Introduction

Shrinking personnel and travel budgets in the future will continue to force agricultural Extension and Outreach programs to rely increasingly on new technology as a platform for knowledge dissemination and stakeholder engagement. This article discusses podcasts as an example of new media development that might complement the communications and learning goals of agricultural and applied economics educational institutions. We discuss best practices and provide ideas on integrating podcast content into communications development and community building. Podcasts have become popular in the United States; over a third of all Americans listen to a podcast at least once per month with some estimates forecasting that podcast listeners will increase substantially in the following years (HubSpot 2020; Soto Reyes 2021).1 With the increasing popularity of podcasts, this media form represents an attractive addition to higher education communications and marketing strategies. However, with over 30 million podcast episodes available, any new podcast is likely to compete for attention (HubSpot 2020). This paper provides guidance and examples for educational institutions hoping to implement a podcast into their communications and/or teaching strategy.

Podcasts, like all digital content, require strategic planning and perform best when integrated into an overall communication or teaching strategy. It is imperative to identify overall communications goals or course learning goals and how incorporating a podcast would achieve those goals. Once you’ve determined that a podcast would align with intended outcomes, strategic planning for the podcast can

---

1 Following Lonn and Teasley (2009), we define podcast as “any digital media file, or series of files, distributed over the internet for playback on portable media players and personal computers."
The remainder of this article is organized as follows. First, we provide a conceptual framework of how to incorporate new media content into an integrated research and outreach program. Dubbed the “ICPC Framework,” we describe how to interact with stakeholders and field Extension staff, identify on-campus comparative advantages, publish stakeholder-relevant peer-reviewed research, and strategically communicate the findings. We then discuss each step necessary for strategically developing a podcast to communicate with the stakeholders of interest. The third section provides a case study of new media content development. Titled “MSU Closing Bell,” this video podcast series originally streamed on the Facebook page of the Michigan State University College of Agriculture and Natural Resources for the first year of the COVID-19 pandemic. The final section concludes with a discussion of the limitations of new media content and recommendations for integrating old-world Extension programming into a more constructive outreach program.

2 Conceptual Framework
Before developing any new media content, it is important to think strategically about how the content will fit into a broader strategic vision for integrated research, education, and outreach. Figure 1 displays an example of a conceptual framework that might promote the development of a strategic outreach program, that is, the “ICPC Framework.” Like the Ignatian pedagogical cycle of context, experience, reflection, action, and evaluation (Pousson and Myers 2018), each step along this framework seeks to build into a repetitive, longer-term outreach-focused research program. Indeed, the tenants of land-grant Extension programming require a strong relationship between research and outreach content, making it crucial to maintain an integrated program (Tonsor 2018). Integrated educational offerings for agricultural policy have even been explicitly requested via U.S. Department of Agriculture funding, such as grants related to the 2014 Farm Bill (Ellison et al. 2017).

Figure 1. ICPC: A Framework for Strategic Outreach
The ICPC Framework can start at any place within the cycle, but for our purposes we will begin with “I,” or “Interact with Stakeholders and Field Extension Staff.” The primary goal of these interactions is to gain insights on the “real-world” issues confronted by the stakeholders of interest. Starting with stakeholder interaction is particularly helpful for early career Extension economists who are still developing their in-state stakeholder relationships (Hagerman et al. 2022). Within those interactions, a focus on “shovel-ready” agent-producer tools should be emphasized. These tools vary dramatically across stakeholder groups, but prime examples include the TelFarm Project (Werth 1965), the Farmdoc Project (Irwin et al. 2004), and the Kansas State University Research and Extension service programming for the 2014 Farm Bill (Taylor and Tonsor 2019).

Following the initial stage of stakeholder interaction, an important next step is to identify the on-campus comparative advantages. This stage is especially important as the funding and development of new agricultural technology research has shifted toward private agribusiness firms, inducing a greater need for understanding how the land-grant system can provide support to these off-campus developments (Fuglie et al. 2017). Each university has a unique consortium of resources for developing outreach content, including students, staff, and multidisciplinary teams.

