

# CULINARY SKILLS IN HIGHER EDUCATION: A STUDY OF HOME ECONOMICS STUDENTS IN FEDERAL COLLEGES OF EDUCATION OMOKU, NIGERIA

Nwosu Jane Chizoba\*

*\*Department of Home Economics Federal College of Education (Technical) Omoku, River State, Nigeria*

*\*Corresponding Author: -*

---

## **Abstract**

*The study of home economics is a crucial component of higher education in Nigeria's colleges of education. It allows students to acquire the fundamental home education needed in modern societies. However, little is known about the culinary abilities of students taking home economics classes. The present study assessed the culinary skills of home economics students in the Federal College of Education Technical, Omoku, River State, Nigeria. Ninety-seven students were recruited from home economics departments in colleges of education in the southeast. The respondents completed a self-report measure of cooking skills. The percentage analysis showed that most students (61.11%) enrolled in home economics possess high cooking skills. The findings from the study have implications for increased enrollment in home economics and effective implementation of policies geared towards the development of home economics in the colleges of education in Nigeria.*

**Keywords:** *culinary skills, home economics, students, higher education*

## BACKGROUND

In the Nigerian higher education landscape, home economics is an essential part of learning in colleges of education. It provides learners with the opportunity to obtain basic home training that is required in modern societies. Home economics students in colleges of education are exposed to a variety of cooking styles and dietary knowledge. As a result, students are taught the necessary skills for cooking, dietary behavior, health maintenance, and eating behavior. Home economics has taken on a new dimension to meet today's human needs in its current development and potential values. It prepares students to be self-sufficient and self-employed. It provides students with the necessary cooking skills. Thus, cooking skills taught in Nigerian colleges of education are critical because they influence self-reliability, nutritional knowledge, dietary behavior, quality, and personal health. It also includes the process of preparing and consuming meals at home, as well as how a household can deal with stressful situations.

A growing body of evidence points to a decline in cooking and cooking abilities and an increase in the consumption of prepared foods. Continuous learning and training are one way to improve one's culinary abilities. As a result, students taking home economics in Nigerian colleges of education are expected to be adept at cooking. The study aims to evaluate the cooking abilities of home economics students in Nigerian colleges of education. Cooking is a valuable life skill frequently associated with eating a healthier diet. (Kuroko et al., 2020). In the last decade, there has been a growing demand for home cooking to prevent poor diets and chronic diet-related diseases. (Lichtenstein & Ludwig, 2010).

Alpaugh et al. (2020) found that home cooking is linked to higher-quality diets. Obesity and risk factors for a chronic illness may be linked to decreased cooking. As a result, evidence has linked frequent consumption of homemade foods, including regular consumption of fruits and vegetables, to healthier foods. (Mills et al., 2020; Wolfson et al., 2020). A primordial idea at the heart of all human existence is cooking. It takes much work to combine and transform ingredients to make a meal when cooking. (Wolfson, Lahne, et al., 2020). Cooking entails various skills and abilities related to the practical act of formulating ingredients and the ability to prepare food within one's food environment while keeping time and budget constraints in mind. (Boni, 2019; Wolfson, Bostic, et al., 2017). Cooking is a complex construct that is not regularly understood (Wolfson et al., 2016). However, it refers to preparing food according to one's specifications and knowledge. The cooking process may have a significant impact on food nutrition. For instance, literature abounds linking home cooking to improved health and well-being. (Hart, 2019; LeRouge et al., 2019; Mills et al., 2017; Raber & Wolfson, 2021; Schönberg et al., 2020; Silver et al., 2021; Tani et al., 2021; Tani et al., 2020; Virudachalam et al., 2014; Yordanova et al., 2019). As a result, basic food preparation skills are becoming a growing barrier to an adequate home meal. Culinary skills are thus an essential component of home meal preparation.

Numerous factors influence people's proclivity to prepare and consume healthy meals. (Herbert et al., 2014). In recent decades, there has been a lot of research interest in culinary skills. In today's society, culinary abilities are vital to healthy eating and home cooking. Culinary skills are mechanical or physical abilities that describe effectively combining ingredients to make a nutritious meal. It covers the techniques for preparing food and for cooking. (Lavelle et al., 2017). Culinary skills entail the conceptual and perceptual skills related to food transformation (Short, 2003a, 2003b). While there is no universal agreement on the definition of cooking skills, it has been widely referred to as the overall ability to perform tasks associated with preparing a healthy meal, which includes knowledge of basic procedures such as washing, peeling, and chopping. (Begley & Gallegos, 2010; Hartmann et al., 2013).

