Connected #TeachAg:
Utilizing Technology for the Premier Delivery System of AgEd
As we embark on a new volume of the Agricultural Education Magazine, number 91 to be exact, I have taken some time to reflect on how agricultural education has advanced over the years. We have seen many great advancements in technologies that often start in agriculture, and then find their way into other aspects of daily life. However, we also find that some great technology is developed for one reason and then finds its way to agriculture or education or both. We are truly living in the information age, where we can information at the touch of a button. I believe that is what makes this issue of the magazine such a good read. There is so much out there that can help us be better teachers, but it may be a bit intimidating at times. However, I believe the articles in this issue give us some great starting points, and practical advice, to “jump in” to using technology to make us better teachers.

The articles range from a historical review of the Agricultural Education Magazine looking at articles about technology through the years to articles that share insights of how technology has helped teachers and their programs. All the articles have great information to share, and I believe each one has something that you as the reader can take and implement in your classes right now. I really enjoyed the approach that three of the authors took in their article titled “From the desk of fellow owls- Technology you can use”. Just as our students want information in quick “sound bites”, these authors kept their article short and sweet and then provided us with easy to consume information on seven different technology resources that we can implement in our classrooms. These resources can help us in program planning, instruction, and overall organization within our daily teaching schedule. The information on each resource is on a notecard sized portion of paper within the magazine for your continued use.

While many of the articles in this issue help us as teachers to better our practice and reach out into the community, one article helps us understand how to help our students in being leaders with digital technology. “Moving from digital citizenship to digital leadership” by Anna Bates walks us through development of students’ abilities to be responsible consumers and producers of digital content. Additionally, this article provides some great ideas for digital projects that you can use in your own program that will help students become both digitally literate and digital leaders in agriculture. It doesn’t matter if you are in a rural area or an urban area, technology can be used to promote student learning, as well as the agricultural education program. Jolliff and Faulkner outline in their article the advantages of keeping their students abreast of the newest technology and how it can be used in their rural program. In her article, Lumpkins, shares the ways in which the agricultural education program stays “on the map” in urban Nashville through the use of social media.

This issue of the Agricultural Education Magazine also includes the author index, as well as the subject index for the past six issues (Volume 90, Issues 1 - 6). This information will aid you in finding past theme issues of the magazine, as well as specific articles of interest. Take time to review the subjects over the past year and find an article or two that catches your interest. Then give those articles a “read through” to see what you can glean to better your program, and ultimately the students with which you interact with daily.
Subscriptions
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Article Submission
Articles and photographs should be submitted to the Editor or Theme Editor. Items to be considered for publication should be submitted at least 90 days prior to the publication date of the intended issue. All submissions will be acknowledged by the Theme Editor and/or the Editor. No items are returned unless accompanied by a written request. Articles should be approximately four double spaced pages in length (1500 words). Information about the author(s) should be included at the end of the article. Photos and/or drawings appropriate for the “theme issue” are welcomed. Photos/drawings should be submitted in an electronic format (jpg or tiff format preferred – minimum 300 dpi). Do not imbed photos/drawings in the Word document. A recent photograph (jpg or tiff format preferred– minimum 300 dpi) of all authors should accompany the article unless photographs are on file with the Editor. Articles in the Magazine may be reproduced without permission but should be acknowledged.

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Publication Information
The Agricultural Education Magazine (ISSN 0732-4677), published bi-monthly, is the professional journal of agricultural education. The journal is published by The Agricultural Education Magazine, Inc. at 300 Garrigus Building, The University of Kentucky, Lexington, Kentucky 40546-0215.
Periodicals Postage Paid at Lexington, Kentucky and at additional mailing offices.

POSTMASTER: Send address changes to The Agricultural Education Magazine, attn: Jay Jackman, 300 Garrigus Building, The University of Kentucky, Lexington, Kentucky 40546-0215, Phone: (859) 257-2224, FAX: (859) 323-3919.
menting various technologies into your programs. Throughout this issue, you’ll get practical advice from your colleagues who are effectively integrating technology. Additionally, you’ll get a few tear out pages to keep on your desk that outline educational apps you can easily use in your classroom. How cool is that?

Just remember: It is never about technology for technology’s sake, it is about technology that helps YOU as the professional educator be more effective in impacting total student success!

Best Wishes in Your Tech Integration Journey!

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Daniel D. Foster, Associate Professor, The Pennsylvania State University

OP McCubbins, Assistant Professor, Texas A&M University

by Daniel D. Foster and OP McCubbins

As a theme editor team, we “geeked” out when we were approached to curate an issue of the *Agricultural Education Magazine* focusing on technology. Why? Technology is a powerful tool and if leveraged properly, it can open up endless possibilities for assisting in delivering the philosophy of Agricultural Education. As Agricultural Educators, we have so many opportunities to incorporate different types of technology into our programs; for instance educational technology apps, the latest GPS units, or even drones.

Technology can help streamline processes that typically bog teachers down. It can transform students’ worlds by connecting them with experts they normally wouldn’t be able to. It can do so many things if you open your mind to the possibilities. The objectives that undergirded the development of this issue were:

1. Sharing the reasoning of rock star secondary teachers on their integration (The WHY!)
2. Identifying specific integration practices to advance the total school-based agricultural education model: FFA, SAE, Classroom (The WHAT!)
3. Sharing Best Practices (The HOW!)

We wanted to create a unique, easy-to-follow guide for implementing various technologies into your programs. Throughout this issue, you’ll get practical advice from your colleagues who are effectively integrating technology. Additionally, you’ll get a few tear out pages to keep on your desk that outline educational apps you can easily use in your classroom. How cool is that?

Just remember: It is never about technology for technology’s sake, it is about technology that helps YOU as the professional educator be more effective in impacting total student success!

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Moving from Digital Citizenship to Digital Leadership

by Anna Bates

It used to be that most agricultural education programs relied upon direct interactions through recruitment days, paper brochures, and making appearances at middle school open house nights to captivate new members. Nowadays, with the rise in expanding agriculture programs, new academic course requirements, and more FFA opportunities than ever, it is vital for agriculture educators to jump into the digital game. The purpose is two-fold. It is to create platforms to expand the promotion of their programs, including producing more agriculturally literate graduates, and also to teach their students to be informed useful contributors to the age of digital communications. This involves teaching students, current and future teachers, to move from simply using technology to leading the movement embracing its capabilities. This evolution can be described as “Moving from Digital Citizenship to Digital Leadership.”

It is safe to say that individuals in all aspects of the teaching profession need to be able to meet the needs of “Generation Z” who use their devices as their lifeline to communication. Whether you are in a mall, at a sporting event, or in a classroom, digital devices dominate the lives of students of all ages. Those who are resistant to embrace it are going to be left behind. We need to adapt the tools necessary to help teach others to use their skills to be the innovative leaders we need in the future. It is also important to note that teaching them where, and how to use technology transforms them into digital leaders. For the sanity of family members, teachers, and colleagues, this includes knowing when to turn their phones off and put away when not needed. Unplugging is just as critical to charging your battery.