Leveraging those pre-existing resources to respond to stakeholder needs can create a rapid and effective new media response to an ongoing concern. Furthermore, because one state’s stakeholder needs are likely to overlap with those of stakeholders in other states, multistate collaboration teams also represent a strong strategy for leveraging the resources of the university to address ongoing stakeholder concerns. An example of multistate team programming is the Cattle Market Notes Weekly newsletter (Maples, Mitchell, and Burdine 2021), which is a collaboration between Mississippi State University Extension, the University of Arkansas Extension, and the University of Kentucky Extension.

The third step of the ICPC Framework is to publish stakeholder-relevant peer-reviewed research. Including peer-reviewed research as a part of outreach programming allows for a more comprehensive understanding and discussion of each topic (Brorsen 1987; Parcell et al. 2020. Structuring each real-world issue into an academic article format forces you to think systematically about how to create the most relevant, accurate agent-producer tool. Used correctly, the peer review process creates an important feedback loop with other experts in the field, allowing you to be more confident about your outreach content.

The remainder of this article primarily focuses on the final step of the ICPC Framework: to strategically communicate your findings to relevant audiences. Given the time lag between submission and publication in agricultural economics journals, it is important to begin your strategic communications planning process prior to journal publication. A strong dissemination strategy requires opportunities for relevant stakeholders to see your outreach content. As such, consider the psychological concept of the “mere exposure effect,” which poses that people tend to develop a preference for things that are more familiar than others (Fang, Singh, and Ahluwalia 2007). That said, dissemination of research findings must be mindful of the geography, demography, and psychology of the relevant stakeholders. This strategy might require communication with topic-specific journalists but also might involve collaboration with agricultural communications faculty and staff.

Your communications strategy might also require the development of new media content such as podcasts. In the following section, we describe podcasting as one mechanism for strategic communication in an integrated research and outreach program.

### 3 Strategic Considerations for Podcast Creation

New media plays an increasingly important role for content branding and consumer engagement (Holt 2016; Malone and Cripps 2021). Though adoption of new media has lagged for certain stakeholder groups such as commercial agricultural producers (Zahn 2020), podcasts have carved a growing market share for decades. The higher education literature has been particularly mindful of podcasting in student learning,

Over half of U.S. consumers over age 12 listen to podcasts, and the number of listeners is increasing every year (Edison Research 2021). This trend became particularly salient for Extension programming with the onset of the global pandemic where higher education institutions were faced with the challenge of educating and community building in increasingly digital spheres. The pandemic was a catalyst to creating educational and connection opportunities through new media as prospective and current students, program participants, alumni, and stakeholders remained at home. Despite those opportunities, few articles have described a strategic approach to new media development in Extension and outreach programming. The following section describes important considerations for effectively implementing a podcast into an integrated research and outreach program in agricultural and applied economics.

3.1. Strategic Consideration for Podcast Creation

The first step in developing a podcast is to create a strategic plan. Spending time on the front end of podcast development is an investment in the podcast’s full potential. Additionally, make sure you are involving and getting input/feedback from people with diverse backgrounds and experiences.

During a strategic planning process, you decide who you are trying to reach, what they are interested in, why they would care about your content, and how and where you are going to connect to your audience. It is imperative that you build your podcast on a foundation of accessibility.

In other words, establish the audience and the goal of your podcast that accomplishes your overall communications or course learning goal, and engage in some primary and secondary research. In other words, think about the who, what, and why of your podcast:

- Who are you specifically trying to reach?
- What are they interested in?
- Why will they care?
- What action do you want your audience to take once they listen, or what do you want them to take away?

To use an example from above, perhaps your goal is to reach and recruit prospective students (audience). This will guide your content development to focus on prospective students and the content that would inspire them to apply and the things they need to know about becoming a student. Perhaps that process involves interviews with other students, enticing majors, and information about social student life on campus. Perform online (secondary) research about topics and trends, but also perform primary research, perhaps sending a survey to current students asking about the information they wish they had, and prospective students about what questions they have.

