat industry and the culinary arts continues to grow; however, this certification gives each side a more valuable understanding and appreciation of the other. Going through this certification process can give culinary students useful information that will allow them to excel in meat selection and preparation while offering meat science students tools to help coach chefs through those decisions. I believe students who earn this certification will have a solid foundation that they can build upon in college or apply directly in the workforce.

Sincerely,



Diana Clark
Meat Scientist, Certified Angus Beef LLC





BELTON VETERINARY CLINIC

707 West Loop 121
Belton, Texas 76513
(254) 939-1884
www.beltonvetclinic.com

May 9, 2018

To whom it may concern:

My name is Matthew Wright and I am a partner in the Belton Veterinary Clinic in Belton, Texas. I have been here for over eleven years and part of the ownership for the last five years now. We are a large, multi-doctor, mixed animal practice in central Texas with over fifty employees.

I am writing this letter in support of the Veterinary Medical Applications Certification endorsed by Elanco Animal Health. Our team and I feel like the veterinary industry as a whole believes that students who earn this certification have demonstrated a mastery of concepts vital to succeeding in the industry. With the decline of standardized career and technology courses in public education and the lack of funding, it is important to utilize resources of this caliber to further our future employees education and therefore maintain the integrity of our profession.

My understanding is that students who complete this certification will be proficient in fundamental veterinary skills, such as checking vital signs, venipuncture and administering medication and injections. They should be able to perform the basic laboratory tests we routinely perform such as fecal flotations, heartworm testing and prepping samples for microscopic examination. They also will understand and be able to perform animal care skills such as nail trimming, bathing and grooming, ear cleaning and treatments, along with dental care. These students should be proficient at patient monitoring, maintaining IV fluid lines and catheters, applying simple bandages and wound care. These students will have been exposed to surgical procedures for both large and small animals.

I feel like it is imperative that there be a way to prepare and expose students to our industry and get them prepared for a much needed positions in our industry. Not only for our pets, but to help care and maintain our nation's food supply. I feel like the growing disconnect in our country from agriculture in general makes this even more important. To be able to expose students to our industry and how to care for and maintain our food supply is a growing concern, and I believe this program will benefit not only the students, but the veterinary profession and agriculture in general. Therefore maintaining our nation's safe food supply and allowing us to maintain our freedom from relying on foreign resources.

Respectfully,

J. Matthew Wright, DVM



May 10th, 2018

To whom it may concern,

I am writing this letter in support of the Principles of Small Engine Technology Certification endorsed by the Equipment & Engine Training Council.

My name is Mike Broetzmann and I am the Lead Service Training Specialist for Kohler Engines. In my role, I am responsible for all technician training and certification programs for the Kohler Engines worldwide distribution network, which includes over 9,300 servicing dealers in North America, 700 of which are in Texas. Our engines and dealer network service and support equipment is used in a myriad of industries including agriculture, lawn care as well as gas and oil production. All of which have substantial presence in Texas economy.

Students who earn the Small Engine Technology Certification gain mastery and skills in the core concepts essential for becoming an outdoor power equipment technician, including:

- Four stroke engine operation
- Analyzing engine systems and engine components
- Engine disassembly and reassembly
- Troubleshooting, service and repair

It is crucial we develop a pipeline of skilled workers for current and future positions in the industry. A student that has earned the Principles of Small Engine Technology Certification that is endorsed by a nationally recognized association such as EETC has proven that they are more qualified and prepared for stepping into high demand roles in our industry. In addition, this certification is extremely valuable to employers as it helps connects us to qualified candidates and should be offered at all schools with courses in small engines. Building and supporting school programs that offer this skillset is crucial to the success of not only the Kohler dealer network, but the industries supported by our products.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Broetzmann". The signature is stylized and written in cursive.

Michael Broetzmann
Lead Service Training Specialist
Michael.Broetzmann@kohler.com



May 17, 2018

To whom it may concern,

I am writing this letter in support of the Learning Objectives for Food Safety & Science endorsed by the American Meat Science Association.

