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Competencies for practitioners working in food systems

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Abstract

This report describes a recent project funded through USDA Agricultural Marketing Service (USDA AMS) to understand food systems practitioner's needs in various environments, cultures, and focus areas, as well as curriculum that is currently available to support food systems work. This project took place in 2019 with a group of over 30 individuals across the nation with diverse background and understanding of food systems and the systemic issues they connect to. Between August 2019-December 2019, partners worked collectively to identify core competencies needed for practitioners working in food systems, created a set of learning objectives for each competency, and identified existing curricula around the nation that met the objectives described.

Keywords

food systems, competencies, curricula, practitioners

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 This report describes a recent project funded through USDA Agricultural Marketing Service (USDA AMS) to understand food systems practitioner's needs in various environments, cultures, and focus areas, as well as curriculum that is currently available to support food systems work. This project took place in 2019 with a group of over 30 individuals across the nation with diverse background and understanding of food systems and the systemic issues they connect to. Between August 2019-December 2019, partners worked collectively to identify core competencies needed for practitioners working in food systems, created a set of learning objectives for each competency, and identified existing curricula around the nation that met the objectives described.

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INTRODUCTION

Food systems practitioners are involved in a variety of efforts from enhancing communities' access to food to developing business plans and facilitating strategic planning efforts. Due to the dynamic needs that practitioners face, there is a range of competencies needed for this work. There is also a need to "professionalize" this track for food systems workers by developing a set of standard trainings and professional development opportunities (Long and Chase, 2020).

Practitioners working in food systems are located throughout the United States working to develop new or enhance various aspects of their place-based food systems. Extension Educators are a defined group within the landscape of practitioners with a role of supporting farmers. These educators have a need for information and competencies that will address emerging markets and consumer trends. All local food practitioners need a wide range of professional experience and qualifications related to the individual jobs they currently hold. Iowa State University, along with thirty (30) national organizations, have engaged to professionalize the local foods sector through determining a shared set of job skills and core competencies.

This move toward professionalization can be accelerated by creating a concentrated effort to track and identify local food practitioner educational resources and coming to consensus on core competencies as it relates to needed skills for food systems practitioners. Local food system practitioners attaining confirmed competencies should, in turn, be more effective in expanding or improving new and existing markets for farm and value-added agricultural products and improving local food businesses and farmer profitability.

Throughout 2019 mixed-methods research, facilitated sessions and collective dialogue assisted in determining the suggested core competencies discussed throughout the paper (see Figure 1). Following the project, in spring 2020, a second UDSA AMS cooperative agreement began to develop an online database to highlight practitioners and educational resources around the nation based on the competencies discussed. The following reviews the process, methods, and next steps.

RESULTS AND DISCUSSION

A collective impact facilitation approach was utilized throughout the project to ensure all voices were heard. This included one primary facilitator, a core "leadership team", and project

partners. An initial literature review and content research was conducted for historical understanding followed by two national surveys. Literature review included existing reports, publications and prior surveys around concepts of food systems, levels of learning, competence and curricula. Three previous surveys on food system curricula and education needs had been conducted by NAFSN (2 surveys conducted) and eXtension (1 survey conducted). Survey results and literature were reviewed to identify

Historical Context + Literature Review

Conducted by Iowa State University in collaboration with leading partners; identified resources, literature and reviewed previous survey results from leading partners

Core Competency Development

Facilitated discussion with 30 national partners on competencies needed for practitioners working within food systems
Topical small group discussion with rotating areas of interest for collective thinking

Outreach and Confirmation

Distributed a National survey through partner organizations to understand and confirm core competencies for practitioners in food systems
Confirmed 9 competency areas

Learning Objectives

Facilitated working session with 30 national partners to develop sub-categories for competencies and draft learning objectives
Output: Example learning objective matrix

