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Research Articles

Curricular Content, Pathway Affiliation, and Selected Characteristics of Teachers of Secondary Fashion Courses

Sarah Cosbey

Bette Montgomery

Incorporating Paraprofessional Educators' Perspectives into the Curriculum Revision Process for the Expanded Food and Nutrition Education Program

Carla J. Moore

Nathalie Celestin

Ginnefer O. Cox

Tiffany N. Williams

Rebecca M. Mullis

Promising Practices Article

The Angel Tree Project: Incorporating Mathematics into a Family and Consumer Sciences Service-Learning Project

Kimberly Sartain

Using Bibliotherapy to Promote Cultural Competence in Family and Consumer Sciences Education

Gencie Houy

Karen L. Alexander

Cynthia L. Miller

Kyle Roberson

Amanda K. Holland

Melanie D. Schmitt

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Curricular Content, Pathway Affiliation, and Selected Characteristics of Teachers of Secondary Fashion Courses

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Teachers from three Midwestern states who taught clothing and textiles content within the previous two years were surveyed in this pilot study to explore the extent of coverage of five subject areas in secondary-level fashion courses. Pathway affiliation, teacher age, length of time teaching, and fashion industry experience, respectively, to the extent of subject coverage were examined. The subject area covered most extensively was “apparel or other textile product construction or alteration.” No difference in the extent of subject coverage between teachers of pathway-affiliated and pathway-unaffiliated courses was found. While neither teacher age nor teaching experience was related to the extent of coverage for any of the subject areas studied, teacher fashion industry experience was positively related to coverage of the subjects “fashion design or illustration” and “fashion merchandising or general apparel-related topics.”

Family and consumer sciences (FCS) is part of Career and Technical Education (CTE), which prepares high school students for employment or further education in a career field upon graduation (Brand et al., 2013; Palombit, 2019). To achieve this goal, CTE employs career pathways, a series of high school courses as well as other developmental activities, such as work-based learning and Career and Technical Student Organization (CTSO) involvement, in specific career areas. Likewise, FCS teachers and administrators have been called upon to frame coursework within FCS’s various content areas into career pathways as a means of preparing students for related careers and college programs of study (Rehm, 2009).

The Association for Career and Technical Education (ACTE) noted that career readiness incorporates three important skill areas: core academic skills, employability skills, and technical, job-specific skills (ACTE, 2010). While FCS coursework may certainly help develop skills in all these areas, its focus on technical skills within a specific career area makes FCS coursework unique. In the case of clothing and textiles, students can acquire technical skills in garment construction as part of a pathway to a career or higher education in fashion. Within the Framework for FCS in CTE, “Apparel & Textile Merchandising & Production” and “Fashion Design” pathways are listed within the “Visual Arts & Design” career field (LEAD FCS, n.d.). Pathways leading to fashion-related occupations may be found among multiple CTE career clusters, including “Arts, AV Technology and Communications” (Advance CTE, 2023a), “Human Services” (Advance CTE, 2023b), and “Marketing” (Advance CTE, 2023c).

As a discipline, FCS evolves as individual, familial, and societal needs change over time (Handy, et al., 2021). For the clothing and textiles or fashion content area in FCS, social change as well as the increased emphasis on preparing students for gainful employment and/or higher education has put its curriculum under scrutiny from faculty and administrators (Coffeen & Bartley, 2019; Brandes & Garner, 1997), both from within and outside FCS (Werhan et al., 2004). The construction of textile-based products has traditionally been a mainstay of the clothing and textiles curriculum in FCS secondary education (Montgomery, 2006). However, its continued usefulness to homemaking, let alone college and career preparation, has been called into question. For area of study 16.0, “Textiles, Fashion, and Apparel,” the *FCS National Standards 3.0* include a much wider range of competencies beyond skills in garment construction (NASAFACS, 2018-2028). Teachers may draw upon topics from the broad subject areas of industry career analyses, textile and apparel product evaluation, apparel design and production, and the merchandising of textile and apparel products in developing their fashion curriculums. Given their limited time with students, teachers must decide which topics to include and how extensively to cover them. Course pathway affiliation may place more pressure on teachers to justify their curricula in terms of preparing students for careers or college study, and subsequently influences what they choose to cover in their courses.

Given the focus of FCS toward college and career readiness as well as the debate around sewing’s relevance in the FCS classroom, the question of what content FCS high school teachers currently cover in their fashion classrooms arises, along with what might be shaping their choice of content. Identifying factors that shape fashion curricular content may help school administrators to identify obstacles as well as catalysts to ensuring that FCS high school curricula meet the goals of college and career readiness.

Review of Literature

Fashion Education at the Secondary Level

Few scholarly publications have addressed the FCS fashion curriculum at the secondary level. Those that have tended to focus on whether clothing construction should be retained as part of the high school curriculum, sometimes for the purpose of determining whether the subject should be retained as part of the university FCS teacher-preparation curriculum. As the primary content of high school FCS fashion coursework, sewing has presented the subject area with challenges. Among these is the view that sewing has outlived its usefulness in homemaking, and today is more of a hobby or craft (Brandes & Garner, 1997; Lee, 2002; Werhan, et al., 2004). Sewing is also stigmatized by its association with a dated gender ideology. To many, learning sewing skills may seem inconsistent with contemporary views of women’s roles (Werhan, et al., 2004), further calling its place in secondary education into question.

Despite these challenges, clothing construction has continued to be valued and taught by FCS teachers. In their study of Ohio FCS curricula, Werhan et al. (2004) found that most teachers (83%) included clothing and textiles content in their courses and among those that did, a vast majority included machine sewing (91%). The study’s focus group of FCS professionals unanimously agreed that university FCS teacher-preparation programs should include clothing construction coursework. Similarly, Lee (2002) described a survey of North Carolina FCS teachers who reported that sewing was “among the most important skills to be gained in the study of clothing and textiles” (p. 30). Werhan et al. (2004) observed that the conflicting ideas about the value of teaching sewing presented a dilemma for many new FCS teachers; even if a university teacher-preparation program no longer requires the subject, he or she may still be

expected to teach it. The new laboratory management standard of the *National Standards for Teachers of Family and Consumer Sciences* (Handy, et al., 2021; NATEFACS, 2020) would seem to suggest that laboratory spaces, including those used in clothing and textiles courses, continue to be an important component in FCS (Jensen, 2020, as cited in Handy, et al., 2021).

Still, the challenge to teaching clothing construction is such that FCS professionals have been moved to write in its defense. Brandes and Garner (1997) argued students entering baccalaureate programs in clothing and textiles are underprepared without having had clothing construction in high school. They also pointed out that the 1995 International Textile and Apparel Association (ITAA) core competencies for baccalaureate programs in clothing and textiles drew on content introduced in clothing construction coursework, particularly the competencies in the areas of “Merchandising/Design/Production” (p. 64). While the 2021 ITAA meta-goals have since provided an updated guide for four-year baccalaureate clothing and textile programs, “textile and apparel production processes” listed under “Industry and Business Knowledge” within the “Core Knowledge Content” meta-goal would still seem to directly reference an understanding of clothing construction (ITAA, n.d.). Similarly, Coffeen and Bartley (2019) argued that clothing construction knowledge is necessary for a diversity of fashion industry careers. In making the case that FCS classes “are crucial to postsecondary success as they strive to equip students with the knowledge and skills to succeed in their careers and in life” (p. 37), Werhan (2019) profiled a young woman whose high school FCS courses in clothing construction and design paved the way for her college studies in fashion and helped establish her in her career as a tailor/fitter with Nordstrom.

Fashion Education at the Post-Secondary Level

Because few studies have focused on fashion curricula at the secondary level, looking at studies examining college-level curricula may prove useful. Like secondary FCS programs, this research has been motivated by the need for university programs to remain relevant and demonstrate continued effectiveness in preparing students for employment. In their study of US textiles and clothing four-year academic programs, Laughlin and Kean (1995) identified seven common content areas: “Beginning Textiles, Color and Design Principles, Socio-psychological Aspects of Clothing, History of Clothing, Cultural Aspects of Dress, Merchandise Operations, and Fashion Theory” (p. 195). They suggested that these subjects represented “a core curricular content in textiles and clothing” (p. 188).

Other studies of college curriculums have focused on certain stakeholders’ perceptions of competencies graduates needed for employment in the field. Garner and Buckley (1988) created an inventory of 136 content elements representing “textiles, clothing construction, fashion merchandising, social science aspects of apparel including historic costume, apparel design and selection including accessories, professional preparedness, textile and apparel industry and economics, and support courses outside of apparel” (p. 33). They then surveyed Illinois apparel retailers, clothing and textiles faculty, and an Illinois university’s clothing and textiles program’s alums to measure their perceptions of the importance of the various curricular content to job performance in “fashion marketing, with emphasis on retail merchandising” (p. 32). Based on these ratings, the authors ranked individual content elements in terms of the amount of priority each should be given in curriculums for retail merchandising positions.

Not surprisingly, the fashion content recommended for highest priority was from the merchandising area. Garner and Buckley (1988) stated that “many of the traditional clothing and textiles content areas” (p. 39), including basic clothing construction and textiles, were among curriculum elements that were rated as being “neither very important nor of no importance” (p.

39). However, topics relevant to clothing construction, textiles, as well as other content areas besides merchandising specifically were ranked among the second priority group.

More recently, Frazier and Cheek (2016) measured 109 supervising retail managers' perceptions of competencies graduates would need to be successful in entry level merchandising positions. They used the 2008 baccalaureate program meta-goals established by the ITAA as a basis for their instrument. Based on their findings, the authors concluded that soft skills or boundary-spanning skills (e.g., leadership, communication, teamwork) were valued over discipline-specific content.

It should be noted that studies by Garner and Buckley (1988) and Frazier and Cheek (2016) focused on skills needed for retail merchandising positions. As Frazier and Cheek (2016) suggest, competencies employers consider important in graduates would likely differ depending on the specific fashion industry position. Furthermore, research published by Garner and Buckley (1988) and Laughlin and Keen (1995) is dated and does not reflect the development of university-level fashion curricula in recent years. In sum, in terms of implications for fashion curricula at the secondary level, some evidence suggests that fashion merchandising might be the most valuable content for students entering retail merchandising positions or pursuing post-secondary education in that area.

