Extension Programs, Altmetrics, and the Scholarship of Engagement

Inga Haugen, Agriculture, Life Sciences, and Scholarly Communication Librarian, Virginia Tech | ihaugen@vt.edu
Lily Troia, MLIS, Engagement Manager, Altmetric | lily@altmetric.com | @lilytroia
Agenda

- Introductions
- Translational Scholarship: understanding pathways to broader impact
- Land Grant universities, extension agents, and knowledge exchange
- Boyer and the Scholarship of Engagement
- Developing altmetrics user personas for translational scholarship
- Case study: Scholarship at Virginia Tech's College of Agriculture and Life Sciences
- Emerging themes discovered
- Questions/Discussion
Sharing translational scholarship: *maximizing visibility and impact*

**Who engages with this info?**
- Other scholars/researchers
- Communities of practice
- Policy-makers, funders, and gov't officials
- Nonprofits and community groups
- Industry professionals
- Commercial enterprises and corporations
- Educators and students
- Targeted communities and populations
- General public

**What are the forums where this happening?**
- Academic institutions and research centers
- Mainstream news and media
- Curated blogs and social media
- Policy documents and recommendations
- In-person outreach and learning events
- Patent applications/intellectual property
- Wikipedia and other crowd-sourced spaces
- Direct contact via email, newsletters, one-on-one interactions
# Results analysis

Analyzing results for all research outputs sorted by Altmetric Attention Score with keywords containing food safety published after 2017-06-01

<table>
<thead>
<tr>
<th>ALL TYPES</th>
<th>NEWS</th>
<th>BLOG</th>
<th>POLICY</th>
<th>TWITTER</th>
<th>PEER REVIEW</th>
<th>FACEBOOK</th>
<th>WIKIPEDIA</th>
<th>GOOGLE+</th>
<th>REDDIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,734</td>
<td>158</td>
<td>43</td>
<td>11</td>
<td>2,358</td>
<td>2</td>
<td>130</td>
<td>3</td>
<td>33</td>
<td>4</td>
</tr>
</tbody>
</table>

### Mentions for Week from Monday, May 7, 2018

- 13 news mentions
- 87 Twitter mentions
- 1 Facebook mentions
- 101 total mentions

### Accounts of EverythingScience

Get Fair in iScience and in iEverythingScience

<table>
<thead>
<tr>
<th>Date</th>
<th>Study finds that schools are lacking adequate resources, namely sanitizer, to properly protect children from foodborne pathogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 comment</td>
<td><a href="https://www.everythingscience.com/study-finds-that-schools-are-lacking-adequate-resources-namely-sanitizer-to-properly-protect-children-from-foodborne-pathogens">Read more</a></td>
</tr>
</tbody>
</table>

### YouTube Video

Title: Is MSG healthy? A doctor’s perspective

Summary: This study evaluated microbial contamination and good manufacturing practices (GMP) in school kitchens. The kitchen of four municipal schools have been assessed through microbiological analysis performed in the cutting boards (n = 12), kitchen sinter (n = 12), dish sinter (n = 12), hand of food handlers (n = 12), kitchen aprons (n = 12), milk (n = 12), and water (n = 12). A questionnaire was also applied to food handlers in order to assess their profiles and get their daily practices inside school kitchens. The results of this study showed that all sampled surfaces, cutting boards, kitchen aprons, milk, and water were contaminated with helminth parasites. Statistically, a mean was found on the surface of water, milk, sinter, cutting boards, and on the hands of food handlers. Field observations were found on sinter, water, and milk. Results from the survey revealed that food handlers know about GMP, but they do not perform these activities in school kitchens.

### Food and feed law

Compendium of UK food and feed legislation with associated context and changes during October – December 2017

Government Chemist Programme Report
Extension agents and knowledge exchange:

Land grant colleges and the New Scholarship

“...extension will collaborate with partners, on campus and off—to align systems (including recruitment, professional development, accountability, and undoing systems) to support engaged work that cuts across the spectrum of teaching, research, and service.”

