

RESEARCH STATEMENT

SUMMARY OF RESEARCH ACHIEVEMENTS

- **Co-PI of a 1.27 million dollar 5 year NIH SEPA**
- **Paid 5-15% of salary** and covered 3 months of summer salary since beginning as faculty in the fall of 2013
- Published **7 articles** in professional journals (3 additional under review)
- **Director** of two research programs (FEED and FoodMASTER)
- Submitted and/or contributed to the **submission of six grants** (federal and foundation)
- **10 refereed poster presentations** and 6 non-refereed oral presentations
- Successful track-record of **student engagement in research**

RESEARCH FOCUS

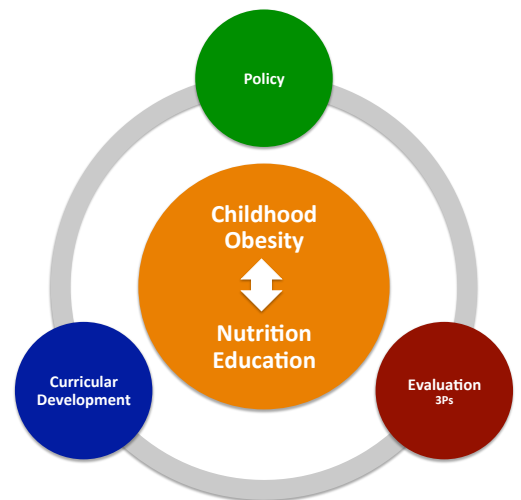
My research focus aims to impact childhood obesity with effective nutrition education through three primary objectives: 1) develop and implement nutrition education programs in the school environment; 2) evaluate the outcomes and impact of nutrition education interventions in the classroom setting on teachers, children, and families through the development and use of valid assessment tools; and 3) use findings to inform current and future policy decisions that will help to improve the state of nutrition education in school environments. These research goals are met primarily as Director of the FEED Strategy and the FoodMASTER Initiative.

THE FEED STRATEGY

The Food-based Education and Evaluation Development (FEED) Strategy mission is to develop integrative curricular and evaluation resources for P-12 learning environments. Currently, FEED partners with **ECU's Nancy W. Darden Child Development Center** and several **Head Start organizations throughout ENC** (e.g. Greene, Lenoir, Nash, Craven). Current research under FEED is focused on **exploring barriers and facilitators to nutrition education in the Head Start classroom**. Using qualitative methods, my research team is specifically investigating Head Start administrator and teacher perceptions related to parental influence on children's nutrition knowledge; nutrition education resource use and accessibility among teachers; and the impact of existing multi-level policy and regulations on teacher's ability to provide nutrition education in the classroom setting. These exploratory studies are serving as a **needs assessment to inform future programmatic interventions** in NC-based Head Start programs and **provide support/justification for needed funding**.

FOODMASTER INITIATIVE

The FoodMASTER Initiative (Food, Math, and Science Teaching Enhancement Resource) is a curricular program that uses food as a tool to teach mathematics and science. Current federal funding is supporting the development of a **10-chapter science curriculum and 12-chapter mathematics curriculum for middle grade students, and to provide professional development opportunities to teachers in NC and across the nation**. Over the 2013-2014 academic year, the **science book was implemented and evaluated** (process and outcome/impact). Middle school students and teachers provided feedback on the lesson and completed surveys assessing their knowledge, attitudes, and behaviors (pre/post). The mathematics curriculum will under similar evaluation in 2016. Simultaneously, teacher professional development workshops are being held across the state to train teachers on how to utilize the resources in their classrooms. **To date, 3 professional development**



workshops have been provided to 50+ teachers across the state. Six additional workshops will be provided over the next two years with an estimated 10-30 teachers being training at each event. Research is being conducted to explore the process and impact of these activities for teachers and students.