In seeking guidance for curriculum planning, university programs may refer to the aforementioned ITAA meta-goals, which have been available since 1995, but have since been updated in 2008 and again in 2021. The three meta-goals include "Core Knowledge Content," "Curricular Elements," and "Professional Competencies," each of which consists of diverse knowledge content (e.g., the Core Knowledge Content meta-goals consists of specific content related to "Textile and Apparel Product Knowledge," "Industry and Business Knowledge," and "Human Interactions with Products and Processes"). The Textile and Apparel Programs Accreditation Commission (TAPAC) uses these meta-goals for program accreditation purposes (ITAA, n.d.).

Factors Shaping Fashion Curricular Content

Deliberations over appropriate curricular content raises the question of what shapes this content; the literature, however, provides scant information on this topic. In their study of university curricula, Laughlin and Kean (1995) stated that content area coverage was related to undergraduate enrollment as well as number of faculty; larger programs tended to offer more areas of content. Werhan et al. (2004) found that teachers ranked "student interest" and "personal interest" highest in terms of motivations of Ohio FCS teachers for including clothing and textiles in their curricula. Similarly, in Murphey and Stewart's (1990) study of five home economics teachers' clothing and textiles teaching practices, teachers identified student needs and interests as driving factors in shaping their curricula. While they referred to "curriculum guides," they ultimately used their own judgment in deciding what to include in their classroom instruction. The authors noted that "This was especially true of those with more years of teaching experience" (p. 28). Furthermore, those teachers who devoted the most class time to sewing were also the most experienced teachers and expressed their own personal enjoyment of sewing.

Given the debate over appropriate fashion curricular content, the question of what content high school fashion teachers were including in their courses, as well as what things may be influencing their choice of content emerged and guided this research. Specifically, the purpose of this pilot study was to see, in the context of the secondary fashion classroom, 1) to what extent different content was being covered, 2) if content coverage differed between teachers of

pathway-affiliated and pathway-unaffiliated courses, and 3) whether relationships existed between content coverage and the teacher characteristics of age, length of time teaching, and fashion industry experience.

Methods

Instrument

A Qualtrics electronic questionnaire was administered to teachers who had taught a fashion course within the past two years were surveyed in this research. A fashion course was defined as a “clothing construction, textiles, apparel design, fashion merchandising, or other fashion industry-related course” in this study. Respondents answered the survey questions as they pertained only to those courses they taught within that two-year period. This ensured the data reflected teachers’ most current teaching strategies while allowing time for course rotation.

The questionnaire was designed to assess 1) whether respondents’ fashion courses were pathway affiliated, 2) specific topics they covered in their courses and the extent to which they covered them, and 3) demographic and other descriptive information about the respondents relative to their educational and professional backgrounds. The questionnaire was pretested with two experienced high school FCS teachers who taught courses with clothing and textiles content.

To measure the extent to which teachers covered different topics in their fashion courses, CTE course descriptions from the Illinois State Board of Education (n.d.) were used to identify specific topics for the questionnaire. Topics were grouped into the five subject areas of “textiles,” “apparel or other textile product construction or alteration,” “fashion design or illustration,” “fashion merchandising or general apparel-related topics,” and “career exploration and preparation.” The number of topics per subject area varied, ranging from three to nine. Respondents indicated the extent to which they covered each topic within the five subject areas using the following scale: 0 – *did not cover*, 1 – *slight coverage*, 2 – *slight to moderate coverage*, 3 – *moderate coverage*, 4 – *moderate to extensive coverage*, and 5 – *extensive coverage*. For each subject area, respondents could write in up to two of their own “other” topics and rate the extent to which they covered each.

Finally, multiple choice items recorded respondents’ gender, age, undergraduate field of study, post baccalaureate field of study, and number of years teaching high school fashion courses. Participants were also asked to indicate their amount of fashion industry work experience using a 6-point scale where 1 – *no experience*, 2 – *minimal experience*, 3 – *minimal to moderate experience*, 4 – *moderate experience*, 5 – *moderate to extensive experience*, and 6 – *extensive experience*, specifying that “‘fashion industry-related employment’ might include working in fashion retail, manufacturing, design, or promotional positions, but does not include education for this question. ‘Fashion’ may include apparel, fashion accessories, fabrics, or home fashions (e.g., textiles for the home or home décor).”

Sample

FCS teachers in three Midwestern states were surveyed in this research. At the time of this writing, CTE pathway requirements vary somewhat among these states. Dual credit opportunities with post-secondary partners, work-based learning experiences, sequences of CTE coursework, and participation in CTSO activities are among the more common attributes listed among the state educational agency websites. Furthermore, all three states provide standards or course descriptions for clothing and textile subject matter. These standards/descriptions include knowledge of construction, as well as other competency areas for the apparel industry such as employment opportunities and career paths, design, and merchandising. Finally, all three states

offer post-secondary programs in FCS Education with coursework in clothing and textiles where basic apparel construction is among the course offerings.

Teacher email addresses were identified in school district or high school websites from randomly selected educational regions in each of three different Midwestern states. When possible, teachers of fashion courses were specifically identified. Most of the sample addresses were associated with individuals identified as FCS or CTE teachers, however. The final mailing list included addresses for 316. Following the initial distribution of invitational emails, two successive reminder emails were sent to teachers who had not yet completed the questionnaire, securing a final sample size of 34 usable responses.

The sample respondents were all female, with most being 50 years of age or older (58.8%). A majority had undergraduate degrees in FCS (76.5%), and some graduate-level coursework (70.6%). The most cited area of graduate study was in FCS Education (41.7%).

Analysis

Because the sample size was small ($N=34$), the scales used to measure the dependent variables were ordinal, and the score distributions for those variables were not consistently normally distributed, data were analyzed with non-parametric statistics. For each respondent and each subject area, median scores based on each respondent's ratings of the extent to which various topics were covered were calculated; median scores for each subject area for the entire sample for each topic were also calculated. Topics respondents added as "others" were excluded from these median score calculations due to 1) the tendency for these topics to be redundant with those already appearing in other subject areas and 2) respondents' occasional failure to rate extent of topic coverage in addition to listing the topic.

To assess whether there was a difference in extent of subject area coverage depending on pathway affiliation status for respondents' courses, the authors grouped respondents into two categories, one for those whose courses were not pathway affiliated during the past two years ($n=23$), and the other for those whose courses were pathway affiliated for either part or all of the past two years ($n=11$). For each subject area individually, they used a 2-sided Mann-Whitney U statistic to test the difference in respondent median scores for extent of subject coverage between the two groups.

The authors calculated Spearman rank correlation coefficients to measure the relationships between respondents' extent of coverage for each of the five subject areas and the respondent characteristics of 1) years of teaching high school fashion courses, 2) age, and 3) fashion industry experience, respectively. The significance level was .05 for all analyses.

Findings

For each of the five subject areas, the median scores for the sample as a whole indicate the extent to which the teachers collectively covered these subjects. The subject covered most extensively was "apparel or other textile product construction or alteration" ($Mdn = 5.00$). "Textiles" ($Mdn = 2.25$) and "fashion merchandising or general apparel-related topics" ($Mdn = 2.00$), respectively, followed. Subject areas covered the least of the five included "fashion design or illustration" ($Mdn = 0.25$) and "career exploration and preparation" ($Mdn = 0.00$).

The authors found no significant differences in the extent of subject coverage between the pathway affiliated and unaffiliated groups of teachers (See Table 1). In other words, respondents whose courses were pathway affiliated did not cover any of the five subject areas to a greater or lesser extent than respondents whose courses were pathway unaffiliated.

Table 1

Independent Samples Mann-Whitney U Test, 2-Sided, for Subject Area Median Scores Across Pathway Affiliation (N=34)

Subject area	Mdn, pathway affiliated group	Mdn, pathway unaffiliated group	U	p
Textiles	2.00	2.50	138.500	.663
Apparel or textile product construction or alteration	5.00	4.00	94.000	.243
Fashion design or illustration	1.50	0.00	75.000	.060
Fashion merchandising or other general apparel-related topics	2.50	2.00	93.000	.228
Career exploration and preparation	2.00	0.00	75.500	.060

No relationships were found between the extent of subject coverage and respondents' years of teaching high school fashion courses or age, respectively, for any of the five subject areas. The logical positive association between teacher age and years of teaching ($r_s=.482$, $p=.002$) explains the consistency of these findings. However, they found positive relationships between respondent fashion industry experience and extent of subject coverage for “fashion design or illustration” and “fashion merchandising or general apparel-related topics” (see Table 2). In other words, the greater the level of fashion industry experience indicated by the respondents, the greater the extent of coverage for these two subject areas.

Table 2

Spearman Rho Correlation Coefficients, 2-Sided, for Subject Area Median Scores and Fashion Industry Experience (N=34)

Subject area	r_s	p
Textiles	.073	.683
Apparel or textile product construction or alteration	.163	.356
Fashion design or illustration	.403	.018
Fashion merchandising or other general apparel-related topics	.462	.006
Career exploration and preparation	.126	.477

Discussion

Extent of Subject Area Coverage by the Sample as a Whole

Findings suggest that the “apparel or other textile product construction or alteration” subject area continues to be an important focus of fashion courses at the high school level. Reported as receiving *extensive* coverage ($Mdn = 5.00$), none of the individual topics within this

subject area had a median score of less than 4.00 out of 5.00. This finding is consistent with studies by Lee (2002) and Werhan et al. (2004), which concluded that clothing construction was still a valued component to high school clothing and textiles programs.

The “textiles” subject area was next in terms of extent of coverage ($Mdn = 2.25$), though only covered to a *slight to moderate* to *moderate* extent. Textiles may have been second in importance because basic knowledge of fabrics is necessary for sewing.

“Fashion merchandising or general apparel-related subjects” was covered to a *slight to moderate* extent ($Mdn = 2.00$). This subject area included a diversity of topics which were either fashion merchandising focused or were relevant to fashion merchandising but did not clearly fit into one of the other four subject areas. Individual topics within this area received between *slight to moderate* and *moderate* coverage ($Mdn = 2.00 - 2.50$), indicating the sample teachers endeavored to address diverse fashion merchandising-related topics in their courses.

The “fashion design and illustration” subject area was rated as receiving between no coverage and *slight coverage* ($Mdn = 0.25$). With the exception of a couple of topics related to elements and principles of design that received *moderate to extensive* coverage ($Mdn = 4$), other topics in this subject area had median scores of 0.00. Finally, the median score for the “career exploration and preparation” subject area indicated essentially no coverage ($Mdn = 0.00$). Though one topic related to exploration of fashion industry careers received *slight to moderate* coverage ($Mdn = 2.00$), the remaining topics had median scores of 0.00.