Directory

Distributed a National survey to identify existing curricula that meets identified competency-based learning objectives
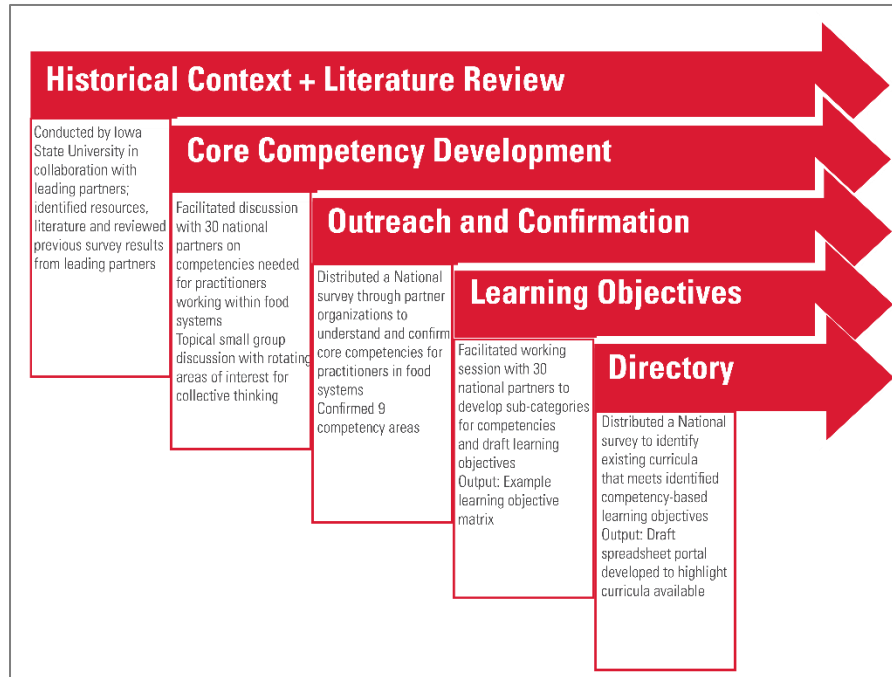Output: Draft spreadsheet portal developed to highlight curricula available

Figure 1. Core Competency Process

an initial set of categories for project partners to begin brainstorming competencies in October 2019 in Chicago, Illinois. The survey results were reviewed to understand historical context and needs practitioners had shared over the last five years. Additionally, a literature review of competency-based curricula assisted in creating a working definition for both curricula and competency for the project.

> **Competencies** are a set of skills, knowledge and attitudes necessary for a profession. They may include core areas or standards of practice and skills, specific topic area knowledge and expertise.
>
> **Curriculum** is a set of learning experiences, that may include lecture, experiential learning, and observation that when combined help achieve the desired learning objectives to achieve competencies.

The literature provided a foundation for the initial partner meeting in September 2019 to establish an initial understanding of primary competency categories around food systems.

Following the initial partner meeting, a national survey was sent out through partnership organizations and list-serves. This survey was conducted as an initial assessment to gauge perspectives on needed competencies for food systems practitioners within
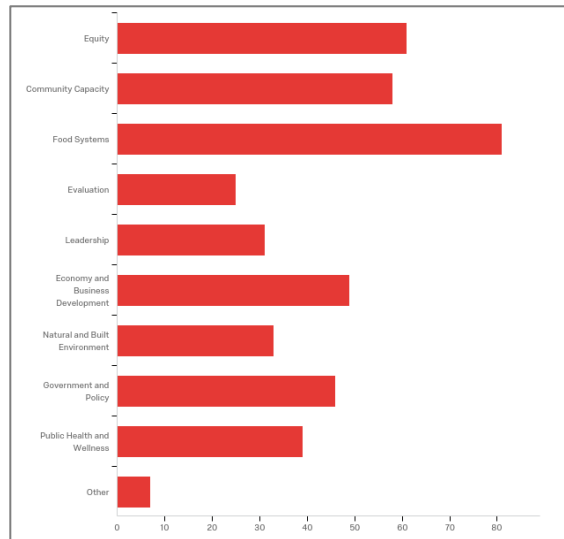

Figure 2. Competency Prioritization

the nine suggested categories determined during the partner meeting (equity, food systems, evaluation, community capacity, leadership, natural and built environment, economy and business development, public health and wellness, and government and policy), as well as share existing curriculum that meets these needs. The survey was open for approximately a month. Responses were coded through NVivo, along with notes from the first partner meeting to identify sub-themes for each competency (see full report). A total of 450 individuals viewed the survey, with 140 unique responses. The survey also asked participants to select their top four competencies needed for food systems practitioners. This question did not infer that the other categories are not important, but rather may be more topic focused or specific to certain roles. Food Systems, Equity, Community Capacity and Economy and Business Development were the top four categories in respective order (see Figure 2).

