

# CHAPTER 13

## Strategies for Implementing Digital Technology Within Extension Programs

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### Overview

The roots of information and communication technology in the United States can be connected to Extension work in the early 1900s. The Morrill Act of 1862 and the Morrill Act of 1890 were instrumental in the foundation of higher education in the United States and the emergence of the distance education movement (Miller et al., 2014). Land-grant colleges were a leader in agricultural production and disseminated evidence-based information to rural families through the Rural Free Delivery mail correspondence system (Miller et al., 2014). The generations of distance education began with correspondence courses and were followed by broadcast radio and television, open universities, teleconferencing, and the internet (Moore & Kearsley, 2011). As times have changed, and with the invention of the internet in the 1990s, so have the methods of communication and learning. To meet the current needs of our communities, Extension offers learning through tools ranging from podcasts to mobile apps, text messages, websites, social media, online courses, and more. These types of learning opportunities are flexible in their approach and offer opportunities to individuals with constraints on time and financial resources.

Even as digital tools continue to evolve, core elements of adult learning still drive how we design our educational programs. Mutual respect between the educator and learner can have a positive effect on the satisfaction, motivation of learners, and their ability to learn (Stavredes, 2011). Adult learning theorist Malcolm Knowles developed the concept of the six principles of adult learning including: (1) adults need to know why they need to learn something and what value it will give them, (2) adults are responsible for their own decisions and seek self-directed learning, (3) adults bring life experiences to learning, (4) adults are ready to learn things that relate to real-life situations, (5) adults have a life-centered orientation to learning that focuses on problem-solving, and (6) adults are motivated to learn new skills, which may increase opportunities, job satisfaction or an improved quality of life (Knowles et al., 2005). Incorporating these principles is challenging to instructors and designers who strive to make

online curriculum that is interactive, includes peer-to-peer learning, and is engaging to multiple audiences.

As technology improves and is more accessible to learners, Extension programs must focus on reaching out to clients in new and creative ways. According to the Pew Research Internet/Broadband Fact Sheet, roughly 90% of American adults use the internet and one-in-five Americans only use their smartphone to access the internet rather than traditional broadband (Pew Research Center, 2019). Rural Americans have made large gains in adopting technology over the past decade; however, they are less likely to have broadband or own a smartphone (Perrin, 2019). Smartphone use across the world has been growing with an estimated more than 5 billion people with mobile devices and half of those being smartphones (Silver, 2019). Offering Extension programs in an online format is a method often used to reduce expenses and reach audiences that may not have previously been served. In doing so, educators must be responsive to the needs and preferences of online learners by offering content that is relevant, of high quality, accessible to learners, and available through the use of mobile devices.

## Examples of Technology Use in Extension

This section features examples of Michigan State University (MSU) Extension programs that use digital methods for content delivery such as online courses, blended courses, train-the-trainer models, mobile learning, and webinars. Learning experiences should be designed in a flexible way to meet the needs of a specific target audience. For example, adult learners may be receptive to webinars, self-paced online courses, and podcasts, whereas members of a youth audience may be more engaged with short videos and social media. The following seven programs include background information and a link to more information.

### Farm Stress Blended Program for Industry Organizations

Financial stress relating to low commodity pricing, increased debt, and unfavorable weather conditions can negatively affect farmers. MSU has been successfully partnering with organizations that work with farmers by offering a variety of training for their staff. In 2018, MSU Extension began working with the United States Department of Agriculture Farm Service Agency (FSA) to train their staff on how to better communicate with farmers showing signs of stress through a blended program, which included a self-paced online course, interactive videoconference sessions, and an in-person training. The topics covered in the training included sources of stress, signs of stress, effective communication strategies, warning signs of suicide, reduction of stigma relating to mental health concerns, and connecting farmers with mental health resources. In the initial phase of the program, 500 FSA staff members completed a three-module self-paced course. They then registered for a one-hour videoconferencing session. These sessions included small groups of around 20 individuals facilitated by a trained

expert in farm stress. The interactive sessions focused on discussion questions that reflected on what they had learned in the self-paced online training. Five months later, FSA staff participated in a face-to-face training involving small group role-playing exercises. Once again, Extension staff from around the country who have expertise in the area of farm stress facilitated these sessions.

For more information on farm stress programs at MSU, visit MSU Extension Farm Stress Programs at <https://bit.ly/32KUbxD>.

