

# DISSERTATION

## *Exploring Career and Technical Educators' Attitudes: The Participation of Girls in Nontraditional Programs of Study*

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*Exploring Career and Technical Educators' Attitudes: The Participation of Girls in Nontraditional Programs of Study* is a dissertation by Anne Sourbeer Morris, accepted by the University of Phoenix for the degree of Doctor of Education in Educational Leadership, in March 2011. The full executive summary is available by request. The study is published on the ProQuest database:

<http://gradworks.umi.com/34/67/3467492.html>

### Executive Summary

#### ABSTRACT

The Carl D. Perkins Career and Technical Education Improvement Act of 2006, known as Perkins IV, mandates improvements in the participation and completion of secondary career and technical education (CTE) students pursuing nontraditional Programs of Study (POS). The directives are among pressures placed upon CTE leaders from stakeholders. Perkins IV legislation affects CTE leaders whose schools receive federal funding under Perkins IV. Exploring the attitudes of experienced career and technical educators regarding the participation of girls in nontraditional CTE programs may inform an understanding of the conditions supporting or inhibiting the participation of girls pursuing nontraditional POS. The two components of the research included a pilot survey of 48 career and technical educators from Southeastern, PA (SEPA), and a Delphi panel of 20 individuals including those with experience or expertise in CTE, the career development of girls, or nontraditional student issues. The Delphi panel represented 10 states and the District of Columbia. The Delphi panel included CTE educators from SEPA, tying the two study components together. The exploration of career and technical educator attitudes makes the study unique. The central question was *how does the lack of understanding about educator attitudes toward educational and gender equity limit the development of equitable nontraditional programming and response strategies?* The issue of girls pursuing nontraditional POS is complex. The findings identified factors related to the participation of girls in nontraditional POS and suggested solutions to challenges related to the participation and completion of girls. Four themes emerged including educator bias, supporting girls, systemic issues in CTE, and state and national issues. Strategies were identified.

#### DOCTORAL RESEARCH

##### EXPLORING CAREER AND TECHNICAL EDUCATORS' ATTITUDES: THE PARTICIPATION OF GIRLS IN NONTRADITIONAL PROGRAMS OF STUDY

Among the issues facing contemporary educational leaders, are those related to educational equity. Amid those issues is gender equity as it relates to a student's access to programs, curriculum, and instruction. Specifically, educational leaders are charged by federal and state governments to recruit and retain

students in career and technical programs identified as nontraditional by gender. The attitudes held by career and technical educators, including those of administrators and counselors, may influence the willingness of secondary school students to participate in career and technical programs identified as nontraditional. This study explored the attitudes and recommendations of experienced career and technical educators as they related specifically to the participation of girls pursuing nontraditional secondary career and technical education Programs of Study.

## **The Problem**

The general problem is that career and technical leaders whose schools or programs receive Perkins IV funding are accountable for annual improvements in the outcomes identified by *Perkins Core Performance Indicator 6*. *Core Indicator 6* addresses the *participation* and *completion* of students pursuing nontraditional career and technical Programs of Study. The ability to increase the annual participation of girls pursuing nontraditional career and technical programs is of concern to career and technical leaders. The study probed whether a lack of understanding about educator attitudes toward educational and gender equity may limit 1) the development of gender-equitable, nontraditional programs and 2) the achievement of participation and completion goals.

## **Purpose of the Study**

The purpose of the study was to explore the attitudes of experienced career and technical educators from the southeastern region of Pennsylvania about the participation of high school girls in career and technical Programs of Study identified as nontraditional by gender. Further, the study sought recommendations of national experts regarding best practices promoting the design and development of equitable nontraditional programming and educator response strategies to address *Perkins IV Core Performance Indicator 6*. To explore this issue, the study employed a two-part qualitative research methodology - pilot survey and Delphi panel - administered electronically. Open-ended response options were employed. The study featured a comparison of regional and national perspectives.