In our FFA chapter, one of the main reasons we started the development of our digital evolution came in the need to reach eighth grade students in a more creative and expansive way. The rise of restrictions to take students out of class and to travel to our middle school limited our ability to truly connect with them. It was at that time that our current officer team decided to make a video explaining the opportunities in our agriculture program. This process included brainstorming the “how” and the “what” to do to produce recruitment tools unlike any other we had done. For the first time, we would not be present, to explain our FFA program directly to the middle school. Needless to say, I relied on the expertise of some of my more progressive change maker type students to produce the video. This was really prior to using social media and when starting a YouTube channel became a new way to organize video projects for organizations. One of our first videos, titled “SLO Ag/FFA Program…What’s in it for Me?” catapulted our student’s interest in continuing to reach new heights through agriculture communications. Our next step was to create social media platforms and learn how to use them for educational purposes for promoting our program. This evolved into a publicity and technology committee charged completely with the role of running all these accounts in collaboration with our chapter officer team. In 2016, our chapter created “An FFA Members’ Guide to Social Media” with the website creation of Dr. Courtney Meyers at Texas Tech University. This valuable resource has been used by FFA members, collegiate agricultural education programs, and agriculture industry businesses across the country. It has led to students now finding a passion for agriculture communications and their ability to not just be citizens of the rise in the digital age, but to transform themselves into leaders in the field. Now, more than ever, we need digital leaders in the agriculture industry. The following is a list of tools or guidelines for educators to use to implement the transformation of digital leadership in their own programs.

1. Start simple: Determine which social media or digital resource your program needs and develop a plan on who will run it. Whether this is simply a webpage or if you want to run multi social media platforms at once.
2. Teach etiquette: This includes everything from teaching students to be professional while sending emails, texting teachers, or using apps for messaging advisors to ‘liking’ and ‘commenting’ properly on social media platforms.

3. Develop a routine: Establish a person, whether it’s your chapter reporter or an officer, that is in charge of running accounts. This includes creating a schedule and time for posts to be made.

4. Practice writing: Blog posts are becoming an essential way to contribute to telling a story. There are several different programs such as Word Press, Wix, and Weebly that are free to use and simple for a beginning user.

5. Focus groups: Use your students as a resource to find out what is the most popular and strategies to use the platforms you choose. They often have the best ideas.

6. Password storage and contracts: Have a game plan for storing passwords and fill out a contract for those students entrusted with access to the accounts.

7. Exit/delete strategy: Have a plan of action ready in case you need to delete a post, block someone, or deal with negative comments. As an advisor, you need to know what to do in case you have issues with any of your content.

Ideas for New Digital Projects

1. Insta ‘Ag’ Classroom: Develop a private Instagram account to use as an additional class resource. This has made a tremendous impact on our science classes and their ability to communicate to us. We also have them send digital projects such as videos and photo collages via this avenue.

2. Blog Post Year-In Review: This past year we printed and bound all our blog posts to give to our school board and advisory committee. This served as a great resource for them to gain a deeper insight into all aspects of our program.

3. Use Apps like GroupMe: In addition to Remind, Group Me is an incredibly useful group chat app that you can use for organizing standing chapter groups (i.e. officer team) or special groups (i.e. National Convention attendees) to communicate. We have one for each of our CDE and LDE teams, livestock groups, leadership committees, and much more. This tool needs to be used appropriately and students need to be taught the etiquette behind its purpose.

4. Video Re-Caps: Have an officer or student in charge of taking video clips at chapter activities and compiling them into recaps to use for future promotion. Creating video tutorials in classes as assignments is also a way to foster creativity for students. i.e. Demonstrate how to suture a wound.

5. Facebook or Instagram Story: Make sure to have the discussion with students about using these for professional purposes. Have the talk ahead of time about behavior, what to post, and when.

6. Google Forms and Folders: Many programs have started utilizing Google Forms to not only gather information about their programs, but also to take tests in the classroom and chapter applications. Google folders are an easy way to share resources for curriculum and CDE teams. The collaboration possibilities are vast with this resource.

7. CANVA: If you have not discovered this free and creative resource, you are missing out. We use this to create all our chapter posts and information for our courses. We also have assignments in class for students to

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How and when did we start using Twitter?

MATT: I first started using social media in 2010 - specifically Twitter - to compliment a regular blog posting space. The nice thing was that Twitter in 2010 was all about real people connecting. Many of the names in education and thought theory were there and accessible. I can’t count the number of times an idea struck me or my engagement with one of these accounts didn’t leave me thinking of better practices. It was like going to sit with all of the best professors on campus all at once. Twitter also connected me to many blog postings of short essays from these folks - engorging my reading list. I don’t think I have read professionally like that … well, ever.

Establishing a twitter account for our FFA Chapter was a natural move. Currently, I post to that account but I also turn the curation of that account over to a student in our chapter who is responsible for chapter information. It allows me to monitor the account along with having access to it in case of emergency - but to also give students an authentic experience in using social media for positive outcomes and communication - unless you count duck-face selfies in that category.

Tweetdeck has also been very helpful in managing multiple accounts and making sure that I can work across the platforms with ease. Now just in a desktop form, I recommend it very much if you are interested in working from multiple accounts, timing tweets, participating in #teachagchat or other hashtag events. It will make online life a lot easier.

ROBIN: When I first heard of Twitter, there was talk that if you wanted to make sure you got your name you wanted to establish an account. I didn’t know what Twitter would evolve into but I knew I wanted “my name” therefore in April 2009, I established a personal Twitter account. My first tweet was “I am thinking about learning more about Twitter.” and within two weeks, I tweeted “Being a ‘geek’ checking out some other “tweeters” related to education and agriculture.” I also established an account for the Middle School FFA and the first tweet was “Trying to create a twitter account for the Northern Burlington Middle School FFA Chapter so I can keep the “kids” up to date.” The goal at that time was to be a tool to communicate chapter events. Additionally, although classroom instruction and FFA are an integral part of a three component agricultural education program I realized the information shared in the Middle School FFA account might differ from classroom communication. In August 2009 a middle school agriculture account was established with some of the earliest tweets relating to reminders about homework and sharing of information related to general agricultural literacy.

In order to manage multiple accounts, I set up a Hootsuite account. This provides the opportunity to better curate information, as well as create streams of certain people or hashtags to follow along. Hootsuite also allows for easily scheduling posts or the use of autoschedule.

How are we using Twitter now for professional development?

MATT: Now, while Twitter has changed over the years, like a neighborhood that has neglected yard maintenance, it still allows engagement with some of the foremost minds in a chosen field - education being one of them. You must be choosier about who you follow and why - along with holding a bit more skepticism about the sources and motivations of your ‘tweeps’. Overall though, I still get most of my most meaningful ‘food for thought’ from Twitter from a batch of carefully cultivated points of view covering the spectrum of topics and biases.