To begin to identify curricula that met any of the competency areas, the second part of the survey offered space for individuals to share their curricula, including title, location, and contact information; over 50 existing curricula were shared with identified contact information. Another critical aspect of the project was continuing to develop the network which included asking a question about staying engaged in the project; over 60 individuals requested updates and report of the final output.

Based on the coding mentioned previously, the team was able to "rank" core competency categories as well as determine sub-categories of each competency (shown below).

1. Food Systems: Common Language for Food Systems; Supply and Value Chain; Production and Wild Harvesting; Processing and Value-Added Agriculture; Aggregation and Distribution; Market Channels; Consumption; Food Safety; Food Systems Assessment
2. Equity: Cultural Humility; Historical Acknowledgement and Context; Power, Privilege and Position; Inclusion: Race, Ethnicity and Income; Income and Resource Disparity
3. Community Capacity: Building Trust and Relationships; Community Development; Facilitation; Resource Identification
4. Economy and Business Analysis: Business Development; Business and Organization Legal Structures; Finance and Funding; Market Identification and Marketing Strategies; Economic Development Strategies
5. Governance and Policy: Policy Identification and Process; Organizing for Policy Change; Governance and Law: Regulations and Licensing Standards
6. Health and Wellness: Social Determinants of Health; Personal Health; Food Access and Nutrition Assistance
7. Environment: Planning for the Built and Natural Environment; Agroecology and Ecosystems; Waste Reduction, Reuse and Sustainability; Climate Impact; Built Environment; Disaster Preparedness, Response and Recovery
8. Leadership: Personal Leadership Styles; Communication and Interaction Skills; Teams and Working Groups
9. Evaluation: Evaluation and Defining Success; Data Sources and Uses; Strategies, Methods and Evaluation Plans

In November the final partner meeting took place with the goal of confirming sub-categories for each competency as well as beginning the process of writing learning objective statements for each competency. To begin this process, we researched and reviewed different aspects of levels of learning, or, know, do and teach, or level 1, 2 and 3 (see Figure 3). We also acknowledged that there was an initial level of learning for awareness, however, this was not the focus area of the research.

For additional information on levels of learning and specific components for each competency, please see full report.
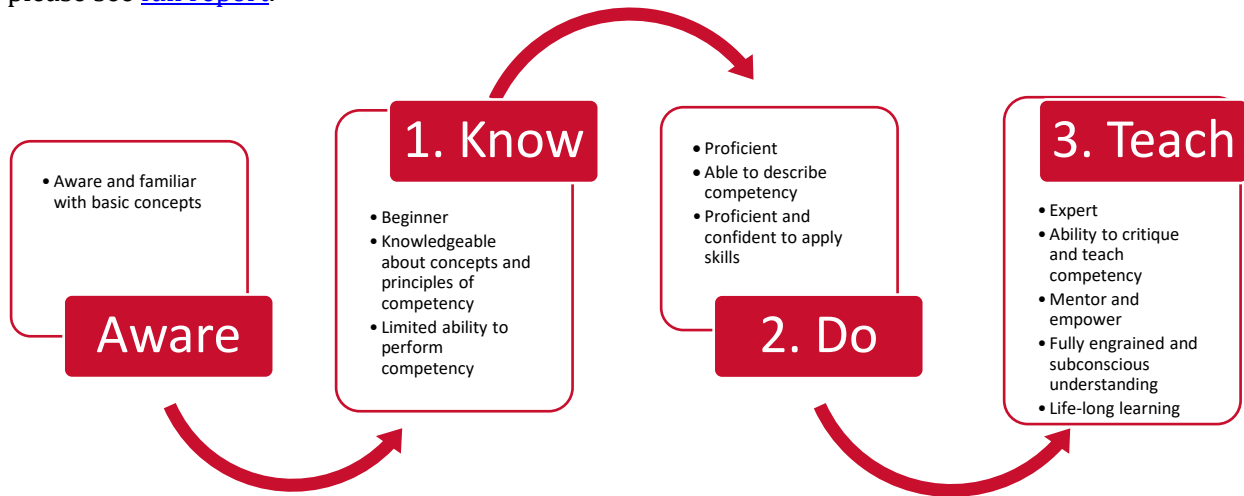

