



Maui Food
INNOVATION
C E N T E R



Rural Hawai'i Project
TAACCCT Round 2 Grant
April 2016



FINAL GRANT REPORT 2016

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The Maui Food Innovation Center will serve as a catalyst for transforming food production in our local community, supporting local agriculture, generating new businesses and jobs, contributing to more locally produced foods and providing greater food security.

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OVERVIEW

The Maui Food Innovation Center (MFIC) provides *business* and *technological expertise* to food and agricultural entrepreneurs throughout the State of Hawai‘i.



GRANT INITIATIVES

The US Department of Labor awarded a TAACCCT Round 2 grant to consortium lead University of Hawai‘i Maui College to help address food security and economic development in Hawai‘i. The grant funded various capacity building initiatives to establish resources, networks, branding and marketing, infrastructure, and educational technology innovations.

RESOURCES

Food Spectrum, LLC, President and Director of Rutgers Food Innovation Center, Lou Cooperhouse, consulted with the grant team to develop comprehensive implementation resources for the Maui Food Innovation Center.

NETWORKS

Grant efforts facilitated new partnerships with local organizations, face-to-face training workshops, statewide outreach, and a series of annual food summit events. Stakeholders from within the UH system, private and public nonprofits, and government officials provided input on the scaling and sustaining of food innovation statewide. A Client Relationship Management (CRM) tool was also developed and maintained to support relationship building.

BRANDING & MARKETING

Branding and logo design, web site design and development, a marketing kit, advertising, video public service announcements, and a media library of photos and videos were created for on-going marketing and promotions.

INFRASTRUCTURE

The Maui Food Innovation Center is slated to receive funding from the state legislature to renovate an existing cafeteria in the Pilina building. The grant purchased supplies for a temporary classroom and kitchen lab in the Laulima building to support programming until the larger renovation is complete.

EDTECH INNOVATIONS

MFIC utilized a team of instructional designers to develop a customized series of four 2-hour courses that are available on-demand online. The courses were developed to provide an introduction to the fundamentals of the food industry for Hawai‘i residents interested in developing new food products, and support the development of value-added products through an educational foundation of skills and knowledge.

RESOURCES

Grant funding supported *capacity building* to develop value-added *resources* for the Maui Food Innovation Center facility.

OPERATIONAL RESOURCES

Referencing a successful model established at the Rutgers Food Innovation Center for the creation of a “Food Hub” or *industry cluster*, food industry consultant Lou Cooperhouse of Food Spectrum, LLC, developed a report consisting of strategies and recommendations for the Maui Food Innovation Center including:

- > **Community Outreach and Cluster Development**
- > **Industry Research**
- > **Hiring of a Director**
- > **Facility Layout and Product/Process Assessment**
- > **Equipment Lists**
- > **Policies and Procedures Manual**
- > **Training Curriculum**
- > **Training Delivery**

ONLINE RESOURCES

Visit the MFIC website for an extensive list of online resources including links to federal, county, nonprofit and private organizations offering information and services for food innovation and value-added food production.

URL: maui.hawaii.edu/foodinnovation/resources

SURVEY RESEARCH RESULTS

The consultant conducted a survey of 23 Maui food industry stakeholders including food product developers, chefs, and food service providers in 2013. The survey findings indicated a keen interest among food industry stakeholders for business services (see Chart 1), and training in product development, specialty food marketing, and business consulting (see Chart 2).

Schematic diagram of a “Food Hub”
 Contact Chris Speere at speere@hawaii.edu for a copy of Food Spectrum’s full report.