After all - Aristotle positioned that “It is the mark of an educated mind to be able to entertain a thought without accepting it.” I wonder what he would have made of Twitter?

ROBIN: The first way I use Twitter as a professional development tool is through participation in chats. There are some chats that I actively participate in, includ-
ing #TeachAgChat and #BunceeChat. There are other chats that I visit after the fact by searching the chat hashtag. Although that situation is not ideal, it allows me to see conversations that have happened and make connections to people whose contribution to the chat interests me. Depending on what I am sharing in a Twitter chat will determine whether I share from my personal account where I have a larger network of educators or the middle school agricultural education account. If I am sharing any images of my students or student work in a chat, it is critical that based on school policies I use the school based account that is on file with our administration.

Another way I use Twitter as a professional development tool is simply by scrolling through my Twitter feed. This is possible because through chats or reading what other people have shared I have added people to my Twitter network. These people encompass educators from around the globe and people who help feed my desire to incorporate new ideas and technologies into my classroom, as well as challenge my thoughts about my teaching practice. As appropriate, I try to use #AgEdu, #TeachAg, and #CareerTechEd to help others with similar interests find what I share.

We keep learning

MATT: As you dip into the twitter pool, a couple of cautionary thoughts -- have a twitter fire plan. What will you do if an account (or all) get hacked? What happens if someone - you, a student, or anyone else - posts something that you don’t agree with? What do you do when a parody or hostile account steals your stuff and tweets as their own?

Animal activists a few years back took my tweet and picture and tweeted without my permission (obviously and of course) along with a campaign I would never support.

I have also had advertisements created with my photo -- with my permission and blessings -- because they asked and were in the ag community.

So be prepared as you venture forth -- and enjoy!

“It is not the destination where you end up but the mishaps and memories you create along the way!” Penelope Riley

ROBIN: In writing this article, I learned how to use the advanced Twitter search tool to dig into information. You can find the advanced search at https://twitter.com/search-advanced. This allows on a near daily basis by tweeting images with short descriptions with hashtags for each course (#NBAg7, #NBAg8, #NBAFNR) and on days that science is clearly involved also using #wesciencehere. Additionally, it is used to help build agricultural literacy. Articles and infographics related to agriculture in general are frequently shared.
you to search for a certain time frame, person or hashtag, along with other variables.

Challenge

MATT: I have seen the small community of active agriculture teachers grow over the years -- please - connect with us. Use #teachag or #youmightbeanagteacher or #myagteachersfault (posting good things that your students are doing /learning) to create a searchable and connected web of tweets.

ROBIN: If you are reading this article and have not created a Twitter account, I encourage you to create one and build a professional learning network. If you are already on Twitter and haven’t explored a Twitter chat, check one out. A calendar of education related Twitter chats is available at https://sites.google.com/site/twittereducationchats/education-chat-calendar.

Continued from page 6 Digital Leadership

create a CANVA to promote agriculture literacy and/or for marketing an agriculture commodity. You can truly use it for anything.

8. Zoom: Last year we were able to use this easy live chat tool to talk to our friends at Silent Springs FFA Chapter in the North Pole. We projected their officer team up on our screen in our classroom while asking questions, then took them on a brief tour carrying a smartphone around our department.

The connections our students have made through expanding their digital database has exponentially grown over the last 4-5 years. Being able to see what FFA members, agriculturists, and colleges are doing across the country has deepened their knowledge of agriculture. Whether you are connecting through Twitter chats, interacting on Instagram posts, or becoming bloggers, fostering new technological leadership skills is an integral skill to today’s workforce. As digital platforms become the resume of the future, it is our job to help guide today’s students developing new skills as our digital society changes. If you use a smartphone, create on computers, or socialize on social media, you are a part of the digital media movement generating not just digital citizens, but the digital leaders of our future.
Opening Doors for Rural Programs with Technology

by Stephanie Jolliff and Shelby Faulkner

Years ago, location determined access to technology; today access is created by creativity and the vision of teachers and students. In rural areas, students can have similar access to advance their education and experiences.

As each teacher strives to make connections to curriculum and extends their scope of content there are a number of ways rural youth can connect with innovative education. The SAMR model guides the teacher in confirming that there is validity in the rationale for the integration of technology in the classroom. The technology tools utilized must become an invisible part of the learning. Yet, it is important for teachers to remember that it may take two, three, or four applications of an app or new technology before students embrace the change. Resistance from students means they are being encouraged out of their comfort zone by expanding their traditional ways. Teachers must remember technology can extend our service to students, give us more time to serve students, and help us become more organized. It takes time for both students and teachers to expand their technology experiences.

Technology tools can also be utilized to enhance classroom instruction and differentiate lessons for students. At the same time, curriculum is strengthened through access to resource people or mentors for project based learning, like science fairs, business plans, or CDE events. Yet, rural areas limit the teachers capacity to bring professionals into the classroom. Specialists can be virtually brought into the classroom by using Skype, Google Hangout, or Duo. It is amazing the resources rural youth can have at their fingertips with a call or email to request a resource. It has been our experience that when we ask experts to provide a talk, guidance, or mentoring to strengthen the knowledge of agricultural education students that the majority of experts will offer assistance. However, do not be limited to people or organizations that are familiar. When we need a resource and we are not sure where to secure it we typically post to social media and people offer suggestions and resources that we have not even contemplated.

When it feels like there is not enough of a teacher’s time to go around, kids need to hear the lesson again or directions seem like they keep replaying in our classroom, it may feel like we need to clone ourselves. Technology allows teachers to virtually recreate and archive content. There are a number of free apps that offer video creation and screencasting solutions, plus for a few dollars per month, additional options can be purchased to enhance options and have more add-ons. Our go-to for recording is Screencast-O-Matic and we pay for the pro subscription. Recording content allows students to work at their own pace. Video content can be re-visited and allows for students to demonstrate autonomy in their learning. A search of the web will offer additional options like Screencastify, Filmora, Nibus, and many more. This year we recorded our slideshows for banquet with Screencast-O-Matic and posted that to YouTube so it was accessible to the public. We also marketed the video through our social media platforms that we use to promote our program. We use Facebook to connect with many parents and a few students, while we use Twitter and Instagram to connect with many students and a few parents. Using three platforms offers communication options for diverse audiences that are sometimes not accessible in rural areas.