In sum, a fairly traditional, construction-focused approach to teaching fashion-related courses seemed to be maintained at the secondary level in this sample. Findings also suggest that teachers explored diverse content relative to fashion beyond construction, albeit to a comparatively limited extent.

Pathway Affiliation and Extent of Subject Coverage

Pathway affiliation would seem to potentially shape FCS fashion course content. Teachers may be more persuaded to include content for which a stronger argument may be made for preparing students for careers and college. For example, one might expect “career exploration and preparation” to receive greater coverage by teachers of pathway-affiliated courses compared to pathway-unaffiliated courses. However, this sample did not show a significant difference in the extent to which the five subject areas were covered when comparing the two groups of teachers. Nevertheless, it is interesting to note that differences between the two groups approached significance for the subject areas of “fashion design and illustration” as well as “career exploration and preparation” ($p = .06$) with median scores for subject area coverage being higher for teachers of pathway-affiliated courses (see Table 2).

Teacher Characteristics and Extent of Subject Coverage

Murphey and Stewart (1990) found that more experienced teachers devoted the most class time to sewing, suggesting that longevity in their teaching roles might make teachers more inclined to cover this traditional subject. However, our findings did not indicate that this was the case; neither teacher age nor length of time teaching fashion courses was related to coverage of any of the five subject areas. However, the authors found the teacher fashion industry employment experience to be related to extent of coverage for the subject areas of “fashion merchandising or other general apparel-related topics” and “fashion design or illustration.” The increased coverage of these two subject areas by high school teachers who had greater self-reported fashion industry experience may indicate that such experience provides a heightened

awareness of their relevancy to today's high school fashion student. Students may benefit in terms of career and college readiness from the broader exposure to fashion topics that appears to be associated with greater teacher industry experience.

Limitations and Conclusion

This study is limited by its small sample size as well as the number of independent variables examined in attempting to identify factors shaping subject area coverage by high school fashion teachers. Other factors may also come in to play. For example, access to resources (e.g., technology) as well as the amount of class time teachers have to cover fashion-related content is likely to impact the extent to which they cover difference subjects, though these factors were not addressed in this study.

Another limitation concerned the questionnaire design. The list of topics respondents rated for extent of subject coverage were not exhaustive and did not represent all fashion content areas found among the textiles, fashion, and apparel competencies listed in the FCS National Standards. While the opportunity for respondents to list their own topics was provided, this did not add to the topics already listed in the questionnaire.

Findings from this study support the idea that FCS high school teachers still cover sewing more than any other subject related to fashion. Sewing, or rather the process of producing a garment, is knowledge that is useful if not necessary for certain fashion industry careers (Coffeen & Bartley, 2019). Garment production is also a subject that is reflected in the National Standards for Family and Consumer Sciences (2018-2028) and the 2021 ITAA meta-goals (n.d.).

However, as mentioned, the FCS National Standards list a diversity of learning outcomes pertaining to "Textiles, Fashion, and Apparel" beyond clothing construction, though some of these may be gained through that experience (e.g., "evaluate quality of textiles, fashion, and apparel construction and fit") (NASAFACS, 2018-2028). The career pathways identified by the *Framework for Family & Consumer Sciences in CTE* (LEAD FCS, n. d.) include occupations that may not require garment construction knowledge (e.g., apparel merchandising) or would be better served through other types of learning activities. The same holds true for fashion-related careers identified by the CTE career clusters and pathways (e.g., visual merchandise manager, store manager, buyer) (Advance CTE, 2023 a,b,c).

This raises the question of why sewing still seems to be the predominant content for FCS clothing and textile courses. Sewing may be an effective starting point in education leading to careers in fashion because it involves the engaging, hand-on types of learning associated with CTE. Perhaps, as Werhan et al. state (2004), new FCS teachers may be expected to make effective use of existing, expensive sewing laboratories. However, in creating effective pathways to post-secondary fashion programs or industry careers, teachers, with the support of their administrators, might consider hands-on learning activities beyond sewing that will expose students to different aspects of the industry as well as serve as a more general foundation for post-secondary education in fashion. Given the constraints teachers face in terms of the amount of time they have with students, FCS professional educational organizations might provide teachers with guidance on which subjects should receive priority in developing pathways to fashion careers.

The relationships found between teacher fashion industry experience and extent of coverage for two subject areas suggests that greater teacher fashion industry experience is associated with greater coverage of diverse subjects. More industry exposure might help FCS teachers approach fashion content from a broader perspective. Administrators might consider this in their goal of recruiting as well as retaining high quality FCS teachers (Handy et al., 2021).

Strengthening teacher fashion industry exposure may be a useful strategy for helping high school curriculums address more of the competencies listed for the clothing and textiles area in the FCS National Standards, which in turn would address more of the fashion career pathways identified in the FCS and CTE career clusters (Advance CTE, 2023a,b,c; LEAD FCS, n.d.).

In place of or in addition to prior employment in the industry, administrators may enhance the quality of their FCS instruction by facilitating professional development opportunities for teachers, as recommended in Handy et al. (2021). Through release time to visit and study places of fashion business, teachers could gain insight into current industry practices, which in turn would guide them in implementing relevant learning experiences in the classroom. FCS programs might utilize advisory boards that include industry professionals to help identify content that would be most useful to students anticipating careers in fashion store or department management, buying, product development, etc. At the teacher preparation stage, fashion industry field trips and internships may help prepare student teachers for more effective fashion instruction by giving them first-hand experience from which to draw in developing their own curriculums.

This pilot study should provide impetus for further exploration of current fashion curriculum content at the secondary level, as well as the factors that shape it. Continued research efforts in this area may help identify ways to facilitate high school fashion programs' ability to meet the FCS National Standards and the technical, job-specific skills necessary for college and career readiness (ACTE, 2010).

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Incorporating Paraprofessional Educators' Perspectives into the Curriculum Revision Process for the Expanded Food and Nutrition Education Program

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Focus groups were convened with 29 paraprofessional educators from two land grant universities (LGUs) to document their experiences delivering an adult nutrition education curriculum through the Expanded Food and Nutrition Education Program (EFNEP) and to solicit their suggestions for curriculum improvement. Emergent themes indicated that paraprofessional educators desired greater flexibility in curriculum delivery, more activities that employ active learning, and simplification of curriculum content. Educators also expressed concerns regarding professional competence, perceptions of contradictory information within the curriculum, and a disconnect between program leaders' expectations and the realities of program delivery in the community setting. Findings highlight benefits of including educators in curriculum development and revision processes and support the development of future studies to investigate ways to incorporate more flexibility into curricula without compromising core content. Findings also support the need for additional studies that assess whether food-based recommendations rather than nutrient-based recommendations could improve outcomes in EFNEP and other health and nutrition education programs.

Background

Since 1969, the Expanded Food and Nutrition Education Program (EFNEP), administered by the United States Department of Agriculture's (USDA) National Institute of Food and Agriculture (NIFA), has addressed social disparities in health by helping low-income families acquire the knowledge, skills, and attitudes to live more healthful lifestyles. Using a community-based, hands-on educational approach, EFNEP coordinators at land grant universities (LGUs) recruit and hire paraprofessionals (i.e., peer educators) from low-income areas and train them to deliver a series of face-to-face, interactive educational sessions through organizations and agencies in their home communities (Chipman & Kendall, 1989). EFNEP is delivered in all 50 states and U.S. territories utilizing the framework of the Cooperative Extension system. The curricula utilized within EFNEP programming vary across states and territories and target both

adult and youth populations, but the lessons that the paraprofessionals teach must address the core areas of EFNEP programming: diet quality, physical activity, food resource management, food safety, and food security (USDA, 2016).

Curricula targeting adult populations typically consist of eight to twelve sessions per educational series (Auld et al., 2019), and most adult curricula also include food preparation demonstrations and/or food tastings at each session (Moore et al., 2020; Murray et al., 2015). Program impact among adult populations is evaluated using a standardized evaluation tool that consists of a pre- and post-education behavioral questionnaire and 24-hour dietary recall (USDA, 2018). State and national reports consistently demonstrate immediate positive behavioral impacts of EFNEP among participants (Arnold & Sobal, 2000; Auld et al., 2015; Dickin et al, 2005; Neelon et al, 2022; Perkins et al., 2019; USDA, 2021). However, a recent systematic review found limited evidence of long-term behavioral change among participants and suggested that curriculum content could potentially be strengthened to improve the maintenance of positive behavior changes over time (Atoloye et al., 2021).

Within the broader literature evaluating the efficacy and effectiveness of nutrition education interventions, factors associated with greater improvements in nutrition-related behaviors include utilizing a theory-based curriculum with clear, focused objectives; facilitating an appropriate duration and dosage of the intervention; and delivering the intervention with fidelity to the original design (Murimi et al., 2017). Further, once a successful intervention has been implemented, it must be continually reviewed and revised to ensure that the curriculum content aligns with current dietary recommendations and program objectives, meets the current needs of the target population, and is being delivered and evaluated as intended (Baker et al., 2020; Chipman & Kendall, 1989).

Food Talk: EFNEP in Georgia

The adult curriculum utilized in Georgia EFNEP operations, entitled *Food Talk*, was originally developed in 2007 as a nutrition education intervention to reduce hypertension among program participants. The curriculum includes learner-centered education techniques and experiential learning activities based on the Health Belief Model (Janz & Becker, 1984). Since its inception, the *Food Talk* curriculum has been updated to include two additional educational sessions, resulting in an eight-session series. Sessions are designed to last about one hour, and each session incorporates food demonstrations with two low-cost recipes.

Although the original curriculum validation studies were conducted with a convenience sample of 212 participants, the program now reaches thousands of participants each year and is delivered by more than 30 separate paraprofessionals in over 40 counties throughout the state, introducing some degree of variation in the curriculum's delivery. Some of the images in the curriculum have become outdated, and other updates may be needed to address documented changes in the food environment and individual food preferences in recent years (Kuhns & Saksena, 2017). Additionally, at the time of this evaluation, the *Dietary Guidelines for Americans* had undergone two cycles of revision (USDA, 2020), and a new national EFNEP evaluation tool was implemented in 2018 (Murray et al., 2017; Murray et al, 2020).

As the state program coordinator and local Extension leaders considered needed curriculum revisions to improve program outcomes and enhance participant retention, focus groups were convened with paraprofessional educators throughout the state to document their experiences delivering the existing curriculum and to collect their suggestions for curriculum improvement. This paper outlines the methods utilized in this cross-sectional, formative study

and discusses findings that may assist others in the development, implementation, and evaluation of curricula for other community health, nutrition education, and family and consumer sciences (FCS) programs.