In the realm of secondary research, search industry best practices, but also identify groups or organizations offering similar podcasts or content. This is a great way to view content in action and build ideas. Here are some questions to think about while doing secondary research:

- What are organizations like yours doing and doing well? Where are they missing the mark?
- What topics are already being covered? What unique perspectives can you offer to the conversation?
- What areas are missing that you can speak to?
Table 1. Give People What They Want

<table>
<thead>
<tr>
<th>Goal and Audience</th>
<th>Examples of Topics</th>
<th>Primary Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruit prospective students</td>
<td>Interviews with current students about life on campus.</td>
<td>Survey current and prospective students to determine helpful information and topics.</td>
</tr>
<tr>
<td>Increase content knowledge for students/participants in an academic class or Extension course</td>
<td>Information about careers.</td>
<td>Survey class participants to learn about what they are interested in.</td>
</tr>
<tr>
<td>Build employees’ diversity, equity, and inclusion resources</td>
<td>Inspiring alumni stories.</td>
<td>Survey industry professionals about topics they want their pool of applicants to know for the job.</td>
</tr>
<tr>
<td></td>
<td>How to write college entrance essays.</td>
<td>Survey employees about areas of growth or perspectives outside of their experiences.</td>
</tr>
<tr>
<td></td>
<td>Interviews with professionals in the field.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interview researchers on current research. Speaker series—authors, activists, DEI professionals.</td>
<td></td>
</tr>
</tbody>
</table>

Tip: If you send a survey out to your target audience, provide an option for participants to add their email address if they're interested in hearing from your organization when the podcast is launched.

3.2 Creating the Podcast

Once you have mapped out your goals, your audience, and their interests, and performed important research, you can move onto the “nuts and bolts” of bringing your podcast to life. Here are some questions to get you started:

Who:
- Who will host the podcast? Do they represent the diverse members of your audience or area of expertise?
- Who are the members of the podcast team? Writing, editing, design—do you have a team of people who represent the breadth of interests and experiences of your stakeholder audience?
- Who will be interviewed? Do they represent your stakeholder audience or area of expertise?

Where/How:
- Where will you host the podcast? Does your website platform have the capability to host audio files? Will you do audio and video?
- Where will you record? What will you record with?
- Where will you promote your podcast? What channels do you have to reach your audiences? (We will discuss promotion in detail.)
- How will you edit your podcast?
- How will you transcribe your podcast? (This is important to make sure your podcast is accessible.)
- How long will the podcast last? Length can play a role in determining your target market.
- Is this a series with a set end date, or do you have longer term plans (6 months, 1 year, 3 years,
infinitum, etc.)?

**When:**
- How often will you release a new episode? Monthly, biweekly, weekly? (Make sure the frequency is sustainable for the duration of your podcast.)

**What:**
- What does success look like?
- What type of analytics will collect to measure whether you have reached your goals?

**Writing, Music, and Graphics:**
Now it is time to name your podcast, write and record an introduction, create a podcast cover, and select music to go along with your podcast. There are free and low-cost music sites to choose songs to play at the beginning and the end of your podcast. Additionally, there are also free and low-cost graphic design programs online if you are not able to work with a graphic designer within your organization. This visual identity will be used on streaming platforms and all your promotional materials.

If you have a format where the entire podcast is an interview with a guest, make sure you are researching your guest to write thoughtful questions, and sharing information about your audience and questions with your guest ahead of time so they can prepare relevant stories. There are plenty of best practices surrounding interviews that you can find on the internet.

Or perhaps you are choosing a journalistic style, where you are narrating and adding in audio from interviews and events to wrap into a larger story. This allows you to plan out a story ark and take your listeners on a journey. For example, perhaps you are following researchers in the field through the beginning, middle, and end of their research, and putting together the story in a podcast series.

Whatever format you use, make sure you spend time planning out the content, almost like you planned out the podcast. Things to remember:

- Why is your audience interested in this episode?
- What do you want them to do or know at the end of the episode?
- How does this fit into the larger strategic goals of the podcast?
- Whose voices/views are represented in this episode?

**Promoting the Podcast:**
Your plan to promote the podcast should also be part of the strategic planning process. What current channels do you have that already reach your audience? For example, do you reach alumni and donors regularly through email newsletters? Are your students mostly engaged with your college on Instagram? This is where you will think about your audience and your email, website, social media, and traditional media channels where you can reach your audience. Additionally, make a list of partner organizations that you think might be willing to share your podcast with their audiences.

You will want to think about promoting your podcast in three ways:

- Pre-release promotion
- Episode promotion
- Resurfacing content

**Pre-Release Promotion:**
It is important to have your audience members excited and looking for the first podcast episode to drop, and you can do that through promoting the podcast in the weeks before you have made the first episode
live. The best place to promote the podcast is to use the channels that you have already identified through your strategic planning where your audience members are active and engaged. Additionally, if you have a list from your primary research survey of people interested, you can send out an email giving them release details and offering them the chance to connect.

