



Culinary Institute
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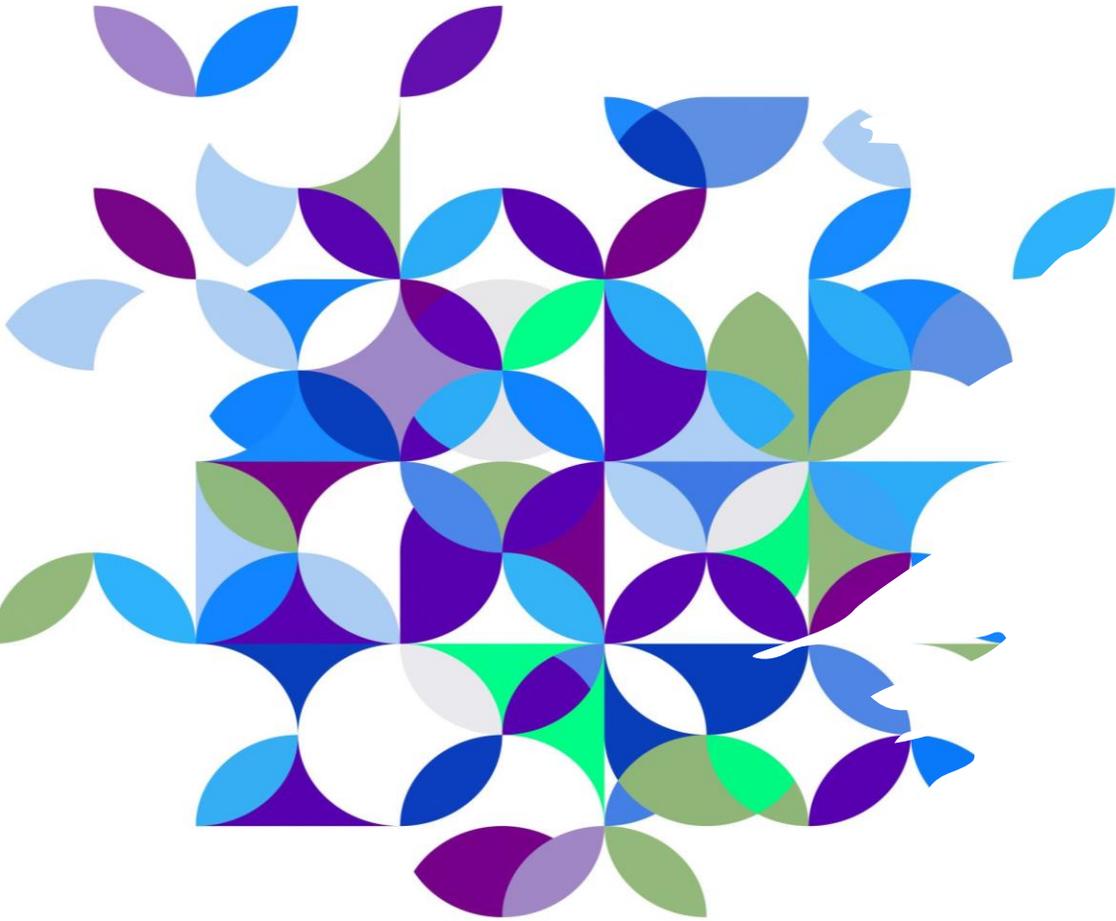
Whipping Up Assessment to a Tastier Outcome: Exploring Competency-Based Assessment through a Culinary Lens

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AI Conference, Fall 2023

Introduction



Designed around helping students to master the core competencies of their chosen field of study, the National Center for Education Statistics, defines the idea of competency as ***"a combination of skills, abilities, and knowledge needed to perform a specific task."***

The rise of competency- and experiential-based assessment have been of growing interest to assessment professionals, though questions have lingered about how rigorous this assessment is compared to traditional direct "artifact-based" methods.

This presentation examines a multi-campus initiative at the Culinary Institute of America to develop a competency-based assessment methodology that provides answers (and a pathway for student learning improvement) to a common question from culinary faculty: "Why don't my students possess the skills they should have for academic success in my class?"

Learning Outcomes for this Session...

- Explain and demonstrate an example of competency-based assessment through an interactive activity that will then be graded by this session's participants using a rubric.
- Facilitate group discussion on the use of a standardized, yet flexible, rubric for competency-based assessment.
- Apply lessons learned from this project to a larger competency-based model of assessment that should be applicable to other competency-based assessments.

Competency- based Education (CBE)

- While the Culinary Institute of America (CIA) works on a traditional course/credit model, much of the assessment of culinary and baking and pastry student learning has a strong direct assessment component.
- At the CIA many of Malan's (2000) six essential tenets for CBE apply to culinary and baking and pastry education for aspiring culinarians. Among the six, the most important are:
 - the development of explicit learning outcomes with respect to required skills and proficiencies;
 - a variety of instructional methods to facilitate learning;
 - and certification based on the demonstrated learning outcomes.

Competency Based Assessment vs Traditional Academic Assessment: What Could Go Wrong?

Competency based assessment in higher education has occasionally been given a bad rap when compared to more traditional academic-focused assessment methods and techniques.

However, in a higher education based culinary program, the idea of competency-based assessment alongside more traditional assessment measures must be included into the assessment professional's toolbox.

Competency based evaluation is not just about the development of new skill sets, but the chance to measure them to show what is "competency" at different points in the educational program.

In many ways this mirrors the practice of "pre-test, intervention, post-test" often held as the gold standard of assessment methodologies, especially in the social sciences and health care.