FUNDING

Currently I serve as **Co-PI and Director of a 1.27 million dollar 5 year NIH SEPA** (Science Education Partnership Award). Over the 2014-2015 academic year, I **have paid 5-15% of my salary** and covered 3 months of summer salary since beginning as faculty in the fall of 2013. As Director of the program, my responsibilities include but are not limited to: **budget** management, **staff** management, program development, **curriculum development**, development/implementation of professional development workshops, grant proposal writing, **program management**, development/implementation of program **evaluation** methodologies, **marketing**, and working directly with preK-12 upper level administration, teachers, and students. Over the past 18 months, I have continued to seek additional outside funding. To date, I have submitted and/or contributed to the **submission of six grants**. As Principal Investigator, I submitted a **\$50,000 USDA grant** to support state wide professional development for high school chemistry teachers. I was named as Co-PI on a **\$80,000 NIH SEPA**, and evaluator on a **\$300,000 NSF grant** to support the expansion of FoodMASTER's efforts in local Boys & Girls Clubs. Three small grants, ranging from \$2,300 to \$20,000, were submitted to ECU's Research Creative Activity Award (collaboration with Jaya Rose, Interior Design) and General Mills Foundation (collaboration with Lenior/Greene County Head Start) to support various projects in the community related to FEED.

IMPACT

A primary aspect of achieving impact is through publishing in high-impact peer-reviewed scientific journals and presenting regularly at national meetings. To date, I have published **7 articles** in professional journals. Five articles are already in print in *Appetite*, *American Journal of Health Education*, *Journal of Food Science Education*, *School of Science & Mathematics*, and *Renal Care*. The remaining two articles will be published in 2015 in *Journal of School Health* and *Young Children*. Most of these are considered top journals in the fields of food/nutrition education and childhood education, respectively. **Three additional articles** are currently under review at the *Journal of the Journal of Nutrition Education & Behavior*, *Infant, Child, and Adolescent Nutrition*, and *Science Education*. Additionally, I have had **10 refereed poster** presentations and **6 non-refereed oral presentations**.

I also believe open sharing of my developed programmatic resources and evaluation tools is the best way to encourage use and foster further national collaboration. For example, in fall 2014, the article "Evaluation of a Pictorial Method to Assess Fruit and Vegetable Preference among Preschool Children" published in *Appetite* received media attention. The Fruit and Vegetable Liking Assessment Tool for Preschoolers discussed in the article was featured in multiple venues including the **680 WPTF Radio Interview Series** out of Raleigh, NC. Overall, the tool has garnered **national and international attention** with researchers requesting to use the tool. Many researchers have requested access to the assessment materials (assessment and supporting photographic files) including individuals from Penn State University and Temple University. Similar success has been realized through available curricular resources.

STUDENT ENGAGEMENT

A secondary aspect of achieving impact is through training and mentoring of undergraduate and graduate students. Students are key to the success of my research agenda, as well as the long-term impact of my research. I seek to recruit diverse people with strong talents for research and a passion for nutrition education. Mentoring the educational and professional development of students is a key goal and will be partially achieved by open communication and involvement of students in all aspects

of my research, including funding, teaching, and outreach. See Exhibits PAD (T-8-D Independent Student Research & Student Awards) for details on how students have engaged in my research.

UPCOMING RESEARCH GOALS

FUNDING

My research requires human and materials, and thus ongoing funding is ideal. My goal is to obtain multi-year renewable funding that is sufficient to fund a research team consisting of a Project Coordinator, at least 1 graduate student, 1-2 undergraduate students and all necessary material supplies. Obtaining an NIH or USDA grant (\$200K / year direct for 5 years) as Principal Investigator is a major goal and is an ideal funding level. Numerous other sources of funding for my type of research are available (particularly shorter-term “idea” grants), both from federal and foundation sources. Through my professional experience, I have managed over \$3 million in federally funded projects in the areas of nutrition, mathematics, science, and technology. Additionally, I have published seven academic articles; authored and co-authored multiple preK-12 curricular resources; presented numerous national and international research presentations; and developed, organized, and delivered several training workshops. Ultimately, I believe these experiences will make me a competitive candidate for funding at the federal level.