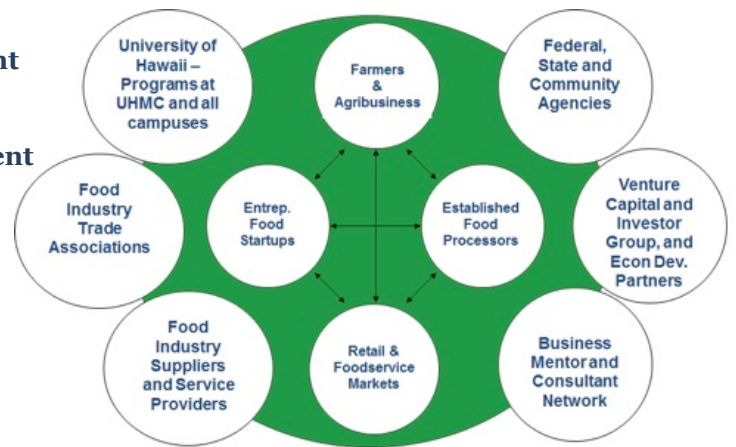


Chart 1
 Stakeholders expressed strong interest in business services.¹



Chart 2
 Stakeholders are interested in a diverse range of trainings.¹



¹ Source: Final Report, Food Spectrum, LLC, 2013

NETWORKS

Outreach through partnerships, workshops, and events built new *networks* for food innovation *statewide*.



Photos from left: Statewide stakeholders attended the Food Summit II at Kapi'olani College in November 2015. Outreach raised awareness at local events like World Water Day at the Maui Brewing Company, Kihei, January 2015.

PARTNERSHIPS

The Maui Food Innovation Center (MFIC) formed new partnerships during the grant with local and state organizations such as the High Tech Development Corporation, The Kohala Center, Maui Native Hawaiian Chamber of Commerce, and other private and public nonprofit organizations.

WORKSHOPS

In-person training workshops on Maui and other neighbor islands, including Hawaii and Molokai, with Food Spectrum, LLC consultant Lou Cooperhouse, helped to build awareness of food innovation strategies with statewide participants.

EVENTS

Participation in community events including Maui County Ag Festival, Maui Fair, Maui Food Technology Supply & Service Expo, World Water Day, Earth Day, and job fairs helped to raise awareness and build the network.

RELATIONSHIPS

A Client Relationship Management (CRM) tool was developed and maintained to support relationship building with over 300 contacts collected through outreach events and initiatives.

STATEWIDE SCALING

Stakeholders from within the UH system, private and public nonprofits, and government officials provided input on the scaling and sustaining of food innovation statewide in annual Food Summits hosted at Kapi'olani Community College in 2014 and 2015, and partially funded by the grant.

Contact Susan Wyche at swyche@hawaii.edu for a copy of the Food Summit II Report.

What do you feel are the most important issues for the development of a statewide strategy for developing the food industry sector in Hawai'i?

“ Understanding Hawai'i and developing realistic goals for the food industry. Things and systems that work on the mainland cannot just be implemented in Hawai'i.

Stronger farming participation **Leadership**
Collaboration

A coordinated statewide plan involving the executive and legislative branch.

Entrepreneurial pathways

Strong educational programs, access to experts and advice, resources, industry support

Financing
Producing more food locally ”

- Food Summit II attendees

BRANDING + MARKETING



A branding and strategic marketing campaign raised awareness of the Maui Food Innovation Center in the local community and supported course enrollments.

Branding and logo design, website design and development, a marketing kit, advertising, video public service announcements, and a media library of photos and videos were created for on-going marketing and promotions through grant initiatives.

SOCIAL MEDIA



FOLLOWING 1,369 FOLLOWERS 552



VIDEO



Video PSAs promote Food Industry Fundamentals online courses on social media.

WEB



New website maui.hawaii.edu/foodinnovation

PRINT



Print ads, brochures and flyers promote Food Industry Fundamentals online courses.

INFRASTRUCTURE

The Maui Food Innovation Center will repurpose an existing cafeteria space on the UH Maui College campus, and develop a *food business incubation program* for community entrepreneurship and experiential learning.

Supported by a feasibility study conducted by Food Spectrum, LLC consultant Lou Cooperhouse for the grant, the Maui Food Innovation Center plans to develop the first food incubator program in Hawai'i featuring a shared-used food processing facility that will be County, FDA, and USDA inspected.