The pilot survey – *Career and Technical Educator: Nontraditional Attitudes Survey – Girls (CTENAS-G)* – was administered to 126 career and technical educators of whom 48 or 38% responded (63% women, 37% men). Pilot survey participants included experienced educators from three secondary career and technical education centers, all in Southeastern Pennsylvania. The pilot study was convened to explore the attitudes of career and technical educators about girls’ participation in nontraditional career and technical Programs of Study. The survey also explored issues and generated solutions to challenges related to the recruitment and retention of girls.

Entitled *Girls Participating in Nontraditional Programs of Study: An Analysis of Issues and Solutions*; the Delphi panel consisted of local, state, and national educators with expertise in career and technical education, nontraditional issues, or the career development of girls. The 20 Delphi panelists (12 women and 8 men) represented 10 states – a cross-section of the country – and the District of Columbia. The panelists participated in three-rounds of discussion conducted over a five-week period. The panel was convened to respond to themes generated by the pilot study, issues related to gender equity, and to identify best practices promoting the participation and completion of girls enrolled in nontraditional programs. Round 3 specifically linked the pilot survey with the Delphi panel discussions.

## Research Questions

The central question was *how does the lack of understanding about educator attitudes toward educational and gender equity limit the development of equitable nontraditional programming and response strategies?* Sub-questions refined the central question.

1. What are the attitudes of career and technical educators regarding the ability of girls to fulfill the roles and responsibilities inherent in traditionally male-dominated careers?
2. What are the characteristics of girls whom career and technical educators may identify as able to pursue career and technical education (CTE) Programs of Study (POS) identified as nontraditional by gender that differ from the characteristics of boys participating in male-dominated CTE programs?
3. What educator behaviors may promote or limit girls' participation in CTE POS identified nontraditional by gender?
4. What difficulties may educators encounter associated with the recruitment and retention of girls in CTE POS identified as nontraditional by gender as related to *Perkins IV Core Indicator 6* mandating annual improvements in nontraditional participation and completion?
5. What recommendations do experts have for the design and development of equitable nontraditional programming, curriculum, and instruction, and educator response strategies?
6. What recommendations do experts have for best practices that may promote the participation and completion of girls in nontraditional CTE POS that may differ from the strategies used to facilitate the participation of boys in male-dominated programs?
7. What recommendations do experts have that support nontraditional gender education and equity?

## CONCLUSIONS AND RECOMMENDATIONS

In response to central and sub questions, the study explored the influences of educator attitudes relating to the participation of girls pursuing nontraditional career pathways. The study identified themes relating to challenges faced by individuals, primarily girls, pursuing nontraditional career and technical programs. Specific strategies promoting equitable programming were identified through the pilot survey and Delphi panel. The distinct difference between the findings of the study and the literature review was in the specificity of the discussion to career and technical educators and to the education of high school girls pursuing nontraditional programs of study.

### Pilot Survey Findings

While the survey generated a 38.1 % response rate, only five of the respondents identified themselves as teaching girls pursuing nontraditional Programs of Study. Of the forty-eight participants, eighteen were career and technical program instructors. The remainder of participants were administrators, counselors, and other academic instructors. In addition to responding to demographic questions, pilot survey participants responded to statements including those about their knowledge of nontraditional issues, their attitudes about girls' participation in nontraditional Programs of Study, and the use of specialized strategies to facilitate the recruitment or retention of girls.

Career and technical educators participating in the pilot survey overwhelmingly agreed with statements on the CTENAS-G. Via the open-ended response option, educators suggested that nontraditional program instructors might require additional support and reinforcement in facilitating the participation of girls in nontraditional Programs of Study. Educational leaders may benefit by exploring the underlying and systemic reasons limiting the participation of girls in nontraditional Programs of Study and the role that educators of girls in nontraditional Programs of Study play in the process. Further, leaders may consider implementing supports for the educators teaching nontraditional Programs of Study.