To achieve this goal, **I anticipate submitting an USDA AFRI (PI) and NIH SEPA (Co-PI) grant June 2015.** The **USDA AFRI grant** will create a theory-based teacher professional development program designed to increase competency (knowledge) and self-efficacy for integrating FV-based nutrition education into Head Start classrooms. As a result, children from low-resource families will increase FV intake, demonstrate improved socio-emotional, cognitive, and physical developmental skills related to simple preparation/growing fruits/vegetables, and increase asking behaviors related to FV in school and home environments. This grant will be a partnership between the ECU Diabetes and Obesity Institute, Department of Child Development and Family Relations, and faculty at North Carolina State University in Nutrition Science and Extension. Also, submission of the **NIH SEPA grant** will continue the expansion of the FoodMASTER Initiative through the development of an Elementary Grades curriculum. The resource will focus on improving children’s science, mathematics, and language art skills through food-based learning.

RESEARCH

In 2015-2016, I hope to achieve major progress in research under FEED and FoodMASTER.

FEED activities will focus on 3 primary activities:

1. I will work to complete **data collection/analysis** of the previously described needs assessment of barriers/facilitators related nutrition education in Head Start classrooms. Findings will be used to support the development and submission of a USDA AFRI grant, also previously described.
2. I will begin the **development of a tool to evaluate nutrition knowledge** among preschool children. There is a great need for evaluation of preschool nutrition education curricula to determine their impact on children’s nutrition knowledge; however, very few nutrition and health knowledge assessment tools have been developed specifically for use with preschool children. Assessment of preschoolers’ current levels of knowledge of health and nutrition is essential in order for teachers to provide effective education in these subjects.
3. I will continue to **publish**. Over the next year, I anticipate the submission of at least 2 manuscripts.

FoodMASTER activities will also focus on 4 primary activities:

1. I will work to **analyze the data** obtained from implementation of the Middle Grades Science curriculum including qualitative and quantitative measures.
2. I will work to complete **curriculum development** for the Middle Grades Mathematics curriculum.
3. I will work to **improve the current model for teacher professional development** and evaluate the effectiveness through teacher feedback.
4. I will continue to **publish**. Over the next year, I anticipate the submission of at least 1 manuscript.

SYNERGISTIC COLLABORATIONS

NAME/TITLE	LOCATION	NATURE OF COLLABORATION
INTERNAL		
--	East Carolina Diabetes and Obesity Institute (ECDOI)	Recognized Affiliate
Jason Brinkley, Assistant Professor	Department of Biostatistics	Co-Author
Tammy Lee, Lecturer	Department of Mathematics, Science, and Instructional Technology Education	Curriculum Development
Margaret Wirth, Retired Professor	Department of Mathematics, Science, and Instructional Technology Education	Curriculum Development
Kathy Kolasa, Professor Emeritus	Department of Family Medicine, Department of Pediatrics, Brody School of Medicine	Co-Author
Shawn Moore, Assistant Director	Center for STEM Education	Grantmanship
Archana Hedge, Associate Professor	Department of Child Development and Family Relations	Grantmanship
Julie Fowler, Director	Nancy W. Darden Child Development Center, Department of Child Development and Family Relations	Program Development, Grantmanship
Toyin Babatunde, Assistant Professor	Department of Nutrition Science	Co-Author (Working Manuscript)
Melani W. Duffrin, Professor	Department of Nutrition Science	Grantmanship, Co-Author
Christopher Duffrin, Assistant Professor	Department of Family Medicine, Brody School of Medicine, East Carolina University	Grantmanship, Co-Author
EXTERNAL		
Pam Koch, Professor and Executive Director, Laurie M. Tisch Center for Food, Education & Policy	Teachers College, Columbia University	Manuscript Reviewer, Curriculum Reviewer, Co-Author (Working Manuscript)
L. Suzanne Goodell, Assistant Professor	Department of Food, Bioprocessing, and Nutrition Science, North Carolina University	Grantmanship, Co-Author
Sarah Ash, Professor	Department of Food, Bioprocessing, and Nutrition Science, North Carolina University	Co-Author
Sebastian Diaz, Statistical Consultant	Diaz Consulting Inc.	Co-Author
Jana Hovland, Assistant Professor	Department of Dietetics, Marshall University	Co-Author
Gene Geist, Associate Professor	Department of Early Childhood, Ohio University	Co-Author
Ginger Cross, Assistant Professor	Family and Children Research Unit, Social Science Research Center, Mississippi University	Evaluation Tool Reviewer
Pat Shane, Independent Education Consultant	North Carolina Science Leadership Association	Curriculum Reviewer
Brenda Davy, Associate Professor	Department of Human Nutrition, Foods, and Exercise, Virginia Tech	Curriculum Reviewer
Katherine Phillips, Research Scientist	Department of Biochemistry, Virginia Tech	Curriculum Reviewer
Kristey Coulter, Nutrition/health Coordinator	Greene Lamp Inc. – Head Start	Program Development, Grantmanship
Mary L. White, Middle School Science Teacher	A.G. Cox Middle School, Greenville NC	Curriculum Development