Methods

Utility of Focus Groups

Focus groups, initially developed for marketing research, have been used in recent years in health and social science research to obtain qualitative information on “focused” topics. The purpose of a focus group is to elicit respondents’ perceptions of a defined area of interest through carefully planned, semi-structured interviews. This methodology generates a large amount of data in a short period of time, and the social interaction of the group often produces deeper and richer data compared to one-to-one interviews. Although focus group findings have limited generalizability, these methods are well suited for exploratory, formative, or process evaluation research and can provide meaningful information that may not be available through other techniques (Betts et al., 1996; Rabiee, 2004.).

Instrument

A committee including the state program coordinator and several local Extension leaders developed a focus group script that consisted of 12 open-ended questions with additional probes to stimulate conversation among paraprofessional educators regarding perceived strengths and weaknesses of the curriculum utilized for adult EFNEP programming and to assess the degree to which the curriculum was being implemented as intended. The script was reviewed by additional colleagues with expertise in conducting focus groups and staff members who previously worked as EFNEP educators or supervisors. Minor revisions were incorporated based on their feedback, and final questions and probes are shown in Table 1. An in-person training was conducted for all moderators and room assistants that outlined the purpose of the exercise and standard procedures that should be followed to ensure consistency across groups and appropriate documentation of responses (Jones & Carson-Cheng, 2013).

Participants and Recruitment

During the 2018 annual state EFNEP conference, all paraprofessional educators from the two LGUs within the state were invited to participate in focus groups to identify needed changes to the existing adult curriculum. Participation was voluntary and focus group participants were neither compensated nor penalized based on their decision to participate or not participate in the focus groups. All focus group participants provided written informed consent, and all procedures were approved by the Institutional Review Board at the University of Georgia.

A total of 29 paraprofessional educators participated in four focus groups. Group sizes ranged from 6 to 12 participants. All focus group participants were female, and educators’ experience working with EFNEP ranged from 0.4 to 22.3 years, with a median of 4.5 years. Groups were assembled to include individuals from different geographic regions with a range of programmatic experience. This heterogeneity was intended to introduce a range of perspectives that could encourage contrasting opinions and active discussions within each group.

Procedures

Focus groups were led by moderators whose work involved nutrition education; however, moderators were not directly affiliated with EFNEP. The selection of moderators without direct program affiliation was intended to avoid the perception of superior-subordinate relationships

between moderators and focus group participants that might inhibit candid discussions. Moderators administered the scripted questions and probes during each of the four 90-minute sessions. Focus group discussions were audio recorded and transcribed by a third-party transcription service (Rev.com, San Francisco, CA).

Table 1

Scripted questions and probes used in focus groups with EFNEP paraprofessionals who deliver the Food Talk curriculum.

Focus Group Questions	Additional Probes
Which <i>Food Talk</i> sessions do you enjoy teaching?	
Which sessions are difficult to teach?	
What activities are most engaging for your participants?	Provide outline of activities for each session.
What activities do your participants like least?	Provide outline of activities for each session.
Are you teaching <i>Food Talk</i> according to the Leader Guides?	Do you add information to your sessions that is not covered in the Leader Guide? What are you adding?
Are you leaving things out when you teach <i>Food Talk</i> ?	What do you leave out?
What seems out of order within sessions or from session to session?	
What flows well within sessions or from session to session?	
What questions do participants ask?	
Which recipes do you enjoy preparing?	Provide a list of all recipes included in <i>Food Talk</i> .
Which recipes do you dislike preparing?	Provide a list of all recipes included in <i>Food Talk</i> .
If you were modifying the curriculum to better suit your participants, what changes would you make?	

Coding and Data Analysis

Two data analysts read focus group transcripts and independently identified emergent themes using an open coding technique (i.e., key words or codes were generated from the data itself rather than evaluating the data using a predefined set of categories or codes) (Thomas, 2006). The two analysts reconvened and developed a codebook detailing emergent themes. Each focus group transcript was coded independently by each analyst using the comment function in Microsoft Word. A macro was used to extract coded text from each transcript and create a table in a separate Microsoft Word document using macro syntax that was previously published (McAlister et al., 2017). This technique allowed analysts to easily visualize concordant and discordant coding, which informed subsequent discussions to reach consensus in cases where inconsistencies were noted.

Results

Many curriculum-specific themes emerged regarding the educational content, activities, and recipes that are unique to the *Food Talk* curriculum; however, thematic excerpts from the codebook that apply to themes with broader implications among FCS and health educators are shown in Table 2. Representative comments that pertain to each of these more general themes are subsequently reported.

Fidelity vs. Adaptation

Statements related to the degree to which paraprofessionals deliver the curriculum exactly as written indicated that educators do make some adaptations to the curriculum to better relate to EFNEP participants.

I've been working with EFNEP for quite a few years, almost 15, and, I try to do my best to do exactly like it is supposed to be done, but... I have to gear what I'm doing to my audience. (Focus Group 2)

I follow my leader guide, but I make it my own because like I've stated... you have to tell your story to get your clients to understand you... I have to make them realize that I've walked in some of their similar shoes... It's not written in my lesson guide but it's the only way that – if they can relate to me, that's the only way that they're gonna take the stuff home. (Focus Group 4)

Educators also indicated that some adaptations can be necessary due to time constraints.

I think the only time I might leave [something out], is because either I've forgotten it, or the time crunch was ridiculous where I had no choice. (Focus Group 4)

Sometimes it's a matter of can you get it all in. It's not a matter of the fact that you're purposely trying to leave it out... Sometimes, depending on what type of class you're doing, you've got between 30 minutes to 45 minutes to teach the session. And... with some of the sessions being so long... if participants ask you questions... you can't get it all done. You can't. (Focus Group 3)

Table 2

Excerpt from the codebook of emergent themes from focus groups with EFNEP paraprofessionals evaluating their experiences with and perceptions of the Food Talk Curriculum

Code	Definition
Fidelity vs. Adaptation	Statements that relate to the degree to which educators deliver the curriculum exactly as written, a need for more flexibility within the curriculum to allow for adaptation/personalization, or adaptations that they have made/are making to solve current issues.
Lecture vs. Active Learning	Statements that provide educators' opinions related to the two teaching and learning methods included in the curriculum and/or reference the degree of interaction with participants during the sessions.
Complexity vs. Simplification	Statements regarding the level of detailed information included in the curriculum, comprehension challenges for participants, or a need to simplify curriculum content.
Professional Competence	Statements that indicate that educators do not feel that they have the needed knowledge and or skills to address participant questions or deliver the information in the curriculum with authority.
Contradictory Information	Statements that indicate that educators feel that the messages in the curriculum are contradicted by other messages within the curriculum or general nutrition guidelines.
Theory vs. Practice	Statements indicating a perceived disconnect between program leaders' ideas of what is appropriate or feasible curriculum content and what can practically be implemented in a community setting.

Some educators expressed frustration with having to follow scripted lesson plans and requested more flexibility within the curriculum to allow for more personalization.

You can't incorporate your own little twists on things. It's like straight script... so that makes it a little boring sometimes. (Focus Group 3)

We need to read our group of people and be able to say, "Okay, I think we need to do this a little different or that a little different." That's where we need that little bit of leeway that we can make some changes on our own. (Focus Group 3)

Lecture vs. Active Learning

EFNEP paraprofessional educators consistently expressed a preference for activities that are highly engaging and interactive.

I like that part because they get to talk a lot and you get – it's a lot of back and forth and that – those is the classes I like the best because we can stand up and tell them anything and everything, but until they can relate, they're not gonna really take it in.

(Focus Group 2)

Additionally, most felt that more interactive activities could be incorporated.

When you read from the leader guide completely, I don't know- for me- I don't like learning like that. I like interaction... I mean, just to stand up there and read everything, that tends to bore me to death. (Focus Group 2)

You have to draw people's interest, and you don't draw a person's interest with a long process of teaching. It has to be quick. It has to be interesting. I mean, people don't want you standing up there and talking to them for an hour in a lecture type of situation.

(Focus Group 3)

Complexity vs. Simplification

There was a strong consensus that information presented within lesson plans is too dense and complex, and EFNEP paraprofessionals indicated that simplifying the curriculum might improve participant retention and program outcomes.

I think it's a lot of information just to grasp in one class. (Focus Group 2)

I would cut it down where it'd be short and simple so it's more or less, you know, I got time to give you the important points. Then I got time to cook. (Focus Group 1)

Some educators also suggested placing a greater emphasis on the food demonstrations rather than nutrition education.

Share a solid good recipe that will change one thing in a life... People change their eating habits based on simple things. [It] doesn't have to be that complicated.

(Focus Group 3)

The lessons are so long... Most of the time when people know you do food demonstrations, that's all they want. (Focus Group 1)

Professional Competence

Some EFNEP paraprofessionals felt that the information included in the curriculum is beyond their scope of practice.

When we walk into a classroom, they literally think they have a dietitian in front of them. Even though you make sure you explain who you are and what your limits are, they hear . . . nutrition – EFNEP nutrition – and they wanna ask you everything that concerns their health. (Focus Group 3)

Part of the food label is also understanding the average amount of calories maybe for them as adults. For their children, they'll ask me, "Well how many calories should my seven-year-old eat?" Or whatever. So that's kind of, you know, I can't really give them numbers because I don't know. (Focus Group 4)

Contradictory Information

Educators also felt that some messages in the curriculum are contradicted by other messages within the curriculum or by general nutrition guidelines.

I think with [session] number three, we kinda contradict ourselves about the recipes telling us about salt and sodium, but that recipe is so high with sodium. (Focus Group 3)

I feel like with us teaching about sodium and then we got these recipes with sodium, [participants are] like "Do you really know what y'all talking about, what y'all teaching us?" (Focus Group 3)

I'm teaching you, promoting healthy living and healthy lifestyles, and they're looking at [me like], "Well, let's calculate these calories." (Focus Group 4)

Theory vs. Practice

Several notable comments also emerged indicating a perceived disconnect between program leaders' ideas of what is appropriate or feasible curriculum content and what can practically be implemented in a community setting.