FUTURE FACILITY

- > **Offices**
- > **Processing areas (wet, dry, cold)**
- > **Packaging area**
- > **Sanitation/Potwash area**
- > **Raw material and finished good storage**
- > **Maintenance area and equipment storage**
- > **Shipping and receiving area**

EQUIPMENT

The consultant developed an extensive equipment list for use in the facility to support product development, analysis, commercialization, and small-scale manufacturing of food products for retail and foodservice markets.

FUTURE CAPABILITIES

- > **Wet processing.** Soups, sauces, jams, jellies, salad dressings, dips, beverages, entrees, fruit and vegetable purees.
- > **Dry processing.** Cooked meat and poultry products, pies, breads, muffins, cookies, snacks and other baked goods, dehydrated meats, fruits, vegetables, and herbs.
- > **Cold processing.** Fresh cut fruit, vegetables, and raw value-added meat, poultry, and seafood products.



Floor plan design for new facility in Pilina Building.



Kitchen rehab in Lauilima Building.

While preparing for the renovation of the existing Pilina building through funding from the Hawai'i state legislature, the grant purchased supplies for a temporary classroom and kitchen lab in the Lauilima building.

EDTECH INNOVATIONS

Use of educational technologies enabled *experiential learning* statewide through online courses and trainings developed in response to *industry and community engagement*.

EDUCATION DELIVERABLES

From April 2014-December 2015, the Maui Food Innovation Center offered its first series of in-person workshops and online courses.

ONLINE COURSE INNOVATIONS

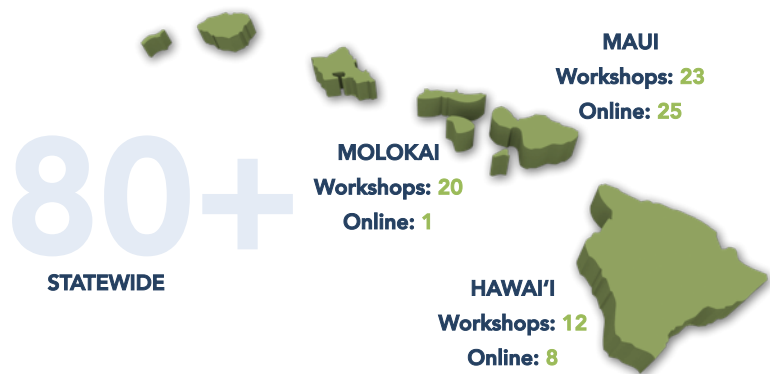
Using curriculum from Food Spectrum, LLC consultant Lou Cooperhouse, the grant funded a dedicated instructional design and media team to develop interactive, web-based courses available on-demand through EdVenture in the Office of Continuing Education & Training. The courses were offered at a discounted price of \$139 for four courses, or \$39 each.

> The Certificate of Completion in Food Industry Fundamentals consists of four online courses:

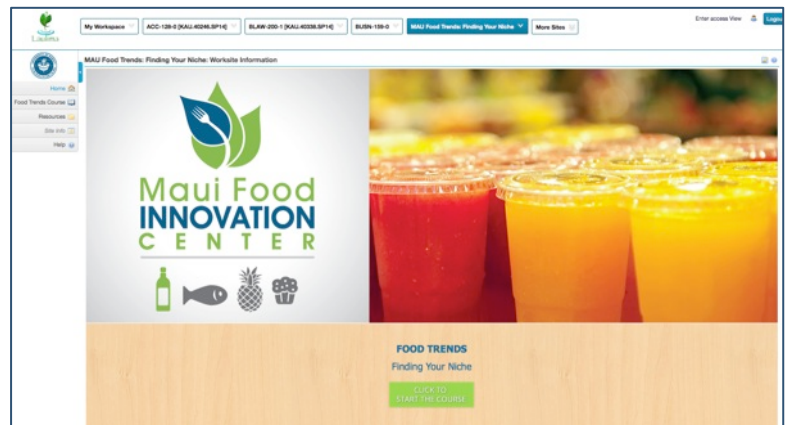
1. Food Trends: Finding Your Niche in the Specialty Foods Industry
2. Food Product Development and Technology Essentials
3. Quality Assurance and Food Safety Principles
4. Good Manufacturing Practices (GMP) for Food Producers