Quality of research/original creative work – how your strategy for conducting research or your approach to original creative work contributes to the quality of your efforts

Programmatic nature of your research/original creative work – how your individual research projects contributed to your program of research, or how individual project contributes to the focus of your original creative work

Sustainability of your research/original creative work – how your research shows promise for ongoing publication and external research funding – TRAJECTORY

Productivity in research/original creative work – how the strategic decisions you made on publishing and presenting your work furthered your program of research/focus or original creative efforts

Include goals for future, position your work (future and past) within a larger body of work

Intro summarizing number of publications and funding (total & indirects)

RESEARCH STATEMENT

SUMMARY OF RESEARCH ACHIEVEMENTS

- **Co-PI on 1.27 million-dollar 5-year NIH SEPA grant** (2011-2016, currently in no-cost extension)
- **PI on 2 internally funded grants** for Engagement of Scholarship activities (\$6,500 in total)
- **Paid 5-40% of salary** fall 2013-spring 2016 and covered 3 months of summer in 2014 and 2015
- **Published 19 articles** in professional journals (3 additional under review)
- **Published 3 curricular resources** (1 first author)
- **Published 4 textbook chapters** (2 first author)
- PI or Co-PI on **seventeen grant submissions** (5 federal external, 6 internal)
- **5 Honors/Awards for research activities** (SNEB Early Career Award, ASN Early Career Award for Nutrition Education & Behavioral Sciences, ECU University Scholar Recognition 2017, Centennial Award for Ambition 2015, College of Human Ecology Outstanding Research Nomination 2014)
- **37 refereed research poster presentations**
- Presented **20 presentations/workshops** for professionals in the field
- Presented **17 P-8 teacher training workshops**
- Successful track-record of **student engagement in research**

RESEARCH FOCUS

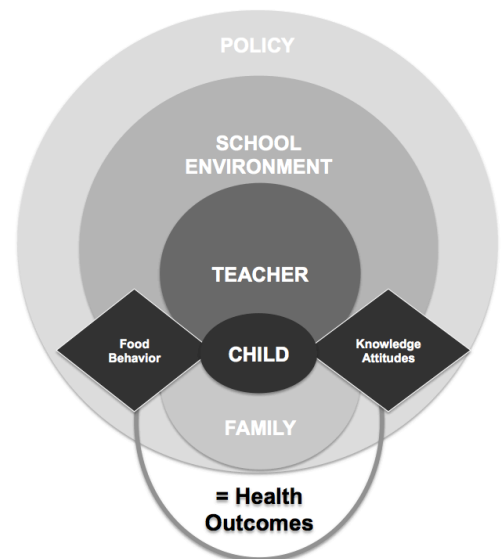
My research is housed under the **Food-based Early Education (FEEEd) Lab's** (www.thefeedlab.org). The FEEEd Lab's research focuses on childhood overweight prevention by improving early childhood teachers' food and nutrition education strategies when working with children (birth-5 years) and their families in Head Start. Head Start is the federally funded preschool program serving low-income, low-resource children and families.

