

## MEMBER SPOTLIGHT

**MELANI DUFFRIN, PH.D, RDN**  
**FOUNDER OF FOODMASTER****PROFESSIONAL JOURNEY AND COLLABORATION**

Melani Duffrin, PhD, RDN, professor of Interdisciplinary Health Professions at Northern Illinois University College of Health and Human Sciences, began her dietetics journey heading towards foodservice. During her journey, she worked as a Clinical Dietitian and found that she loved working with and teaching the interns that came through her door. It was then that she discovered her passion for teaching. She knew that she needed to pursue her PhD to become a professor.

After earning her PhD, she began teaching college classes. A partnership with a friend, who was an elementary school teacher, inspired the launch of the FoodMASTER Initiative. “I was teaching food science, and the partner teacher, Sharon Phillips Tompkins, asked, ‘Can I come to your food science lab and learn more?’ From there, she started bringing her elementary kids to my food labs, and I started bringing my college students out to her classrooms,” said Duffrin. “I had originally thought you could use food as a tool to teach mathematics and science to kids. Mrs. Phillips Tompkins and I saw the magic of it in her classroom and started building on the concept.”



Dr. Duffrin states that a lot of teachers want to bring nutrition education into the classroom, but it is not always apparent how the subject matter aligns with their teaching objectives. However, mathematics and science are more apparent, and food and nutrition happen to be themes that fit right in with those two subjects. Approaching nutrition education in that way opened the door to the classroom!

## DIETITIAN, EDUCATOR, FOOD MASTER

Being a dietitian as well as an educator, Dr. Duffrin knows the importance of teaching students of all ages about food and nutrition. She wanted to create FoodMASTER as a tool to connect dietitians with K12 classrooms. "For some reason, my husband really knew 20 years ago that STEM education was going to be the right fit for my interest in food and nutrition science for the public," Dr. Duffrin says. He was right!

The development process included years of research, teacher and student interviews, and advisory panels. Students were given pre and post standardized tests to check knowledge against standard competencies. "We found that our students perform better, but more important than the cognitive is we really focus on the affective domains of learning. We're really looking to see how it changes students' attitudes ... their confidence in learning science," she said. This proves that both eating and learning with nutritious foods while at school can increase standardized test scores!


While the content utilized in her program does not focus solely on nutrition and cooking, it uses food as a tool and integrates nutrition and food science into the lessons while focusing on important mathematics and science skills that teachers need to meet their objectives. A subtle way to expose students to food and nutrition while in the classroom.

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## TEACHING THROUGH THE PANDEMIC

During the pandemic, Dr. Duffrin and her team had to think outside of the box when schools and colleges switched to virtual learning and getting into a food lab was impossible. With a couple of tweaks to the existing model, they created "Kitchen Counter Science" which brought the nutrition education to students' homes. Students pulled ingredients from their own pantries and from packages mailed to them. Not only did this allow STEM education to continue throughout the pandemic, but it brought nutrition education into the home, making it even more relatable.

The pandemic provided unique challenges for everyone, both in the classroom and the cafeteria. Dr. Duffrin understands the difficult realities of what is currently happening in school nutrition with the labor & supply chain issues that are not only affecting school districts, but families at home, too. These difficulties are leading to less scratch cooking, and more convenience foods. Convenience foods are the "wave of the future," Dr. Duffrin says. "We just need to make sure that they are of the highest quality and that they are meeting our customer's nutritional needs. I think we just have to ... hope food suppliers continue to be responsive to that."



## FOOD MAGIC MOVING FORWARD



Throughout the years, Dr. Duffrin noticed that different areas across the country have unique food environments and food cultures. She recalls many previous students and clients from the Southeast Ohio, Appalachian region who grew their own fruits and vegetables and raised their own animals for food. Then, there were people just 30 minutes down the road who simply didn't have the same resources and received food from food banks. She remembers seeing fresh fruits being thrown away because they didn't know how to

utilize them. "From the beginning, we selected foods that would be accessible and affordable for the majority of many U.S. populations," she says.

After 20 years, Dr. Duffrin is still expanding the FoodMASTER curriculum. One new approach is connecting lessons directly to the cafeteria to enhance relevance for the learner. She believes it's important to introduce students to new foods and to teach kids how to make healthy food choices and help educators understand the quality of foods provided at schools.

"We need food to survive so food triggers our senses that we may eat soon. Also, most of us have had some pleasant experience with food which can prompt good feelings. Last, food is conducive to prompting communal gatherings which can stimulate a sense of belonging." She believes that by exposing students to food science and nutrition both in the classroom and the cafeteria is a "good recipe for the release of our "feel-good" neurotransmitters." Clearly, there is a real relationship between science and nutrition, and Dr. Duffrin is making that connection daily in our schools.

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