I am responsible for developing the enterprise strategy for Sustainability. I collaborate with enterprise leaders of Food Safety, Environmental Services, Animal Wellbeing, Workplace Safety and Corporate Social Responsibility to develop strategic goals that will prepare our business for the future. We have more than 117,000 Tyson team members (TM) in 135 plants across the US, with 11 plants and 12,200 TM in Texas.

Students (talent) who earn this certification in food safety and science have demonstrated they have a mastery of concepts vital to succeeding in this industry:

It is imperative we have a pipeline of skilled talent for current and future positions in the industry.

- Finding and retaining talent that enters with the fundamental understanding of food safety and food science is a great opportunity for success.
- Talent that have been exposed to food industry safety standards and practices, and identify causes of foodborne illnesses and methods of prevention is valuable.
- Talent earning this certification would be more prepared and employable than a student without the certification.
- Growing and developing talent to lead this organization in the future is critical to our success and programs like this allow real learn opportunities early in their career.

As one of the largest protein companies in the world, we are constantly looking for talented people who want to grow their career at Tyson Foods. Today, the president of our poultry business was in the FFA, he started at Tyson as a Service Tech on poultry farms and now he is leading the largest poultry company in the world. We appreciate programs that invest and grow people as we collectively raise the world's expectations for how much good food can do.

A handwritten signature in cursive script that reads 'Justin Ransom'.

Justin Ransom, Ph.D.
Senior Director
Sustainable Food Strategy

José O. Dodier, Jr., Chairman
Barry Mahler, Vice Chairman
Scott Buckles, Member
Marty H. Graham, Member



David Basinger, Member
Tina Y. Buford, Member
Carl Ray Polk, Jr., Member
Rex Isom, Executive Director

TEXAS STATE SOIL AND WATER CONSERVATION BOARD
Protecting and Enhancing Natural Resources for Tomorrow

May 15, 2018

To Whom It May Concern:

I am writing this letter in support of the Plant Science Certification endorsed by Bayer CropScience. As the Executive Director of the Texas State Soil and Water Conservation Board (TSSWCB), I firmly believe in the importance of plant sciences, conservation and educational efforts. As conservation practices continue to change, it is essential that the stewards of the natural resources in Texas stay abreast of the latest trends.

Established in 1939, TSSWCB administers Texas' soil and water conservation law and delivers coordinated natural resource conservation programs through the State's 216 soil and water conservation districts. Additionally, TSSWCB is the lead agency for planning, implementing, and managing programs for preventing and abating agricultural and silvicultural nonpoint sources of water pollution. TSSWCB also works to ensure that the State's network of 2,000 flood control dams are protecting lives and property by providing operation, maintenance, and structural repair grants to local government sponsors.

Students who earn this certification have demonstrated that they have a mastery of concepts vital to succeeding in conservation efforts in agriculture, including:

- Identify major crops and analyze trends in crop production for regions of the United States.
- To understand how to calculate fertilizer needs.
- Understand the importance of water conservation and management on crop production and the environment as a whole.

TSSWCB recognizes the importance of education and outreach efforts and strives to support valuable learning opportunities.

Sincerely,

Rex Isom
Executive Director



May 14, 2018

To Whom It May Concern:

I am writing this letter in support of the Livestock Selection & Evaluation Certification endorsed by the National Collegiate Livestock Coaches' Association.

I serve as a Ruminant Nutritionist on the Beef Strategic Technical Services team at Zoetis. Zoetis is the largest Animal Health Company in the World, with over 9,000 employees and over \$5 billion in annual revenue. I have been with Zoetis since 2016 and help support cattle customers in Texas, New Mexico, Oklahoma and Kansas. Prior to joining Zoetis, I was on faculty at Texas Tech University in a teaching and research capacity.

These two opportunities have allowed me to work with student in academia and the industry. Although high schools are producing good students, they are consistently becoming less and less educated about the agricultural industry. Currently, about 1.8% of the population is involved with production agriculture and they are feeding the other 98.2% of the population.

Students who earn this certification have demonstrated that they have a mastery of concepts vital to succeeding in this industry or in college. We live in a global market, and a student's ability to discover and analyze the growth and development of the livestock industry as a global commodity is crucial. As fewer students are directly involved with production agriculture, it is imperative that they understand the elements of a successful breeding programs, how to analyze EPD data and parent selection. These skills are crucial to the long-term success of the livestock industry.