To date, work in the FEEEd Lab has resulted in **5 published peer-reviewed journal articles** (2 additional manuscripts under review), submitted **8 grants submissions** (1 funded), presented **17 professional poster presentations**, trained **150+ teachers** on integrative food-based learning in the preschool environment in **8 hands-on workshops**, and planned/executed multiple **community outreach events**.

Food and nutrition education strategies include providing teacher professional development (personal wellness and pedagogy), developing evidence-based integrative STEAM learning curricula for classroom environments, and working with local, state, and national partners to expand programming. My work is guided by the CDC's Social Ecological Model for Food and Physical Activity Decisions and uses qualitative and quantitative methods to examine these areas of research.

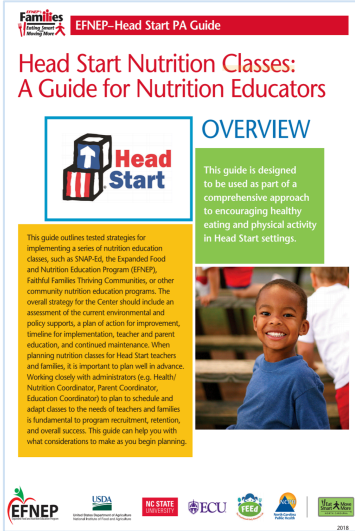
Current and past research in the **FEEEd Lab** has focused on:

- Examining the influence of teachers' background (e.g. knowledge, attitudes, health behaviors, prior experience with food) on the food and nutrition education strategies implemented in their classrooms
- Influence of teachers' feeding/nutrition education strategies on young children's preferences and eating behaviors



- Understanding communication between teachers and parents related to young children's preferences and eating behaviors
- Influence of the teacher/parent relationship (specifically related to food/nutrition) on children's food consumption/preferences and eating behaviors in the classroom environment
- Development and evaluation of teacher professional development programming focused on personal health behaviors (collaboration with North Carolina State University Expanded Food & Nutrition Education Program (EFNEP))
- Development and evaluation of integrative curricula using food as a STEAM education teaching tool for young children (3-5 years) attending Head Start programs
- Influence of local, state, and federal policy (e.g. CACFP) on the food and nutrition education strategies teachers use with young children and families

As an example of impact, the FEEd Lab has worked in collaboration with the Expanded Food and Nutrition Program (EFNEP) for the past three years to create a sustainable food and nutrition professional development program for NC Head Start teachers. The collaborative partnership theorizes that teachers' personal commitment to healthy eating will positively impact their ability to encourage and model healthy eating and physical activity behaviors for children in their care. To date, we have developed a standardized teaching guide for EFNEP Educators and provided **50+ teachers** across Craven, Bertie, and Lenoir counties with professional development. Participating teachers demonstrated significant improvements were observed for fruit ($p=.001$), vegetable ($p=.001$), added fat/sugar intakes ($p=.002$), and physical activity ($p=.000$). This summer we trained an additional 15 EFNEP Educators located in as many counties as possible to begin partnering with local Head Start programs to provide food and nutrition professional development. We anticipate this program will expand reach and impact in the coming years. The team will be seeking funded



from USDA this spring to support large scale dissemination and evaluation of program outcomes.

Future research will focus on PEAS (Preschool Education in Applied Sciences), an innovative Teaching Guide that will teach Head Start teachers “how” to teach children scientific understanding in the context of healthy living using the NGSS’ Practices of Science. While teachers provide teacher-directed learning activities in the classroom, they are also required to design child-initiated activities. This method requires teachers to develop learning activities based on interest expressed by child(ren) during the school day. Preschool teachers often have low-efficacy for teaching science, and/or believe science is too difficult to teach. Providing teachers with a Teaching Guide from which to design their own science learning experiences will reduce barriers to science learning in the classroom and improve teachers’ ability to design quality integrative, inquiry-based science learning experiences for low-resource, low-income children that interests them. Our team has recently submitted an NIH Science Education Partnership Award in the amount of \$1.3 million to fund this project.



