

Lab reflection 1-7

I chose to include this project and each reflection because it shows how I grew from one project to the next, but it also shows how complex the food we eat each day are. Before these labs, I thought of myself as a pretty good cook, but after these labs, I learned I may have been a good cook, but there is so much more that goes into making a perfect dish. I found it challenging to take sensory evaluations from foods that we may not have cooked and justify the results. While looking back from today, we had an emergency in our kitchen and had to cook meals in simple ways and having these labs really came to great use during this time. Overall, I think I got so much out of these labs but I have to say that the clients I worked with throughout my SEL's got a lot out of these labs too because of the understanding I gained.

Lab 1: Recipe Modification Reflection

Doing the first lab of the semester, it was a learning experience, and I learned that less is better.

This lab was about taking a macaroni and cheese recipe and alter it to a specific client needs. I

had a client that need a CHO controlled and increased fiber choice and I set out to make major

changes to this recipe, which with the feedback I received I learned that making one or two simple changes that drastically changed the recipe is what is called for rather than making

several small changes to effect the recipe but ultimately making it less cost effective and available for the client. The original recipe was very high in CHO but more specifically low in

fiber which would not be suited for the client. I have some background in modifying recipes, but

my palate is very different for most, so I try to change recipes for my wife, but I think this lab was very helpful. Not only doing the lab, but the feedback from Dr.D, built my foundation for what I think I could use moving forward in the class when changing and analyzing recipes.

The feedback was important but the analysis of what I did was helpful. By addressing the effect

of palatability and cost, it helped me understand what I could have done differently to make the

appropriate changes to the recipe. To go back to the simple is the best, I combined two pastas

and it could have driven up the cost, but I could have just used one type of pasta to achieve the

modifications but also keep the cost down. The next question that was raise was the limited

change of CHO but when I changed the recipe, I wanted to focus on both CHO and fiber but by

creating a recipe with fiber, I was thinking that the serving size would go down because of the

satiating effect of the fiber. Although, this was the first of many labs, I think it was good start

and gave me a better understanding of how to modify recipes. Recipe modifications is not just about making the changes to help the client's needs but also to

ensure that the recipe maintains sensory qualities that the clients also needs and wants.

As we

learned in the past about diets, the only diet is the one that is tailored for the client and can be

sustainable. The same concept applies here, and while you could make a recipe that checks all

the boxes for health reasons, if it doesn't keep or improve the sensory qualities it won't have any

impact because it won't be consumed. So, lab 1 help teach me that recipe modifications are

important but something that is also important is having a client centered approach to ensure is

both efficacious and enjoyable so the client can be mindful of their needs but also have fun with

making the recipe and eating it.

Lab 2: Energy Transfer

For lab 2, it was a different approach for the labs, and it focused on boiling and cooling in various water dispersion. We had to measure temperature changes in a shared document to

observe the different effects of salt, sugar, gelatin and cornmeal. I have some background before

this program and during of taking data and creating graphs but for this we had to illustrate these

changes and summarize it with a presentation of our findings. While lab was to help us better

understand the way energy is transfers with different types of solutes, it really helped me

understand the practical use of during cooking. For example, I always used salt while cooking

pasta, but this lab explains why it is useful for reducing energy consumption. Another example is

sugar, and I thought it would just add flavor or texture, but it's crucial for confectionary and to

prevent scorching. One challenge we had during this lab was the result section and the ability to

create the correct graphs to present in the proper way. We started with line graphs; this was a

perfect fit to help explain the relationship, but it didn't work so well in relation with time.

Since doing this lab, I have used plenty of the principles in my own cooking but I always here my

coworkers that are chefs by trade talk about the key ingredients but now I know that this could

make or break a product,

Lab 3: CHO sweeteners and starches reflection

This lab was very tough to meet the requirements, because there was so much to cover within our

10-minute time frame but we were able to create a great end product with also be able to keep it

under the allotted time frame. Dr.D said this was the best explanation she has seen in 10 plus

years, and we are glad our work came out the way it did. The actual lab was about the functional

role of CHO in baking, and to be more exact replacing white sugar, with other non-nutritive sweeteners. The lab was straight forward but we did have a challenging portion during the visual

analysis part. Trying rate these from subjective pictures without having them in front of them

was challenging but with all of the other aspects of the data helped us compile the data.

The data

we had was tenderness rated with the chew count, appearance and the type of spread.