## Text Messaging Study: Farm Stress

Stressors such as weather and economic concerns may cause farmers a great deal of stress. Farmers' chronic stress can be associated with negative outcomes including mental illness, substance abuse, poor physical health, risk of injury, and suicide. The purpose of this project is to develop a text-messaging mental health intervention to educate farmers about farm-related stress, as well as coping strategies to manage that stress. A pilot test is being conducted with Michigan farmers to assess feasibility, usability, and acceptability. The study will also assess the initial efficacy of the intervention in increasing knowledge about farm stress and coping strategies, the use of adaptive coping strategies and perceived social support, as well as the reduction of perceived stigma surrounding mental health, farm stress, and the use of maladaptive coping strategies. This innovative intervention has the potential to overcome multiple barriers farmers face to access mental health information. Participants in the project will complete a pre-test, receive text messages over a three-month period, and complete a post-test. Selected participants will be recruited to participate in telephone interviews.

For more information on farm stress programs at MSU, visit MSU Extension Farm Stress Programs at <https://bit.ly/32KUbxD>.

## Pollinator Champions Online Train-the-Trainer Courses

The MSU Pollinator Initiative launched the Pollinator Champions program in June 2018. This free online course is designed to educate the public about the importance of pollinators in Michigan. After completing the course, individuals can pay a fee to become a Certified Pollinator Champion. This gives them access to presentation materials so they can educate others about pollinators at garden clubs, libraries, and schools. In the first year the course was offered, the course had over 1,300 participants, 193 of which became Certified Pollinator Champions.

This course provides a quality learning experience including engaging reading materials, videos, and interactive games. For example, the course includes an animation of a blueberry bush, where blueberries will appear or disappear based on selected inputs to show the importance of pollination. Enrollees learn the objectives through multiple avenues and are provided links to further learning. This program relies on trained volunteers for assisting in outreach based on growing public interest in evidence-based information about pollinators and pollinator decline.

For more information, visit Pollinator Champions at <https://bit.ly/3nngUYn>.

## Floriculture College of Knowledge Online Course Series

The Floriculture College of Knowledge Online Course Series began in 2015. It was built upon curriculum taught in a face-to-face format for commercial floriculture growers. The series includes three courses: (1) Biological Control for Greenhouse Growers, (2) Greenhouse and Horticulture Lighting, and (3) Root Zone Management. The courses are offered in both English and Spanish. Each of the courses include recorded lectures, handouts, additional resources, as well as a pre- and post-test. The self-paced courses are offered twice a year in a cohort-type format where the participants have 90 days to complete the curriculum. In 2018, data from participant pre- and post-tests indicated significant increases in knowledge with scores increasing from an average of 68%–73% in the pre-test to 92%–92% in the post-test (Lindberg et al., 2018).

For more information, visit the MSU Extension Online College of Knowledge at <https://bit.ly/36se0uw>.

## My Horse University Online Program

My Horse University (MHU) was established in 2005 at MSU through a partnership with the MSU Department of Animal Science, MSU Extension, and MSU Global. The goal of MHU is to connect research and expertise from equine experts to horse enthusiasts across the country through online courses, webinars, podcasts, educational products, and more. MHU launched its first online course in 2006 and now offers 11 courses on topics ranging from horse health and nutrition, to a course focused on keeping youth safe while working with horses. The majority of courses are self-paced; however, some are offered annually in a cohort-based format. Since inception, MHU has received several awards, grants, and sponsorships.

Over the past 15 years, MHU has created brand awareness through a variety of marketing channels. It has a list of over 7,600 email contacts built from course participants, webinar participants, and online sign-up forms. The MHU website receives an average of 14,000 views per month. The program is also active with social media including over 5,400 likes on Facebook, and through a YouTube channel, MHU has had approximately 1.5 million views on horse-related videos.

MHU has been creative in finding new ways to partner with experts across the country. In 2012, through a grant funded by the North Central Regional Center for Rural Development, a live videoconferencing event connected four states across the Midwest section of the United States. Each state had one live speaker and was broadcast to each of the other three remote locations. The following year, the program continued through a five-part webinar series, which was the basis for an online course.

For more information, visit MHU at <https://www.myhorseuniversity.com/>.

## Beginning Farmer Webinar Series

The Beginning Farmer Webinar Series is an educational videoconferencing program that connects experts with new and future producers on topics

ranging from livestock, fruits and nuts, machinery, soil health, marketing, and more. The series began in 2012 in an area of Michigan where participation in live workshops was limited due to a widely scattered farming population and long driving distances. The webinars are offered during the winter months when participants are more likely to have time to participate. Participants are charged a small fee for attending the webinars to cover costs such as closed captioning of the recordings. In a survey conducted in 2016, 57% of the participants indicated the series contributed to them starting a business and 78% indicated they made changes to production practices based on what they learned (Wardynski et al, 2018).