### **Delphi Panel Findings**

The three Delphi rounds contributed to the study by addressing the central and sub-questions associated with this survey. The Delphi panel provided open-ended opportunities of a sample of educational leaders with expertise or experience in the career and educational development of girls, nontraditional student issues, or career and technical education, to respond to questions specifically exploring educator attitudes and perceptions about girls pursuing nontraditional career and technical education programs. Delphi panelists had the opportunity to suggest solutions to nontraditional issues as they apply to girls. Delphi panelists made recommendations regarding best practices promoting the design and development of equitable nontraditional programming and educator response strategies.

The panel discussed issues, which paralleled those of the CTE educators from the regional educational entity in Southeastern Pennsylvania. Universally, Delphi panelists agreed that career and technical educator attitudes might influence girls' willingness to participate in career and technical Programs of Study identified as nontraditional by gender. The panel discussed the importance of educator responsiveness to students and the importance of educators being open, encouraging, and supportive of girls in nontraditional occupational programs. Respondents discussed the overt or implicit manner in which educators may encourage or discourage girls. Four themes emerged from the discussion: educator bias, supporting girls pursuing nontraditional Programs of Study, systemic issues in career and technical education, and state and national issues.

The themes individually and collectively demonstrate the challenge faced by career and technical leaders in addressing Perkins IV, *Core Performance Indicator 6*. Educators are vital to the success of school-wide initiatives designed to promote nontraditional Programs of Study. Educator attitudes make a difference between a successful implementation of strategies supporting girls and an unsuccessful campaign to increase the number of girls in nontraditional Programs of Study. Without the support of educators, educational leaders may not be successful in addressing *Core Performance Indicator 6*.

### **Comparison of Pilot Survey (regional) with Delphi Panel (national) Responses**

The majority of participants in the pilot survey and all Delphi panel participants agreed that educator attitudes influence positively or negatively, a girl's decision to participate in or to complete a nontraditional career and technical education program. For example, panelists discussed subtle communications that may express career and technical educator's stereotypical expectations relating to a girl's ability to participate in nontraditional occupations. Such communications may serve - intentionally or unintentionally - to filter girls out of entering into or completing nontraditional career and technical programs.

The findings of the pilot survey, in combination with the Delphi panel recommendations, offer insight into the role of the career and technical educator in the recruitment and retention of girls in nontraditional Programs of Study. For example, both groups concluded that educators require support in facilitating the participation and retention of girls in nontraditional Programs of Study. Survey and Delphi participants alike called for more female teachers, role models, and mentors for girls interested in nontraditional career and technical fields. They stressed the need for more accurate academic, career, economic, and workforce information combined with career exposure through shadowing, co-operative education, and similar opportunities. Early career counseling is likely to increase enrollment. Girls enrolled in nontraditional career and technical education may benefit from additional supports including counseling groups.

Findings in the literature implied that the issue of girls' participation in and completion of nontraditional Programs of Study is complex. One-hundred percent of the Delphi panelists agreed. A significant percent, 40.5%, of the survey participants disagreed or were undecided about the complexity of the issue, yet by the educators' admission, a limited number of girls, fewer than three per year, participated in four of the five male-dominated career and technical programs instructed by pilot survey participants, since 2005. The educators did not offer specific reasons for their disagreement about the complexity of issues surrounding the recruitment and retention of girls in nontraditional programs or suggest reasons for the limited participation of girls.

The consensus of the Delphi panel was that educators' responsiveness to girls in nontraditional Programs of Study is directly related to an educator's attitude about girls pursuing nontraditional Programs of Study. The contrast of responses regarding the complexity of the issue was dramatic, as the leadership of the regional educational entity in Southeastern Pennsylvania supported this research specifically because of the challenges faced relating to increasing the participation and completion of girls in nontraditional programs in the career and technical centers. The findings demonstrate dissonance between educators' attitudes regarding the complexity of the issue of nontraditional participation and completion and the issue faced by educational leaders in attempting to improve nontraditional participation and completion.