An example of a rounded pre-release promotion strategy would be writing and sending a press release to appropriate news contacts, including information about the launch in appropriate email newsletters, and creating engaging content to announce the podcast on your social media platforms. Additionally, asking partner organizations how they might be able to share the news of your new podcast is a great way to promote the podcast to partner audiences. They might retweet or share your post on Facebook about the upcoming podcast.

**Episode Promotion:**
You will also want to spend time promoting each episode as it is released. Quote cards from the episode, interviewee topic photos, and audio graphics are great ways to release rich, visual content on social media or send through email newsletters to your desired audience. If partner organizations are interested, letting them know when you’re posting will give them a chance to retweet or share from their platforms.

**Repackaging Content:**
Perhaps you have released all the podcast episodes and have access to all the analytics on popular episodes. Think of future opportunities to resurface and reuse the content. Are there any social media holidays six months or a year from now where it might make sense to share the episode again? Or perhaps you will be reusing the podcast for each cohort of program participants. Or perhaps there is an Extension program that might enjoy sharing the podcast or episodes as learning materials with their participants. You have spent a lot of time and energy on the podcast, what are ways you can continue to use it and repurpose it? To maximize the mere exposure of each episode, one idea might be to identify those opportunities in advance, and then utilize one of the many online subscription services that allow you to record, edit, upload, schedule the release of podcast episodes to the major outlets (i.e., Apple Podcasts and Spotify), and track analytics. Using one such service would be an excellent investment, as the primary objective should be to generate frequent content, which will be posted via YouTube, Twitter, Instagram, and Facebook. A goal might be to share at least one piece of content once per day, which will be scheduled using social media management programs such as Twitter Drafts, Later for Instagram, and Hootsuite for Facebook and LinkedIn. Often, this content might be most effectively packaged as a photographer a series of short videos to be edited and curated by the department or college communications managers and promoted with written content provided by faculty members.

**Analytics and Reflection:**
Keeping track of analytics is important because it will help you understand what performed well with your audience and understand who your audience is. It will also help you make decisions about what you might reuse or repurpose in the future, or even the future of the podcast. It will also be helpful to look at what did not perform well, and to learn from those episodes as well. Analytics can also tell you if you are reaching your target audience and if you need to revise your promotional strategy to reach relevant stakeholders.

It might be helpful to release a post-survey on social media and other promotion channels to gather information from your audience about what they liked and did not like, especially if you are considering continuing the podcast.

**Turning Research/Speaker Series/Course Material into New Media:**
Many higher educational organizations have opportunities to turn their traditional events into digital media, such as podcasts. For example, faculty and student research, department speaker series, and
recruitment or student orientation events all have elements that could be transformed into new media. For example, perhaps your department hosts a speaker series every year. Perhaps you offer that speaker series on Facebook Live and use the audio for a podcast. Or you ask the invited speaker for an interview before or after their presentation for your podcast. You can advertise their in-person event, the online event, and share content from the speaker series throughout the year, giving your audiences an even greater opportunity to engage with that content.

4 MSU Closing Bell

When the first reported case of COVID-19 was announced in Michigan on March 10, 2020, few could imagine the havoc that it would eventually wreak. Fewer still could imagine the expanded gap that resulting shutdown policies would create between agribusinesses and their service providers, including MSU Extension. In Michigan, farmers are distributed across mostly rural areas of two large peninsulas while Extension economists are centrally located at the land grant university campus in East Lansing. In a state of this geographic size, direct Extension contact with most agribusinesses is ordinarily difficult, expensive, and time consuming, let alone in a COVID-19 environment when such contacts came to a halt. When MSU announced the suspension of in-person instruction on March 11, 2020, and Governor Whitmer declared a state shutdown on March 23, 2020, we began planning for the implementation of a statewide e-Extension program to bridge the information gap that COVID-19 would create. Because the planned regional training and knowledge transfer programs would no longer be possible, farmers and agribusinesses would need more timely and frequent knowledge transfer and deeper expertise to directly address their pressing angst. On March 27, 2020, we launched the first episode of “Closing Bell,” a weekly online program designed to facilitate discourse between researchers/outreach personnel and stakeholders on topics relevant to today’s agricultural and food economy.

