

## Factors that Affect College Students' Decision to Major in Human Development Education and Family and Consumer Sciences Degree

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The objective of this survey study is to identify key factors that affect college students' decision to pursue majors with a focus on family and human development education such as Family and Consumer Sciences Education, Early Childhood Education, and Consumer Affairs. Because of their emphasis on providing students with skills in workforce preparation, economic development, life-long learning, early childhood education, and community development, we believe this study is timely and important especially for many American rural communities where aging and attracting younger generation populations are an urgent challenge. Various studies have recognized several common factors that contribute to students' career and major choices (Brake, Bellamy, Bertsos, & Bhatnagar, 2008; Gerardi 2006; Hong & Schull 2010; Mallory & Sommer 1986; Thompson & Bolin 2011; Tillberg & Cahoon 2005). Our study distinguishes itself from previous efforts by focusing on the geographic region of the rural northern Great Plains, where a significant percentage of college students have a close tie to agricultural production (36% in our sample) and rural communities. We emphasize the importance of students' agricultural background on their choice of these three majors. Equation (1) describes our model of students' decision to choose college majors:

Choice of a specific major = f (parents, teachers, social groups, high school and first-year college courses, high school activities, academic performance, attitudes, personal goals, career potential, and agricultural background). (1)

Dillman, Smyth, and Christian (2009) and Radhakrishna (2007) survey development guidelines were followed to create and administrate the survey study. A sample of convenience was used to obtain data from students from three colleges (Agricultural and Biosciences, Art and Sciences, Education and Human Sciences) who had recently declared a major. The sample was collected from a land-grant university located in the northern Great Plains. Potential biases caused by other influences such as courses taken after declaring a major or completing internships were reduced by recruiting students who had recently declared a major. Participants were guided to answer an on-line questionnaire to help us solicit the information to examine our decision function (Equation (1)). We also requested that participants select one of the 62 majors listed in the questionnaire to classify their majors.

After collecting their answers, the strength of principle component analysis (PCA) was utilized to transfer 32 of the 38 original questions into 17 components. These 17 components, along with three stand-alone questions, were selected as independent variables for Equation (1). PCA was applied to avoid the problem of multicollinearity and improve the quality of estimation. A dummy index was created to identify respondents' majors and assigned the value "1" for any of the three majors: Family and Consumer Sciences Education, Early Childhood Education, and Consumer Affairs. Eight logistic regression models were constructed, and the estimation to test the decision model (Equation (1)) was run.

After deleting unusable responses, 458 participant observations were utilized for the data analysis (with an approximate response rate 32.3%) resulting in the following major findings:

1. Growing up on a farm significantly decreased the probability of a student choosing any of the three majors (i.e., Family and Consumer Sciences Education, Early Childhood Education, and Consumer Affairs).
2. The more a student cared about financial stability, the less likely she/he would choose any of the three majors.

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3. Students' experiences through youth camp, volunteer work, or vacations before declaring a major had a positive influence on their decision to choose these majors. However, their previous working experience did not affect the decision.

4. Students with higher ACT scores were less likely to choose these majors.

5. The extracurricular activities students were involved in high school (e.g., 4-H, FFA, athletics, debates, etc.) did not affect their decision to choose any of these three majors.

6. Parents, peers, and high school teachers had no significant influence on students' choice of these three majors.

7. High school or pre-major college courses did not affect students' decision on choosing these three majors.

In sum, the study results suggest students' farm background, academic performance, financial stability, experiences through volunteer, summer camp, and vacations have significant impacts on college students' decisions to choose the following three majors: Family and Consumer Sciences Education, Early Childhood Education, and Consumer Affairs.

### References

- Brake, M., Bellamy, A., Bertson, G., & Bhatnagar, K. (2008). Choice of technology majors among high school students. *Advancing Women in Leadership Journal*. Retrieved from [http://advancingwomen.com/awl/awl\\_wordpress/choice-of-technology-majors-among-high-school-students](http://advancingwomen.com/awl/awl_wordpress/choice-of-technology-majors-among-high-school-students)
- Dillman, D. A., Smyth, J. D., & Christian, L. M., (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. Hoboken, NJ: John Wiley & Sons.
- Gerardi, S. (2006). Positive college attitudes among minority and low-income students as an indicator of academic success. *The Social Science Journal*, 43(1), 185-190.
- Hong, B. & Schull, P. J. (2010). A retrospective study of the impact faculty dispositions have on undergraduate engineering students. *College Student Journal*, 44(2), 266-278.
- Mallory, M. E., & Sommer, R. (1986). Students show low awareness of agricultural careers. *California Agriculture*, 40(3), 4-6. doi:10.3733/ca.v040n03p4
- Radhakrishna, R. B. (2007). Tips for developing and testing questionnaires/instruments. *Journal of Extension* 45(1). Retrieved from <http://www.joe.org/joe/2007february/tt2.php>
- Thompson, R., & Bolin, G. (2011). Indicators of success in STEM majors: A cohort study. *Journal of College Admission, Summer 2011*, 18-24.
- Tillberg, H. K., & Cohoon, J. M. (2005). Attracting women to the CS major. *Frontiers: A Journal of Women's Studies*, 26(1), 126-140.