Preschool Education in Applied Sciences

FOODMASTER INITIATIVE

While my current research focus is on the preschool learning environment, my prior work with the FoodMASTER Initiative is notable. The FoodMASTER Initiative (Food, Math, and Science Teaching Enhancement Resource) is a curricular program that uses food as a tool to teach mathematics and science in the K-12 setting. During my 3-year tenure as Director (2013-2016), Team FoodMASTER published **3 curricular resources** (I was 1st author on one), **7 papers in peer-reviewed journals** (2 additional manuscripts are under review), presented **7 professional presentations**, submitted **4**

federal grants, trained 150+ teachers on FoodMASTER curricula in **7 hands-on workshops**, and planned/executed multiple **community outreach events**.

As Director of the FoodMASTER Initiative, I partnered with intermediate and middle school teachers across nineteen NC counties to introduce and implement science and mathematics curricula that use food and nutrition as a teaching tool. Because the majority of middle school students relate well to food, this unique approach enhances their interest in science and math, and in turn, positively affects knowledge and skills in these core disciplines. For example, intermediate students completed a science knowledge exam, consisting of 13 multiple-choice questions administered pre- and post-test. At pre-test, no significant differences were observed between groups students exposed to the food-based methods and students not exposed. At post-test, the intervention group scored (9.95 ± 2.00) significantly higher ($p=.000$) than the control group (8.84 ± 2.37). Similarly, a significant difference was observed between intervention and control groups on a 20-item mathematics knowledge exam. In addition, the incorporation of food into this curriculum teaches Eastern North Carolina (ENC) students about healthy nutrition—knowledge badly needed in this part of the state where childhood obesity rates have reached epidemic proportions.

2016 was the last year of a 5-year NIH grant that supported the development of a 10-chapter science curriculum for middle grade students. The grant also provided professional development opportunities to teachers in NC and across the nation. Over the 2010-2016 academic years, I led the FoodMASTER partnership with 25+ ENC teachers to develop and evaluate a comprehensive food and nutrition science lesson manual for middle school students. Throughout this process I instructed multiple teacher workshops on the curriculum, as well as provided needed equipment; documented community response to the program; and continuously disseminated information throughout the relevant counties. I routinely tweaked the curriculum based on feedback I receives during my regular classroom visits, and through my sustained communications with teachers in the communities. The curriculum was officially published in 2017. Teachers with whom we partnered were very enthusiastic about the curriculum. Their comments included:

- “I think our kids did a lot better on their [End of Grade] exams because of the supplemental curriculum.”
- “I really think my kids learned a lot from doing the investigations and learning the material. And I remember back at the training, you and your team were really excited to put this program in place. Don’t think that enthusiasm wasn’t noticed; I carried that enthusiasm back to my classroom. It was really an enjoyable program and you and your team were really enjoyable to work with.”
- “I was able to help my students more with the End of Grade exams for macromolecules because of this curriculum. It helped me better understand the sugars and starches, which ones are healthier, and the overall cycle of energy through food.”

FUNDING

Since beginning as tenure track faculty in 2013, I have received **two internal grants** from the office of Public Service and Community Relations and served as **Co-PI and Director of a 1.27 million dollar 5 year NIH SEPA** (Science Education Partnership Award). The NIH grant is currently in a no-cost extension. Over the 2013-2016 academy years, I **paid 5-15% of my salary** and covered 3 months of summer salary (2014, 2015).

I have continued to seek additional internal and external funding. To date, I have submitted and/or contributed to the **submission of seventeen grants** as PI or Co-I. My immediate goal for funding is to obtain support for the development of FEEd (Food-based Early Education) Head Start, a food/nutrition professional development program focused for Head Start teachers across NC. This project will develop, evaluate, and disseminate an evidence-based, professional development program for teachers designed to improve: (1) teaching practices, nutrition education teaching self-efficacy, and integration of nutrition content in the classroom, (2) teachers’ role as health advocates in their classrooms and communities by improving their own knowledge, attitudes, and health behaviors,

(3) and the nutrition knowledge and dietary behaviors of preschool children (3-5 years) across NC. The program will be composed of three primary components: an in-person teacher professional development workshop, eLearning modules for continued education through the academic year, and EFNEP outreach focused on improving teachers' role as health advocates in their classrooms and their personal health knowledge/attitudes/behaviors.