In the classroom, many days feel like they are full of announcements of upcoming FFA activities, finding papers for kids who were absent the previous day, or repeating information that can be missed by learners. Integrating a Learning Management System (LMS) allows for a home base for information that is accessible to parents and students. LMS offer agricultural education instructors a location for storage of announcements on boards, notification of assignments, organized storage of curriculum, and can be archived to be used for the next year. In addition, the LMS is accessible to students 24/7. A student could always know what happened in school because daily objectives can be pasted in the announcements and clarify the day’s work. There are a plethora of excellent LMS platforms that are free and have the...
opportunity to purchase upgrades. Our school purchased Schoology two years ago to use as our LMS. We have used Canvas, Google Classroom, and Edmodo, which all are excellent options. A LMS allows the learners to have access to directions for class and allows the teacher to have an organizational platform to inform students of daily activities.

Organization can always be a struggle, especially in the agriculture laboratory. It can be difficult to find operational information when adjustments need to be made on power tools. The use of QR Codes allows for easy access to operator’s manuals for each tool. Students can use common apps like Snapchat to quickly scan the QR code attached to a tool. One QR code sends students to the online operator’s manual and another QR code links to the safety test for the tool. This saves time as students no longer need to search through stacks of operator’s manuals to find the correct information.

Students don’t know what they don’t know. If students are not aware of current technologies, they will be behind the times when they leave the safety of our classroom walls. MakerSpace is an afterschool program that provides students with the opportunity to explore their passions and tinker with current technologies. Students know that this is a safe place to be able to experiment and explore technology possibilities. Students are given the opportunity to work with robotics, online programming, 3D printing, welding, woodworking, and other technologies. Students are able to choose a focus area to work on each week. They are given the time to explore possibilities and think outside of the box to find solutions to self-driven projects. Students learn to create plans for their learning and must advocate for themselves when presenting potential ideas that might need financial resources to become reality.

The teacher serves as a guide, mentor, and model in the use of technology. We must be the ones to encourage and support the active engagement of students with technology resources. Teachers have the opportunity to facilitate lessons in which students are engaged in higher order learning activities that may not have been possible without the use of technology tools. Learning by doing opens the doors of technology to students and prepares them for diverse careers outside of our agricultural education classroom walls.

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When it comes to being a better agriculture teacher, my mentors made it clear early in my career about what was expected of me: summer conference was mandatory. In college, I worked as an RA at Middle Tennessee State University in Murfreesboro, where conference is held. “Vocational Conference” (as I knew it then) was the week to kick-start the new year, including relevant professional development and sessions that set the stage for the next 12 months. Back then, the teachers stayed in the dorms instead of hotels.

About a year before I started teaching, it was my job as an RA to check these advisors into their rooms for the week. Being heavily involved in high school and through college meant these teachers were my mentors, friends, and for some, even family. The advisors I had known for years were cast in a new light when I watched their excitement—yes, excitement—to begin a week of professional development. While part of that eagerness was probably related to the karaoke skills they would display later that night, it was evident that much of this tangible sense of purpose and renewal was related to being able to collaborate with their peers over what everyone there had in common: being a better agriculture teacher this year than they were the year before.

What if… we didn’t have to wait until conference each year to improve? What if our goal was being better today than we were yesterday? And can social media help us do that?

It can—in ways that break down just like our FFA POAs. These platforms help us strengthen agriculture education, grow our students as leaders, and build support from our communities.

General #AgEdu Social Media ideas:
• Create accounts for yourself or your chapter, or both
• Assign your chapter reporter, other officers, or even a committee to handle your chapter’s social media
• Set a goal for frequency of posts, possibly daily or bi-weekly (a dead social media account doesn’t generate much engagement)
• Include a clause in your syllabus (if not already required by your school district) asking parents if their child is allowed to have their photo and name included on your program’s social media

Strengthening Agriculture (Educators)

Chances are, if you’re already on Twitter, you know the benefits of the 240 characters this platform gives you. If you aren’t, I imagine you’re the kind to joke about not being on “tweeter,” assuming it’s more about tweeting what you had for breakfast instead of anything useful related to teaching. While there are folks who share that kind of info (I had a sausage & biscuit and iced coffee, by the way), Twitter has blossomed into a powerful professional development tool that a teacher at any stage of their career can benefit from.

Once you have a Twitter account, using hashtags—those words or phrases preceded by the pound symbol—allows you to search tweets by event or topic. Want to see the cool things that happened during NAAE Convention in December? Search #NAAE17. Want to check out ideas from FFA Week? Search #ICanWeWillFFA. How will you know about these hashtags? Most events, conferences, and conventions will display the hashtag they want you to use, allowing you to both connect in the moment and to search archives later for ideas.

Another benefit of Twitter and hashtags is #TeachAgChat. This initiative founded by Penn State Ag Ed allows ag teachers to connect at an appointed time with designated topics and ideas. While I will spare you the mechanics of how to engage in a Twitter chat (there is a great tutorial from Daniel Foster that will explain how to make it happen), the essence is that the platform becomes a chat room when all users include the #TeachAgChat hashtag. During these chats, questions are posed so you can share your best practices while gleaning quick, to-the-point pieces of useful information from others.

But this doesn’t have to happen just during a #TeachAgChat. I tend to scroll through Twitter during lunch (if the 15 minutes I inhale my food over my laptop can be called lunch). Recently I saw a tweet from my agriculture teacher friend from Idaho, Jaysa. She posted a picture of a set of boots she had recently purchased for her program with the caption, “Way less complaining about getting their shoes dirty when we go outside!” I hadn’t been thinking about my students’ shoes at the time, but now I was. Could I do something similar? Definitely. The idea went on my to-do list, I finished my lunch, and 4th period started. It wasn’t pedagogy or some career-altering plan—it was a small, digestible idea that I can accomplish. The brief nature of Twitter (you’re limited to only 240 characters for each post) makes it the ideal way to get small piece of useful information without feeling like you’re constantly staring at your phone. While I still love
summer conference, I feel like I can tap into that sense of excitement it brings on daily, instead of yearly, basis through Twitter.

**#AgEdu Twitter Idea List:**
- Engage in a #TeachAgChat
- Utilize tweets from @NationalFFA or similar accounts as bellringers or exit tickets, or to highlight current events during class
- Search for event hashtags; like a tweet you find useful and follow someone who had a good idea
- Create a hashtag for an upcoming FFA event and include it with other relevant information when publicizing
- Post something that went well in your classroom this week; include photos or a video
- Follow ag ed and ag related accounts to stay connected to industry trends and give real-world examples to students (some of my favorites? @NAAE, @case4learning, @USDA, @FarmBureau)

**Growing Leaders**

In high school, I served as chapter reporter. I remember focusing an old digital camera (around the same time that I also had a pager and a Nokia brick cell phone) and posing my fellow officers against a tree, getting their official portrait for our website just right. It took days and even weeks sometimes to get the plan for the website into a reality. Once it made it to the site, it was unlikely to be changed. HTML was a struggle when you only had your lunch period at your advisor’s desk to finish the project. I wonder how great of a reporter I could have been if I had access to social media like our students do today.

