

**A Financial Management Simulation for College of Agriculture Undergraduates**

Joseph L. Donaldson, Ph.D.  
North Carolina State University

Carolyn L. Bird, Ph.D., A.F.C., R.F.C.  
North Carolina State University

Elizabeth G. Blosser, B.S.  
North Carolina State University

Saifur Rahman, M.S.  
North Carolina State University

Department of Agricultural and Human Sciences  
1 Lampe Dr., 248 Ricks Hall  
Campus Box 7605  
Raleigh, NC 27695-7607  
919-515-1758  
[joseph\\_donaldson@ncsu.edu](mailto:joseph_donaldson@ncsu.edu)

### Introduction

College students lack the financial management skills to manage income, understand investment and retirement alternatives, and superintend their student loans (Gomez et al., 2023). These needs are acute for first generation college students and students representing racial/ethnic minority groups (Carales et al., 2020). Additionally, college students are at-risk of poor financial decisions due to aggressive credit marketers and the alarming number of students who drop-out of college due to debt (Scurlock, 2007). Young adults are making career and financial decisions that will influence their entire adult lives. However, the low rates of financial literacy among college students coupled with increasing student loan debt intensifies the need for financial education (Bradley, 2021).

A related issue is preparing students for professional roles whereby they need financial management skills to advise, educate, and coach individuals and families regarding financial management. As an illustration, Cooperative Extension professionals make extensive use of educational simulations for varied programs including farm financial management (Davis et al., 2018) and poverty hardships for human service professionals (Choi, 2019). This underscores the need for research that contributes to community vitality and understanding in the human and life sciences (AAAE, 2023). To address these needs, we conducted a financial management simulation in an undergraduate Agricultural and Extension Education (AEE) course, the *On My Own* financial education simulation (Bird & Donaldson, 2023). *On My Own*, designed by the University of Tennessee Extension family economics specialists, primarily targets middle school, high school, and young adults. Participants are assigned a hypothetical career, income, and family situation. They are then challenged, as the primary income earner for their hypothetical household, to make purchases for an entire month (University of Tennessee Extension, 2022).

### How it Works

The *On My Own* simulation was conducted across three 110-minute class periods for AEE 325, Planning and Delivering Nonformal Education, in the fall semester of 2022 and 2023. This course is a required course for the Extension Education minor, and undergraduate students enrolled in the course represent diverse academic majors including agribusiness, agricultural education, environmental education, and poultry science. AEE 325 had 13 students in 2022 and 21 in 2023, and three class periods each semester were used orientation, simulation, and debriefing.

For the orientation class period, the Extension family resource management specialist provided a lecture and class discussion on housing costs, inflation, and common budgeting approaches. Students were assumed to be 26 years old, and they were assigned careers, family scenarios, and monthly gross salary such as one student assigned to the animal health industry with a spouse and two young children. The *On My Own* curriculum uses careers, job requirements, and salaries all aligned with the U.S. Department of Labor's O\*NET, a comprehensive database of occupations and required abilities, education, knowledge as well as work activities, context, and styles, among other data points (National Center for O\*NET Development, 2023). Students were randomly assigned careers aligned with agricultural baccalaureate degrees (e.g., farmer, extension agent, food scientist, and soil scientist) and careers representative of the broader

society with varied educational requirements (e.g., civil engineer, farm laborer, military enlisted, and food service manager).

For the simulation class period, students engaged in *On My Own* stations to make their monthly selections and purchases for childcare, clothing, entertainment, food, health insurance, housing, insurance, transportation, utilities, and unexpected expenses. Additional stations for banking and “financial first aid” provided a robust learning experience. *On My Own* stations were operated by volunteers from various NC State academic, outreach, and student affairs entities. Prior to the simulation, volunteers were instructed in how to operate their station, especially the need to mimic real-life scenarios by encouraging up-sales.

For the debriefing class period, faculty emphasized observations and experiences from two perspectives: (a) family resource management behaviors, and (b) the simulation itself and the value of simulations for Extension education. The faculty leading the *On My Own* simulation created a retrospective post-then-pre questionnaire to measure specific learning for seven family resource management subjects (i.e., cost of housing) and specific behaviors for six family resource management practices (i.e., reducing debt). Each item used a five-part scale: 1 (*very little*), 2 (*little*), 3 (*some*), 4 (*much*), and 5 (*very much*). Among the AEE 325 students, 27 of 34 (79%) chose to participate in the research; all 27 students completed the questionnaire.

### Results to Date

Findings indicated positive changes in the students’ financial knowledge and behaviors (N=27). Knowledge gains for the seven financial education subjects averaged a 17% increase and ranged from an 11% increase in knowledge of payroll deductions to a 22% increase in knowledge of childcare costs. Regarding the six financial behaviors, students reported an average 26% increase with a range of 18% for “talking with my parents about finances” to 35% for “talking with a spouse or unmarried partner about finances.” The *On My Own* simulation improved the students’ overall perception of simulations as an instructional tool with a 38% increase in those planning to use simulations for educational programs in their professional careers. Notably, 93% of students indicated they would change their personal financial practices and 100% reported a deeper understanding of personal finances based on what they learned from this program.

### Future Plans

We plan to continue using the *On My Own* curriculum, and we recommend that it be adopted by other colleges of agriculture. We felt it was important to have careers reflecting the broad spectrum of careers in society. However, *On My Own* would be easily adaptable to use careers that match the individual students’ career intentions. For future simulations, we plan to monitor current inflation to ensure housing, food, and childcare prices are realistic.

### Costs and Resources Needed

The *On My Own* curriculum – purchased from the University of Tennessee Extension – and simulation supplies such as sign holders and labels totaled approximately \$1,500. The major resources needed are volunteers to operate each of the 12 stations.

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