Figure 3. Levels of Learning

Following the development of the learning objectives, a second national survey was conducted to understand the learning levels that curricula met. A total of 67 individuals viewed the survey, with 31 unique curricula responses. In order to fully answer survey questions, participants received the competency-based learning objective matrix before participating in order to inform and identify which level of learning their curricula met. In total, from both surveys, 85 unique curricula were identified. Based on the initial curricula survey, Figure 4 showcases the number of curricula that meet each competency (note that curricula can meet more than one competency).
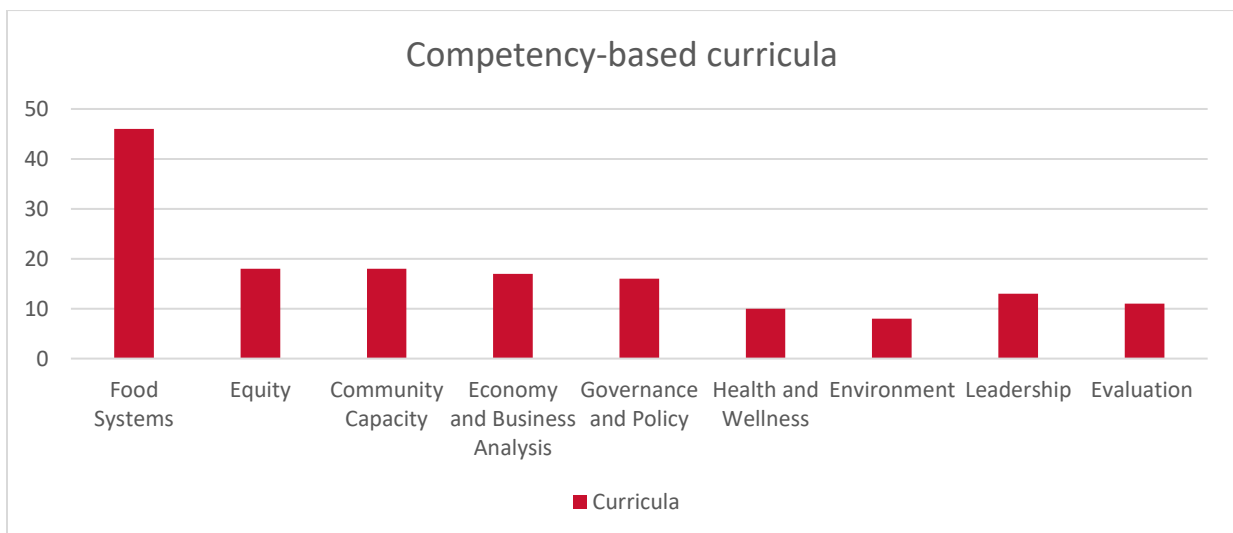

Figure 4. Curricula offerings by competency

In addition to identifying the learning objectives of the curricula, logistics for each curricula were also requested, including audience, location, type of offering, fee structure, method of delivery, etc.

Curricula shared within the survey were compiled into a table that highlighted competencies met by the curricula, as well as the logistics of the offering.

This current matrix was developed with two viewing options. The first option allows the participant to simply view any curricula available by logistic offerings and a selection of any of the nine competencies met (Figure 5).