Engaging with and for our students on platforms like Instagram are the free and fast solution we didn’t have back in 2003. It’s almost fool-proof to share a beautiful picture of your students in official dress or a great candid of them engaged in a lab. Students who use Instagram will often scroll until they’ve hit old content, meaning your post will definitely have their attention at least once. The impact that has on a visual learner is worth the time spent posting the photo. For many of my students, they are willing and happy to pay dues, but they simply forget day after day. Once I posted a photo of a $20 bill and a membership card, the amount of students who remembered increased significantly. Bringing that message to their domain allowed the message to sink in. Similarly, whether they admit it or not, students want and need (and deserve) to see their face and their name celebrated. Each Spring I have my first year students create animal skeletons out of dried pasta. We give silly awards at the end of the project, and I always include those winners in a post, holding their creations and congratulating them on their win. What project is always the first one students remember from that year?: the pasta skeleton project. While I’m sure it also memorable because of the plethora of hot glue burns it gives them, it’s also because they remember that the winners are always featured on our account. Even if they weren’t one of the winning designs, all students are engaged through voting, meaning every single student in my classroom has a connection to that post.

The “legacy” we leave online, regardless of the type of posts we decide to include, makes students want to be associated with our brand. When my students are engaged in something visually dynamic, like raising their eyebrows at what they see under a microscope or scrunching their face in determination while judging a chicken, I’ll often say, “This is going on Instagram!” Wanting to share their own insta-worthy moments, students will come to me with photos they’ve taken during a lab or while taking care of our animals and asked if we could feature it on our account as well.

What’s the impact? My school counselor, administrators, parents, school board representative, and community members all follow our account. When we need advocates to the public or potential students, they don’t need to call me – they already know exactly what type of real-world and rigorous activities happen down in room 151.

**#AgEdu Instagram Idea List:**
- Use the app Wordswag to place text on photos for announcements or advertisements
- Post updates and reminders about field trips, CDEs, or chapter meetings using any photo that relates to the information
- Use the app Boomerang when your students are doing something with movement – it loops the 7 second video continuously, making it a catchy post
- Post a Greenhand or Member of the Week, with a picture of your student and their information in the caption
- For any chapter contests that require votes, make each entry a post. The posts with the most likes wins.
- After banquet, post one award winner per day/week, extending their recognition and excitement for your chapter

**Building Communities**

Remember the book, When You Give a Mouse a Cookie? Our program has a similar, positive correlation story of our own that would not have happened if we had not utilized social media to reach out to our community.

It started when we were lucky enough to have a new barn built on our campus. This is noteworthy in any program, but ours was almost a
novelty considering that we’re in urban Nashville, right down the road from the Grand Ole Opry. Our officer team created a “barn raising” ribbon-cutting event so that students, teachers, parents, and all community members could celebrate the new facilities. Worried that no one would show up, I created just a few digital announcements (using the app Wordswag mentioned previously) and forwarded them to the officer team, getting the word out to as many people as possible. I submitted a press release to all local news stations and the paper, with no responses. I also posted to a Facebook community page, Hip Donelson. With more than 14,000 followers, the free form of advertisement generated a lot of great discussion around our program from people who live and work in the community our high school services. Days later, a newspaper reporter contacted me, wanting to do a full story on the program and the new barn. It wasn’t the press release where she heard about us, but the Facebook post. The coverage led to a story on the local news, and a large turn-out for our event. Once the dust had settled, I received a call from a local alpaca farm that wanted to donate three alpacas to grow our herd. Curious as to how they heard about our program, they cited the newspaper article. Later that year, one of the alpacas gave birth and we were able to live stream it to classrooms and teachers nationwide. We were able to include all of these projects on our National Chapter Award, leading to us being a Models of Excellence finalist at National FFA Convention in 2017.

When I look back on that accomplishment, I realized that if we had not (almost offhandedly) connected to our community, we probably wouldn’t have been standing on that stage in Indianapolis. What mice in your area need cookies, and what will come of it?

#AgEdu Community Engagement Idea List:

- Seek out and join any community Facebook pages to post FFA announcements
- Create Facebook events for all activities requiring a headcount so you know who has digitally RSVP’ed
- Skip the paid Facebook posts; the return isn’t worth the investment and most of the exposure you generate can be through shares anyway
- Don’t wait to only post to community groups when you have a big announcement; share normal “day in the life” type of pictures so they know you’re a consistent force in the community
- If you have a low-impact decision to be made (Need a name for a new animal? Need to decide what plants to include in the greenhouse?) post the question to the community so they feel invested in the direction of your program.
- For banquets or community events, create a filter for Snapchat ($5 per filter, very low cost for one area for the time of one event); people love unique Snapchat filters and it’s free advertising for your program!

Does all of this even matter?

In my early days of me finding my way as an ag teacher, I came across someone involved in a #TeachAgChat named Kellie. Her contributions to the chat were great, and we liked each other’s tweets so she seemed friendly. Her profile said she was a teacher in Wisconsin, and her thoughts about the realities of her daily life as an FFA advisor were relatable and funny. After becoming friends, we would often like and reply to each other’s tweets, despite having never met in real life.

Years later, waiting to enter a workshop room during NAAE Convention in Las Vegas, I watched a familiar yet unfamiliar face walk out — it was Kellie! I hesitated at first; should I say hi? Does she recognize me? Is this weird? I introduced myself and it turns out, she wondered the same things. Once we had connected in person, it was easy to become true friends. In the time that’s followed, we’ve been able to stay close through our snaps on Snapchat, snail-mail packages, and other ag ed related events. During one such event when we were able to be roommates, we relaxed in our pajamas while she shared what she was working on as the Ag Ed Graduate Teaching Assistant at Oregon State University. As she handed me a book she suggested that I read, I had a realization — I would never be exposed to this perspective on our profession if I had not connected with her years ago on Twitter. Would I have found this book otherwise? Maybe, maybe not. It wasn’t about the book itself. Not only has Kellie been my friend through some difficult times in my life, she’s also had an immeasurable impact on my understanding of the bigger picture of agriculture education, and that’s something that I can only credit hashtags and tweets for.

Jessie Lumpkins, Agriculture Teacher & FFA Advisor, McGavock High School, Metro Nashville Public Schools, Nashville, TN. Let’s connect online! You can find me at @jlumpffa and @mcgavockffa on both Twitter and Instagram.
I like to believe that my students keep me young; they make sure that I know all the new music, new “hip” words, and how to use the new social media platforms. One day I was talking to a few students in my classroom about something that I saw on Facebook and they proceeded to tell me that Facebook was for “old” people. I was in disbelief...I love Facebook. Facebook was my chosen platform for keeping up with family members, friends, and news and I could not be “old.” With a plethora of social media outlets at our fingertips, I think each has its own place in the world. If you want to write a novel about your beliefs you go to Facebook, if you want to share a quick picture you go to Snapchat, and if you want to show off your #ModelStatus at that swank restaurant and add a description you go with Instagram. We realized that our high school students had many social media options and we needed to choose one to reach them.