For more information, visit the Beginning Farmer Webinar Series at [https://www.canr.msu.edu/beginning\\_farmer\\_webinar\\_series/](https://www.canr.msu.edu/beginning_farmer_webinar_series/).

## Ask an Expert Online Question-and-Answer Forum

Through Ask an Expert, an online question-and-answer system, Michigan residents are able to ask questions and quickly receive expert answers on a broad range of subjects. This tool was developed by eXtension, a foundation that supports land-grant institutions and is available to all land-grant universities in the United States. Through this tool, university evidence-based information is provided to help residents improve their quality of life, families, gardens, businesses, and communities. Participants can submit a question online, a staff member assigns the question to an expert, and the expert sends back a response. In 2019, MSU Extension experts and highly trained Extension Master Gardener volunteers answered 6,500 questions. The majority of questions are related to plants and pests; however, additional topic areas include zoning and land use, food safety, agriculture, human nutrition, and water resources.

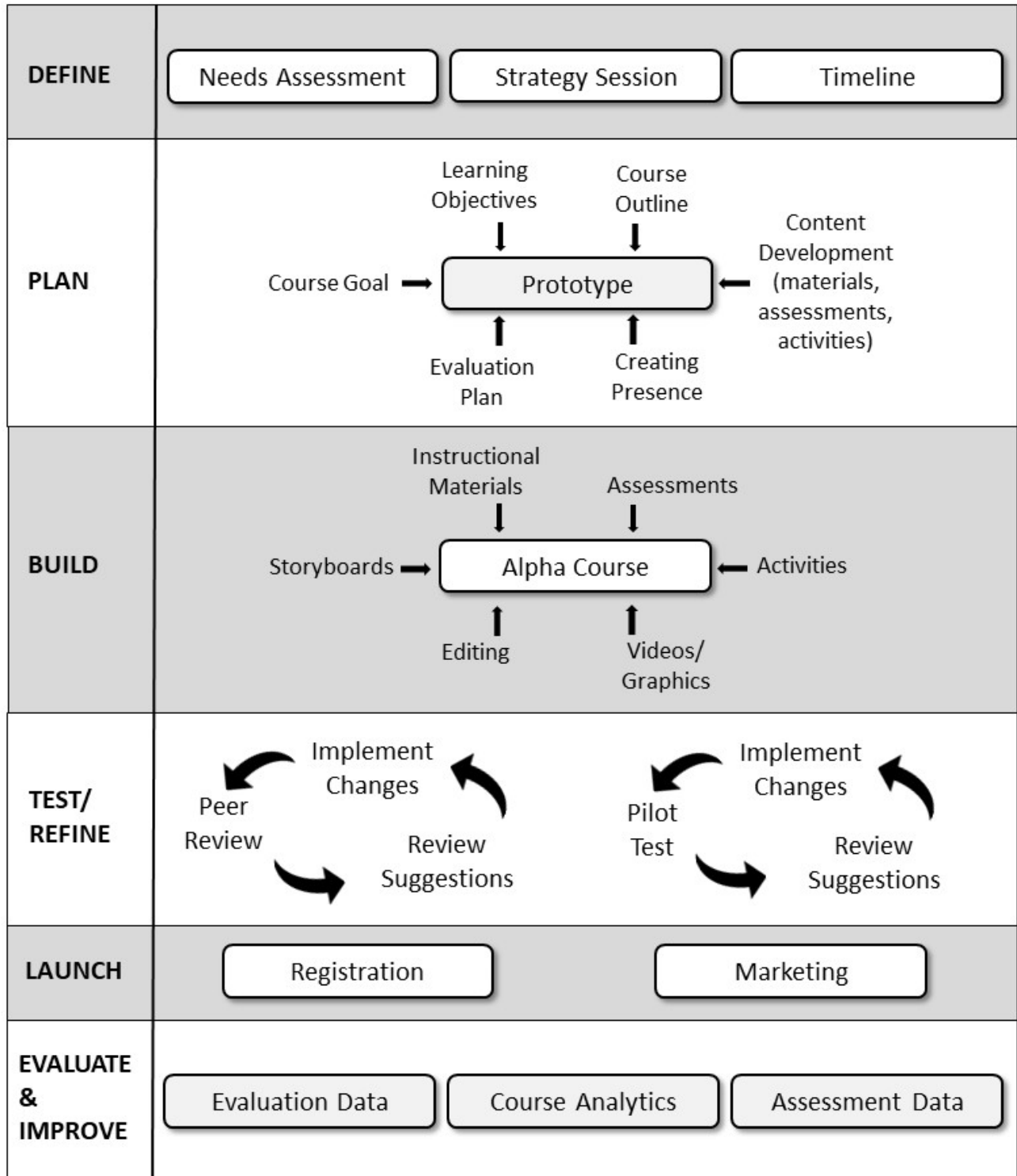
To view the MSU Extension Ask an Expert form, visit [www.extension.msu.edu/ask-an-expert](http://www.extension.msu.edu/ask-an-expert).