The consensus is that cooking proficiency does not always imply that food will be prepared from essential ingredients. Researchers may have found that most people have limited knowledge of and relevant meal preparation skills (Nelson et al., 2013). It is implied that cooking-related skills go beyond simple manual labor. Meal preparation depends heavily on cognitive abilities, fundamental food concepts, cooking customs, planning, and hygiene-related skills. Basic meal concepts include meal categorizations and associated ingredients, whereas cognitive ability is related to the perceptual processes of food production. Cooking standards signify adherence to requirements. While hygiene skills reflect the sanitary correlates of cooking, planning skills are crucial and necessitate persistent observation of daily meals so that they are not repetitive. As a crucial mechanism for preventing diet-related illnesses and obesity, culinary skills are being recognized more and more frequently. (Lavelle et al., 2016; Nelson et al., 2013). Similarly, poor cooking skills have been linked to unhealthy diets (Adams et al., 2015; Burg et al., 2018; Hughes et al., 2004; Hutchinson et al., 2016; Li et al., 2021; Sandell et al., 2019; Tani et al., 2020; Wolfson, Frattaroli, et al., 2017). There has been a growing call to implement culinary skills interventions to improve dietary outcomes. According to the literature, these strategies differ in methodologies, such as information provision, demonstrations, and practical hands-on sessions. They have been aimed at people of all ages, including children, teenagers, and adults. While each intervention clearly states the rationale for targeting each group, the optimal age for learning cooking skills regarding dietary outcomes is unknown. However, cooking practice in home economics education is essential for acquiring cooking skills. Therefore, the primary purpose of the present paper is to assess the culinary skills of home economics students at the Federal College of Education Technical, Omoku River State.

## Method

The study adopted a convenience sampling approach. The participants comprised students enrolled in home economics departments at the Federal College of Education Technical, Omoku, River State, Nigeria. The students were approached between December 2022 and February 2023 and were asked to participate in the assessments to understand their culinary skills. The participants included students in different years of study and comprised males and females aged between 18

and 28 years. Out of the original 132 approaches for the study, only 109 consented to participate and signed the consent forms. Thus, the study questionnaire was administered to those who signed the consent form. They were briefed on the purpose of the research and were urged to respond to the items in the questionnaire with the assurance of confidentiality and protection. The completed questionnaires were retrieved on the spot. However, only the appropriately filled questionnaires (i.e., 97) were used for subsequent analysis, while the remaining 12 copies were discarded due to improper filling.

Culinary skills were measured with a seven-item Linkert-type scale designed to assess cooking abilities. The scale included items such as 'I can cook complicated multi-course meals'; 'I can prepare many meals even without a recipe.' The respondents indicated how much the statements applied to them on a 6-point scale ranging from 1 'does not agree to 6 'agree very much. The Cronbach's 0.78 was recorded for the scale following a pilot study.

**Result**

The data from the respondents were analyzed in simple percentages. Table 1 below indicates the percentage score of the student's cooking skills. It shows that 61.11% of the respondents possess high cooking skills than their counterparts with low cooking skills, 32.98%. Also, table 2 shows the percentage score of the participants according to their year of study. The result showed that the students scored high in cooking skills in their final year, 31.04%, followed by year three students, 24.25%. Meanwhile, those in their second year scored 20.37% above the 18.43% score of the first-year students.

**Table 1:** showing the percentage scores of the student on cooking skills

Cooking skills	N	%
High cooking skills	63	61.11%
Low cooking skills	34	32.98%

**Table 2:** showing the percentage scores of the student on culinary skills according to years of study

year of study	N	%
year 4	32	31.04%
year 3	25	24.25%
year 2	21	20.37%
year 1	19	18.43%

**Discussion**

The present study assessed students culinary skills of home economics students in the Federal College of Education Technical, Omoku River State, Nigeria. Ninety-seven students enrolled in the home economics department were recruited for the study. An analysis of their response to the survey instrument demonstrates that most respondents have high culinary skills (61.11%). This means that a significant number of the students enrolled in the home economics departments are confident in their culinary skills. This finding may be attributed to the teacher's pedagogical input and the student's learning adaptation. Similarly, Hansen et al. (2019) reported that students who considered cooking classes necessary displayed cooking confidence developed extra non-cooking-related skills and valued the courses. This assertion presupposes that the students who showed high cooking skills committed more attention to cooking classes and probably were motivated to increase their cooking skills. In other words, those with low cooking skills (32.98%) could lack motivation and inattentiveness to cooking classes. Thus, the finding provides insight into the variations in cooking skills among home economics students in the colleges of education.