> Leveraging an existing UH learning management system, **the courses are now hosted on the Lulima platform for future offering** through the Office of Continuing Education & Training.

Trainings reached 80+ participants statewide, 2014-15.



Online courses hosted on Lulima platform.



FOOD SAFETY BASICS: AN INTRODUCTION TO FOOD SAFETY

Responding to survey results from 22 chefs, restaurant managers, and farmers on Maui, the grant developed a free, educational series of YouTube training videos focused on entry-level, food safety basics for food handlers in Hawai'i. Using multimedia software including VideoScribe and FinalCut Pro, the videos present the four key strategies to keep food safe.

URL: maui.hawaii.edu/foodinnovation/foodsafety



EVALUATION

Evidence-based analysis through focus groups and surveys provided insights for *continuous quality improvement* efforts.

FOCUS GROUP OBJECTIVES

- > Gather feedback from participants who have completed the four online courses
- > Collect empirical data through course evaluations to support evidence-based analysis.
- > Analyze the results and make recommendations for next steps for the online courses
- > Gather input for future MFIC courses.

POPULATION SAMPLE

- > 45 local industry professionals were invited to participate in the focus group from a diverse group including food retail markets, wholesale vendors, restaurants, resorts, agriculture, packaging, garden and culinary educators, value-added food product producers, and startups. (see Appendix, p. 10 for list of reviewers).
- > 20 participants responded and confirmed interest to complete all four online courses, attend focus groups and complete evaluation reports.
- > 13 participants completed the four online courses and attended the focus groups.

EVALUATION PROCESS

- > Empirical data were collected through course evaluations using an observation report format to support evidence-based analysis.
- > Focus groups were conducted to collect feedback through an interactive, round-table discussion moderated by a third-party continuing education coordinator.
- > The evaluation results were presented in a debrief meeting with the grant project team on July 22, 2015.
- > Based on the focus group feedback, a new series of online courses were developed that specifically address Basic Food Safety issues recognized by chefs and local restaurants as a critical training need on Maui (see Food Safety Basics, p. 7).

Table 1.
Evaluation Participation Outcomes², n=13

EVALUATION PARTICIPATION OUTCOMES	#
Completed evaluation reports and attended focus group on July 23, 2015	3
Completed evaluation reports and attended focus group on July 24, 2015	7
Completed evaluation reports, did not attend focus group	2
Provided feedback via interview only	1
TOTAL	13

² See Appendix for more detail on the focus group findings, June-July 2015

How could we improve the Food Industry Fundamentals courses?

“ Add local context

More interactive activities should be available to enable students to be more hands-on in the learning process.

Fix tech glitches

Focus on startups and small businesses.

Case studies

Discussion of labeling and packaging would be practical.

Business Plans, Marketing Plans, Financing

Hybrid, blended courses with face-to-face and online instruction. ”

- Focus Group participants

ACTIONABLE INSIGHTS

The Transformative Change Initiative at the College of Education at the University of Illinois has developed eight guiding principles¹ to assist community colleges in achieving transformative changes in education. These principles may be applied to help *scale and sustain initiatives* for the Maui Food Innovation Center beyond the grant.

1

Leadership

> Developing leadership is critical for the on-going sustainability of the Maui Food Innovation Center (MFIC). The Food Spectrum, LLC, report recommended establishing a Director position. Food Summit II attendees also endorsed the importance of leadership for the future development of a statewide network. The absence of a MFIC director during the grant may be one factor that impeded the overall development of the incubator model, additional trainings, and network building.