Brief overview of CIA AOS Culinary Curriculum

Total Credits 51

Course Number	Title	Credits
<u>CULS-100</u>	<u>Culinary Fundamentals</u>	6
<u>CUSC-100A/105A</u>	<u>ServSafe Exam</u>	
<u>APFS-110</u>	<u>Introduction to Food Systems</u>	1.5
<u>CULS-115</u>	<u>Meat Identification, Fabrication, and Utilization</u>	1.5
<u>CULS-116</u>	<u>Seafood Identification and Fabrication</u>	1.5
<u>CULA-260</u>	<u>Modern Banquet Cookery</u>	3
<u>CULP-115</u>	<u>Introduction to À La Carte Cooking</u>	3
<u>CULP-135</u>	<u>Non-Commercial Foodservice and High-Volume Production</u>	3
<u>BAKE-241</u>	<u>Baking and Pastry Skill Development</u>	3
<u>EXTN-220</u>	<u>Externship (Culinary Arts)</u>	3
<u>CULP-225</u>	<u>Garde Manger</u>	3
<u>CULP-301</u>	<u>Cuisines and Cultures of the Americas</u>	3
<u>CULP-311</u>	<u>Cuisines and Cultures of the Mediterranean</u>	3
<u>CULP-321</u>	<u>Cuisines and Cultures of Asia</u>	3
<u>HOSP-355</u>	<u>Wine and Beverage Studies</u>	1.5
Complete One Back-of-House from Restaurant Operations +		6

Non-Culinary Curriculum

Liberal Arts Courses at the 100 and 200 Level

Course Number	Title	Credits
CUSC-100	Food Safety	1.5
CUSC-110	Nutrition	1.5
APFS-150	Introduction to Gastronomy	1.5
LITC-100	College Writing	3
MTSC-100	Mathematical Foundations	1.5
Sub-Total Credits		9

Business Management 100-200 Courses

Course Number	Title	Credits
FRSH-100	Professionalism and Life Skills	1.5
MGMT-100	Introduction to the Hospitality Industry	1.5
MGMT-250	Principles of Menus and Managing Profitability in Foodservice Operations	3
Sub-Total Credits		6

Total Credits

66

FUNDIES! A day in the life of a CIA student.

- Read
- Listen
- Watch
- Practice
- Evaluate





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Demonstration Activity

Chef Keller



Example of Kitchen Lab Learning Outcomes

- Students will be able to
- list the basic formula of ingredients
- explain the steps in the method of preparing mayonnaise.
- prepare a mayonnaise sauce and evaluate it for quality based on the criteria
- explain the following scientific principles as they apply to mayonnaise:
 - explain the process of creating an emulsion
 - microbial activity food safety and sanitation

Culinary Emulsions Basic Science

- **Emulsions** lie at the base of many kitchen ingredients and preparations. Milk, butter, and mayonnaise are examples
- Emulsions are mixtures of **two compounds that will not normally mix**, such as oil and water
- All emulsions have a continuous phase into which are scattered tiny droplets of the dispersed phase
- Emulsifying agents are partly hydrophilic and partially hydrophobic
- Liquids that cannot mix together for chemical reasons will mass together due to the force called **surface tension**.
- We need to **use force to break up the dispersed liquid into the smallest particles possible** to help prevent it from binding to another molecule of the same liquid. In the kitchen we typically use a hand whisk, a mixing machine with a whisk attachment or a blender.

Basic Formula Mayo: 1 egg yolk + 1-cup Oil

1 egg yolk (3/4 oz pasteurized egg yolk)

1/2 tsp cider vinegar

1 tsp water

1 tsp prepared mustard

8 oz neutral salad oil

1 tsp lemon juice

Salt and pepper to taste

1. Combine yolk, water, vinegar, and mustard in a bowl. Using a whisk mix well until slightly foamy.
2. Gradually add the oil in a thin stream, constantly beating with the whisk, until all the oil is incorporated, and the mayonnaise is smooth and thick.
3. Season with salt, pepper and lemon juice.
4. Use immediately or refrigerate covered in a clean container for later service.

Et voila, Sauce Mayonnaise

Key Characteristics

- Temperature: cold
- Color: pale yellow to creamy white
- Texture: thick and smooth
- Aroma: neutral
- Flavor: somewhat neutral, tangy, mild lemon

Before you go...you need to know: Microbiology

- Raw eggs: Salmonella (potential health risk)
- Lower pH (vinegar and lemon) and helps to slow bacterial growth
- Work clean (wash hands and surfaces)
- Keep refrigerated but toss after 4 days
- Pasteurized egg yolks are an option

Mayonnaise Video

(Source: ProChef 9th edition)



Evaluation

- Compare and contrast
- Expert chef demo video
- Student A performance
- Student B performance
- Audience members will assess students' task execution using a rubric that we will provide.
- Placeholder for Student Videos

Audience Discussion of Results

- How well did the rubric help you judge the performance of the students?
- What inferences can you make about student performance from the rubric?
- Questions from the audience...

A WELL WRITTEN RECIPE FOR ASSESSMENT SUCCESS

Yield: one cross-class, multi-level, program assessment

Ingredients:

1. Clearly described competencies and learning outcomes
2. Students should be able to understand the rubrics as a roadmap to what they were learning and more importantly, why they are learning
3. Well-written rubrics should allow instructors to measure the quality of student performance
4. Rubrics, overall, should not only measure performance, but be a reflection of the learning process and provide some form of formative feedback to the instructor and the student alike

Method:

1. Educate faculty, students and administrators on the meaning and reasons for good assessment
2. Administer the measure(s)
3. Collect the data and provide analysis
4. Explore the findings with the faculty
5. Create an action plan
6. Wash, rinse, repeat
7. Maybe it needs a pinch more salt too...



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Questions?



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Thank You!



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