Our chapter reporter, who has served two years in this role (and has been a total rockstar at it), revamped our Facebook page and created an Instagram account in her first year of service. We use the Facebook page mainly for alumni updates and the Instagram is for uploading photos from various events throughout the year. However, she was extremely excited to create a Snapchat account for our FFA chapter. She felt Snapchat would engage the students in our school and community. After all, it is considered the “cool” social media platform for teenagers. Have you ever seen what a student will do when the hourglass appears next to a Snapchat streak?

Before she started snapping away, we established a few guidelines for this new account. Unlike our other chapter accounts we wanted to make sure that only the reporter had the password. As advisors, we did not want the account information or access to students’ Snapchat information. We also made sure that she knew what was appropriate to post and that she would not post pictures of students without their permission.

The biggest issue that we faced when starting a Snapchat account for our agricultural education program was to gain followers. For some reason students did not want to add a school account…they probably thought it was run by teachers. So, to quickly gain followers our reporter put the QR code for the account throughout the school and made a game out of it. She would randomly give away prizes to followers of the account. The followers started rolling in and not only do we have students from our school, but we also have several students from other agriculture programs that follow our Snapchat.

One reason why our chapter reporter wanted to create a Snapchat account for our program was because of how many students were using it in school. However, another reason was because how many videos and pictures you can put up without being “annoying” and by getting unfollowed. On Snapchat it is totally acceptable to post several pictures from one day at National Convention. You could take a video of the opening of a session, pictures during a workshop, and take pictures at several booths in the career show and it’s fine on Snapchat. However, if you create twenty different posts on Instagram in a single day...it’s not the “norm.”

We use Snapchat to show others how exciting conventions and conferences are for members. We also use it to promote Career and Leadership Development events. Our reporter is also good at trying to Snapchat different classroom activities that go on in both agriculture classrooms throughout the year. As agriculture teachers, our days look completely different than the next so that is why Snapchat is such a great tool to use. We want other students who may not be enrolled in an agriculture class to realize what all FFA has to offer and they might only see that through their cell phones on our Snapchat account.
THEME ARTICLE

From Cows and Plows to Smartphones and Drones: A Review of Educational Technology in The Agricultural Education Magazine

by Tiffany Morey

Since the first issue of The Agricultural Education Magazine was published in January of 1929, educational technology has undergone many advancements and changes that the earliest agriculture teachers never could have dreamed of. Things that the modern agriculture educator takes for granted, such as videos and telephones, were considered luxury items at the time, while commonplace classroom technology like computers and Smartboards were unheard of. Let’s take a walk down memory lane and through the archives of The Agricultural Education Magazine to look at how the definition of technology in the agriculture classroom has evolved and grown.

In the earliest days of The Agricultural Education Magazine, a progressive agriculture teacher was one who “finds that his courses of instruction can be greatly strengthened when he can obtain suitable visual material for his use.” (Brigham, 1932). The common visual technology aids of the time were motion pictures, lantern slides, film strips, and agricultural charts (Scranton, 1930). The motion pictures were shown on hand cranked reels, film strips had to be displayed one slide at a time on manual projectors, and the lantern projector was today’s equivalent of the overhead projector. Agriculture teachers applied for these materials by mail from sources such as the USDA and cooperative extension. A 1000 foot reel of film stock retailed for between $10 and $30, which was quite expensive at the time and did not include the cost of the projector. Film strips up to 65 slides cost less than $1, making them much more affordable and commonplace.

After World War II, agriculture in the United States became more mechanized, and the need for technology in the agriculture classroom increased. Teachers were encouraged to build up libraries of film strip, slide, and photograph resources, and it was suggested that they charge students a yearly fee to access these materials, with the profits being used to increase the size of the library (Fitzgerald, 1932). They also started reaching out to the growing agricultural industry corporations and companies to obtain resources, in addition to the USDA and cooperative extension. Articles with plans to build projector booths to show films were published, as were tips to easily transform the agriculture classroom into a screening room (Federer, 1958). The 35mm camera became more affordable, and that, combined with color film from Kodachrome and flashbulbs, allowed programs to create their own color slides and photographs (Walter, 1950).

The 1950s and 1960s saw a rise in new forms of technology for agriculture teachers and students. Aerial photography became more commonplace, and the pictures taken from survey plans were used as educational resources (Dalgleish, 1951). New types of color film, such as Panatomic-X, made photographs more clear and detailed (Smith, 1959). Slide projectors became more mechanized with the ability to hold many slides at once that could be changed with the simple pressing of a button (Duncan, 1953). Color film strips and movies on 16mm film were more affordable and even included sound (Williams, 1953). Automatic projectors were commonplace in schools, and students or teachers no longer needed to hand crank the reel for it to project. A basic version of the modern overhead projector was introduced, and teachers had the ability to show color transparencies for the first time (Hadley, 1952). The advent of television made broadcasting and sharing information about program and chapter events accessible to a whole new audience (Decker, 1958). FFA chapters across the country partnered with their local television stations to create their own programs and television segments (Menoher, 1954). Highlights from the National FFA Convention were also broadcast, which allowed chapters and supporters all over the country to be a part of the action from the comfort of their homes (McCalla, 1958).

The next twenty years saw the agriculture classroom becoming more and more like the version we know it to be today. Slide projectors became fully automated, film
strips and movies were available on VHS tapes to be shown with VCRs, overhead projectors were present in nearly every classroom, and televisions were introduced to schools. Most classrooms had their own telephone and phone number for teachers to make and field calls for program and FFA related business. Computers started to be introduced into schools, for both student and teacher usage (Miller, 1989). The computers were equipped with useful applications like word processing and spreadsheets, and programs specific to agriculture began to be developed (Odell, 1989). Hydroponics became a buzzword in the 1980s, and by the end of that decade, agriculture teachers and their students were starting to build their own systems to use in their programs (McQueen, 1989).

The 1990s and 2000s were a time of increased emphasis on computer technology in the agriculture classroom. Classroom computers became commonplace, and programs on CD-ROM discs like Sim Farm and The Farming Game allowed agriculture students to practice technology skills and experience simulations in many different areas of agriculture (Kuenzi, 2005). Textbooks became available in electronic format, and eReaders enabled students to access them from anywhere (Powers & Leflore, 1998). The rise in popularity of the Internet allowed chapters and programs to create websites to advertise events and information, and to use email as a new form of communication. Teachers also began using e-mail as a major form of communication with students, colleagues, and community members (Foster, Elliot, Blackey, Rich, & Bertelsen, 1997).

Today, it’s hard to imagine the agriculture classroom without YouTube, social media, and movies on DVDs. Many forms of educational technology are only a click away, and the majority of agriculture teachers and students have access to smartphones and tablets (McLean, 2014). With these devices, students have immediate access to a camera, the Internet, and e-mail, phone, and text message communication (Freeman, 2014). Curriculum is available on the Internet, and there are a plethora of websites with resources for every area of instruction (Harris, 2005). Programs are utilizing drones to study the land around them, and are easily able to share information and happenings through various forms of social media.