2

Adoption and Adaptation

> Online learning offers one way to reach an audience, however, participants indicated a preference for hybrid and face-to-face learning.
> Focus group feedback recommended further adaptation of the educational curriculum to include the local context of Hawai'i in future trainings.

3

Evidence

> The course evaluation process using focus groups and rubric-oriented surveys provides a useful model for future curriculum development and training through on industry and community engagement.

4

Storytelling

> Social media and outreach efforts enabled storytelling using participant testimonials, opportunities to engage, and development of a statewide CRM. Continuing the Facebook, Twitter and outreach initiatives is key to sharing meaningful stories.

5

Networks

> Food Summit II attendees requested a way to stay in touch and continue collaborative efforts (e.g. through a virtual network). The development of a statewide network will be one of the key next steps for the Maui Food Innovation Center.

6

Dissemination

> Through the use of the CRM, outreach efforts were able to keep participants informed of the status of their course enrollments, promote courses, and conduct surveys. On-going communication to build the network will be critical for the sustainability of MFIC initiatives.

7

Technology

> Instructional design offers a way to engage with online learners, however, course participants provided feedback that locally contextualized content is important to embed into educational offerings.
> Leveraging existing technologies such as the Lulima platform will support on-going use of the online courses.

8

Spread & Endurance

> Leadership and on-going collaboration have the potential to scale food innovation through a statewide network.

¹ Transformative Change Initiative
URL: occr1.illinois.edu/projects/tci/

APPENDIX

Findings from *focus groups* with industry and community stakeholders informed revisions to the online courses and development of new training curriculum.

FOCUS GROUP PARTICIPANTS

During a 6 week period from June-July 2015, 13 participants completed the courses, provided course evaluations using observation report forms, and participated in the focus groups.

Table 2
Course Evaluation Participants, June-July 2015

Focus Group Participant	Company/Organization	Subject Matter Expertise/ Background
Arianna Feinberg	Aloha Natural Brokers	Value-added food product sales and distribution
Cynthia Conrad	Cynthia Conrad Design	Packaging designer
Mike Mangca	Hui Malama	Chef and educator
Lauren Tamamoto	Kapi'olani Community College	PhD, Culinary Arts Department
Becky Speere	Maui No Ka Oi Magazine	Food industry journalist
Jun Wu	Miracleberry startup	Educator and entrepreneur
Paris Nabavi	Sangrita Grill	Chef and entrepreneur
Andrea de Roode	Pono Infusions	Nutritionist and entrepreneur
Melanie Boudar	Sweet Paradise Chocolatier	Chef and entrepreneur
Chris Speere	UH Maui College	Chef and educator
Tammie Evangelista	Waikapu Pickles	Value-added food product entrepreneur
Elyse Ditzel	Whole Foods	Community Relations Manager
Reda Boustani	Whole Foods	Chef and product manager

APPENDIX, cont'd

FOCUS GROUP METHOD

Rubrics were designed for each course by the grant project team based on examples of other online course evaluations.¹ Observation Reports for Online Course Evaluation were then created to enable participants to review the Student Learning Outcomes and rubrics prior to taking each course.

Participants evaluated the following constructs in the Observation Reports using a Likert-like scale of 1 (low) to 5 (high):

1. Learning Outcome Alignment
2. Teaching Methods
3. Organization & Design

Additional comments were also requested to collect qualitative data.