People that are, you know, sitting at the top... if you go out and be me for a day, you would truly understand my world. And I guess they probably feel if I was them for a day, I would understand, though. But... what goes on paper and what has to take place, it's a whole other world. It's hard. (Focus Group 3)

I feel that [the]activities are too messy, they fall out everywhere and to carry all that stuff is, to me, is not comfortable, is not practical at all. And, people, you know...when they gave the demonstration for the first time for us, everything looks perfect but we was not really sitting in a real environment where people ask questions and all of that. (Focus Group 4)

Discussion

The general themes from focus group comments coded with fidelity vs. adaptation, lecture vs. active learning, complexity vs. simplification, professional competence, contradictory information, and theory vs. practice are summarized below and are subsequently discussed within the context of the existing literature:

1. There should be more flexibility to allow educators to adapt the curriculum to better meet client needs.
2. Educational sessions should incorporate active learning rather than lecture-based teaching to a greater degree.
3. The information presented within lesson plans is too dense and complex. Content should be simplified to improve participant retention and program outcomes.
4. The curriculum content elicits questions from clients that educators are not equipped to answer.

5. Information presented within the curriculum seems contradictory at times and undermines the educators' ability to establish rapport and credibility with the clients.
6. Program leadership is not fully aware of the challenges that come with implementing the program at the community level.

Fidelity vs. Adaptation in Community-Based Interventions

Regarding community-based interventions, there is ongoing debate between those who advocate for exact replications of effective program models and those who maintain that models must be adapted to local conditions to maximize impact as well as local ownership (Mowbray et al., 2003). However, while some level of adaptation may be necessary due to social and cultural needs of local participants, the bulk of existing literature has found that better outcomes are achieved when efficacious programs are implemented with greater fidelity to the original model (Durlak & DuPre, 2008; Murimi et al., 2017). Additionally, implementing both curricula and evaluation processes with fidelity can increase confidence in program evaluation data that are aggregated from multiple educators and/or multiple implementation sites (Baker et al., 2020).

Thus, assessing fidelity to a curriculum in the current framework of program implementation and determining which components of the curriculum are essential to achieving desired program outcomes, independent of delivery context, would be of vital interest to program leaders and other practitioners who are adopting EFNEP and other FCS, community health, or nutrition education programming. Making this critical determination could inform ways to strategically build more active learning, flexibility, and alternative programming options into the curriculum that would allow educators to feel more empowered and invested in the programming that they are delivering while also ensuring that accurate and impactful information is being communicated. Additionally, having a better understanding of which curriculum components are most integral to achieving desired program outcomes might inform strategies for condensing material when time constraints or unforeseen circumstances do not facilitate delivery of the full curriculum as intended.

Concerns Related to Nutrition Messages

EFNEP paraprofessionals' requests for a more simplified curriculum as well as concerns regarding professional competence and perceptions of contradictory information focused heavily on curriculum content addressing diet quality. The nutrition education messages within the *Food Talk* curriculum align with key recommendations from the *Dietary Guidelines for Americans*. Food-based recommendations and activities encourage participants to eat a variety of vegetables, consume whole fruits, make half of grain servings whole grains, choose low-fat or fat-free dairy products, and eat a variety of protein foods. The curriculum also includes nutrient-based recommendations to reduce consumption of sodium, saturated fat, and sugar and increase fiber intake. Nutrient-based messages in the curriculum are reinforced through activities utilizing the Nutrition Facts label and the "5/20 rule," which uses the percent Daily Value (% DV) on the nutrition label as an indicator that a serving of an individual food or beverage is high or low in a nutrient. A % DV of 5% or less is considered low, and a % DV of 20% or more is considered high (USDA, 2020). Messages in the curriculum advise consumers to look for foods and beverages that are high in nutrients that are often under-consumed, such as fiber, and low in nutrients that should be limited, such as sodium, saturated fat, and sugar.

Evidence suggests that individuals who lack specialized training in nutrition and dietetics can have difficulty implementing dietary advice that is based on nutrients and not foods (Green, 2015). Additionally, although most individuals can understand some basic nutrition information

on food labels, comprehension accuracy decreases for more complex tasks. For example, label reading can be useful for making comparisons between two food products, but few consumers can calculate the contribution of a single food or meal to total dietary intake (Miller & Cassady, 2015).

This latter concept is exemplified by the perception that the recipes included in the curriculum are at odds with recommendations for healthy eating even though the food demonstrations in the *Food Talk* curriculum incorporate strategies to increase the nutrient density and reduce the sodium, saturated fat, and sugar content of the recipes relative to traditionally prepared versions of these meals. Further probing revealed that these misconceptions are likely a byproduct of paraprofessional educators and program participants applying the “5/20 rule” to the nutrition labels that are provided for the recipes in the curriculum. For example, the average sodium content of the main dish recipes in the curriculum is 21% of the DV. Within the context of other healthful meal and snack choices, a full meal that provides 21% or even 30% of the DV for sodium places a consumer on a trajectory to stay at or below the recommended daily intake (100% DV). However, the application of the “5/20 rule” to a nutrition label for any meal that provides more than 20% of DV would lead to the conclusion that the meal is “high in sodium.” Further, if a person were to limit himself/herself to meals and snacks that only provide 5% or less of the DV for sodium, he/she could fall short of daily minimum physiological requirements for sodium intake, which – if sustained over time – could lead to adverse health outcomes (Whelton, 2016).

Although curriculum-specific feedback has indicated that some recipes within the *Food Talk* curriculum should be modified to improve their nutrient and flavor profiles, discussions and observations from these focus groups raise questions as to whether nutrient-based dietary recommendations, label reading activities, and heuristics like the “5/20 rule” are appropriate or possibly counterproductive within the context of nutrition education and FCS programs. Employing more objective measures of program outcomes, ratings of professional competence, and perceptions of contradictory information within the context of existing programming and making comparisons to the same objective measures collected within the context of pilot programming that focuses solely on food-based recommendations and eliminates label reading activities could help answer these questions. Independent of more objective evaluations, however, it is important to note that the information included in the *Dietary Guidelines for Americans* is intended primarily for policy makers and public health professionals (USDA, 2020), whereas food-based guidance included in MyPlate resources was developed for communicating dietary advice with the public (Post et al., 2012).

Importance of Educators’ Involvement in Curriculum Development

Finally, focus group discussions revealed a perceived disconnect between program leadership and the realities of program delivery in the community setting. EFNEP paraprofessionals provided feedback regarding the physical challenges of transporting and displaying specific curriculum components and indicated that some curriculum content seemed irrelevant to their participants. Evidence shows that programmatic impact is improved among EFNEP educators who report higher ratings of the value of EFNEP and the managerial practices of their supervisors (Dickin et al, 2005). Thus, these discussions highlight the importance of including educators in the curriculum development and revision processes and maintaining an ongoing dialogue throughout the implementation process, not just in EFNEP but in other community health, nutrition education, and FCS programs as well.

Of further note, providing EFNEP paraprofessionals with the opportunity to discuss challenges with each other within the context of the focus groups resulted in some paraprofessionals sharing their personal solutions to identified issues. Specifically, educators shared creative methods for transporting and displaying materials as well as procedural or logistic adaptations such as teaching a portion of the curriculum while a recipe was cooking or being served. This further illustrates a potential benefit of including educators in the curriculum revision process and harkens back to the concept of fidelity vs. adaptation, as these examples illustrate situations where adaptations may be beneficial and likely do not detract from the subject matter and learning concepts of a session.

Implications for Research and Practice

A critical realization with any community-based programming is that the development of effective interventions is just the first step toward improving health; delivering effective programs within real world settings is a complicated process that often results in program diffusion and associated program drift (Durlak & DuPre, 2008). Maintaining an ongoing dialogue between program administrators and staff who are delivering programming in the field can inform needed updates to improve program outcomes and can help identify and resolve any tension between delivering the curriculum as intended and adapting programming to meet local needs. Although this evaluation is limited by its reliance on qualitative data from a small group of EFNEP paraprofessionals working with one specific curriculum, discussions within these focus groups highlight the importance of involving educators and members of the target population in curriculum development and curriculum revision processes and outline methods and topics of consideration for other community health, nutrition education, and FCS program leaders when applying general best practices for curriculum revisions (Baker et al., 2020).

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The Angel Tree Project: Incorporating Mathematics into a Family and Consumer Sciences Service-Learning Project

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Service-learning projects can promote student engagement and learning as they make real-world connections. Family and consumer sciences (FCS) classrooms provide students with unique opportunities to integrate academics, skills, and community service. The paper highlights a three-step service-learning project developed by a FCS teacher wherein students combined FCS and mathematics skills in the real-world as they managed a bake sale, set a budget, and made purchases for less-fortunate children in their community.

There is an emerging interest in FCS and incorporating more core academics such as mathematics into its curriculum. Mathematics is interwoven into our lives because it is a part of most daily tasks. These tasks help make mathematics connections in the FCS classroom where budgeting, food preparation, interior design, parenting, and child development are taught. Deaton et al., (2018) notes that the “pragmatic nature of FCS makes it a natural contender for STEM learning opportunities.” STEM is the acronym for the Science, Technology, Engineering, and Mathematics integration movement. The use of STEM in FCS can be linked to its early beginnings where mathematics and sciences, in particular, were a part of its foundation and helped it become a stand-alone discipline and profession (Deaton et al., 2018; Hustvedt, 2015). However, finding creative ways to teach STEM, especially mathematics, can be challenging.

For many students, mathematics can be difficult to understand, or it can make them anxious. Ashcraft (2002) describes mathematics anxiety as a fear or apprehension when dealing with mathematics. Hunt and Maloney (2022) reveal previous mathematics experiences mediate mathematics anxiety and attitudes as well as resilience in how mathematics is perceived. Apprehensive feelings can be found in both students and teachers. Many teachers feel anxiety, too, as they try to find ways to incorporate mathematics across the curriculum. In a study by Lau et al. (2022), it was revealed teacher confidence in teaching mathematics reduces an individual’s feelings of uncertainty. Furthermore, student perception of teacher confidence while teaching mathematics impacted the level of anxiety as well as the level of mathematic achievement. While there is an increased interest within FCS and its connections with STEM and STEAM (i.e., Science, Technology, Engineering, Arts, and Mathematics) movements (McGregor, 2019), it is important to consider the role FCS has in improving perceptions of mathematics among students and teachers alike.