While many things have changed, there are some forms of technology that have proved to be important and useful throughout the history of The Agricultural Education Magazine, and remain so to this day: radio and telephone. Radio has long been accessible to agriculture teachers and communities regardless of location, and is an effective way for programs to reach a large audience of people to share information (Cardwell, 1961). As far back as the earliest issues, FFA chapters were encouraged to use radio to communicate chapter events and activities to their local communities. While radio is no longer the main source of information and entertainment for many, today it has taken on a new form with the invention of podcasts and digitally streaming agriculture radio programs.

The telephone once served as the quickest and easiest way for agriculture teachers to get a hold of others. The communities where the early agriculture programs were located were often rural, and encompassed large areas of land. This made personalized communication with program supporters more difficult, and thus, the telephone became the most efficient way to communicate. While the type of telephones may have changed, there are still areas of the country and agriculture programs with limited Internet access, making the telephone the most effective form of personalized conversation.

Over the last eighty plus years, the agriculture classroom has undergone vast changes in the types of technology present. As the field of agriculture has become ever more reliant on technology, agriculture educators have risen to the challenge and found ways to incorporate it into their classrooms and programs. While this may have challenged their creativity, they rose to the occasion and have found ways to transition America’s agriculture programs from “cows and plows” to “smartphones and drones”!

Tiffany Morey is a doctoral student in Agricultural and Extension Education at The Pennsylvania State University. Prior to returning to graduate school, she was an agriculture teacher in New Jersey for seven years. She holds a B.S. in Animal Science and an M. Ed. in Agricultural Science Education from Rutgers University.
by K. Janae McMichael, Meagan Slates, and Josie McQuillen

More often than not agriculture teachers seem to struggle managing time between lesson planning, grading and FFA activities. However, utilizing technology, can put one’s mind at ease and assist in organization, record keeping, and creativity. It may even make it more fun! Here are several resources all agriculture educators can get started on in less than ten minutes: YouTube, Google Suite, The Agriculture Experience Tracker (AET), FlipGrid, and Canva. All of these digital tools have mobile capability working consistently from your tablet, phone, or computer.

Google Suite has many features and services and is free for students and teachers to set up. The Suite is specifically derived for communication including Calendar, Keep, and Classroom. Google Drive is most often used for storage, where the information and changes made to documents is saved instantly, and additionally students and teachers will use Slides, Docs, Sites, Sheets, Forms, and YouTube for creation tools.

Canva, FlipGrid and The AET are a few other great resources to add to your teacher toolbox for review, marketing design, and officer organization. Canva is easy to use and allows students or teachers to quickly design professional flyers or social media posts. Use Flipgrid in the classroom as a reflection tool. Challenging students to document and reflect on projects in the moment is key for improvement. AET is great for Supervised Agricultural Experiences but it can do so much more! Try out some of the other ways to utilize AET by organizing a chapter meeting with the meeting manager, the strategic planner for officer retreat training sessions, and market your chapter through a website that is already attached to your account.

In the following pages you will find desk copies made for teacher ease. These desk copies are designed to create a simplistic journey for you into the world of using digital tools in the classroom. Each page includes a quick reference guide with a variety of ways you can choose to get innovative with these resources. Connect with other educators through their social media outlets and hashtags. Utilizing Snapchat, or a free, easy to download QR Code reading app, will allow you to watch video clips showcasing these digital tools in action.

These desk copies were made specifically for you. Hang them where you will see them, watch the tutorials, connect virtually, and most of all, give them a try!
FlipGrid

Why use me? Create a classroom community by giving each student an online voice! This free, easy to use app allows students to video respond to questions, reflect on projects, and communicate with the class.

Me + You = Innovation
- Create a Grid For Your Class or Classes
- Share the Grid Code or Specific Topic Code with Students
- Quick Share Assignments to Google Classroom
- Pose a Prompt to For Students to Create a Video Response
- Attach a Photo, Video, or Link as a Resource
- Develop Reflective Skills in Students through Self-Evaluation
- Peer Evaluation in Reply Video Responses
- Create Topics Ahead of Time and Schedule them to Post
- Provide Students with Feedback on Each Video
- Upgrade Account to Allow Rubric Grading
- Have Students Watch Students and leave Emoji Responses
- Have Students Create and Pose Questions for Review
- Peers Video Reply to Answer Question

Connect with Me!
@Flipgrid
#FlipgridFever

Watch Me in Action!

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YouTube

Why use me? Take students out of the classroom, show content you can’t replicate in class, or use a playlist to review. Youtube connects your class with industry and allows students to collaborate through video sharing.

Me + You = Innovation
- Create Playlists Related to Course Content to Help Students Review and Practice
- Create Collaborative Playlists
  - Have Students or Colleagues Contribute Clips to Your Group Playlist
- Easily Upload and Share Your Program and Student Successes
- Easily Embed Clips into Google Classroom, Slides or Sites
- Connect with Apps!
- Use as an Enrichment Tool!
  - Ask Students to Research Next Steps, or Other Approaches if They Finish Early
- Store Training Tools and Resources For CDE Teams
- Go Beyond Your Classroom! Take Your Students Outside of Your Town, State and Nation Through YouTube Video Clips

Connect with Me!
@YouTube
YouTube: Teachers

Watch Me in Action!

Google Classroom

**Why use me?** Google Classroom is a free application designed to help students and teachers communicate, collaborate, organize and manage assignments, go paperless, and much more!

**Me + You = Innovation**
- Easily Connect All Classes to the Google Suite
- Skip the step of searching desktop folders!
- Create Assignments for One Student or the Whole Class
- Make a Copy For Each Student
- Share One Copy With the Whole Class
- Create Announcements
- Upcoming Events, Due Date Reminders, etc.
- Connect Google Forms for Assessments
- Create a Quiz That Grades Itself
- Create a Survey to Get to Know Your Students
- Platform For FFA Chapters to manage Committees Reports, Local Applications, and Events
- Organize CDE Teams and Allow Students to Share Study Resources
- Sync Your Calendar Lesson Plans For Students To Catch Up When Absent

Connect with Me!
@GoogleForEdu
#withClassroom

Watch Me in Action!

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Google Sites

**Why use me?** A team-oriented free application, connected to Google Suite, to help students and teachers design, communicate and collaborate to create a website to share with the community.