MSU Closing Bell was a weekly live video stream that broadcast through Zoom webinar onto the MSU College of Agriculture and Natural Resources Facebook page to address concerns and discuss implications of the rapidly evolving policy and economic decisions. Recordings were posted on a YouTube channel with episodes assigned as reflection options for both the Decision-Making in the Agri-Food System and Public Policy Issues in the Agri-Food System undergraduate courses. The questions (1) came from the week prior, (2) were sent directly through the webinar platform and screened by MSU Extension personnel, or (3) came directly from the hosts.

In 2020, Michigan was a political battleground state where many rural farmers and agribusiness operators were anxious about its potential economic and social challenges. We designed Closing Bell to meet several complex objectives: (1) feature knowledgeable, credible, and trusted experts from across the country, (2) facilitate real-time two-way audience-centered dialog, (3) ensure that each program is strategically informational and conveys real solutions while allowing questions on the fly, (4) give the audience a high degree of comfort, especially given the stresses of the pandemic, and make Closing Bell accessible to nationwide audiences, realizing that all universities would have the same issues.

The first session focused on the expected economic impacts of COVID-19. This left many questions unanswered. March and April were months of intense misinformation about COVID-19 and its implications for farmers, agribusinesses, markets, and the overall economy. In response to emerging concerns, the sessions focused on Black Lives Matter, the projected impacts of the lockdowns, the definition of essential workers, regional differentials in COVID-19 infection rates, and what Northern Michigan could expect given the limited number of hospital beds. When farmers expressed concern about whether or not the pandemic was real, or was a hoax, we brought in Dr. Felicia Wu, a Hannah Distinguished Professor and a global expert on public health risks to share the scientific facts about COVID-19. Similarly, when the audience expressed concern about their future, we brought in the current AAEA President, Dawn Thilmany, to talk about the future of food.

Regarding program scope, depth, and content, the list of topics covered to date on the weekly Closing Bell programs include resilience of the livestock industry, efficiency versus resilience in the food
system, is 2020 like the 1980s farm crisis?, grain marketing during COVID, race in rural America, systemic racism in agriculture, immigration, and trade during COVID, climate change and production agriculture, superbugs and anti-microbial resistance, bee pollination, online learning challenges of students, agricultural reporting during COVID, economics of forest fires, U.S.–China trade, agribusiness marketing using new media, the future of farm policy, the economics of Thanksgiving, COVID-19 and the mink market, and the COVID vaccine.

The most powerful feature of Closing Bell was the ability to field appropriate experts to address special topics. We featured a diverse list of guests, including economic and other university professors and Extension agents, representatives of policy and government agencies, and knowledgeable professionals from the private sector. We also prioritized diversity and inclusion. For example, 14 women and 9 people of color were highlighted as experts through the program.

The direct audience of MSU Closing Bell ranged from 30 to 150 viewers per episode. In addition to direct online participants, Closing Bell had attracted over 16,000 viewers via Facebook (12,494) and YouTube (3,563). In addition, Twitter impressions of the YouTube posting of Closing Bell totaled 7,123 while impressions of postings on the College of Agriculture and Natural Resources (CANR) Facebook page totaled 24,988, for a gross total of 32,114. The YouTube page for Closing Bell (https://www.youtube.com/channel/UCiU6A4oDk8BX_FsrSuK4hjg) was available for farmers and agribusinesses in Michigan.

As part of the ICPC Framework described above in Section 2, we made an effort to publish scholarly works related to the Closing Bell program (Malone, Schaefer, and Lusk 2021; Malone, Schaefer, and Wu 2021; Miller, Malone, and Schaefer 2021; Gao et al. 2021; Janzen et al., 2021; Robertson et al. 2021). News articles related to Closing Bell are also featured in a wide variety of news media, including Detroit Free Press, Lansing State Journal, ABC-13 Grand Rapids, and Crain’s Detroit at the state level; and USA Today, Associated Press, U.S. News & World Report, and The Hill at the national level. Coverage in industry and news media include articles in Food and Agriculture, Michigan Farm News, Farmers Advance, Restaurant Business Online, and Eater.

