

## **ASSESSING CLOTHING CONSTRUCTION SKILLS OF FAMILY AND CONSUMER SCIENCES EDUCATION STUDENT TEACHERS**

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*This study assessed family and consumer sciences student teachers' clothing construction skills as perceived by cooperating teachers and the student teachers themselves. Skills were assessed using a mailed survey that listed the competencies related to clothing construction developed by the North Carolina Department of Public Instruction for Clothing Design, the state-approved high school clothing class. In general, both former student teachers and cooperating teachers rated student teachers' clothing construction skills as adequate, but noted weaknesses in serger skills and other areas. A recommendation from this study was the addition of an abbreviated clothing construction course that was aligned with the high school curriculum. This course with a laboratory was piloted.*

After supervising three family and consumer sciences (FCS) education student teachers from one FCS education university program in North Carolina over a five-year period, a cooperating teacher shared her concern about the students' preparedness to teach clothing construction at the high school level. The cooperating teacher felt the student teachers might be unprepared to effectively teach a high school clothing construction class and facilitate a sewing laboratory. It appeared that students needed additional instruction in the use of sewing machines, sergers, and commercial patterns.

A review of the literature indicated that there is not consensus concerning the value of including clothing construction in either university or high school FCS programs. Often the specific debate concerns the emphasis that should be given to clothing construction skills. Some feel clothing construction should be a primary focus of clothing courses, noting the creative benefits and positive outlets it provides (Loker, 1987). Others also favor emphasis on clothing construction skills, maintaining that the apparel and textile industry represents one of the largest manufacturing employers in the United States with numerous challenging careers which require knowledge of clothing construction (Brandes & Garner, 1997; Dickerson, 1995). Brandes and Garner further note that while expertise in clothing construction may be required for successful employment, many colleges and universities claim there is insufficient time to include a basic clothing construction class in their programs in addition to the advanced technical skills that are required of college graduates.

Others contend that changes in society have altered the role of the traditional sewing component in the study of textiles and apparel, and therefore clothing construction skills are less critical (Murphey & Stewart, 1990; Pauley, 1996; Reynolds & Watson-Maile, 2000). Murphey and Stewart interviewed five Virginia high school FCS teachers regarding their use of sewing as part of their clothing and textiles curriculum. They found that four of the five teachers included some type of sewing project as part of their curriculum, although all had decreased the time they

allotted for sewing instruction, in part because they recognized that most families in today's society purchase rather than construct their clothes. Pauley surveyed middle school students, parents, teachers, professionals, and selected other community representatives to determine what they desired in the local FCS middle school curriculum. Parents, professionals, teachers, and community members ranked sewing instruction the least important among 12 curriculum areas, instead indicating that communication, parenting/family, and consumerism skills were the most important concepts to teach.

The Family and Consumer Sciences Education National Standards include Comprehensive Standard 16.0 for textiles and apparel: "Integrate knowledge, skills, and practices required for careers in textiles and apparel" (National Association of State Administrators of Family and Consumer Sciences, 1998, p. 231). Content standards include the following:

- 16.1 Analyze career paths within textiles and apparel design industries.
- 16.2 Evaluate fiber and textiles materials.
- 16.3 Demonstrate apparel and textiles design skills.
- 16.4 Demonstrate skills needed to produce, alter, or repair textiles products and apparel.
- 16.5 Evaluate elements of textiles and apparel merchandising.
- 16.6 Evaluate the components of customer service.
- 16.7 Demonstrate general operational procedures required for business profitability and career success.

In their review of Comprehensive Standard 16.0 for textiles and apparel, Reynolds and Watson-Maile (2000) note the various changes in the family, workplace, and apparel industry which have ultimately altered the traditional sewing component of textiles and apparel instruction. They contend that it is still necessary to manage clothing, but that clothing construction skills are less important. Therefore, the National FCS Education standards for textiles and apparel focus on managing family clothing resources and preparing students for careers in the industry. Only one of the seven content standards relates directly to clothing construction, and Reynolds and Watson-Maile say that standard should focus on the manufacturing/industry level rather than home sewing.

As the value of clothing construction education has been questioned, many university programs have reduced or eliminated their clothing construction classes (Brandes & Garner, 1997). Some state that equipment, maintenance, and staffing of such programs are too expensive. Others view clothing construction as a craft class, one that doesn't contribute to the mission of their program. As a result, an increasing number of family and consumer sciences education students do not receive clothing construction education at the university level and enter their student teaching without adequate clothing construction skills.

This might not pose a problem for student teachers in states in which clothing construction is not taught in high school programs. However in North Carolina, Clothing Design, the state-approved high school clothing course, is one of the most frequently offered FCS courses in the state. Since a major part of that course involves clothing construction, it is necessary that FCS education majors in North Carolina possess adequate skills in clothing construction. The purpose of this study was to determine FCS student teachers' clothing construction skills as perceived by cooperating teachers and the student teachers themselves.