## Course Development Process for Online & Blended Courses

MSU Extension has developed a framework for staff to follow when designing an online or blended course. The framework includes six phases: define, plan, build, test/refine, launch, and evaluate. Each segment of the framework builds upon each other to develop a high-quality, cohesive learning experience that meets the needs of the intended audience. This process is applicable to any type of online course including self-paced courses where participants have the flexibility to complete the content at their own pace but typically with a specific timeframe and cohort-based courses where participants must complete assignments or tasks by given deadlines. It also applies to blended courses, which include a combination of online and face-to-face instruction. Each step of the process, which is shown in Figure 13-1, is described in detail throughout this section.

Figure 13-1. Michigan State University Extension online and blended course development process.

# MSU Extension Online/Blended Course Development Process





## Phase 1: Define

The define phase of the framework focuses on needs assessment and creating a strategy for the intended learning experience. Knowing the specific needs of your target audience is imperative to develop curriculum that participants can connect to and use for solving problems or challenges that they face. As we know from adult learning theory, adults are more likely to be engaged in the learning experience if content is relevant to their own needs (Knowles et al., 2005). It is also important to gain insight from other sources such as stakeholders, external organizations, community groups, volunteers, and others.

A needs assessment can include a combination of both formal and nonformal methods. A formal needs assessment may include an online survey, focus group, or interview. For example, the MSU Extension My Horse University (MHU) program conducted a formal needs assessment at the beginning of the program to identify content areas, appropriate pedagogical approaches to learning, and insight into marketing aspects of the program such as how much potential participants would be willing to spend on the courses. The results of the needs assessment were used to build the foundation of the MHU program. Approximately a decade later in 2019, this team developed an 18-question marketing survey to once again ensure that they are meeting the needs of the target audience, to find preferences for learning as technologies have changed, and to find preferences for marketing. To date, there have been 903 responses to the survey. Initial results indicate that the preferred method for receiving information is email, followed by communicating with professionals, social media, and websites. In terms of learning preferences, 94.3% indicated they were either interested or very interested in learning through online courses. When considering online learning, respondents valued scheduling flexibility as demonstrated by being very interested in self-paced courses (75.2%), and recorded webinars (51.1%) as compared to scheduled instructor-led courses (32.6%) and live webinars (33.0%) (Skelly et al., 2019).

Informal needs assessment can also play an important role in curriculum development. An informal needs assessment may include meetings with stakeholders, advisory committees, or feedback from clients. A specific example is from the MSU Extension Equine team, which invites stakeholders to their monthly meetings for lunch to discuss the needs of their program and the ways MSU Extension can be of assistance. In 2019, this team invited representatives from therapeutic riding programs, the Michigan Department of Rural Development, veterinarians, and representatives from the horse showing industry.

The define phase also includes time for planning the general strategy for the program. During this process, the subject matter expert(s) will review other online courses, discuss technology needs or limitations with an instructional specialist, and develop a timeline. The subject matter experts should also make decisions regarding the format of the program, such as online or blended, and self-paced or a cohort model with a specific timeframe.

## Phase 2: Plan

In the plan phase of the framework, experts develop their course goal and learning objectives, and begin to explore ideas for the format of the course. The learning objectives identified by the subject matter expert should connect the learning materials, activities, and the assessment. They should be written so the objectives are measured through the activities and assessments that the participants complete. The learning objectives should also reflect the need or problem identified in the define phase.



To assist staff in connecting learning objectives to the content of their course, the MSU Extension Course Development Learning Objective Outline tool was designed (see Figure 13-2). This tool was initially created through a project that found adaptive learning, a method for creating personalized learning paths based on data and learning objectives, to be an innovative method for online teaching and learning within Extension programs (Shelle et al., 2018). As shown in Figure 13-2, by using the learning objective outline tool, those developing courses can map learning materials, activities, and assessments to learning objectives. This outline is completed before any content is added to a learning management system.