Of course, perhaps the most meaningful measure of the impact of an outreach program is how participants feel about its contributions. On the novelty, relevance and impacts of Closing Bell, Audrey Sebolt, Associate Horticulture and Industry Relations Specialist at the Michigan Farm Bureau, stated:

“I appreciated the candid, casual approach to addressing a myriad of issues that arose as a result of COVID-19. Trey and Aleks have an amazing approach to presenting information together that is admired by our organization.”

Marcia Cripps, Lead Agronomist at Lennard Ag Co., Sturgis, MI, stated:

“I like that you can hear from a variety of professionals in the agri-food system and that it is a comfortable conversation to listen to. … For example, I really appreciated the BLM show, and it was really good to see CANR acknowledge that it happened and not sweep it under the rug.”

Stakeholders indicated that Closing Bell made a major difference in their operations, especially their ability to manage the effects of COVID-19. For example, Sebolt states:

“The discussion just blew me away. Several times, I referenced the discussion in my conversations to say, look, this is today’s reality.”
Cripps says:

“As a woman and person of color, I really appreciated seeing people of multiple backgrounds represented on the show... I really enjoyed hearing about the COVID vaccine with Dr. Wu, especially since I did not know/understand much about the vaccine, and it was good to hear a professional instead of mainstream media talk about it.

Finally, Jayson Lusk, an AAEA fellow, Department Chair and Distinguished Professor at Purdue University summed things up by stating:

“In the aftermath of the March 2020 shocks caused by the COVID-19 pandemic, there was an immense demand for information about the food system by the media and the food consuming public. In a model of rapid and responsive outreach and engagement, Trey and Aleks launched the Closing Bell. They brought in diverse viewpoints from the agricultural economics profession to help sort through and understand economic drivers of the food system, and subsequently broadened their efforts to help their viewers and listeners understand economic phenomena in food and agricultural markets. This is a model for how modern Extension can and should respond to emerging public demands for information.”

In conclusion, early in the pandemic, the creation of the MSU Closing Bell podcast enabled us to maintain relevance, advance our Extension programming, and create a robust framework for effective long-term knowledge delivery to stakeholders. The podcast allowed us to address the information gap during the pandemic, tailored for a selected target audience in need of solutions (farmers, food firms, and agribusinesses), through an innovative infrastructure for the continuation of Extension education and connectivity between national and local experts and their stakeholders. The root of the program was evidence-based information not only about economics, but also about the nexus to health, public policy, education, and profitability.

5 Parting Thoughts
As has been made clear during the COVID-19 pandemic, questions and answers evolve rapidly, and decision making is made even more difficult in an already challenging agricultural economy. Though this article focuses on the development of new media content such as podcasts, essential to the effective publication of applied research is the dissemination of outcomes through a variety of platforms. Additional policy-relevant content new media content might also be distributed via a centralized online site with interactive graphics. Many choices that might have once been measured simply in economic tradeoffs are now being filtered through the psychology of uncertainty. This is especially disconcerting as people struggle to evaluate the trustworthiness of new information, leading to incorrect forecasts of future events and the potential for panic.

While traditional Extension and outreach outlets clearly have important merit, new media outlets have become of utmost importance and via electronic means (e.g., websites, blog posts, and podcasts) to help industry professionals become aware of and adopt current consumer perspectives. Content can also be shared via traditional outlets such as Drovers and AgWeb, and blog posts, which all might be made accessible through Extension websites. Blog posts could include links to relevant content such as Extension publications, journal articles, and conference opportunities.

That said, not all Extension programming should be pivoted to online distribution. Consistent with the traditional model of Extension, research findings must also be shared at traditional stakeholder meetings and personal interaction. We see new media such as opinion pieces, podcasts, videos, and outreach articles as a complement to the currently existing programming, which might be positioned to
reach a broader audience through outlets such as TheConversation, which publishes open-source academic content accessible for popular press outlets.

About the Authors: Trey Malone is an Assistant Professor and Extension Economist at Michigan State University (Corresponding author: tmalone@msu.edu). Jim Monahan is Communications Manager at Michigan State University. Katie Nicpon is Communications Manager at Michigan State University. K. Aleks Schaefer is an Assistant Professor at Oklahoma State University. Madelyn Cary is an undergraduate student at Michigan State University.
References