## **Procedures**

A survey instrument was developed and mailed to the 15 individuals who had completed their FCS education student teaching during the previous six years through one particular North Carolina university. The survey was also mailed to the student teachers' 15 cooperating teachers. The survey listed the competencies related to clothing construction developed by the North Carolina Department of Public Instruction for Clothing Design, the state-approved high school clothing class. Former student teachers and their cooperating teachers were asked to independently rate the student teachers' levels of competence during student teaching for each clothing construction skill from 1 (lowest skill level) to 4 (highest skill level). Student teachers and cooperating teachers were also invited to include any additional comments they wished to make. Surveys were completed and returned by 8 of the 15 cooperating teachers (53%) and 10 of the 15 student teachers (67%). All 10 of the former student teachers were female and presently teaching family and consumer sciences at the high school level.

## **Findings**

In general, the former student teachers rated as adequate their sewing machine operations skills and their construction skills; however, they rated their serger operation skills as marginal. Student teachers rated themselves highest for the following competencies: connecting the power source to the sewing machine (4); connecting the foot pedal to the machine (4); changing a needle (4); threading the machine (3.9); and backstitching (3.9). They perceived themselves as weakest in the following competencies: adjusting serger for rolled hemming (1); troubleshooting and repairing serger (1.5); threading serger (2); adjusting serger tension (2); and cleaning, lubricating, and storing sewing machine (2.2).

Like the student teachers, cooperating teachers rated student teachers as adequately prepared in their sewing machine operation and construction skills; however, they, too, noted that students' serger skills were marginal. Cooperating teachers rated students most highly for: connecting the power source to the machine (3.9); connecting the foot pedal to the machine (3.6); threading the machine (3.6); and finishing a seam with the serger (3.6). Cooperating teachers rated student teachers lowest in: adjusting serger for rolled hemming (2.3) and troubleshooting and repairing the sewing machine (2.3).

## **Summary and Implications**

In this study, both former student teachers and cooperating teachers recognized weaknesses in the student teachers' clothing construction skills at the time of student teaching. In general, student teachers rated their clothing construction skills as slightly more developed than their cooperating teachers rated them. However, students were quick to note their lack of competence in working with sergers. One former student teacher commented, "We need to learn serger skills better," while another said, "The clothing construction class [at my university] was good, but there is only so much that can be covered in one semester." Another former student teacher recalled her first year of teaching FCS: "When I started teaching, I knew basically nothing about sewing. I had to ask co-workers how to do these things." Another remarked, "The reason I do not teach Clothing Design [today] is that I still feel very intimidated by my lack of skills."

Cooperating teachers' comments were also insightful. One cooperating teacher described her former student teacher as very competent in clothing construction: "I had a student teacher

that had taken Clothing Design in high school and sewed on her own, but she was an exception.” However, most cooperating teachers’ comments were similar to those of their former student teachers: “My student teacher had a real lack of skills for teaching clothing construction,” and “My student teacher did not know very much at all when it came to sewing.”

Considering the results of this study, it was recommended that FCS education majors from the North Carolina university program in this study complete additional class work in the area of clothing construction to assure that they were effectively prepared to teach high school clothing classes. One suggested strategy was to offer students an abbreviated clothing construction course taught by a secondary FCS teacher in a high school FCS clothing lab. Such a class would include clothing construction coursework that was aligned with the competencies in the Clothing Design course of study, along with learning experiences which would enable students to simulate the role of the clothing instructor.

Collaboration among the university FCS teacher educator, department chair, cooperating teachers, and student teachers occurred. As a result, a six-week clothing construction laboratory which simulated the state-approved high school clothing course was developed and taught by the local high school clothing teacher as part of her graduate work. The laboratory was piloted within the university FCS curriculum course which is taken by senior FCS education majors the semester before they complete their student teaching experience.

The learning objectives addressed in the laboratory were based upon the competencies taught in the North Carolina State Department of Public Instruction high school Clothing Design class. Objectives of the laboratory related to the following topics: commercial patterns; small sewing equipment; sewing machine parts, functions, and troubleshooting; serger parts, functions, and troubleshooting; use and care of sewing machine and serger; purchase of fabrics and notions; basic construction techniques; and management of a sewing lab. Students attended a weekly two-hour lab for six weeks in which they completed three sewing projects and presented to the class one demonstration of a clothing construction technique. They completed pre- and post-surveys concerning their perceptions of their clothing construction skills. The surveys listed the competencies related to clothing construction in the North Carolina state-approved Clothing Design course (and in this laboratory). In both the pre- and post-tests, students were asked to rate their level of competence for each clothing construction skill from 1 (lowest skill level) to 4 (highest skill level). Overall, student’ perceptions of their clothing construction skills increased from the pre-test to the post-test.

It was concluded that the clothing laboratory was beneficial in helping students improve their clothing construction skills and should be included in their university program of study. However, the logistics of implementing the lab experience have not been finalized at this point.

Findings from this study and the resulting laboratory experience indicate that further research in this area could prove beneficial. The survey instrument might be developed further and validated for use with a broader state or regional sample. In addition, other states might be surveyed to determine their inclusion of clothing construction in their undergraduate teacher education programs and the benefits they perceive.

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