During the plan phase, experts should review and reflect on existing courses to assist in shaping the format of the learning experience they are designing. After the course outline is developed, they can begin to add detail to the learning objective outline in terms of defining the materials, assessments, and activities. The learning objective outline becomes the framework for the intended course.

As experts begin to think about the design of the curriculum, they should also think about creating an online presence. The Community of Inquiry model was designed to assist those teaching online to build meaningful online experiences through *social presence*, which allows students to identify with their community of learners; *cognitive presence*, which focuses on the learners gaining meaning through reflection and discourse; and *teaching presence*, which is the design of meaningful and worthwhile learning outcomes (Community of Inquiry, n.d.). Creating online presence is critical for connecting with learners. Methods such as short videos from facilitators or experts, online discussions or chats, and webinars are all ways to connect the instructor to learners, as well as to promote peer-to-peer learning. Keeping instructor presence in mind when developing online curriculum challenges experts to move beyond just making content available—and moving toward a rewarding learning experience.



Figure 13-2. The Michigan State University Extension course development learning objective outline tool.

1				
2	This template is meant to be a guide for developing an outline for a course or program based on learning objectives. If you have any questions regarding this template please contact Gwyn Shelle, Instructional Technology Specialist at heyboerg@msu.edu or 517-432-5131. (This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License)			
3				
4	<b>Title of Course (Add Title)</b>			
5	<b>Learning Objective Examples (Need to add)</b>	<b>Supporting Content Examples</b>	<b>Activity Examples</b>	<b>Assessment Examples</b>
6	Learning objectives must be measurable Do not use "understand" or "know" as a verb Align learning objectives with the level of the course Align learning objectives to assessments	Lecture Video Podcast Article Digital Storytelling Screen Recording Guest Speaker Video Clip of Expert FAQ	Scavenger Hunt Games (Ex. Jeopardy) Online Flash Cards Webinar Online Chat Virtual Tour Case Study Review Online Debate Group/team Activities Scenarios w/ Questions Ice Breakers/Discussion Forum Read, Reflect, Report Role Playing Article Critique Brainstorming Concept Mapping Interviews Simulation	Pre/Post Assessment Paper Discussion Forum Wiki Blog Portfolio Project Literature Review Presentation Quiz/Exam
7	<b>Unit 1 (Add Title)</b>			
8	<b>Learning Objective #1</b>	<b>Supporting Content</b>	<b>Activities</b>	<b>Assessments</b>
9				
10				
11				
12				
13	<b>Learning Objective #2</b>	<b>Supporting Content</b>	<b>Activities</b>	<b>Assessments</b>
14				
15				
16				
17				
18	<b>Learning Objective #3</b>	<b>Supporting Content</b>	<b>Activities</b>	<b>Assessments</b>
19				
20				
21				

## Phase 3: Build

The build phase can be the most time intensive part of the development process. In this phase, the content for the course is developed. This can include recording videos, designing activities, writing assessments, and more. A good practice is to begin with a storyboard. In this document, the expert writes out content of the course, scripts for videos, and assessment questions. Having the content initially written in a storyboard format allows a professional editor to give feedback on flow, consistency, and grammar. The storyboard should follow the organization framework created through the Course Development Learning Objective Outline.

The course content should also be organized within units or modules. The units can be organized by topic area for a self-paced course or by week for a cohort-based course where the content would be made available to the participants one week at a time. Each unit should contain instructional content, activities for participants to practice what they have learned, and a way for them to assess their knowledge.

The instructional content, activities, and assessments within a course will be unique based on the target audience, purpose, and the need that the content is expected to fulfil. Many options for instructional content exist including text the participants must read, recorded videos, links to websites, podcasts, digital storytelling, a recorded interview with an expert, and others. The activities should also be designed based on the learning objectives. One way to build activities is to reflect on the learning objectives and think about the most important areas of content that the participants must know or demonstrate. It may be easy to create a simple activity such as matching terms with definitions; however, this may not help the learner apply the most critical areas of content that they learned through the instruction. Examples of activities include scenarios with feedback, knowledge recall activities, classification, decision trees, virtual tours, an online chat, or games such as Jeopardy. Often quizzes are used for assessments in online courses as they can be automatically graded for the participants, in addition to features such as automatic feedback on questions they answered incorrectly and the ability to take the quiz more than once to achieve a certain score. Applied assessments can also be integrated within a course such as using discussion forums, having the participants complete a handout and submit it to the instructor for feedback, or completing a project. These types of activities do require more time of the instructor as the assessments should be graded and the participants should receive feedback. Examples of instructional content, activities, and assessments can be found in Figure 13-2.

