Artificial Intelligence Use in Extension: *Insights from Ohio, and Why Human Work Still Matters*

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(See also forthcoming *Journal of Extension* article for full detail.)

Abstract
This study investigated the current use of artificial intelligence (AI) at Ohio State University Extension. Objectives: 1. Identify/analyze how educators, staff, and administrators currently use AI; 2. Identify challenges/obstacles to using AI in Extension work; 3. Learn if users felt AI improved efficiency; 4. Differentiate Extension's human work from AI output to respond to funders or partners who may see AI as a means of conducting Extension's work at no apparent cost. The findings indicate personnel were divided on AI's value. The analysis provides detail, suggests approaches, and shares sample statements that may be helpful to Extension organizations nationwide.

Introduction
How are Extension educators, staff, and administrators using artificial intelligence (AI) today? The Journal of Extension has two recent articles with helpful tips on using AI noting potential for "increasing efficiency, productivity, and performing tasks previously exclusive to humans" (Hill & Narine, 2023), but warning that "Extension must ensure educators and staff have the necessary knowledge and skills to effectively utilize and integrate this technology." In a follow-up, Hill et al. (2024)cite the great potential of AI use to "enhance programs, deliver personalized advice, engage audiences, and disseminate research-based information."

This study asked Extension educators, staff, and administrators in Ohio how they were using generative language tools. We wished to explain why Extension's human-intelligence work is still relevant when some are asking if AI can do this work at no apparent cost.

Research Design
A qualitative survey targeted all current OSU Extension employees (educators, staff, administration). We sent the invitation to all 1,022 addresses on our internal email listserv. This yielded input (via Qualtrics) from 195 employees (a 19% response rate) at survey close on January 13, 2025.

Years in Extension		
# Years	People	%
0-5	61	31.2
6-10	32	16.4
11-20	24	12.3
21+	29	14.9
Unspecified	49	25.1

Respondent Program Area		
Family & Consumer Sciences	42	21.5
4-H	34	17.4
Agriculture & Natural Resources	28	14.3
Support Staff	23	11.8
Community Development	10	5.1
Administration	5	2.6
No response	53	27.2

Data Analysis Technique (Standard human coding followed by AI inquiry)
We followed standard qualitative research data analysis protocols, assigned codes, and then used human review to identify key ideas, recurring themes, and concepts. After that review, we fed segments of the raw data (aggregated survey responses grouped by each question) into Microsoft Copilot and ask it to code for thematic elements. We found only slight variations (e.g. how concepts were broken down).

Results *[See the full report for summary tables.]*
Our data analysis revealed greatly divided opinions on whether AI should be used. For those adopting AI use in their Extension work, we saw a broad range of diverse applications. Examples included data analysis, resource management, and educational design and outreach. But common challenges were noted. These included *inaccuracies, resistance to change, and multiple levels of ethical concerns.* These findings highlight the need for targeted training and support to facilitate AI expanded use or adoption in Extension work.

The final survey question said: ***Make a 1-sentence argument for why Extension's work is still needed in the age of AI.*** Below are a few quotes and paraphrases. These are critical statements that explain why Extension is still relevant in the age of AI. These emphasize *accuracy, interpretation, context, and human connection.*

- Extension's work provides human connection and understanding that AI cannot replicate.
- Trust and integrity are at the core of Extension's work, ensuring reliable and validated information.
- Every community is unique, and Extension's boots on the ground are needed to understand and respond to specific community needs, offering tailored and personalized solutions.
- Extension bridges the gap between technology and human needs, offering a trusted source of information and support.

As a generative AI experiment, we asked Copilot to summarize. It returned this: ***"Extension provides the human touch, trust, and personalized help that AI can't, ensuring accurate information and meeting community needs."***

Suggestions and Conclusion
The insights gained from this inquiry can inform future strategies for AI adoption and utilization. This will ultimately contribute to the advancement of Extension services as artificial intelligence continues to expand in use and accuracy. But moving forward today, Extension must:

- **Outline strategies (not regulations) for AI adoption and utilization**
    - Continue research to expand understanding and usage.
    - Identify usage and implementation barriers.
    - Establish practices for continuing human oversight.
    - Explore AI ethical concerns.
    - Ensure AI data are shared transparently.
- **Train Extension workers on AI use**
    - Define ethics, bias, risk, and unintended consequences.
    - Outline approaches to mitigate the above.
    - Explore Extension personnel's willingness to learn to incorporate AI tools into their work.
    - Summarize and share current ways Extension employees are leveraging AI today.
- **Educate the public and partners on AI use and limitations**
    - Outline Extension's aim of cautiously leveraging AI as a tool.
    - Emphasize the continuing need for human oversight to *verify and interpret* AI output (accuracy, application of information, copyright, misinformation, etc.).
    - Reinforce the critical nature of *context* and *local connection* (vs. random application of AI outputs).