Without this certification program, it would take years of experience to gather this knowledge in the industry. It is crucial that we are doing all we can to prepare our future employees to be successful from their first day on the job. As the population grows, the livestock industry will be under more pressure to meet the protein demands of our World. It is imperative we have a pipeline of skilled workers for current and future positions in the industry. A student that has earned the Livestock Selection & Evaluation Certification will be able to differentiate themselves based on the skills and knowledge acquired during these courses. As an employer, this certification is extremely valuable to help connect us to qualified candidates. This and other certification programs should be offered at all schools with courses in agriculture. Thank you for your consideration.

Sincerely,

Bryan Bernhard

Bryan Bernhard, PhD
Nutritionist
Beef Strategic Technical Services
Zoetis



February 8, 2019

To Whom It May Concern:

I am writing this letter in support of the Center for Financial Responsibility Personal Financial Literacy Certification.

My name is Robin Warner and I am a Managing Director at Oaklins DeSilva & Phillips Investment Bank (ODP) in New York City. We are part of the Oaklins group of 44 Investment Banks in 40 countries. We all employ support staff that are mostly millennials and play important roles in the success of our firms. At ODP, our 10 plus Investment Bankers depend upon our support teams to assist in preparing for our deals and also for meetings with potential clients.

We are FINRA compliant. FINRA is the Financial Industry Regulatory Authority charged with governing business between bankers/brokers and the public. We must conduct background checks on future employees and if bankruptcies, tax issues, any type of financial issues show up then the candidate will not be hired. However, if a candidate shows that they have a financial certification, for example, this will positively play into our consideration for this candidate.

High school and college graduates must be able to understand financial literacy and how it now only affects their personal lives but also their ability to secure quality employment. It is often stunning how many candidates...many of them college graduates...that have no idea that their personal financial history is so troubled and will negatively follow them for years.

I cannot state more emphatically that young people must be financially literate. I just spoke at an Education Conference and one of the panels dealt specifically with the dearth of financial literacy among millennials and it being, next to tech literacy, the most important knowledge base that must be acquired by millennials and generation X (pre-millennials).

We are looking for candidates who are aware of their current financial situation, understand the value of and their own credit reports, are respectful of and understand why they need to pay taxes, and can demonstrate general financial responsibility.

Lastly we would not consider a certification from a no-name group as legitimate; we would want to see that it had an affiliation such as Texas Tech University Center for Financial Responsibility...the latter would give us comfort that this is a legitimate and valuable certificate.

Very truly yours,

Robin Warner

Robin Warner | Managing Director

Oaklins | **DeSilva+Phillips**

475 Park Avenue South, 22nd Floor, NYC 10016

T 212.686.9700 D 212.651.2605 M 917.589.4858

E r.warner@dp.oaklins.com

dp.oaklins.com | [LinkedIn](#)

Oaklins DeSilva & Phillips LLC

475 Park Avenue South, 22nd Floor
New York, NY 10016
United States

Phone +1 212-686-9700

Oaklins | **DESILVA+PHILLIPS**

dp.oaklins.com

ABUELO'S[®]

FOOD + DRINKS + FAMILY

4413 82nd Street, Suite 250 | Lubbock, TX 79424 | 806.785.8686

To Whom It May Concern,

I am writing in support for the Culinary Meat Selection and Cookery Certification endorsed by AMSA and produced and offered by CEV Multimedia.

As VP Supply Chain for Abuelos, a Texas based Restaurant chain with 38 locations; this program certainly has value to us. The skills an individual may learn are not only a value to our company, but represent an employment advantage for the students who participate. Our industry has a tremendous need for personnel who possess skill and knowledge in food safety and production, as well as advanced knowledge in beef, pork, poultry, and seafood. It is imperative that we have a future pipeline of skilled workers for current and future positions.

Hopefully this endorsement will aid in the consideration to the programs and certification to aid our industry in recruiting and hiring the individuals who complete this program.