### **Implications**

This study found that an educator's attitudes influence the participation and completion of girls in nontraditional career and technical programs of study. An educator's responsiveness to girls in nontraditional Programs of Study is directly related to the educator's attitude about girls pursuing nontraditional careers. If educators do not possess the knowledge and skill required to support girls pursuing nontraditional occupations, the educators may intentionally or unintentionally limit girls' educational access.

Delphi panelists raised the question, "To what extent can educators' attitudes play a decisive role – positive or negative – in influencing girls' willingness to participate in career and technical programs perceived as nontraditional for women?" Educators might consider assessing personal bias as girl-specific recruitment and retention strategies are designed and implemented. Curriculum, instruction, and evaluation that are intentionally and purposefully gender-bias-free must be developed. Educators must create safe, equitable, and harassment-free school and classroom environments.

## Recommendations

The research was designed, in part, to support CTE leaders administering the three CTE centers in SEPA as they strive to increase the participation of students enrolled in nontraditional POS in response to Perkins IV, *Core Performance Indicator IV*. The findings of the pilot survey, in combination with Delphi panel recommendations, offered insight into the role of the CTE educator in the recruitment and retention of girls in nontraditional POS. Educational leaders may use the findings of this study to address organization-wide issues and to design a targeted organizational plan addressing Perkins IV directives. Specific recommendations include:

1. Exploration of the “root causes” underlying the limited participation of girls in nontraditional POS i.e. the resources of the National Alliance for Partnerships in Equity, STEM Equity Pipeline Project’s 5-Step Process;
2. Create school-specific forums intentionally designed to promote dialogue between educators to address systemic issues related to the recruitment and retention of girls in nontraditional POS. Encourage all CTE educators to be a part of the process and a part of the solution;
3. Offer educators ongoing professional development opportunities and information regarding the impact of attitudes, bias, or stereotyping on student decision making;
4. Develop specific strategies designed to create an organization/school-wide climate of acceptance and inclusiveness; and
5. Inform and engage key educational stakeholders in supporting educational initiatives.

## Summary

This study and its accompanying literature review were as much about raising awareness regarding the academic, economic, social, and political challenges faced by young women pursuing nontraditional career and technical POS as they were about an examination of educator attitudes. The study addressed the dictates of Perkins IV legislation and the resultant challenge presented to leaders of secondary career and technical centers. This study explored the impact of career and technical educator attitudes on the participation of girls in nontraditional POS. This study was about the investigation of issues and the implementation of solutions that will promote opportunities for girls while enabling career and technical leaders to address Perkins IV mandates and increase the participation and completion of girls in nontraditional POS.

CTE: Nontraditional Attitude Survey-Girls ( <i>CTENAS-G</i> )							
A Comparison of Career and Technical Educator and Delphi Panelist Responses to Statements on the <i>CTENAS-G</i>							
Response	1	2	3	4	5	6	7
Options	Strongly Agree	Agree	Slightly Agree	Undecided	Slightly Disagree	Disagree	Strongly Disagree
<i>Career and technical educators influence the academic, career, and educational development of girls.</i>							

Delphi Response	57.1%	35.7%	7.1%	0%	0%	0%	0%
CTE Educator Response	53.3%	35.6%	4.4%	4.4%	2.2%	0%	0%
<i>Career and technical educators influence the participation of girls in career and technical programs identified as nontraditional by gender.</i>							
Delphi Response	50.0%	42.9%	7.1%	0%	0%	0%	0%
CTE Educator Response	48.9%	31.1%	8.9%	8.9%	0%	2.2%	0%
<i>Girls should have the opportunity to participate in all career and technical Programs of Study.</i>							
Delphi Response	100%	0%	0%	0%	0%	0%	0%
CTE Educator Response	93.2%	6.8%	0%	0%	0%	0%	0%
<i>Girls should participate in Programs of Study identified as nontraditional by gender.</i>							
Delphi Response	71.4%	28.6%	0%	0%	0%	0%	0%
CTE Educator Response	60.1%	33.3%	2.2%	0%	2.2%	2.2%	0%
<i>Girls have the ability to participate in all nontraditional career and technical POS.</i>							
Delphi Response	92.9%	7.1%	0%	0%	0%	0%	0%
CTE Educator Response	88.9%	11.1%	0%	0%	0%	0%	0%