**Me + You = Innovation**
- Easily Connect With Items Stored on Google Drive
- Embed Google Docs, Slides, Images, YouTube clips, etc.
- Easily Save Your Work in the Google Suite and Publish when You’re Ready
- Share Your Site With Students for Collaboration
- Have students Create Portfolios
- Guide Students to use Class Experience to become more marketable employees
- Organize and Display Class Work to Evidence Skill and Content Acquisition
- Have FFA Committees Share & Create Websites for Event Information
- Guide Your Reporter to Blog About Chapter Activities
- Share with Parents and Administration What’s Going on inside Your Classroom and Program

Connect with Me!
@gsuite
#gsuiteedu

Watch Me in Action!
Google Calendar

Why use me? The ultimate teacher to do list! Connect the Google Suite and start lesson planning, scheduling events, deadlines, and goals and collaborate with others.

Me + You = Innovation
- Design Lesson Plans
  - Create Lesson Plans Right in your Google Classroom Classes
  - Easily Attach Lesson Resources from Drive
  - See all Assignment Due Dates From Google Classroom
- Design Different Calendars for FFA Activities, CDE Teams, and School Events
- Share Calendars with Others

Google Keep

Agriculture Experience Tracker

Why use me? Go beyond SAE’s with the Agriculture Experience Tracker (AET)! Keep your program and students organized with Program of Activity (POA) planning, meetings, and events.

Me + You = Innovation
- Have Students “Check In” at Meetings and Events using the AET Calendar
  - Purchase a Barcode Reader and Have Students use The AET App to Sign In
- Have Students Keep a Daily Class Journal
  - Develop Workplace Disposition by Having Students “Clock In - Clock Out” of Class
  - Answering a Do-Now/Bellwork or Ticket Out the Door
- Start your Year with the Strategic Plan/ Meeting Manager
  - Build your POA, Agendas/ Organize Minutes and Meeting Attendees
- Utilizing your Program AET Website
  - Use the AET Calendar as a Public Calendar for Supporters
  - Share your Chapter Story Through Webpages
  - Use the Mobile App to Leave Feedback after SAE Visits

Connect with Me!
Facebook: The AET @ExploreSAE
Canva

Why use me? Simplistic use of design for students or teachers to create posters, labels, flyers, business cards, and so much more. Drag and drop features with high quality images for creative and professional work made easy!

Me + You = Innovation
- Choose from 50+ Templates to Begin your Creation
  - Drag and drop unique text, shapes, lines, illustrations
- Create Certificates for your FFA Chapter Banquet or Classroom Accomplishments
- Have Students Study Agricultural Issues and Create a Professional Infographic to Educate Others
- Have FFA Officers Collaboratively Work on a Flyer for an Upcoming Chapter Event Through the “Create a Team” Feature
- Utilize Lesson Plan Templates
  - Daily Lesson Plans and Easy-to-Read Substitute Notes
- Design Web Banners
  - Create Facebook Cover Photos/Twitter Headers

Connect with Me!
@canva
#mydesignstory

Watch Me in Action!

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Costello, Lori ..........................Jan/Feb 2018
Coutta, Ashley .........................March/April 2018
Cramer, Sarah ........................Sept/Oct 2017
Croom, Barry ..........................Jan/Feb 2018
Dawson, Raleigh ......................Jan/Feb 2018
DiBenedetto, Catherine ..............Jan/Feb 2018
........................................March/April 2018
Eddy, Billy ..............................July/Aug 2017
Edgar, Don .............................Nov/Dec 2017
Edgar, Leslie ...........................Nov/Dec 2017
Elliott, Kristopher M. ............May/June 2018
Epps, Rebekah........................July/Aug 2017
Ermis, Grant Lee ......................May/June 2018
Evans, Samuel ........................July/Aug 2017

Ewing, John ..........................July/Aug 2017
........................................Sept/Oct 2017
........................................Nov/Dec 2017
........................................Jan/Feb 2018
........................................March/April 2018
........................................May/June 2018
Faulkner, Paula E. ....................Jan/Feb 2018
Figland, Whitney .....................Jan/Feb 2018
Flood, Kendra ........................Nov/Dec 2017
Foster, Daniel ........................July/Aug 2017
Haynes, J. Chris .......................March/April 2018
Henry, Jon ..............................May/June 2018
Herman, Jennifer S. ..................Nov/Dec 2017
Hock, Gaea .............................Sept/Oct 2017
Irlbeck, Erica .........................Nov/Dec 2017
Jennings, Kayla .......................Nov/Dec 2017
Johnston, Anna .......................Jan/Feb 2018
Kohn, Craig ...........................March/April 2018
Lambert, Misty D. .....................March/April 2018
Lindner, Jimmy .......................Jan/Feb 2018
Mars, Matthew .......................Sept/Oct 2017
Marsh, Marla M. .....................May/June 2018
Marsh, Monica M. ...................May/June 2018
Martin, Michael .....................Sept/Oct 2017
McKim, Aaron J. .....................March/April 2018
Miller-Foster, Melanie .............July/Aug 2017
Morris, Kailee .......................Jan/Feb 2018
Murphrey, Theresa Pesl .............. Jan/Feb 2018
Murray, Kaitlyn ..................... May/June 2018
Myers, Brian E. ..................... Nov/Dec 2017
...................................... March/April 2018
Opat, Kelsi .......................... Nov/Dec 2017
Parham, Elijah ..................... May/June 2018
Parker, Hannah C. ............... Sept/Oct 2017
Pullin, Allison ..................... May/June 2018
Radhakrishna, Rama ............ July/Aug 2017
Radhakrishna, Rama ............ May/June 2018
Ralston, Rachel ................... March/April 2018
Redwine, Tobin ................... Jan/Feb 2018
Rice, Amber H. .................... Sept/Oct 2017
Rice, Laura Sankey ............... July/Aug 2017
Rodriguez, Duverney Chaverra... July/Aug 2017
Roth, Grace ........................Sept/Oct 2017
Rubenstein, Eric D................ Jan/Feb 2018
Samadi, Karima ................. Sept/Oct 2017
Schneider, Greg .................. Jan/Feb 2018
Shoulders, Catherine W. ...........Nov/Dec 2017
...................................... July/Aug 2017
...................................... March/April 2018
Smith, Kasee ..................... March/April 2018
Sorensen, Tyson J. ............. March/April 2018
Spielmaker, Debra ............... Sept/Oct 2017
Stanley, Christian ............. Nov/Dec 2017
Stofer, Katie ...................... Sept/Oct 2017
Stripling, Christopher T ....... March/April 2018
Thieman, Erica .................. May/June 2018

Thomsen, Lee ...................... July/Aug 2017
Tyler, Quentin ..................... May/June 2018
Velez, Jonathan J ................ March/April 2018
Vincent, Stacy ................... May/June 2018
Vincent, Stacy K ................. May/June 2018
Wach, Andrea ................. Nov/Dec 2017
Wells-Brickhouse, Gale ....... Jan/Feb 2018
Whittington, M. Susie ....... May/June 2018
Wight, R. Alan ................... Sept/Oct 2017
Willis, Victoria .................. Jan/Feb 2018
Wright, Kendall M ............. July/Aug 2017