

AN INNOVATIVE METHOD OF TEACHING INTERIOR DESIGN WITHIN FAMILY AND CONSUMER SCIENCES EDUCATION CURRICULUM

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Interior design components are found in few high school curricula; primarily, these components are part of other units such as housing and are often viewed as interior decorating. There is a need for consistency in interior design curriculum taught in high schools. Therefore, the goal of this project was to have teachers focus on teaching interior design concepts within the context of interior design rather than housing or interior decorating in order to stimulate interest in interior design as a career option. A two-week interior design curriculum was developed for FCS educators. Twelve high schools participated with 109 students completing the course including the pre- and post-test. A significant difference was found between the pre- and post-test scores among the students. From these results, it was apparent that students made an improvement in their understanding of interior design.

The implementation of the National Content Standards for Family and Consumer Sciences (FCS) in 1998 has prompted family and consumer sciences teachers, as well as teacher education programs, to evaluate course offerings and requirements. In the standards document, traditional areas of housing and interiors were included in the standards area of housing, interiors, and furnishings.

In some states, occupational programs in FCS are very limited or non-existent. Student enrollments in both occupational and comprehensive FCS classes from twelve states across the nation were reviewed. The curriculum included some content in the area of housing and interior design, but results were mixed. Some states (Arkansas, Indiana, Kentucky, Colorado, Oklahoma, Nebraska, North Dakota, and South Dakota) offered semester courses in housing and interiors. However, enrollments in these states were as low as 186 students in grades nine through twelve. In some of these states, courses in housing or interior design were not available. However, even in schools that offer interior design, the content matter varied greatly. (FCS State Supervisors, Personal communication, November, 2000). In North Dakota, housing issues are sometimes addressed in courses through the FCS curriculum, but it is unknown to what extent and if interior design is included (V. Clark, Personal communication, November, 2000). In South Dakota, of the 10,889 students enrolled in FCS classes only 3% included a unit on housing issues (S. Mentzer, Personal communication, November, 2000).

Since North Dakota, South Dakota, and other states are very rural, students have few, if any, role models in the interior design profession. FCS education programs serve as a vehicle for integrating interior design concepts in the curriculum and, therefore, offer the opportunity for these students to be exposed to interior design as a career option. This data reflect the limitations and diversity related to how this content area is addressed in FCS curriculum. Many states do not offer courses in housing and interior design. Other states include this concept as a part of a comprehensive course, but the extent to which interior design is addressed is unknown.

Purpose

The purpose of this project was to develop a two-week interior design curriculum to be taught at the secondary level in FCS programs. The goal of the entire project was to stimulate interest in interior design as a career option. Objectives for this project included the following: 1) to increase student knowledge of interior design, and 2) to stimulate interest in interior design as a career option, and 3) to assist FCS teachers in understanding the differences between the study of interior design and that of interior decorating. This article will report only on objective one.

The two-week curriculum was developed by professionals in interior design and family and consumer sciences education to introduce high school students to basic design concepts and to strategies for exploring interior design as a career option. After development, both the curriculum and strategies for implementation were presented to FCS educators at a workshop.

Review of Precedent

Exposure to a particular profession at an early age (elementary and secondary students) often sparks interest in that profession. Thus, teaching interior design concepts to secondary (middle or high school) students could stimulate interest in interior design as a career path. However, there are few programs whose curricula focus on interior design or the role of an interior designer (Portillo & Rey-Barreau, 1995).

Curricula in high schools related to interior design often focus on either architectural components or housing. Curricula focused on architecture examine components such as architecture, planning issues, landscape architecture, city planning, or architectural preservation (Portillo & Tew, 1993). Curricula focused on housing examine housing issues and making good housing choices such as barrier-free housing, energy-efficient housing, and affordable housing. In some curricula, interior design components may be interspersed throughout housing curricula. Therefore, the interior design components generally are housing related and focus on teaching about creating interior spaces for the students as future buyers, not as interior designers (Alabama, 1996; North Carolina, 1992; Oklahoma, 1991).

Few curricula focus on interior design components such as floor plans and circulation, spatial relationships, furnishing and furniture arrangement (Portillo & Tew, 1993). In an example given by Portillo and Tew, in most curricula there were references related to interior design in units on color and texture, thus conveying the image of the “decorator.” The interior design profession needs to be portrayed not as decorators but as designers.