Land Grants, Research Stations, and Cooperative Extension
Scholarship of Engagement
Boyer’s model: four interlocking components to scholarship

- Scholarship of Discovery
- Scholarship of Integration
- Scholarship of Sharing Knowledge
- Application of knowledge

New Paradigm of Scholarship
Boyer’s model: four interlocking components to scholarship

- **Scholarship of Discovery**: Research is essential, but not sufficient.
- **Scholarship of Integration**: Communication must extend beyond the academy.
- **Scholarship of Sharing Knowledge**: Context and interdisciplinarity.
- **Application of knowledge**: Scholars as reflective practitioners.
- **New Paradigm of Scholarship**: Not shown in the diagram.
Developing altmetrics user personas
What are user personas?

What are they?

- Hypothetical “user” profiles meant to improve functionality and quality of service
- Originally emerged out of tech development/web design and user experience work
- Involves rigorous qualitative and quantitative data collection and analysis
- Proposed for library site/space design in 2003 by Alison J. Head

What do they do?

- Develops understanding of workflow and behavioral patterns
- Identifies key technical skills unique to each persona
- Determines universal features and functionality
- Evokes empathy; audits and eradicates stereotypes
- Iterative and collaborative -- two way exchange between researchers and communities
User personas for altmetrics

- What primary data is available?
- Secondary?
- What are our assumptions around user categories?
- What attributes align with each?
- What are each user-types' potential frustrations?
- Motivations?
CALS altmetrics user personas: reflexive collaboration

**Goals:**

1. Approach process with a critical lens, keeping mission and values at center
2. Meet needs of CALS program workflows and behavioral patterns
3. Develop in the context of engagement scholarship/non-traditional research outputs
4. Identify and align with communication methods associated with each user
5. Treat personas as living, iterative documents
6. Ensure personas are openly available, shared broadly, and repurposable

**Process:**

1. Identification of research and workflow needs
2. Brainstorm process and goals to meet needs
3. Established research project plan
4. Conducted literature review
5. IRB Approval
6. Initial qualitative survey
7. In-depth, semi-structured, recorded interviews representing four unique scholarly perspectives
8. Organize and analyze data from interviews
9. Collect and analyze additional primary and secondary data
10. Create and share reusable persona frameworks
11. Publish findings
12. Use personas/research for broader impact evaluation across departments, organization, etc.
CALS altmetrics user personas: reflexive collaboration

**Goals:**

1. Approach process with a critical lens, keeping mission and values at center
2. Meet needs of CALS program workflows and behavioral patterns
3. Develop in the context of engagement scholarship/non-traditional research outputs
4. Identify and align with communication methods associated with each user
5. Treat personas as living, iterative documents
6. Ensure personas are openly available, shared broadly, and repurposable

**Process:**

1. Identification of research and workflow needs
2. Brainstorm process and goals to meet needs
3. Established research project plan
4. Conducted literature review
5. IRB Approval
6. Initial qualitative survey
7. In-depth, semi-structured, recorded interviews representing four unique scholarly perspectives
8. Organize and analyze data from interviews
9. Collect and analyze additional primary and secondary data
10. Create and share reusable persona frameworks
11. Publish findings
12. Use personas/research for broader impact evaluation across departments, organization, etc.
CALS altmetrics user personas: reflexive collaboration

**Goals:**

1. Approach process with a critical lens, keeping mission and values at center
2. Meet needs of CALS program workflows and behavioral patterns
3. Develop in the context of engagement scholarship/non-traditional research outputs
4. Identify and align with communication methods associated with each user
5. Treat personas as living, iterative documents
6. Ensure personas are openly available, shared broadly, and repurposeable

**Process:**

1. Identification of research and workflow needs
2. Brainstorm process and goals to meet needs
3. Established research project plan
4. Conducted literature review
5. IRB Approval
6. Initial qualitative survey
7. In-depth, semi-structured, recorded interviews representing four unique scholarly perspectives
8. Organize and analyze data from interviews
9. Collect and analyze additional primary and secondary data
10. Create and share reusable persona frameworks
11. Publish findings
12. Use personas/research for broader impact evaluation across departments, organization, etc.
CALS altmetrics user personas: reflexive collaboration

**Goals:**

1. Approach process with a critical lens, keeping mission and values at center
2. Meet needs of CALS program workflows and behavioral patterns
3. Develop in the context of engagement scholarship/non-traditional research outputs
4. Identify and align with communication methods associated with each user
5. Treat personas as living, iterative documents
6. Ensure personas are openly available, shared broadly, and repurposeable