FCS teachers have unique opportunities to create authentic, real-life learning for students through service-learning projects. Service learning is a teaching strategy that intentionally links community service to academic instruction. As students make connections to real world issues and address ways to resolve them, the level of classroom engagement and motivation increases (Filges et al., 2022). Service learning is important in the educational process because of the many benefits it has for students, educators, and the community. Erasmus (2013) noted that it is

increasingly important for students to learn content knowledge and be exposed to strategies that promote the development of problem solving, critical thinking, communication skills, and active learning. FCS provides students with the opportunity to use learned skills in engaging, real-life settings. This can be achieved through Family, Career, and Community Leaders of America (FCCLA), classroom activities, labs, fundraising events, and service-learning projects. In fact, finding ways to improve student engagement, graduation rates and even career readiness has gained momentum among educators in recent years (Kantrov, 2014). The use of service learning can provide teachers, especially FCS teachers, with engaging ways to keep students motivated and interested in school. In turn, this could help students make important connections between FCS, mathematics, and other foundational skills that lead to personal success. When core academic skills such as mathematics are incorporated into areas such as FCS, it becomes fun and relatable and will follow students long after they leave high school.

The Role of Service-Learning Projects in FCS

Service learning connects acts of service with learning in the classroom. The Arkansas Department of Human Services (2016) notes that service learning is an approach to learning that uses skill acquisition, self-discovery, and community impact. Service learning allows students to make connections between what they have learned and service activities. FCS courses are multifaceted and include activities that lend themselves well to the use of service-learning projects. Examples include food labs to prepare baked goods for fundraising purposes, sewing projects for the homeless, and FCCLA, which encourages students to participate in community-oriented projects as part of its STAR Events competitions. FCS teachers are in a unique position to use service learning not only to teach, but to help engage students in their own learning.

There are several benefits for students associated with participating in service-learning projects. Studies have shown that service learning has the potential to positively impact students in four areas: academics, personal and social development, citizenship, and career awareness (Arkansas Department of Human Services, 2016). Examples of positive outcomes from service learning noted in the literature include improved leadership (Ejiwale, 2013), increased self-efficacy (Hilarski, 2013), and a positive effect on student engagement and achievement (Hullender et al., 2015; Kropp et al., 2015; Lee, 2012). In one study by Hullender et al., 2015, students reported that service-learning projects made them feel more responsible and school more meaningful. Binder and Freytag (2013) indicated that those who volunteer have more significant well-being than those who do not, and Pilkington et al. (2012) reported an increased level of life satisfaction related to volunteer work. Lastly, Meurers (2021) noted that students may become more aware of differences in cultures and diversity issues as they work with others. Service-learning can improve the lives of students and the communities they serve in many ways.

Incorporating Mathematics into FCS

There is growing interest for increasing interdisciplinary mathematics and FCS integration (Berleth, 2020). The catalyst for this interest is Perkins V, which was signed into law in 2018. This law allows CTE programs to recalibrate innovative and creative ways of teaching to provide more opportunities for students. Two specific areas of Perkins V that affects mathematics in CTE are CTE programs of study and CTE work-based learning. Perkins V emphasizes academic and technical content as well as employability skills within CTE programs of study. In work-based learning, Perkins V calls for interactions with real or simulated

workplace settings that foster first hand engagement of tasks that are aligned to curriculum and instruction (Association for Career and Technical Education, 2018b).

In relation to the areas of emphasis, Jacob (2017) stated that CTE can integrate academics into a real-world context, which can motivate students to attend school, become more engaged, and improve core academic skills. These real-life connections have many benefits to students. One benefit of incorporating mathematics in FCS is the connection of interactive learning to everyday tasks. From measuring recipes, balancing finances, to determining vehicle gas mileage, we use different forms of mathematics each day. Scholastic, Inc. (2021) stated interactive learning helps develop critical thinking skills, which are essential to analytical reasoning. Students who explore with imagination and logic learn to make decisions instead of simply memorizing information, thus increasing retention.

Another benefit of mathematics in FCS is building self-confidence in both students and teachers. Mathematics is commonly perceived to be difficult (Fritz et al., 2019) and many students experience anxiety as a result. FCS teachers may go through similar emotions when trying to incorporate mathematics into their curriculum. In fact, Yancura (2018) noted that one of the biggest challenges among teachers is the lack of self-efficacy and feeling less qualified to include mathematics and sciences in their FCS classrooms. Despite these concerns, there has been success using the Math-in-CTE Model (Stone et al., 2008) which uses both pedagogy and professional development for teacher collaborations. It looks at practical mathematics applications when creating lesson plans and helps make connections between mathematics and classroom concepts. Stone et al., (2008) conducted a study using the model and determined five core principles of its use which include developing and sustaining practice among teachers, working with the FCS standards, understanding mathematics as a workplace skill, maximizing mathematics in the CTE curriculum, and recognizing CTE teachers are Math-in-CTE teachers rather than mathematics teachers. Stone et al., (2008) also revealed that the Math-in-CTE Model helped students understand how to solve real problems at hand, use creative problem-solving and application of mathematics to solve abstract problems. Students who participated in the study performed significantly better on two of three math ability assessments.

Whether teachers use developed models or their own lessons, creating meaningful learning opportunities using mathematics can easily be done. FCS teachers have a variety of instructional activities, such as service-learning projects, which can make mathematics in the classroom fun, relatable, and relevant.

The Angel Tree Project

The Angel Tree Project was created after realizing the value of service-learning for students and the need to reinforce mathematics into the FCS classroom. The project lasted for approximately two months during November and December; however, because it was so successful, it will be continued for years to come. *The Angel Tree Project* had three purposes: 1) Equip FCS students with skills in food preparation, cost analysis, and decision making during a Christmas bake sale; 2) Help students learn skills in budgeting, teamwork, and critical thinking about the needs of children in their immediate community; and 3) Utilize real-world budgeting skills to make purchases for children in students' community.

Using the five core Math-in-CTE principles outlined by Stone et al., (2008), the FCS teacher worked with two mathematics teachers to ensure students had a strong foundation in workplace mathematics skills. Percentages, fractions, division, addition and subtraction were highlighted in instruction. The FCS standards remained at the heart of the service-learning project as students maximized mathematics and FCS skills for a bake sale, established a budget,

and shopped. In the end, the FCS teacher helped facilitate and support students' use of mathematics through the *Angel Tree Project*.

Details of the Service-Learning Project

The FCS program associated with the project highlighted here is in a small, rural school where with a yearly enrollment of approximately 100 students. Due to low benchmark mathematics scores, district leaders asked teachers to find creative ways to include mathematics into their curriculum. Realizing mathematics could easily be incorporated into a service-learning project, the *Angel Tree Project* was created using a three-step process. The first step was to hold a week-long Christmas bake sale where students could raise money to fund the project. The bake sale was held for one week in the FCS kitchen lab. Students arranged display tables to create a small store where baked goods were sold. To get ready for the bake sale, FCS students worked during their classes and after school to prepare baked goods. During the sale, they established daily shifts to bake and to sell goods to elementary, junior high, and senior high students. Parents, teachers, and community members also came to the bake sale to purchase prepared goods and to support student efforts. The importance of presentation, consistent portions, and social skills necessary for running a small business became apparent as students worked each day. The bake sale generated approximately \$980.00.

During the second stage of the project, students worked as a team to decide how many children to sponsor from the list provided by the Angel Tree coordinator, establishing a budget based upon bake sale profits, and determining the needs and wants of each child. The Angel Tree community coordinator provides an anonymous list of children who have been identified as low income and in need each year. During the last phase of the *Angel Tree Project*, students shopped in teams for children on the Angel Tree list using the established budget. Students met at the local Wal-Mart store and formed shopping teams to purchase each child's needs first, then wants, from the list provided. Participation in the *Angel Tree Project* allowed students to use mathematics skills, decision making, teamwork and leadership to help others in their community.

Outcomes of the Service-Learning Project

Bake Sale

In November, students met to determine what baked goods to sell and establish pricing for each food sold. Mathematics skills were used to determine production cost, selling cost, and profit margin. Because the school is in a low socioeconomic area, students set prices which were within a selling range, while also providing a profit margin. Prices were determined by using a food cost percentage formula. This was calculated by dividing the cost of each item by the revenue it provided. Overall, students maintained a 33-50% profit margin. Items such as cookies netted a higher profit margin while larger items such as pies yielded smaller profits due to ingredient costs. Cookies sold for \$1.00, cakes \$10-20.00, pies \$10-15.00, brownies \$3.00, sealed bags of chocolate covered pretzels \$4.00, apple fried pies \$3.00, and Oreo truffles \$5.00 for a three-piece bag. The FCS kitchen lab was transformed into a small store as tables were moved and set up to showcase the bake sale goods. Festive decorations and table garnishments helped create a welcoming room. Students also created work schedules to prepare baked goods during school time and on Saturday before the bake sale began. Three parents volunteered to assist students in the FCS kitchens as well. Students donated some baking supplies, but the FCS department purchased most of the ingredients and supplies needed.

During the bake sale, students worked thirty-minute shifts in assigned roles such as cashier, display table salesperson, and customer assistants. Learning different roles within the

hospitality and restaurant industry can help students identify potential career pathways such as managers, waiters, and event planners. The Association for Career and Technical Education (2018a) notes that 80% of restaurant owners and 90% of restaurant managers report their first job was an entry-level position. Once foods were prepared, students began packaging them in attractive plastic bags and ribbons. Neat and orderly placement on selling trays was another important task as fresh baked goods were rotated into the existing stock. Since cookies and brownies were the best sellers, they were made fresh throughout the day. Student workers came by before school to help package fresh goods for that day's bake sale. Middle and high school students came during the last fifteen minutes of lunch while elementary teachers scheduled times throughout the day to bring their classes. It was an important mathematics lesson for younger students as teachers used this as an opportunity to learn how to count money.

Budgeting and Decision Making

After the bake sale, students met to calculate their profit and decide on a budget for the *Angel Tree Project*. This allowed them to determine how many children they could afford to sponsor. The bake sale generated approximately \$980.00, so students chose to sponsor three children for \$300.00 each. The Angel Tree community coordinator provided a list of children ages six months to 18 years of age whose names and information were removed so identities were anonymous. This list provided important information on age, gender, clothing size, special needs and wants. FCS students decided to sponsor an infant, young child, and a teen from the list. Lastly, students chose a date and time after school to meet for shopping. Parent volunteers organized carpools to help transport students while the FCS teacher made reservations at a local pizza restaurant so students and parents could eat before shopping. This time provided a positive social experience for students and a way for the teacher to build rapport with parent volunteers.