There is a question as to where interior design should be taught at the high school level. In Clemons (2002) research, she assessed the “perceptions of interior design education/practitioners and k-12 teachers/principals/curriculum specialists concerning critical issues when integrating interior design content areas into K-12 grade levels” (37). In her findings, the FCS program was not considered the best channel for teaching interior design. However, other possible channels were not identified.

Areas in which interior design concepts may be taught include industrial arts, fine arts, or FCS. Industrial arts teaches drafting; fine arts programs teach design theory and drawing techniques. FCS programs teach a variety of skills to assist individuals and families to improve their quality of life such as nutrition and wellness, child care, and family development curricula. Interior design fits within this field of study. Since interior design concepts have been associated with FCS for many years, interior design should be introduced to K-12 students in an allied discipline such as FCS. If FCS education programs do not include interior design concepts in

their curriculum, these concepts may be absorbed in other content areas in a less cohesive manner.

At the university level, many interior programs are accredited by the Foundation for Interior Design Education and Research (FIDER). The FIDER accredited programs are located in various colleges: FCS related (34), architecture (27), design related (52), and other (5) (FIDER). This means that some interior design programs have a strong emphasis on family - a continuation of the secondary FCS emphasis. Therefore, it is crucial that students learn basic interior design concepts in FCS programs at the secondary level.

The purpose of teaching interior design concepts at the secondary level is to stimulate interest in interior design as a career option. Clemons (1999) created a pictorial storybook on CD ROM for use in sixth- through eighth- grades that demonstrated the design process and construction of residence. The focus of the CD-ROM is on the investigation of different career paths. Though it is a tool that stimulates interest in a career paths related to interior design, the CD was to be distributed by career counselors and media specialists. This method is likely to reach only those students identified by counselors and media specialists as having a specific interest in this area. Therefore, other students who may not show an interest in interior design due to lack of exposure are not identified. In addition, this process does not teach students about interior design as a part of an interactive curriculum.

Project Description

FCS curriculum standards were reviewed. The purpose of the comprehensive standard for Housing, Interiors, and Furnishings (Standard 11.0) is to integrate knowledge, skills, and practices required for careers in housing, interiors, and furnishing (FCS, 1998, p. 169). The standards that include interior design are as follows. Units included in the curriculum are bulleted:

- 11.1 Analyze career paths within the housing, interiors and furnishings industry.
 - Career paths in interior design
- 11.2 Evaluate housing decisions in relation to available resources and options.
- 11.3 Evaluate the use of housing and interior furnishings and products in meeting specific design needs.
 - Design Fundamentals: elements and principles
 - Color Theory for interior spaces
 - Lighting Design and its affect on the interior
 - Furniture arrangement and materials used in for specific design needs
- 11.4 Demonstrate computer-aided drafting design, blueprint reading, and space planning skills required for the housing, interiors, and furniture industry.
 - Blue print reading
 - Circulation and spatial relationships;
 - Space planning and client needs
- 11.5 Analyze influences on architectural and furniture design and development.
- 11.6 Evaluate client's needs, goals, and resources in creating design plans for housing, interiors, and furnishings.
 - Space planning and client needs
 - Furniture arrangement and materials used in for specific design needs

- The design process including research; concept development, design development, and presentation.
- 11.7. Demonstrate design ideas through visual presentation.
- The design process including research; concept development, design development, and presentation.
- 11.8 Demonstrate general procedures for business profitability and career success.

These standards were then used in the examination of interior design concepts that could be taught in comprehensive family and consumer sciences classes. Textbooks that are commonly used in high schools are Kicklighter's (1999) *Residential Housing and Interiors* and Sherwood's *Homes Today and Tomorrow*. However, textbooks that are commonly used at the university level included Kilmer and Kilmer's (1997) *Design Interiors* and Nielson & Taylor's (2002) *Interiors: An Introduction*. In reviewing these texts and reflecting on the standards, the following interior design concepts were determined to be the most important: 1) an understanding of career options in interior design, 2) design and color theory, 3) lighting, 4) basic knowledge of design such as blue print reading, circulation and spatial relationships, space planning and furniture arrangement, and client needs, 5) materials, and 6) a design process. This project provided for the development of a curriculum for FCS teachers that supported the national standards as well as taught interior design concepts.