Furthermore, the result revealed that culinary skills in the home economics department increased by the year of study. Students in the early years of study possessed the lowest cooking skills (18.43%), indicating that theoretical and practical application of cooking had not been imparted to them at their stage. Notably, many students in the first years are naive but become more experienced as they progress. It seems that cooking skills increase as students advance in their academic years. From table 2 above, it was found that the culinary skills increased from year 1 (18.43%) to (31.04%) in the final years. This revelation entails that culinary skills are developed in relation to practical and theoretical exposure. In particular, schools with adequate home economics infrastructures were more likely to positively impart culinary skills to students. However, teachers' contributions relative to cooking acquisition have been applauded in literature (Granberg et al., 2017).

Cooking practices in home economics in colleges of education are essential for a student's personal development. Students who develop adequate culinary skills and nutritional knowledge are more likely to make healthier food choices in later life. Students take on these acquired skills through to adulthood. Evidence suggests that increased nutritional awareness and cooking skills ability helps individuals make effective dietary choices. This calls for further investing in evaluating school-based cooking programs, potentially using a standardized, tested tool for cooking skills assessment.

**Conclusion**

The study assessed students' cooking skills in home economics in colleges of education. It was found that most of the students possess high culinary skills. More so, it was revealed that the student's culinary skills varied based on their level

of study. It is concluded that home economics provides the requisite opportunity for developing cooking skills. The findings from the study have implications for increased enrollment in home economics and effective implementation of policies geared towards the development of home economics in the colleges of education in southeast Nigeria. Indeed, the self-reported cooking skills and the cross-sectional design limit the result generalization. Future research should adopt multiple measurements to curtail bias reporting and employ an experimental approach to establish cause-effect relationships. However, the result of the study provides relevant data for creating awareness and improving perception towards home economics education in Nigeria.