When creating content, the expert should always keep accessibility of online content in mind to remove barriers from the learning process. Some examples of accessible content include using materials that include appropriate contrast to make graphics more readable, using more than color when describing a graphic, using alternative text for images so that a screen reader describes it to a learner, and using closed-captioned video content. Making content accessible not only removes barriers to learners but also increases the quality of the content.

A list of best practices for building instructional content in an online course follows. Remember that the content within every online course will be different and should focus on meeting the needs of the target audience.

- **Learner Needs:** Always focus on the needs of the learner. If participants need to learn about tractor safety, graphics of equipment and safety videos might be included. If participants need to learn about making a nutritious meal, recipes and cooking demonstration videos might be included.
- **Different Ways of Learning:** Remember that the target audience may include a variety of learners, and their preferences for learning may differ. Some individuals may prefer written text, while others would prefer short videos. Including a variety of instructional content will also help to increase engagement with your audience.
- **Video Content:** Keep videos short, about 5–7 minutes. Include a variety of videos in a course such as a recording of an expert on a specific topic, a demonstration, a video clip from the field, and other types.

- **Instructor Presence:** Incorporate content in ways that allow you to make the instructor's presence known such as short introductory videos from the instructor for each module.
- **Accessibility:** Think about color contrast, alternative text for images, and closed captioning for videos. Find a basic accessibility checklist from MSU at [https://webaccess.msu.edu/Help\\_and\\_Resources/checklist.html](https://webaccess.msu.edu/Help_and_Resources/checklist.html).
- **Finding Content:** Curate online resources to see if there are relevant and accurate resources online. Make sure to always cite your sources accurately, and use photos and videos with permission or those with a Creative Commons license.

## Phase 4: Test/Refine

Throughout the test and refine stage, the content is reviewed at two different levels including peer review and pilot testing. First, the content is peer reviewed by one to three individuals who have expertise in the subject matter. For example, peer reviewers may include faculty or staff who have a certain level of expertise in the content area. Other examples of peer reviewers may include graduate students or outside consultants. Often peer reviewers are acknowledged on a page within the course and may receive a stipend for their time if funding is available. At this level, the reviewers look for areas that may need more detail and are expected to give suggestions for additional content based on their area of expertise.

The second level includes a pilot test of the content by individuals who represent the target audience. The pilot group may include up to 10 individuals who will give feedback on the course in terms of instructions, relevance of content, and any areas that need to be explained further.

Feedback from both peer reviewers and pilot testers can be obtained through templates or online surveys built within the course.

## Phase 5: Launch

When preparing to launch an online course, instructors should consult with experts on developing a marketing plan for advertising the course to potential participants. A marketing plan is going to be unique to each target audience. Some ways of connecting with potential course participants include:

- **Email Campaigns:** Building a marketing list of potential participants can be helpful for advertising a course. Email campaign tools such as Constant Contact and MailChimp can be useful in managing email lists, designing email blasts, and automating communication. A sign-up form for an email list can be advertised on a website, during online events such as a webinar, and through face-to-face events.
- **Websites:** Having a web presence is key for allowing potential participants to find information about a course. Using proper metadata can make a course more findable online.
- **Social Media:** If the target audience is active on social media, tools such as Facebook and Twitter can be useful in advertising.
- **Events:** Courses can be advertised through other related events whether they are in-person or online such as a webinar.
- **Print:** Postcards, handouts, and fact sheets can be handed out at events or mailed to a list of potential participants.

## Phase 6: Evaluate

As part of a continuous improvement process, courses should be routinely evaluated for effectiveness and quality of the content, and to make sure participants are gaining knowledge. Data such as the amount of time spent in the course, number of logins, and number of certificates issued are typically available through learning management system metrics. This data can help build a picture of the user experience. On a set schedule, content should be reviewed for quality including broken links, instructions that need updating based on new versions of software, and other areas. Data from both quizzes and pre- and post-tests can give instructors insight on knowledge gained by the participants and if there are any gaps in content. The content should also be evaluated for effectiveness in terms of participant satisfaction, suggestions for improvement, and ideas for future courses.