<i>Recruiting girls into male dominated Programs of Study is difficult.</i>							
Delphi Response	50.0%	42.9%	7.1%	0%	0%	0%	0%
CTE Educator Response	31.1%	26.7%	24.2%	8.9%	6.7%	2.2%	0%
<i>Facilitating the participation of girls in male dominated Programs of Study is difficult.</i>							
Delphi Response	35.7%	50.0%	7.1%	0%	7.1%	0%	0%
CTE Educator Response	20%	24.4%	2.2%	22.2%	8.9%	15.6%	6.7%
<i>Girls require specialized support, differing from the support offered to boys, in order to participate in nontraditional CTE Programs of Study.</i>							
Delphi Response	35.7%	35.7%	14.3%	0%	0%	14.3%	0%
CTE Educator Response	8.9%	26.7%	17.8%	15.6%	8.9%	22.2%	0%
<i>Girls should be recruited into nontraditional career and technical Programs of Study.</i>							
Delphi Response	57.1%	42.9%	0%	0%	4.4%	4.4%	0%
CTE Educator Response	31.1%	48.9%	11.1%	0%	4.4%	4.4%	0%
<i>Career and technical educators may influence the participation and completion of girls in POS leading to nontraditional careers.</i>							
Delphi Response	57.1%	42.9%	0%	0%	0%	0%	0%
CTE	48.9%	31.1%	8.9%	8.9%	0%	2.2%	0%

Educator Response							
<i>Career and technical educators may inhibit the participation of girls in Programs of Study leading to nontraditional careers.</i>							
Delphi Response	50%	42.9%	7.1%	0%	0%	0%	0%
CTE Educator Response	28.9%	33.3%	8.9%	6.7%	2.2%	17.8%	2.2%
<i>Specific Strategies should be used to encourage the participation of girls in nontraditional programs of study differing than those used to recruit/enroll boys.</i>							
Delphi Response	57.1%	21.4%	14.3%	0%	7.1%	0%	0%
CTE Educator Response	15.8%	31.6%	21.1%	13.2%	7.9%	10.5%	0%
<i>Specific strategies should be used to encourage the retention of girls enrolled in nontraditional CTE programs differing from those used to retain boys.</i>							
Delphi Response	50%	35.7%	0%	0%	7.1%	7.1%	0%
CTE Educator Response	18.9%	29.7%	16.2%	21.6%	5.4%	8.1%	0%
<i>The issue of girls enrolling in and completing nontraditional POS is complex</i>							
Delphi Response	64.3%	35.7%	0%	0%	0%	0%	0%
CTE Educator Response	18.9%	21.6%	18.9%	16.2%	10.8%	10.8%	2.7%

## About the Study

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Dr. Sourbeer Morris is the Managing Member of A. Morris Consulting, LLC, offering educational and business consulting and coaching services to individuals, schools, and corporate entities. The firm specializes in the career and educational development of students and adult populations, making connections between education and industry – workforce and economic development.

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Anne serves on the Education Foundation Board of the National Alliance for Partnerships in Equity. She is a former president of the Pennsylvania School Counselors Association. Among her affiliations is membership in the American School Counselor Association, the American Counseling Association, the Association for Career and Technical Education, and the National Career Development Association. She is a National Association of Professional Women 2010-2011 Woman of the Year and the 1990 Pennsylvania Secondary School Counselor of the Year. In 2011, Anne was awarded Life Time Membership in the Pennsylvania School Counselors Association for outstanding service.

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