Sincerely,



Larry Pierson

Vice President Supply Chain

Abuelos



A M E R I C A N P A I N T
H O R S E A S S O C I A T I O N

February 8, 2019

To Whom It May Concern:

I am writing this letter in support of the Equine Management and Evaluation Certification endorsed by the National Horse Judging Team Coach's Association (NHJTCA). I am the Sr. Director of Judges, Shows, and Education for the American Paint Horse Association. We are based in Ft. Worth, Texas which is home to 50,000 members around the world. I grew up showing and judging horses, and in turn decided to make a career in the equine industry. Programs like the Equine Management and Evaluation Certification would have been a huge asset to me had they been available in the past.

Students who earn this certification have demonstrated that they have a mastery of concepts vital to succeeding in this industry, including identifying and examining major factors for evaluating classes including, Halter, Western Pleasure, Western Horsemanship, Hunter Under Saddle, Hunter Hack, Hunt Seat Equitation and Reining. Identifying and understanding rules, standards and faults which affect a horse's placing within the Halter, Western Pleasure, Western Horsemanship, Hunter Under Saddle, Hunter Hack, Hunt Seat Equitation and Reining classes. Gaining skills evaluating Halter, Western Pleasure, Western Horsemanship, Hunter Under Saddle, Hunter Hack, Hunt Seat Equitation and Reining classes. These are industry specific skills that cannot be learned in a more concise and effective method than this. It took many of us years to gain the knowledge necessary to be competent judges for the industry.

It is imperative we have a pipeline of skilled workers for current and future positions in the industry. A student that has earned the Equine Management and Evaluation Certification endorsed by the National Horse Judging Team Coach's Association has proven that they are more qualified for employment in the equine industry than a candidate without the certification and is more likely to be employed. In addition, this certification is extremely valuable to employers as it helps connect us to qualified candidates, and should be offered at all schools with courses in equine science.

Sincerely,



David Dellin
APHA Director of Judges

DD/ac



P.O. Box 961023 | Fort Worth, Texas 76161 | 817-834-2742 main | 817-834-3152 fax

Physical Address: 2800 Meacham Blvd | Fort Worth, Texas 76137 | apha.com



Elanco Animal Health
2500 Innovation Way
Greenfield, IN 46140 USA
www.elanco.com

To Whom It May Concern:

I am writing this letter in support of the Elanco Veterinary Medical Applications Certification.

Each day my job allows me the opportunity to witness the tireless work of veterinarians, veterinary technicians and their support staff. As a representative of Elanco Animal Health my primary objective is to provide solutions, through innovation, to veterinarian practices across central and southwest Virginia. I believe my exposure to the dedicated professionals in the veterinary industry, who truly have a heart for service and a passion for helping others and their animals, serves as a barometer to all their colleagues across the United States.

Like any business, many different pieces must be assembled to create the mosaic of a successful veterinary clinic or animal health company. One, if not of highest demand, is acquiring new talent with the proper credentials and useful experiences to be an effective team member. It is imperative that students have access to educational avenues that provide practical capabilities such as the following:

- Gaining in-depth knowledge and understanding of vital signs, blood sampling and injection methods in various animal species.
- Understand clinical terminology and veterinary terms including abbreviations and symbols relating to the diagnosis, pathology and treatment of animals.
- Identify medications, calculate dosages, complete a prescription label and explain the handling and distribution, protocol and laws for controlled substances.

Certifications such as Elanco Veterinary Medical Applications Certification will enable students to display a commitment to excellence that is required in the high-stress and demanding profession of veterinary medicine and animal health.

Sincerely,

Bryce A. Winfrey

Territory Manager

254.592.2355

bryce.winfrey@elanco.com

May 8, 2018

College Avenue Animal Clinic

200 College Avenue

Levelland, Tx 79336

(806)894-4140

jessthomas.dvm@gmail.com

To Whom It May Concern,

I am writing this letter to give my full support of the Elanco Veterinary Medical Applications Certification endorsed by Elanco.

I am a Texas Tech Alumni and graduate of the College of Agricultural Sciences and Natural Resources. From there, I attended the Texas A&M College of Veterinary Medicine and graduated with a Doctor of Veterinary Medicine in 2009. I have been in private practice in West Texas for the past 9 years. My career has been primarily focused on mixed animal practice and I have also been afforded opportunities to work both relief and in mobile veterinary medicine. Prior to my post graduate studies, every work opportunity that I had involved the field of veterinary medicine. Beginning as a volunteer kennel tech, working into a veterinary technician position, and progressing to a veterinarian has given me an extensive background in the field of veterinary medicine and how private practice functions.