## References

- [1]. Adams, J., Goffe, L., Adamson, A. J., Halligan, J., O'Brien, N., Purves, R., Stead, M., Stocken, D., & White, M. (2015). Prevalence and socio-demographic correlates of cooking skills in UK adults: Cross-sectional analysis of data from the UK National Diet and Nutrition Survey. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1). <https://doi.org/10.1186/s12966-015-0261-x>
- [2]. Alpaugh, M., Pope, L., Trubek, A., Skelly, J., & Harvey, J. (2020). Cooking as a health behavior: Examining the role of cooking classes in a weight loss intervention. *Nutrients*, 12(12). <https://doi.org/10.3390/nu12123669>
- [3]. Begley, A., & Gallegos, D. (2010). What is cooking for dietetics? A review of the literature. In *Nutrition and Dietetics* (Vol. 67, Issue 1). <https://doi.org/10.1111/j.1747-0080.2010.01406.x>
- [4]. Boni, Z. (2019). Pressure cooker: why home cooking will not solve our problems and what we can do about it. *Food, Culture & Society*, 22(5). <https://doi.org/10.1080/15528014.2019.1658155>
- [5]. Burg, T., Gergen-Barnett, K., & Saper, R. (2018). Good food fuels good health: A hospital-based teaching kitchen, food pantry, and rooftop farm uniquely provide healthcare. *Journal of Alternative and Complementary Medicine*, 24(7).
- [6]. Granberg, A., Olsson, V., & Mattsson Sydner, Y. (2017). Teaching and learning cooking skills in Home Economics: What do teachers for students with mild intellectual disabilities consider necessary to learn? *British Food Journal*, 119(5). <https://doi.org/10.1108/BFJ-09-2016-0435>
- [7]. Hansen, S., Drake, T., & Vollmer, R. L. (2019). Perceptions of cooking education among high school students. *Family and Consumer Sciences Research Journal*, 47(4). <https://doi.org/10.1111/fcsr.12305>
- [8]. Hart, J. (2019). Culinary medicine: Home cooking essential for good health. *Alternative and Complementary Therapies*, 25(1). <https://doi.org/10.1089/act.2018.29203.jha>
- [9]. Hartmann, C., Dohle, S., & Siegrist, M. (2013). Importance of cooking skills for balanced food choices. *Appetite*, 65. <https://doi.org/10.1016/j.appet.2013.01.016>
- [10]. Herbert, J., Flego, A., Gibbs, L., Waters, E., Swinburn, B., Reynolds, J., & Moodie, M. (2014). The broader impact of a 10-week community cooking skills program is Jamie's Ministry of Food, Australia. *BMC Public Health*, 14(1). <https://doi.org/10.1186/1471-2458-14-1161>
- [11]. Hughes, G., Bennett, K. M., & Hetherington, M. M. (2004). Old and alone: Barriers to healthy eating in older men living independently. *Appetite*, 43(3). <https://doi.org/10.1016/j.appet.2004.06.002>
- [12]. Hutchinson, J., Watt, J. F., Strachan, E. K., & Cade, J. E. (2016). Evaluation of the effectiveness of the Ministry of Food program on self-reported food consumption and confidence with cooking. *Proceedings of the Nutrition Society*, 75(OCE3). <https://doi.org/10.1017/s0029665116001580>
- [13]. Kuroko, S., Black, K., Chryssidis, T., Finigan, R., Hann, C., Haszard, J., Jackson, R., Mahn, K., Robinson, C., Thomson, C., Toldi, O., Scullion, N., & Skidmore, P. (2020). Create our kai: A randomized control trial of a cooking intervention with group interview insights into adolescent cooking behaviors. *Nutrients*, 12(3). <https://doi.org/10.3390/nu12030796>
- [14]. Lavelle, F., McGowan, L., Hollywood, L., Surgenor, D., McCloat, A., Mooney, E., Caraher, M., Raats, M., & Dean, M. (2017). The development and validation of measures to assess cooking skills and food skills. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1). <https://doi.org/10.1186/s12966-017-0575-y>
- [15]. Lavelle, F., Spence, M., Hollywood, L., McGowan, L., Surgenor, D., McCloat, A., Mooney, E., Caraher, M., Raats, M., & Dean, M. (2016). Learning cooking skills at different ages: A cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, 13(1). <https://doi.org/10.1186/s12966-016-0446-y>
- [16]. LeRouge, C., Durneva, P., Sangameswaran, S., & Gloster, A. M. (2019). Design guidelines for a technology-enabled nutrition education program to support overweight and obese adolescents: Qualitative user-centered design study. *Journal of Medical Internet Research*, 21(7). <https://doi.org/10.2196/14430>
- [17]. Li, Y., Zhang, S., & Dong, Z. (2021). "Homenu": An interactive projection cooking assistant. *Advances in Intelligent Systems and Computing*, 1269 AISC. [https://doi.org/10.1007/978-3-030-58282-1\\_15](https://doi.org/10.1007/978-3-030-58282-1_15)
- [18]. Lichtenstein, A. H., & Ludwig, D. S. (2010). Bring back home economics education. In *JAMA - Journal of the American Medical Association* (Vol. 303, Issue 18). <https://doi.org/10.1001/jama.2010.592>
- [19]. Mills, S., Brown, H., Wrieden, W., White, M., & Adams, J. (2017). Frequency of eating home-cooked meals and potential benefits for diet and health: Cross-sectional analysis of a population-based cohort study. *International Journal of Behavioral Nutrition and Physical Activity*, 14(1). <https://doi.org/10.1186/s12966-017-0567-y>
- [20]. Mills, S. D. H., Wolfson, J. A., Wrieden, W. L., Brown, H., White, M., & Adams, J. (2020). Perceptions of 'home cooking': A qualitative analysis from the United Kingdom and the United States. *Nutrients*, 12(1). <https://doi.org/10.3390/nu12010198>
- [21]. Nelson, S. A., Corbin, M. A., & Nickols-Richardson, S. M. (2013). A call for culinary skills education in childhood obesity-prevention interventions: Current status and peer influences. *Journal of the Academy of Nutrition and*