Sample Observation Report Form

OBSERVATION REPORT FOR ONLINE COURSE EVALUATION	
COURSE:	Food Trends: Finding Your Niche in the Specialty Foods Industry BUS6801
OBSERVER:	
DATE:	
DIRECTIONS: Please review this course evaluation prior to beginning the online course. After completing the course, circle the appropriate number for each item evaluated. Comments should detail specific items in support of your numerical rating.	
<u>STUDENT LEARNING OUTCOMES (SLO)</u>	
Course SLO 1: Understand the process by which a new food business can be established, and what critical knowledge of the marketplace will be required.	
Course SLO 2: Recognize the consumer trends that exist in the marketplace today, and also the various channels of distribution that exist today, and how a niche business can be quite successful.	
Course SLO 3: Understand the elements of a business plan that will need to be addressed, including the development of a "unique selling proposition", product strategy, market strategy, management team, competitive assessment, and detailed financial plan.	
<u>1. LEARNING OUTCOME ALIGNMENT</u>	5 4 3 2 1
5	Course has multiple and timely appropriate learning activities that closely align with the course's learning outcomes. Coursework prepares students to demonstrate achievement of the course's learning outcomes. Quizzes successfully measure student achievement of the course's learning outcomes.
3	Learning activities, coursework and quizzes are adequately aligned with learning outcomes. Revision is encouraged.
1	Learning activities, coursework and quizzes are not aligned with student learning outcomes. Course alignment with learning outcomes needs improvement.
COMMENTS:	

¹Sources include Rubric for Online Instruction, CSU, Chico, Copyright 2003 / Revised 2009; Monterrey Institute for Technology and Education (MITE) Online Course Evaluation Project, Copyright 2010; and UHMC Online Course Evaluation Rubric.

APPENDIX, cont'd

COURSE EVALUATIONS

Results from evaluations of each of the four online courses included quantitative data from the rubrics, and qualitative data from participant comments. Findings from the focus groups were used to inform revisions to the online courses and development of new training curriculum.

1. Food Trends: Finding Your Niche in the Specialty Foods Industry

Overall, participants had mixed evaluations of the Food Trends course with some notably low ratings of 1 or 2 for the Teaching Methods and Organization & Design categories.

Comments by participants included:

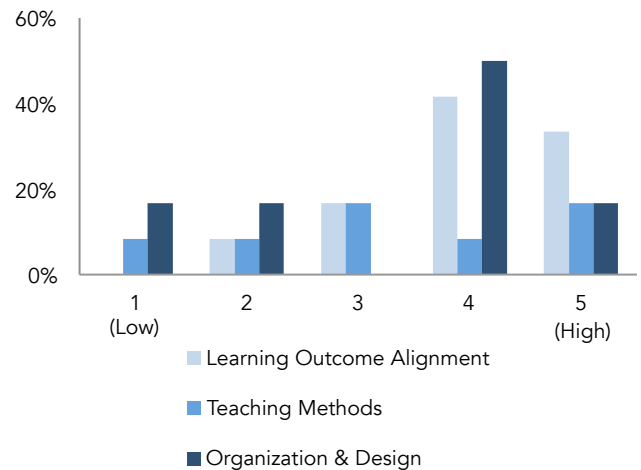
+ Engaging, informative, concise. Different variations of information. Examples good. Liked flow of course, well organized.

- Quizzes confusing and too easy. Lacks local context. Instructor voice be condescending. Not detailed enough. Need more examples, multimedia/videos, local case studies of food businesses in Hawai'i, interviews with people, and more engaging activities. Were accessibility issues addressed? Difficult to navigate. Tone too flat.

Conclusions:

- o Course acceptable.
- o Learning Outcomes rated highly (75% rating of 4 or 5).
- o Teaching Methods could be improved with more video.
- o Organization & Design acceptable with minor adjustments.

Chart 3
Food Trends Course Evaluation Results



2. Food Product Development

Overall, participant evaluated this course more favorably than the first course.