Shopping For Children

Students established a day and time to shop for the Angel Tree children they sponsored. Upon arriving at the store, they established shopping teams for each sponsored child and provided a list of needed items. The FCS teacher gave each team one hour to shop and a place to meet for check out. Before teams began shopping, students went over the budget and designated one person to keep track of expenses as they shopped. Students shopped independently without teacher or adult supervision unless needed. Purchases were made by comparing the quality of similar items, utilizing clearance racks, and taking age appropriateness into account. Once a sponsored child's needs were met and enough money remained within their budget, the child's wants were purchased. This included things such as toys, candy or other novelties. At the end of the shopping hour, teams met at the front registers where the FCS teacher prepared each team's purchases. Students anxiously waited to see if they stayed within their budget as cashiers processed the purchases. The final price for sponsoring three children came to \$897.93.

Conclusion

FCS classrooms can provide valuable contributions to the development of innovative and creative curriculum. Brown (2020) notes that FCS programs reinforce academics by integrating mathematics and sciences while allowing students to identify personal abilities by using hands-on activities. Students not only benefit from the integration of academic curriculum, but also service-learning opportunities that can enhance learning by providing personal benefits to students. The *Angel Tree Project* brought students to a higher level of engagement and promoted the FCS program as more students and parents saw its relevance. From the first year to the

second year of the project, student participation increased from ten students to twenty-five due to increased interest.

This project was impactful and served as much more than a fundraiser or a fun activity. Instead, it is a prime example of what effective FCS classrooms can do academically and personally for students and will be continued for years to come. Future projects may also include a student-written article for the local newspaper, additional parent volunteers to help with baking and transportation, as well as a targeted advertising effort within the community. The *Angel Tree Project* helped build a stronger FCS program through increased participation among students as they actively saw real-life connections with mathematics. It also helped students develop a greater sense of leadership and gain an understanding of how service-learning can affect those in need. More importantly, students developed a deeper understanding of the connections between FCS and mathematics as they become independent adults. This was evident from student comments about using prior learning from mathematics courses. Students also demonstrated a greater ease in using mathematics as they calculated profit margins and established a budget. The impact of this project on the FCS program, community, and students was far-reaching: The *Angel Tree Project* not only provided real-world connections to mathematics in the classroom but connected the school and community as well.

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Using Bibliotherapy to Promote Cultural Competence in Family and Consumer Sciences Education

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Diversity, equity, and inclusion are crucial concepts for educators to demonstrate cultural proficiency in the family and consumer sciences (FCS) classroom. The purpose of this manuscript is to show how one FCS educator preparation program seeks to develop culturally proficient FCS educators. By implementing course activities that help students examine their own cultural biases and by exploring bibliotherapy using the Bluford novel series, students learn how to reflect upon cultural differences and gain insight for their future classroom. The details of the diversity, equity, and inclusion plan for the Texas Tech University Family and Consumer Sciences program are provided.

Introduction

Diversity, equity, and inclusion (DEI) are critical concepts for family and consumer sciences educators to understand and demonstrate with cultural proficiency, which requires a shift in thinking for many preprofessional and professional educators today. Diversity is defined as all our varied identities and differences including race, ethnicity, gender, disability, sexual orientation, gender identity, national origin, socio-economic status, thinking, and communication styles as a whole and as individuals (Ford Foundation, 2023). Equity seeks to ensure fair treatment in opportunities and access. Equity is built on respect for all. Inclusion builds a culture of welcoming and belonging by inviting all individuals to contribute and participate (Ford Foundation, 2023). Cultural proficiency is defined as “the policies and practices of an organization or the values and behavior of an individual that enable that agency or person to interact effectively in a diverse environment” (Nuri-Robbins et al., 2012, p. xxiii). In the Family and Consumer Sciences (FCS) classroom, cultural proficiency should be operationalized as, “educating all students to high levels through knowing, valuing, and using as assets their cultural

backgrounds, languages, and learning styles within the context of our teaching” (The Center for Culturally Proficient Educational Practice, 2022). The purpose of this manuscript is to highlight how one FCS educator preparation program (EPP) has embraced diversity, equity, and inclusion and seeks to develop culturally proficient FCS educators. Examples of EPP course activities are described and details of the DEI Plan for the program are provided.

One framework for cultural competency has four tools: the barriers, the guiding principles, the continuum, and the essential elements (Helms, 1990). The barriers include the problems that occur when people resist change. The guiding principles equip individuals with moral tools. The continuum includes five standards of behavior for measuring cultural growth. The standards are assessing culture, valuing diversity, managing the dynamics of differences, adapting to diversity, and institutionalizing cultural knowledge. These are also known as the essential elements for cultural competency in the classroom. The benefits of cultural proficiency are to provide more effective relationships, promote positivity, and prepare instructors for a diverse classroom (Gollnick & Chinn, 2017). The underlying core values of this framework are the guiding principles that equip the FCS EPP with the tools needed for developing culturally proficient educators.

By becoming culturally proficient, educators can consequently implement a culturally responsive methodology (Hutchison & McAlister-Shields, 2020). According to Pérez (2021), cultural responsiveness is the practice of putting your cultural competence into action. Both are essential in the field of education—especially when recognizing the diverse population of today’s classroom. Although culturally responsive teaching has emerged as an essential aspect of pre-service teacher training, many enrolled in the EPP often complete their program of study without being introduced to issues in society produced by race, class, and culture (Hutchison & McAlister-Shields, 2020).

The faculty in the FCS EPP has extensive training in cultural proficiency in the classroom and has successfully implemented diversity training through culturally responsive pedagogy within undergraduate and graduate courses. Driving our programmatic changes was recognizing that most students enrolling in the FCSE undergraduate program are predominately white (Texas Tech University, 2021). Further, in Texas K-12 public schools, Hispanic students accounted for the largest percentage of enrollment with 58% and African American students had a total enrollment of 12.6% in 2020 (Du et al., 2020). To better prepare our EPP students for the classroom, it is essential that we prepare future teachers to understand that racial and cultural identities are factors that should be considered, taught, and demonstrated in their educational environments (Hutchison & McAlister-Shields, 2020). Therefore, the FCS EPP planned opportunities and adopted strategies for our students to examine their biases and learn more about minority students. By doing so, faculty are providing future educators with strategies to build inclusion and focus on student academic achievement using culture as a cognitive scaffold. The following learning experiences are the result of assessment processes including our program-level assessment and our DEI plan for EPP accreditation.

Implementation

Students in our courses must learn, understand, and recognize their hidden biases before they can successfully teach in a classroom of their own (Marco Learning, 2018). Bias is perpetuated by conformity with in-group attitudes and socialization by the dominant culture. White culture is dominant in America, possibly explaining why people of color do not often show bias or favoritism towards their own ethnic group (Blevins, 2015). This happens because

the mass media has control over images we routinely see, and many times takes advantage of stereotypical characters such as young, beautiful, white people shown as able-bodied and popular. Omitting cultures from TV shows presents an all-white world, which could explain why children adopt hidden biases opposite from their families (Southern Poverty Law Center, 1991-2023). Scientists believe children can acquire prejudices as toddlers. Children as early as three can pick up on racial stereotypes without even understanding their significance. Children then go on to form attachments to their group and create negative attitudes about the out-group or other racial groups. Early in life, these biases may appear in verbal slurs, ethnic jokes, stereotypic categorizations, and discriminatory acts (Southern Poverty Law Center, 1991-2023).

Cultural biases that students do not think exist within themselves exist as mental residue in almost everyone. Studies have shown individuals can consciously work and behave without prejudice, but still possess negative hidden biases (Southern Poverty Law Center, 1991-2023). To bring these biases to light within our students, they are instructed to take an Implicit Association Test (IAT). This type of test by Project Implicit® can tap into those hidden biases, stereotypes, and prejudices that can affect a culturally competent teacher and classroom (Harvard.edu, n.d.). Students are allowed classroom time to take the test but are instructed during the test they may begin to *feel* their hidden biases and prejudices as they are contemplating the test questions (Southern Poverty Law Center, 1991-2023). Just by requiring our future educators to take this test, it is forcing hidden biases into the conscious part of the brain.

Bibliotherapy

After students complete the testing, a discussion then takes place on how to be committed to change. If individuals are aware of their hidden biases, then those biases can be monitored and altered before the behavior presents itself. To further impress upon students how their understanding of hidden biases can help them be more culturally proficient educators, a bibliotherapy exercise is completed in class.

Bibliotherapy is a therapy modality that involves storytelling or the reading of specific texts with the purpose of healing. It uses an individual's relationship to the content of books, poetry, and other written words as therapy (Bencomo, 2021). An FCS educator can use the predominant themes identified in the written content for instructional units to help increase cultural proficiency. The goals of bibliotherapy are: (1) to provide information about a problem; (2) to communicate new values and attitudes; (3) to create an awareness that others have dealt with similar problems; and (4) to provide solutions to problems (Bencomo., 2021). Identifying and understanding one's bias can then be felt and seen through the lens of bibliotherapy. Bibliotherapy also helps students to apply the beginning standards of cultural growth which include assessing culture, valuing diversity, and managing the dynamics of differences.

Students are assigned to read *A Matter of Trust* (Schraff & Langan, 2002) from the Bluford Series. The Bluford Series is a collection of novels that focus on the lives of high school students who attend Bluford High, named after Guion Bluford, America's first black astronaut. The stories are set in contemporary urban America. The characters featured in the novels are diverse in many ways, and students can experience how the characters address topics such as family, friends, trust, violence, isolation, peer pressure, and many more that are important to adolescents (*The Bluford Series*, 2022). *A Matter of Trust* (Schraff & Langan, 2002) centers on high school student Darcy's growing conflict with her old friend, Brisana Meeks. Amid jealousy and competition, Darcy fights for her relationship with Hakeem Randall and struggles with her fears over her own family's future (Schraff & Langan, 2002).

As a class and after reading the book, students are assigned a character and must answer questions based on that character's point of view. For example, a student would be assigned the character Darcy. This student would practice empathy for Darcy while the other students analyzed the feelings of how *they* would feel if their father left at a young age as Darcy's father did. Pretending to be Darcy, they would then come up with one question to ask Darcy's father, and the person pretending to be Darcy's father would respond from the dad's perspective. Completing this exercise with various characters and storylines from the book enables individuals to feel the weight of the characters' issues which range from jealousy, racial injustice, stereotyping, fighting, relationship struggles, fear, and many more. Students are then asked to complete the following:

Write a one-and-a-half-page summary of the *A Matter of Trust* (Schraff & Langan, 2002) novel. Please include these items in your response:

- What is the overall summary of the story being told?
- Specifically, how can this story be an outlet for students to work through problems and help them recognize they are not alone in their struggles?
- Reflect upon cultural differences and insights.
- What is bibliotherapy?
- How could bibliotherapy be included as a teaching method in your future classroom?