- Dietetics, 113(8). <https://doi.org/10.1016/j.jand.2013.05.002>
- [22]. Raber, M., & Wolfson, J. (2021). The Challenging Task of Measuring Home Cooking Behavior. *Journal of Nutrition Education and Behavior*, 53(3). <https://doi.org/10.1016/j.jneb.2020.11.012>
- [23]. Sandell, A., Bogen, D., Keljo, D., Zettle, S., Chang, J., & Kim, S. (2019). Pediatric patient and parent experience with the Crohn's disease exclusion diet: Barriers and facilitators for nutrition therapy implementation. *Journal of Pediatric Gastroenterology and Nutrition*, 69.
- [24]. Schönberg, S., Asher, R., Stewart, S., Fenwick, M. J., Ashton, L., Bucher, T., Van der Horst, K., Oldmeadow, C., Collins, C. E., & Shrewsbury, V. A. (2020). Development of the home cooking environment and equipment inventory observation form (Home-cookeri™): An assessment of content validity, face validity, and inter-rater agreement. *Nutrients*, 12(6). <https://doi.org/10.3390/nu12061853>
- [25]. Short, F. (2003a). Domestic cooking practices and cooking skills: findings from an English study\*. *Food Service Technology*, 3(3-4). <https://doi.org/10.1111/j.1471-5740.2003.00080.x>
- [26]. Short, F. (2003b). Domestic cooking skills - what are they? *Journal of the Home Economics Institute of Australia*, 10(3).
- [27]. Silver, J. K., Finkelstein, A., Minezaki, K., Parks, K., Budd, M. A., Tello, M., Paganoni, S., Tirosh, A., & Polak, R. (2021). The impact of a culinary coaching telemedicine program on home cooking and emotional well-being during the covid-19 pandemic. *Nutrients*, 13(7). <https://doi.org/10.3390/nu13072311>
- [28]. Tani, Y., Doi, S., Isumi, A., & Fujiwara, T. (2021). Association of home cooking with caregiver-child interaction and child mental health: Results from the Adachi child health impact of living difficulty (A-CHILD) study. *Public Health Nutrition*, 24(13). <https://doi.org/10.1017/S1368980021001075>
- [29]. Tani, Y., Fujiwara, T., Isumi, A., & Doi, S. (2020). Home cooking is related to the potential reduction in cardiovascular disease risk among adolescents: Results from the A-CHILD study. *Nutrients*, 12(12). <https://doi.org/10.3390/nu12123845>
- [30]. Tani, Y., Fujiwara, T., Kondo, K., & Kondo, K. (2020). Cooking skills related to potential benefits for dietary behaviors and weight status among older Japanese men and women: A cross-sectional study from the JAGES. *International Journal of Behavioral Nutrition and Physical Activity*, 17(1). <https://doi.org/10.1186/s12966-020-00986-9>
- [31]. Virudachalam, S., Long, J. A., Harhay, M. O., Polsky, D. E., & Feudtner, C. (2014). Prevalence and patterns of cooking dinner at home in the USA: National Health and Nutrition Examination Survey (NHANES) 2007-2008. *Public Health Nutrition*, 17(5). <https://doi.org/10.1017/S1368980013002589>
- [32]. Wolfson, J. A., Bleich, S. N., Smith, K. C., & Frattaroli, S. (2016). What does cooking mean to you?: Perceptions of cooking and factors related to cooking behavior. *Appetite*, 97. <https://doi.org/10.1016/j.appet.2015.11.030>
- [33]. Wolfson, J. A., Bostic, S., Lahne, J., Morgan, C., Henley, S. C., Harvey, J., & Trubek, A. (2017). A comprehensive approach to understanding cooking behavior: Implications for research and practice. *British Food Journal*, 119(5). <https://doi.org/10.1108/BFJ-09-2016-0438>
- [34]. Wolfson, J. A., Frattaroli, S., Bleich, S. N., Smith, K. C., & Teret, S. P. (2017). Perspectives on learning to cook and public support for cooking education policies in the United States: A mixed-methods study. *Appetite*, 108. <https://doi.org/10.1016/j.appet.2016.10.004>
- [35]. Wolfson, J. A., Lahne, J., Raj, M., Insolera, N., Lavelle, F., & Dean, M. (2020). Food agency in the united states: Associations with cooking behavior and dietary intake. *Nutrients*, 12(3). <https://doi.org/10.3390/nu12030877>
- [36]. Wolfson, J. A., Leung, C. W., & Richardson, C. R. (2020). Frequent home cooking is associated with a higher Healthy Eating Index-2015 score. *Public Health Nutrition*, 23(13). <https://doi.org/10.1017/S1368980019003549>
- [37]. Yordanova, K., Lüdtke, S., Whitehouse, S., Krüger, F., Paiement, A., Mirmehdi, M., Craddock, I., & Kirste, T. (2019). Analyzing cooking behavior in home settings: Towards health monitoring. *Sensors (Switzerland)*, 19(3). <https://doi.org/10.3390/s19030646>