This project created an opportunity for FCS teachers to include two-weeks of instruction focused only on interior design. The goal was the implementation of this curriculum would increase knowledge in the content areas previously identified and stimulate interest in interior design as a career option through exposure to the concepts and skills needed to serve as a professional interior designer.

A review of a variety of resources (texts, curriculum guides, CDs and other supporting materials, etc.) was conducted. Utilizing both original ideas and those gleaned from the review of current teaching resources, a two-week curriculum of study in interior design was developed. Objectives for the curriculum lesson plans were based on the FCS national standards for this content area.

A two-week curriculum was developed and assembled into a packet. The packet included the following: 1) information about the packet and, particularly, about interior design: what is interior design, the designer versus the decorator, who is an interior designer, 2) information regarding the interior design curriculum's content areas and the connection to the FCS standards, and 3) various information within each unit. Each unit within the packet included lesson plans for each unit, PowerPoint outlines, extra notes, and suggested activities. PowerPoint presentations also were developed for each unit of study and burned on a CD ROM.

A workshop was conducted for FCS teachers; participants received a curriculum packet and a CD Rom. One of the important aspects of the workshop was to clarify the difference between interior decorating and interior design and emphasize that this curriculum was focused on interior design. Units included in the curriculum are Careers, Design Theory, Color Theory, Lighting (optional), Base Knowledge in Design, FF&E, Design Process, and Intergenerational Activities. Within the workshop, the following was demonstrated: expectations of the teachers, an overview of the curriculum, and use of the Internet as a resource for activities.

FCS teachers implemented the curriculum in the fall or spring semester of the 2001-2002 academic year. Prior to teaching the curriculum, a pre-test was given to students. Then, the curriculum was taught followed by a post-test given to students and a survey completed by FCS

teachers. The survey assessed the contents of the curriculum packet and PowerPoint presentations to allow for improvements.

Findings

South Dakota FCS teachers were solicited for involvement in the project through the state supervisor for FCS education. Twenty-four FCS educators participated in the workshop; 12 of the 24 taught the curriculum. Within these 12 schools, 136 students participated in the classes. Of the 136 students, 132 students completed the pre-test while only 113 students completed the post-test. Of these, 109 students' tests were valid.

The data collected in this study were analyzed using one-way Analysis of Variance (ANOVA) procedures from the Statistical Package for Social Sciences (SPSS), version 6.0. The analyses focus on whether student knowledge of interior design was increased through use of the curriculum. The descriptive statistics focus on frequencies from the pre- and post-test scores. The pre-test mean was 11.12 with a range of scores between 4 and 20. The post-test mean was 15.35 with a range of scores between 5 and 24 (see Table 1). The pre- and post-test consisted of 25 multiple-choice questions related to the interior design concepts.

Table 1
Frequencies Pre- and Post-Test Score Means for Knowledge of Interior Design

	Knowledge of Interior Design		Test Scores	
	Frequency	<u>M</u>	<u>SD</u>	
Pre-test	132	11.12	3.33	
Post-test	113	15.35	5.14	

*N = 136

The one-way ANOVA was administered to determine the differences between and among pre- and post-test scores. The dependent variable was the pre-test score and the independent variable was the post-test score. The results indicated a significant difference ($p = .000$) from the pre-test to the post-test (see Table 2). While the findings revealed a significant difference, an item analysis was not conducted to determine which questions indicated the least to greatest difference. At each school, FCS teachers also conducted additional assessments throughout curriculum, which are not analyzed in this study.

Table 2
Analysis of Variance for the Differences Between and Among Pre-test and Post-test

One-way Analysis of Variance					
Dependent Variable: Pre-test					
Independent Variable: Post-test					
Source	Mean Squares	DF	Square	F Value	Pr > F
Between Groups	709.3193	19	37.3326	8.3409	.000*
Within Groups	309.3505	89	4.4758		

*p<.05

Conclusions

From these results, it was apparent that students made an improvement in their understanding of interior design. However, the length of time spent on the curriculum varied from school to school. While two weeks was suggested as a minimum time for the curriculum, some teachers indicated that they augmented the curriculum with additional activities, especially when the curriculum was used as a part of a semester course in housing and interior design.