## Best Practices for Online Meetings & Webinars

The integration of videoconferencing tools for online meetings and webinars can increase communication channels for internal staff within an organization and increase outreach to local, national, and international communities. Specific examples include community-based online education, broadcasting of live events, and professional development for staff. MSU Extension offers many webinars and facilitated online meetings on topics relating to agriculture, health, youth development, gardening, and natural resources. As an example, MSU Extension's Beginning Farmer and Field Crops webinar series had 438 registrants in 2017 with a combined total of over 2,400 viewers. At times, MSU Extension will also partner with external organizations. Each year, the MSU Extension Health and Nutrition Institute in partnership with the Michigan Department of Health and Human Services offers an annual webinar on vaccinations. In 2019, they had approximately 900 attendees in this webinar.

Some of the many benefits for offering learning experiences through an online meeting or webinar follow:

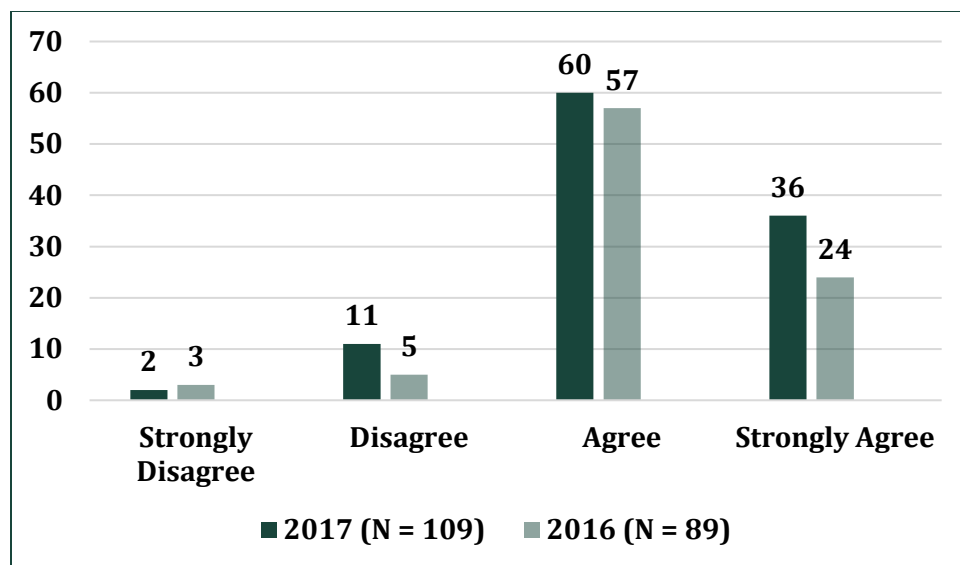
- **Access:** This format allows participants who are located at various geographic locations to attend a live event that they may not have been able to attend otherwise. It is a convenient option for learning.
- **Cost:** Webinars and online meetings can save travel time and money for both speakers and participants.
- **Marketing:** Offering free webinars can be a method for building email lists for other events or online programs. Note that participants should always be allowed to opt in to an email list and must always have an option to opt out of receiving emails. It is also a way to build rapport and brand awareness.
- **Re-usable Content/Recordings:** Recorded content can be made available online and repurposed in other curricula such as a blended or online course.

A variety of formats for designing webinars or virtual meetings exist. Base the option you select on what is best for the content you present and for the target audience. Some examples include:

- **Series:** A webinar series can be offered in a variety of ways such as a week-long series with one webinar a day, or a series in which a webinar is offered once a week for a period of time such as over four weeks. Typically with a webinar series, the content focuses on a specific theme or topic area.
- **Connecting Multiple Locations:** A webinar or virtual meeting can be an aid for connecting two or more face-to-face sites. In this instance, it can be helpful to have at least one in-person speaker at each location for audience engagement.
- **Blended:** A blended approach combines both online experiences and face-to-face instruction. It allows for shorter in-person meeting time, as well as time for preparing for in-person training and reflection after the training. An example of this would be scheduling a webinar or virtual meeting prior to an in-person training to set the stage and get participants acquainted with each other. Offering an online experience after an in-person event or training allows time for reflection and application of content to scenarios or case studies.
- **Ignite Style:** In Ignite style presentations, you may have multiple speakers who have a short time period to present. For example, MSU Extension held an Ignite style event where half of the participants were in-person and half were virtual. The in-person presenters all had 5 minutes to present and were able to answer up to two questions. In this instance, you must have a moderator to keep the event on schedule.
- **Panel of Experts with Q&A:** At times a dialogue between several presenters may be more effective than a formal presentation. In this instance, a moderator is needed to ask question and to keep the conversation focused. It is a best practice to write and share the questions ahead of time with those speaking.