**Process:**

1. Identification of research and workflow needs
2. Brainstorm process and goals to meet needs
3. Established research project plan
4. Conducted literature review
5. IRB Approval
6. Initial qualitative survey
7. In depth, semi-structured, recorded interviews representing four unique scholarly perspectives
8. Organize and analyze data from interviews
9. Collect and analyze additional primary and secondary data
10. Create and share reusable persona frameworks
11. Publish findings
12. Use personas/research for broader impact evaluation across departments, organization, etc.
## Initial Proto-Personas

<table>
<thead>
<tr>
<th>Attributes / outputs</th>
<th>AREC</th>
<th>Extension Agent</th>
<th>Research</th>
<th>Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field days</td>
<td>Extension pubs</td>
<td>Protocols</td>
<td>Open syllabi</td>
<td></td>
</tr>
</tbody>
</table>

| Frustrations         | Internet | Need for real-time data | Mediating policies and processes | Large class sizes; costs |

| Motivations          | Support producers | Improve communication efficiency | Obtain and sustain funding | Connect science to practice |

| Goals                | Diffuse risk | Relay time-sensitive, accurate info | Knowledge discovery and innovation | Inspire practical intellectualism |
Primary data collection: *Questions to guide qualitative inquiry*

1. Please describe % appointments at VT across research, teaching, and outreach.
2. How do you define impact with respect to your research/work?
3. Can you describe your professional role/relationship with non-academic communities?
4. How do you distribute/share information with these communities?
5. What other pathways/forums do you use to share research information and communicate with different audiences? Online or otherwise?
6. How do you share information about your impact? What successes have you had in this realm? What are the challenges to this?
7. Are there individuals or organizations in your field that you feel do this particularly well? Please provide examples.
8. What, if any trends or shifts in scholarly communication and impact evaluation have you perceived?
9. If you had a magic wand, what would it do or solve with respect to your work and impact?
Emerging Themes

“Scholarship is not an it.”
- Fear, F., & L. (2016)

- Narrative-driven metrics and storytelling
  - Crafting an impactful impact statements
  - Making scholarship personal and relatable

- Outreach = key
  - Engagement with numerous, diverse communities
  - Connecting awareness to behavior/social change

- Challenges to current incentive systems and review structures
  - Tenure & promotion still focused on citations, journal impact factor, etc.
  - No defined frameworks for analyzing altmetrics

- Time limitations and resource constraints
  - Strategic social and digital media outreach is labor intensive
  - Incentives often don’t align broader engagement activities
Questions? Comments?

Inga Haugen, Agriculture, Life Sciences, and Scholarly Communication Librarian, Virginia Tech | ihaugen@vt.edu
Lily Troia, MLIS, Engagement Manager, Altmetric | lily@altmetric.com | @lilytroia

5AM Conference
London, UK
26 - 27 September 2018
Additional References


Alternative frameworks?

Figure 1 | Community-Engaged Teaching, Research, and Service

- Community-based participatory research
- Practice-based research

Community-Engaged

- Community-based learning
- Practice-based learning
- Service-learning

Teaching

- Community service
- Academic public health practice
- Clinical service
- Community-oriented primary care

Service

Research
Alternative frameworks?

Habermas’s Three Forms of Knowledge

1. Instrumental knowledge (technical rationality)
2. Communicative knowledge
3. Emancipatory knowledge

A Scholarship of Engagement must keep values and mindfulness at the center.
The Scholarship of Engagement today

“Scholarship is not an it.”
- Fear, F., & L. (2016)

- Current framework in academia is at odds with engaged scholarship
- Prevailing methodology is that of technical rationality, i.e., “scientific approach,” systematic applied procedures
- Scholarship is not static nor a planning process
- New paradigm must challenge traditional construct
- Engaged scholarship must embrace critique and be a dialogue amongst all stakeholders
- Align with the norms of engagement
- Engagement with whom and to what end?
Alternative frameworks?

- Facilitator versus expert model
- Reflective practice
- Qualitative and participatory processes
- Expressive forms of scholarship (e.g., storytelling)
- Service learning - curricular and faculty function
- Scholarship IN engagement
- Engagement in teaching, research, and service
- Engaged forms of inquiry, discovery, and change:
- Participatory and action research