IMPACT

A primary aspect of achieving impact is through publishing in high-impact peer-reviewed scientific journals and presenting regularly at national meetings. Since beginning the tenure-track, I have published **19 articles** (25 career total) in a variety of reputable, peer-reviewed professional journals such as *Advances in Nutrition*, *Appetite*, *Young Children*, *American Journal of Health Education, Education*, *Journal of Nutrition Education & Behavior*, and *Journal of Early Childhood Research*. **Three additional articles** are currently under review.

I believe open sharing of my developed programmatic resources and evaluation tools is the best way to encourage use and foster further national collaboration. In September 2016, the article "Practical Qualitative Research Strategies: Training Interviewers and Coders" was published in the *Journal of Nutrition Education & Behavior*. Our author team was notified by the journal in February 2017 that the article received 556 requests for the full-text article in the fourth quarter of 2016, and **1018 total requests for the year**. The article continues to be in high demand as of August 2018. The article was again recognized as a Most Read article receiving 637 requests for the second quarter of 2018. The article has also already been **cited 23 times**.

Additionally, in fall 2014, the article "Evaluation of a Pictorial Method to Assess Fruit and Vegetable Preference among Preschool Children" published in *Appetite* received media attention. The article was featured in multiple print and radio outlets including the **680 WPTF Radio Interview Series** out of Raleigh, NC. Overall, the tool has garnered **national and international attention** with researchers requesting to use the tool. Many researchers have requested access to the assessment materials (assessment and supporting photographic files) including individuals from Penn State University, Temple University, and University of Nebraska at Lincoln.

STUDENT ENGAGEMENT & MENTORING

A secondary aspect of achieving impact is through training and mentoring of undergraduate and graduate students. Students are key to the success of my research agenda, as well as the long-term impact of my research. I seek to recruit diverse people with strong talents for research and a passion for nutrition education. Mentoring the educational and professional development of students is a key goal and will be partially achieved by open communication and involvement of students in all aspects of my research, including funding, teaching, and outreach. See the PAD (D-1-3 Evidence for Student Success) for details on my students' research and professional achievements.

UPCOMING RESEARCH GOALS FUNDING

My research requires human and material resources, and thus ongoing funding is ideal. My goal is to obtain multi-year renewable funding that is sufficient to fund a research team consisting of a Project Coordinator, at least 1 graduate student, 1-2 undergraduate students and all necessary material supplies. Obtaining an NIH or USDA grant (\$200K / year direct for 5 years) as Principal Investigator is a major goal and is an ideal funding level. Numerous other sources of funding for my type of research are available (particularly shorter-term "idea" grants), both from federal and foundation sources. Through my professional experience, I have managed over \$3 million in federally funded projects in the areas of nutrition and STEM (**S**cience, **T**echnology, **E**ngineering, & **M**athematics). Additionally, I have published academic articles; authored and co-authored multiple preK-12 curricular resources; presented numerous national and international research presentations; and developed, organized, and delivered several training workshops. Ultimately, I believe these experiences will make me a

competitive candidate for funding at the federal level. To work towards this goal, **I will continue to submit grants at the federal level.** I recently submitted an NIH R25 in the amount of \$1.3 million to support FEEd Lab work in NC-based Head Start programs. I anticipate also submitting a USDA Foundational grant by the end of this academic year (2018-2019).

RESEARCH

In the next five years, I hope to achieve major progress in research.

FEED activities will focus on 3 primary activities:

- 1. Data Collection/Analysis:** Complete data collection/analysis of current research activities to better understand the food/nutrition professional development needs of Head Start teachers and continue to establish a strong foundation for funding.
- 2. Publication:** I anticipate the submission of at least 2 manuscripts each year.
- 3. Seek Grant Funding:** Use findings from past and current studies to support the development and submission of a USDA AFRI and/or NIH R15, 21, or 25 grant(s).