For a webinar experience to be successful, some key areas need to be addressed including participant engagement and quality content development. Presenters can improve the effectiveness of their delivery in many ways. Participants can be encouraged to be involved within the webinar through the use of tools such as a poll, chat, and Q & A, and having participants virtually raise their hands. Facilitators should be purposeful in designing webinars that engage with their audiences. For example, in a face-to-face program, a facilitator should stop every 10 minutes and ask for feedback, engage with the audience, and ask questions. This same format should be followed in a webinar by stopping at various points in the presentation and asking for feedback, asking a poll question, or other methods. Another way to improve the effectiveness of the content delivery is to include the video of the person presenting. In a survey of past webinar attendees in the MSU Extension Beginning Farmer webinar series, participants were asked to rate their agreement in terms of if the presenter video added interest and/or value to the webinar. As shown in Figure 13-3, the majority of respondents in both 2016 and 2017 agreed or strongly agreed that the presenter video added interest and/or value.

**Figure 13-3. Michigan State University Extension Beginning Farmer Webinar Series—value of presenter video in webinar.**



If using a presentation tool such as PowerPoint in a webinar or online meeting, keep these best practices in mind. A common mistake by presenters is to put too much text on each slide. One way to avoid this is to limit the number of bullets and amount of words on each slide, such as only have 5 or 6 bullets and up to 5 or 6 words for each bullet. Any additional information can be put in the notes section and made available to participants in the form of a printed or online handout. Pictures and charts will also help engage with the audience. Photos and graphics should relate to the content and often they may help in telling a story or giving an example. Presenters should try to limit the number of slides and practice giving the presentation to make sure there will be time for questions and interaction with the audience.

The archived recordings can be just as important as the live presentation as they give participants the opportunity to review the content or view it at a later time. The webinar recordings are also at times integrated within MSU Extension online programs. When sharing a recording, keep accessibility in mind. Video captioning results in many benefits such as making the content available to all including those who are deaf or hard of hearing, being legally compliant, increasing comprehension of content in online courses, allowing for flexible viewing in sound-sensitive environments such as a library or public transportation, and increasing the searchability of your content (Edelberg, 2019).

When thinking about designing a quality webinar experience, a facilitator should focus on:

- **Date/Time of Webinar:** Those planning the webinar should schedule it for an appropriate date and time. For example, it may be more effective to reach farmers in the winter months when they are not as busy. The time of day can also make a difference in attendance. If the target audience would typically be working during the day then scheduling a webinar for the evening may increase attendance.
- **Technology Equipment:** Having the right equipment is going to make the webinar experience more fluid and will result in a higher quality recording. Those speaking in the webinar should either use a headset or



microphone if they are in an individual office area or a conference room microphone if they are in a group setting. Built-in computer microphones result in lower quality audio.

- **Quality Content:** A high-quality presentation is important in order to engage with your audience. Techniques for engagement include using less text on a slide and more images, and adding interactivity such as video clips or showing websites.
- **Audience Engagement:** Planning ahead for ways in which you can engage with your audience will help with retention throughout the webinar. Examples include stopping and asking the audience for questions throughout the webinar, asking them to share ideas through a chat tool, or using poll questions to increase engagement.
- **Practice Session:** Scheduling a practice session with the presenters may only take a few minutes but will ensure that equipment and technology are appropriate. Presenters should join the webinar 30 minutes prior to the start time for one last test before the live event.
- **Co-Host Support:** Many times, it is helpful to have a co-host who also has expertise in the content area so they can help in answering questions through the chat or Q&A tool.
- **Sharing the recording/tracking data:** Think ahead in terms of how the recording will be shared using a platform such as YouTube or Vimeo. Make sure that all guidelines are followed for branding and accessibility.
- **Evaluation:** If collecting evaluation data on the webinar, ask participants at the end of the webinar to take the survey by sharing the link in the chat. You can also follow-up with those that registered, share the recording, and ask them to complete the survey.

## Summary

This chapter covered best practices for offering content in a virtual way to increase the reach of MSU Extension programs and offer flexibility to both content experts and participants. Technology changes at a rapid pace, which requires Extension staff to stay engaged with emerging tools and practices. Extension staff should continuously improve their skills through formal and nonformal professional development opportunities such as reading blogs, attending trainings, reading articles, and attending conferences. Building a community with peers for ideation and to test new technologies can also be effective. Extension staff should build a toolkit of resources and best practices that they can rely on to effectively meet learners in their space.

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