This lab was very relevant because of the public's thoughts on sugar and the curiosity of using

non-nutritive sweeteners to either enhance the flavor or lower the calories. But this lab taught us

that there is a balance when replacing sugar and while you enhance the flavor you may lose mouth feel, thickness or the spread without trying too. While I am interested in the long term and

acute care, chronic disease is part of that care system, and this lab is a perfect preparation for the

clients. While possibly working in diabetic management counseling in the future, these type of

alternations to recipes containing sugar could be very helpful to teach and guide the clients on

the effects different types of non-nutritive sweeteners could have on the end product. **Lab**

4: Fruits and Veggies Reflection

For this lab, I cook a lot of veggies, but I usually steam and then give them a quick air fry or broil to get a crisp. But while doing this lab, I now understand that each type of cooking method

can drastically affect your desired outcome in a various of ways. This lab was set out to examine

how the different cooking methods and pH environments could influence the pigments, textures

and sensory qualities of vegetables. The way you could and what you use to cook in is very important, by boiling or cool then boil, distilled water, milk, vinegar and baking soda and using

different cooking methods like microwaves and pressure cooking can improve or worsen the

over quality of the veggie. The time and use of a cover also alter the outcome, and this changed

how I cook at home, because I usually always use a cover but now, I know there is certain times

and veggies to use this method for.

Even though we measured the sensory qualities of the veggies, we always measured the color

change of both the veggie and the liquid it was cooked in. Bringing it back to my home cooking,

I usually use a trial-and-error method, but this lab helped my better understand the scientific

process behind cooking and how pH and heat could work for you or against you. We also worked through this lab and tried to keep it under 10 minutes but will all the information that

was needed, we went slightly over the time limit, but another challenge was the scaling system.

We had several different subjective data sets to analyze but also try to sift through the visual data

with some of the names, methods or liquid missing on the forms but we were able to work

through these problems, and we believe we made the correct assumptions. This lab help us

reinforce the idea of proper cooking methods, time, type of liquid use and the technique you use

when cooking vegetables is very important. **Lab 5: fats**

Before I go into the lab itself, I wanted to mention something that I didn't know before this week's lesson and that many people may not know. The concept of the air fryer is just a smaller

convection oven that is portable and can be used in most houses. This lab focused on deep frying

versus air frying and using different types of oils to cook doughnuts. We analyzed the cooking

time, absorption and the temperature to see which variation could produce the best doughnut.

While one type of oil is perfect for deep frying, it may not work as well for air frying, and we found this concept by looking at the lab data but also comparing the ranking system of sensory

profiles given to the samples. To skip past the results, after we posted this presentation on Padlet,

one of our classmates brought up a very interesting point about blinding. They asked if the taste

testers were blinded because of the possibilities of an olive oil bias or dislike for the other oils.

This was a valid point, and this may be why olive oil tested so highly in air frying. The key concept that we learned from the lab is that deep frying typically has a lot more absorption and

air frying is the opposite, but we did have some challenges throughout the lab.

One of the challenges we encountered was the rating system again. As I mentioned in the previous lab, trying to understand or rate the subjective data is challenging but this one was slightly different. The terminology used like greasiness was confusing at first. We didn't know if

it was our bias towards doughnuts and how we like them, but we never really thought about greasiness in doughnuts, so we rated as we saw fit. Even though this was a challenge, the smoke

point was another challenging factor but not for us to understand but how to interpret the data.

For some of the results, it directly conflicted with the smoking points and how the product

should turn out. Something that was interesting and useful in nutrition was the absorbability of either product and we were able to identify this by calculating the pre and post drying weight and

this could add more calories to the product. The takeaway from this lab is that air frying might be

the better option for preserving aroma and have less greasiness if this is the outcome the person

wants in their product.

Lab 7: Foam Cakes

You may be asking why I went from lab 5 to lab 7 but this is because in lab 6 it was a discussion

post rather than an actual lab like the previous one, so I excluded it from the reflection.

This

week's lab I went into my least favorite thing, baking. While I didn't have to bake the cake, I

learned a lot of principles that could when I choose to bake one day or make any products that

include flour. I learned that this cake is one of the simplest but one of the most complicated

cakes to make. It relies on egg whites for its structure, volume and tenderness without having any

fats, leaveners or egg yolks. During my presentation, I accidentally added in that steam was needed

for this, but I meant to put cream of tartar. This was a typo that I missed but it is crucial for understanding how to bake this cake. The acid helps to stabilize the whites during its foamy stage. During the lab, they tested several flours and temperatures to cook the cake, but the best

way is using cake flour at 350 degrees. The cake I was presented with was deflated and had a

dense look which ultimately makes you understand that it didn't have structure. Before, this lab I

would have said that it wasn't cooked long enough or too long but now I understand that it could

have been from many different factors.

As I said at the beginning, I learned a lot from this lab and how not to cook a foam cake.

What

went wrong during this lab to get the deflated cake could have been over whipping, folding or not

following the ingredients or recipe. During the presentation I made the comparison of making a brick oven pizza versus a conventional pizza because of the air pockets that make the pizza have

volume. This helped me and others better understand why following the recipe is crucial. I

learned a lot about this lab but one thing I took away was to triple check my presentation before

submitting. I made my presentation and then the script just as we did in previous labs but this

one error could make someone misinterpret the recipe and the reason how and why the foam

cakes turn out how it does.