Curricula Title	Audience	Location	Method of Delivery	Hours to Complete	Fee	Completion	Contact	Organization	Website
								Logistics	
Agricultural Sciences **							Savannah Rugg: savannah.rugg@austincc.edu	Austin Community College	
Use of National Issues Forums with Extension **							Barbara Brown: barabrown@ccplife.org	Citizens for Public Life	
Building Farmer and Rancher Program	Farmers and Food Businesses	Colorado	In-person training	24 hours (8 weeks @ 3	Varies	Completion Certificate	Rebecca Hill: rebec.l.hill@gmail.com	Colorado State University Extension	
Meat School	Farmers and Food Businesses	Colorado	Online	12 hours (6 weeks @ 2	$150		Martha Sullins: martha.sullins@colostate.edu	Colorado State University Extension	
Economics of Food Systems	Farmers and Food Businesses; College Students	Colorado	In-person training; Online	Semester	CSU Course fee	Course Credit	Becca Jablonski: becca.jablonski@colostate.edu	Colorado State University: Department of Agricultural and Resource Economics	
Small Food and Agribusiness Management **							Becca Jablonski: becca.jablonski@colostate.edu	Colorado State University: Department of Agricultural and Resource Economics	
Healthy Eating**							Robin: rhernandez@crossroadscommunityfoodnetwork.org	Crossroads Community Food Network	
Eat Healthy Be Active Community Workshops		National					Kensle@njaes.rutgers.edu	Department of Health and Human Services and Office of Disease Prevention and Health Promotion	ODPHP Publication No. U0012 April 2012 in English and Spanish--on-line curriculum and hard
Guiding Farmers to Legal Resilience	Extension Staff, Agriculture Professionals, Farmers and Food Businesses, Non-profit Staff	National	In-person training; Online; Cohort discussions	8 hours	Varies depending on location and scope	Completion Certificate; transferable materials	Rachel Armstrong: rachel@farmcommons.org	Farm Commons	
Cultivating Your Legally Resilient Farm							Rachel Armstrong: rachel@farmcommons.org	Farm Commons	

Figure 5. Logistics of curricula offerings

The second option includes nine tabs, one for each competency, with curricula listed and selection of the individual learning objectives met for each curriculum (Figure 6). This table is most useful for practitioners looking for a specific learning objective or outcome, and from there can identify the appropriate curricula and head to the logistics tab for more information.

Category: Equity

Curricula	Cultural Humility and Self Awareness									Historical Acknowledgement and Context											
	Self			Culture			Intersectionality			Land-possession			History			Acknowledgement			Land-Grant Institutions		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Local Food Leader (Iowa State	X			X			X														
Local Food Leader: Community Food Systems (Iowa State University)	X																				
Local Food Leader: Methods of Engagement and Leadership				X																	
Community Food Systems (Iowa State University)	X			X			X														
Racial Equity in the Food System Working Group (MSU Center for Regional Food Systems)		X		X				X		X				X			X			X	
Overview of Local Food Systems: Introduction to Food Systems (NC Cooperative Extension)	X	X		X	X		X	X		X	X		X	X		X			X		
Food Ethics: Serving Up Change (Ohio State University Extension)		X	X		X	X		X	X	X				X			X			X	
Food Systems Graduate Certificate (University of Michigan)			X			X			X	X			X			X			X		

Figure 6. Curricula by learning objective

Identified next steps and needs from this research include the following:
- Create a web-based platform for the matrix and tool to highlight educational resources

- Develop working teams to further review and edit the learning objectives and define each competency area
- Articulate the types of learning that support each area of knowledge
    - Knowledge (beginner), behavior (proficient), and teaching (mastery)
- Develop an accrediting body that can review, critique and accredit curricula
- Develop new curricula based on gaps identified through the matrix
- Continue network and support for practitioners working within areas of competencies to further discussion and sharing of ideas on needs and gaps

CONCLUSION

Following the completion of the initial project, the survey stayed open and lived on the Iowa State Farm, Food and Enterprise Development website. In spring 2020, discussion on developing a public platform began to build awareness of existing curricula and learning objectives met as well as provide additional connections to support resources, networks, etc. This database can be accessed at https://foodsystemsdb.extension.iastate.edu/. This new database has a potential to assist practitioners working within food systems to find available and meaningful educational resources as a "pick your own program".

In addition, the database will include profiles for food systems practitioners to learn about what is going on across the nation based on competencies that individuals hold. Through the research, many networks were identified as supporting beginning and experienced food systems practitioners, and it was heavily discussed that mentorship and lifelong learning is inherent in food systems work for learning. Thus, identifying practitioners is a helpful tool for continued professional development. The database will offer profiles that individuals can search based on competency as well as location to support continued professional development amongst peers.

Due to COVID-19, practitioners are embarking on a new and unique transitions to meet producers, food businesses and community needs in both in-person and virtual ways, and the ability to be flexible and creative in solutions will be continually imperative for our communities.

Overall, further development of professional development and curricula for food systems practitioners continue to be needed as well as research into best practices and standards for teaching. The future, with COVID and additional nuances is going to need flexibility and foundational community-based providers to be ever-ready to support our food systems.

Literature cited
Long, C., and Chase, C. (2020). Food System Core Competency Project Iowa State & USDA AMS Cooperative Agreement.