According to Byrd et al. (2021), there are multiple approaches to using bibliotherapy. Simply reading the literature can be a source of becoming more culturally aware or allowing yourself to become empathetic as you gaze through the lens of each character. Another method, as referenced in the strategy above, includes interactive bibliotherapy. Within this method, the participant, the literature, and the facilitator create interactions that involve distinct responses and a better understanding of the story. The facilitator can drive the conversations that help the participant integrate feelings and cognitive responses to the story. Additional bibliotherapy activities could include:

- *Reading and responding to the text:* Teachers can use the series to promote critical reading and response skills, encouraging students to reflect on the characters, themes, and issues presented in the text. Students can also discuss and analyze their own experiences and perspectives concerning the text.
- *Creating visual representations:* Students can create visual representations of the characters or themes in the series, using a range of media such as drawing, painting, or digital tools. This activity can promote critical thinking and reflection, as well as creativity and self-expression.
- *Engaging in discussions:* Teachers can facilitate discussions on themes and issues presented in the series, creating a safe and respectful space for students to share their own experiences and perspectives. These discussions can promote critical thinking, empathy, and understanding.
- *Conducting research:* Teachers can assign research projects that explore topics related to the themes and issues presented in the series, such as poverty, racism, or social justice. This activity can promote critical thinking, research skills, and awareness of different perspectives and experiences.
- *Writing and reflection:* Teachers can assign writing and reflection activities that encourage students to reflect on their own experiences and perspectives, and to connect

these to the themes and issues presented in the series. This activity can promote critical thinking, self-awareness, and empathy.

- *Collaborative projects*: Teachers can assign collaborative projects that require students to work together to address issues of equity and inclusion, such as creating a community action plan or developing a public service announcement. This activity can promote critical thinking, creativity, teamwork, and advocacy skills.

The FCS EPP has created and implemented a DEI Plan for our undergraduate and graduate courses. While our plan is a compliance expectation with the Texas Educator Preparation Program Requirements, we have gone beyond the minimum expectations to include a comprehensive plan which was used as a model plan in our recent EEP accreditation review documentation. Please see the Appendix to view the Diversity, Equity, and Inclusion in FCSE Undergraduate Educator Preparation Courses DEI plan.

Conclusion

By identifying hidden biases, future educators can journey toward their cultural proficiency, therefore, enabling them to create a culturally competent classroom in their future teaching endeavors (The Center for Culturally Proficient Educational Practice, 2022). Bibliotherapy is a starting point to help FCSE students learn how to implement DEI in their classroom. A growth mindset and continuous improvement are necessary within our FCS EPP. Using student evaluations and reflections to guide our growth, continuous improvement can be made. Our DEI goals can be achieved whenever there is a focus and recognition on goal achievement, and faculty, staff, and students will thrive when we begin to cultivate awareness of our biases, work to increase empathy and empathic communication, practice mindfulness and loving-kindness, and develop cross-group friendships in our own lives. By implementing DEI activities in our EPP, over time, our students will be able to connect and communicate with other teachers and students, as well as thrive in the classroom and as future FCS educators. The faculty at Texas Tech University wants our students to recognize they are proficient in DEI with their students and become advocates for ALL of their students, and champions for the Family.

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Appendix

Diversity, Equity, and Inclusion in FCSE Undergraduate Educator Preparation Courses

There is support for our DEI plan at the institutional level. Specifically, the College of Human Sciences provides a college-wide DEI response statement and facilitates discussions and activities through its DEI Committee, which is currently chaired by an FCS EPP faculty member.

COHS Administration Response to Diversity, Equity & Inclusion

The College of Human Sciences believes and recognizes that diversity makes us stronger. Developing a deeper understanding of each diverse background represented in our community will only strengthen our ability to build a richer and more resilient community that positively impacts those around us and beyond. We are committed to taking action to create a learning environment where all feel valued, respected, supported, and empowered.

Family and Consumer Sciences Overall Program Level Implementation Actions

- A new mentorship program is implemented by the Field Experience Coordinator. This program pairs experienced family and consumer sciences teachers with those who have been teaching for three years or less to encourage and help them navigate successfully in the FCS profession.
- Recruit from diverse schools and use culturally diverse schools more frequently for field experiences.
- Invite diverse representatives to the FCSE Program Advisory Board.
- Hold focus groups with diverse learners in our programs.
- Based upon feedback, adjust pedagogical practices in the EPP.
- Survey cooperating teachers for their DEI local expectations and classroom practices.
- Continue having FCS EPP faculty members serve on the college-level DEI Committee.
- Encourage all faculty to apply for the *Institute for Inclusive Excellence*, a university-level extensive professional development for faculty. Each cohort requires an application and a nine-month commitment from faculty participants. Two current FCS EPP faculty have participated.
- Utilize and implement the Equity Framework for Career and Technical Education Research found at CTE Research Network online.

Family and Consumer Sciences Education Program Course Implementation Actions

Course: Introduction to Family and Consumer Sciences Education.

Activities and Resources:

- Discuss DEI during the teaching philosophy assignment and “Traits of a Good vs. Bad Teacher” lecture.
- Begin the process of understanding your own biases by discussing and examining the information on these websites:
 - The Center for Culturally Proficient Educational Practice (2022)
 - MasterClass (*Understanding cultural bias: 3 examples of cultural bias*, 2021)
 - Psychologenie (Blevins, 2015)
- Include the *Culturally Competence Now* (Mayfield, 2020) textbook by making it a required text that will be used throughout the FCSE program.

Long-term Goals or Ideas:

- After this course, students will understand how important DEI is in education, as well as realize that their behaviors and biases affect this.

Course: Foundations of Family and Consumer Sciences Education

Activities and Resources:

- Inclusion of all students in (Career and Technical Student Organizations) CTSO-based activities through the integration of CTSO components in the classroom using the FCCLA® Stand Up national program in the classroom.
- Have students participate in FCCLA®-based activities like the Stand Up national program or Power of One with information relating to diversity, equity, and inclusion.
- Examine the state and national standards to determine how they can be used to create consistency and equity within lessons.

Long-term Goals or Ideas:

- Have students create DEI-focused learning opportunities for all students they will work with in the future.
- Use the state and nation to drive lessons on DEI.

Course: Professional Applications in FCSE (Methods)

Activities and Resources:

- Diversity in learning styles.
- Introduce Cultural Competence in the lesson plans, activities, and visuals within the classroom.
- Address cultural needs/competency in the classroom planning process including micro and macro aggressions in terms of instruction.

Long-term Goals or Ideas:

- Introduce district-level data for school districts.
- Assign diverse districts and schools for the unit plan. This is the information the students provide in the unit background statements and illustrates the necessary learning supports in the unit and lessons.

Course: Instructional Management in FCSE

Activities and Resources:

- Classroom management lectures and discussions include the importance of diversity, equity, and inclusion in the classroom.
- Classroom management lectures and discussions from the Resilient Educator website cover equity, differentiated instruction, culturally responsive teaching, strategies for empathy, social-emotional learning (life literacy-emotional IQ), building character, creating a community for English language learning (ELL) students and Native American students, teaching tolerance in the classroom, inclusive teaching for project-based learning (PBL), tips for understanding emotional behavior disorder (EBD) students, equitable grading, and positive student and teacher relationships.
- Students must create a classroom diversity, equity, and inclusion statement along with their classroom management plan.
- Students are referred to the chapters in the FCS education e-textbook, *Teaching Family and Consumer Sciences in the 21st Century: A Live Interactive textbook* (Alexander & Holland, 2018), focusing on classroom management and DEI.

- Students create an entire instructional unit plan dedicated to DEI.

Long-term Goals or Ideas:

- Students will leave this course understanding how to control their own biases in a classroom and obtain ideas, instructions, and a plan on how to implement DEI activities in their classrooms in the future.

Course: Career Preparation in FCSE

Activities and Resources:

- This course provides five hours of work-based learning field experience to observe diversity, culture, and safety in the workplace.
- Course content presents ways to remove legal barriers around work-based learning by understanding state and federal legal, health, and safety requirements and ways to mitigate work-based learning liability concerns for schools and employers to ensure equal access for all students.
- A member of the local Society of Human Resource Management is invited to discuss what they are doing to ensure diversity, equity, and inclusion in today's workplace.

Long-term Goals or Ideas:

- Develop work-based learning case scenarios where students research, critically think, and develop a solution to diversity, equity, and/or inclusion problems in the workplace.

]Course: Research and Evaluation in FCSE

Activities and Resources:

- Developing a project that requires various scaffolding strategies to ensure all students are successful in learning while working on the project, as well as every team member is prepared to present that project to an authentic audience.
- Develop a project around a global issue related to a particular FCS course, such as food insecurity that includes meeting with individuals in a particular country to better understand why it is an issue.

Long-term Goals or Ideas:

- Students will understand how to create diverse teams within collaborative research and evaluation.
- Continue with mining state education agency data, including the total number of students and diverse populations, to research districts of interest for their student teaching placements.

Course: U.S. Family Issues and Social Action

Activities and Resources:

- Teaching Tolerance Website: It's an invaluable teacher tool to help reduce prejudice and encourage tolerance in schools, as well as within society as a whole
- Anti-Defamation League (ADL) has a site that fuses meaningful curricular connections between challenging current events and class content and is a helpful go-to for teaching tough issues

Long-term Goals or Ideas:

- Facing History and Ourselves: A wealth of resources to explore racism and prejudice. These materials empower students to understand and address difficult ethical choices --

past and present, as well as social justice and biases in policymakers. These resources will be added to this course in the future.

Course: Student Teaching in FCSE

Activities and Resources:

- Students attend required TEA training: Tutorial for Substance Use Disorder Treatment Professionals, Making Educators Partners in Youth Suicide Prevention: Act on FACTS, Texas Behavioral Support Initiative Course, and Dyslexia: Characteristics, Identification, and Effective Strategies.
- During student teaching, students are implementing their DEI plan. With the guidance of their cooperating teacher, they are adjusting their own biases and learning how to ensure each student is being served equitably. Students can also create their own DEI statement.
- Each lesson plan contains its plan for serving special populations.
- During student teaching seminars, student teachers refresh, reflect, and reinforce their classroom interactions by researching effective strategies for teaching in an all-inclusive environment. What are they seeing in their classrooms to share with their peers?

Long-term Goals or Ideas:

- After this course, students will have fully implemented their DEI plan for a minimum of two weeks. This will help them gain experience in implementing their DEI plan for use in their future classroom.

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