Comments by participants included:

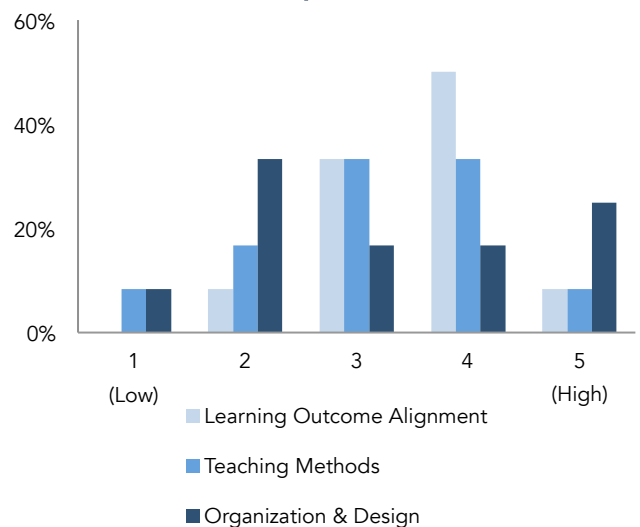
+ Very informative, good knowledge basis, engaging, good examples, quizzes more challenging.

- Not detailed enough to start a food company, need more discussion of packaging. Some technical glitches. Not able to go back to review material.

Conclusions:

- o Course acceptable.
- o Technical issues should be addressed to allow participants to go back within the course without having to go through every previous slide.

Chart 4
Product Development Course Evaluation



Courses were updated January 2016 to add ability to navigate within the course.

APPENDIX, cont'd

3. Quality Assurance & Food Safety

Overall, participants had mixed evaluations of the Quality Assurance & Food Safety course with some notably low ratings of 1 or 2 for the Teaching Methods and Organization & Design categories.

Comments by participants included:

- + Valuable information for all food workers, well organized.
- Need more info on HAACCP related to food quality, and guidelines on temperature for food prep. Food recall quiz needs to be fixed and ability to navigate back added. Align with Serv Safe courses. Add more examples. Difficult to navigate.

Conclusions:

- o Course acceptable.
- o A lot of information displayed in different ways and charts.
- o Good examples. Very well organized.
- o Food recall quiz should be fixed.

4. Good Manufacturing Practices

Overall, participants had positive ratings for this course for Learning Outcome Alignment and Teaching Methods due to use of video and content that met the student learning outcomes.

Comments by participants included:

- + Favorite of all courses. Liked video. Builds upon other modules. Well organized. Information provided clearly.
- Would be good to see actual example of Hawai'i business GMPs comply with HI state law. Add case studies. Scale down course to address smaller kitchen/food prep setup rather than large plant. Need local case studies of food businesses in Hawai'i, video interviews with people, and more engaging activities to make it real. Tech issues with using Previous button. Difficult to navigate. Information not memorable in the way it is organized.

Conclusions:

- o Course acceptable.
- o Technical issue of *Previous* button should be addressed.

Courses were updated January 2016 to add ability to navigate within the course, and address usability issues in Food Recall quiz.

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Chart 5
Quality Assurance & Food Safety
Course Evaluation Results

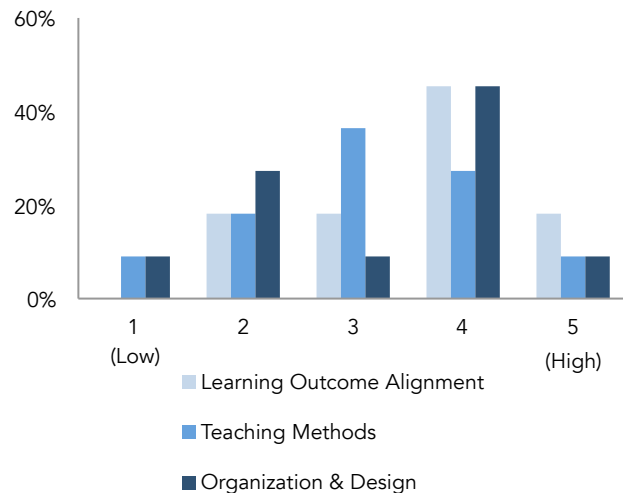


Chart 6
Good Manufacturing Practices
Course Evaluation Results