While this report does not address objective two - to stimulate interest in interior design as a career option - it is interesting to note that one FCS high school teacher reported that the enrollment in the course doubled for the following year. Also, the enrollment in the Interior Design Program in South Dakota has increased in the last two years. While no direct correlation can be made, these findings warrant further study.

The FCS teachers' evaluation of the curriculum was solicited through a survey. It was disappointing that only four of the twelve teachers responded. However, some valuable suggestions were offered. One was to simplify the PowerPoint presentations, and another to add extra notes with each PowerPoint within the curriculum packet. These changes were made to the curriculum and PowerPoint presentations.

Teachers indicated that the inclusion of websites and web-related activities were very helpful. They also indicated that the PowerPoint presentations saved them time, and provided very good background information on the field of interior design. Teachers also indicated that their students really enjoyed presenting color activities to kindergarten and first grade classes.

Suggestions for improving the curriculum included adding more activities and direction for each unit, condensing the media presentations to accommodate learning needs of secondary students, and providing more background information for the teacher whose understanding of interior design was inadequate. As a result of this input, the curriculum, including the PowerPoint presentations were revised. A second workshop for teachers was offered in the summer of 2003 for family and consumer sciences teachers introducing them to the revised curriculum and providing assistance in implementing it. To make this curriculum available to other FCS educators, options for publishing the curriculum are being pursued.

Further research could be conducted to test different variables. For example, research could focus on the differences between and among ethnic groups. As indicated earlier, it would be of interest to survey incoming freshmen to determine how they become interested in interior design.

Because these results were significant, this curriculum may be of interest to other programs in other states. However, it is important that teachers be educated in its use and that the teachers understand the difference between interior decorating and interior design.

References

- Alabama State Department of Education (1996). *Focusing on families, work, and their interrelationships*. (Alabama Course of Study. Bulletin 1996, No. 17) Montgomery, Alabama. (ERIC Document Reproduction Service No. ED 400 429).
- Clemons, S. (1999). Development of interior design career information for dissemination to students in grades six through eight. *Journal of Interior Design*, 25(2), 45-51.
- Clemons, S. (2002). Interior design in K-12: Let's ask the experts! In *Proceedings: IDEC 2002 Santa Fe: The Mesas and Mysteries-on the Edge of Imagination/Green Design*, International IDEC 2002 Conference, Santa Fe, NM, 37-38.

- Family and Consumer Sciences Educational National Standards* (1998). NASAFACS – V-TECS.
- Foundation of Interior Design Education and Research (FIDER). (2003) Available online: <http://www.fider.org>.
- Hays, T. (2000). *Interior design: Teacher's instructional guide*.
- Kicklighter, C. E., & Kicklighter, J. C. (1999). *Residential housing and interiors*. Tinley Park, IL: The Goodheart-Willcox Company.
- Kilmer & Kilmer. (1992). *Designing interiors*. New York: Harcourt.
- Nielson, K. J. & Taylor D. A. (2002). *Interiors: An Introduction*, 3rd. ed. New York: McGraw-Hill.
- North Carolina State Department of Public Instruction. (1992). *Interior design and housing curriculum guide* (No. 7055). Raleigh, NC. Division of Vocational and Technical Education Services. (ERIC Document Reproduction Service No. ED 360 560).
- Oklahoma State Dept. of Vocational Education. (1991). *Foundations for Living. Volume II. Teacher Edition* (No. 74074). Stillwater, OK: (ERIC Document Reproduction Service No. ED 380 705).
- Portillo, M., & Rey-Barreau, J. A. (1995). The place of interior design in K-12 education and the built environment. *Journal of Interior Design*, 21(1), 39-43.
- Portillo, M., & Tew, S. (1993, June). *Survey of curricula content in existing built environment resources*. Plenary papers presented at International Summit of Education Reform: Architecture + Children: Learning Through the National, Built, & Cultural Environment, Albuquerque, NM.
- Sherwood, R. F. (1999). *Homes for today and tomorrow*, Teacher Annotated Edition. New York: Glencoe/McGraw Hill.

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