In private practice, the majority of veterinary hospitals hire employees with little to no training or background in the veterinary field. Many of these employees are typically high school or college age and begin as part time help. They are provided with on-the-job training under the direct supervision of the practicing veterinarian. Please note that the liability of any employee's actions or decisions ultimately falls back on the advising veterinarian. The practice that I am at now, has employed both licensed and certified veterinary technicians for the past 5 years. These technicians have received formal training from either the Vista or Penn Foster Veterinary Technician programs. I can attest that there are huge differences in a work environment that employs formally trained technicians verses one that does not. The quality of medicine that we now practice has substantially increased in a large part to hiring certified employees. They are prepared with advanced technical skills which makes them significantly more efficient. Formally trained employees also have a basic background in medical knowledge and terminology which makes professional communication possible. Their patient handling skills are superb creating a safer work environment and their compassionate bedside manner is preferred by clients. Their training also allows them to recognize the slightest change in a patient's health or mentation and notify the attending veterinarian. This makes prompt critical changes in a patient's treatment plan possible. Veterinary medicine requires a team effort and these formally trained technicians play an invaluable roll.

The Elanco Veterinary Medical Applications Certification Program is designed for high school students. It provides these students with a strong understanding and background in the most important

functions for the veterinary field. For example, students that complete this program will have a good understanding of clinical veterinary terminology including abbreviations and symbols related to the diagnosis, pathology and treatment of animals. They will also be able to demonstrate appropriate animal handling and animal care skills in a variety of animal behavioral situations. The learning objectives that are outlined by Elanco are sound and highly relative to the day to day functions in a private practice setting. Students who complete this program will have mastered these objectives and will be endorsed by a nationally recognized association such as Elanco. This serves to make these students more prepared and more employable than their peers.

In a market flooded with bachelor degrees, this program creates a pipeline of skilled workers for current and future positions in the industry. It also serves to give these students an added advantage should they choose to further their education and either pursue a veterinary technician certification or DVM degree. This is a luxury that I would have benefitted from, had it been an option for my career path. As an expert in this field, I strongly feel that this program is invaluable and has a place in elevating the standard of care that we strive to protect.

Sincerely,

Jessica D. Thomas DVM

1655 Main Street, Suite 101
Lubbock, TX 79401

T 806.747.2711
F 806.747.2716

LIVEUNITEDLUBBOCK.ORG



Lubbock Area United Way

May 15, 2018

To Whom It May Concern:

Lubbock Area United Way was founded in 1946 and is deeply involved in all aspects of life in this area. This organization works to bring the business and non-profit communities together in order to craft solutions to address a variety of problems in our area

I am writing this letter in support of the Business Office Technology Preparation Certification endorsed by Express Employment Professionals. I have over 30 years of experience managing non-profit organizations and employees. I have seen how organizations flourish when employees possess superior business and communication skills.

The Business Office Technology Preparation Certification demonstrates to potential employers that applicants have developed skills and mastered concepts vital to succeeding in any industry, including: teamwork techniques, superior customer service, and proper written and verbal communication techniques.

Communication skills, basic office and software knowledge are essential to succeed in any workplace, but regular high school curriculum does not cover these critical skills. No amount of technical knowledge will make up for an employee who cannot communicate effectively with coworkers, superiors, clients or customers.

This certification indicates that students possess the necessary foundational skills to build successful careers and contribute positively to the companies, organizations and communities they serve. Such skills should be taught, evaluated and validated at the secondary school level. Students who can pass the rigorous certification exam required by this course will have the skills necessary to obtain employment that leads to a successful career.

Our community is successful when our citizens are able to create self-sufficient and fulfilling lives. This requires a diverse offering of education opportunities to meet the needs of today's students in a rapidly changing society.

Sincerely,



Glenn Cochran
President / CEO

OUR MISSION: *Giving • People • Hope*