Nontraditional Careers–Career and Technical Education

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An overview...

Nontraditional Careers...

1. Why are we talking about this? – Your District and PBMAS
2. Some Definitions
3. What’s in your program?
4. Why is this important?
5. What is our role?
6. Strategies
Why are we talking about this today?

PBMAS Indicators 7 & 8

• What is PBMAS?

• Where do you find the information?
  - TEA > A-Z P > PBMAS > Reports & Data > District Reports
  - https://rptsvr1.tea.texas.gov/pbm/distrpts.html

• What does this mean for us?
Nontraditional Careers . . . Defined

From the Perkins Guidelines:

from Perkins Guidelines: Nontraditional Programs:

The district/SSA should provide CTE programs and instruction for students enrolled in CTE courses that are nontraditional for their gender. Every effort is to be made to eliminate sex bias and stereotyping in curriculum, instruction, and services. Materials and practices (instructional and counseling) should be reviewed for gender equity. If materials or practices are determined to be biased toward either gender, the district/SSA should establish and implement a plan that will eliminate stereotypical practices and gender bias.
Nontraditional Careers . . . Defined

From the National Alliance for Partnerships in Equity (NAPE, www.napequity.org):

Nontraditional careers are those occupations in which one gender comprises less than 25% of the current workforce.
Nontraditional Careers . . . Where to find Information

How to locate the information:

- [http://tea.texas.gov/pbm/PBMASManuals.aspx](http://tea.texas.gov/pbm/PBMASManuals.aspx)
Nontraditional Careers: What’s in your Program?

Activity—

1. Take a look at the list of courses that are considered nontraditional courses for females.

2. Take a look at the list of courses that are considered nontraditional courses for males.

3. Which of those courses does your district teach?
Nontraditional Careers: Why is this important?

We live in an ever-changing world—

- Some of the fastest growing occupations are in STEM and health care
- 7 of the 16 federal career clusters that lead to many high-skill, high-wage, high-demand careers are in these and other STEM-related fields
  - Architecture & Construction
  - AFNR
  - Information Technology
  - Manufacturing
  - STEM
  - Transportation, Distribution & Logistics
  - Health Science
Nontraditional Careers: Why is this important?

The supply is not meeting the demand—

Examples:

- Electricians
  - Over 600,000 jobs for electricians currently in the US
  - Almost $\frac{1}{2}$ of those 600,000 jobs will become available within the next decade

- Nursing Industry
  - Projection: 1.6 million job openings through 2020
  - Fact: 200,000 person shortfall by 2020 if the US continues to enroll nursing students at the current rate
Nontraditional Careers: Why is this important?

Diversity is a critical need—

- Diverse teams drive innovation—competitiveness, creativity, multiple perspectives
- Diversity yields economic growth—greater return on investment
- Diversity enables equal access and opportunity—training in nontraditional fields provides greater access to high-skill, high-wage, high-demand jobs
Top industry of employment for region, long ago: 1990

- Mining, Oil and Gas
- Manufacturing
- Transportation & Warehousing
- Public Administration
- Health Care & Social Assistance
- Education Services
- Retail Trade

Ranked by OCEW average weekly wages for that industry
Top industry of employment for region - 2016

- Mining, Oil and Gas
- Manufacturing
- Transportation & Warehousing
- Public Administration
- Health Care & Social Assistance
- Education Services
- Retail Trade

Source: TWC Quarterly Census of Employment & Wages (Ranked by QCEW average weekly wages for that industry)
Nontraditional Careers: What is our role?

From the Perkins Guidelines:

• Help to eliminate bias and stereotyping
• Review materials and practices for gender equity
• Have a plan that eliminates stereotypical practices and gender bias
Nontraditional Careers: Some strategies

Strategy #1: Image is everything

Feature females
- On the job
- In the lab
- In the field
- In context

- Photos should include half NT
- Females should be working—not watching
- Females should be shown with males
Nontraditional Careers: Some strategies

Strategy #2: Create critical mass

- It takes a team to transform culture
- Start with creating awareness
- Have a catalyst and an advocate

Rosie the Riveter

- Campaign was extensive and ongoing
- Posters, word of mouth, news stories, magazine covers, movie reels, employer involvement
- What if they had just stuck a bunch of posters up . . . ?
Nontraditional Careers: Some strategies

**Strategy #3: Keep it Real**

Video Outreach materials showing “a day in the life”

- Real-world settings of a typical day
- What it’s like to be the “minority gender” in a “majority gender” field

**Resources**

- YouTube
- [www.nepris.com](http://www.nepris.com)
- [www.napequity.org](http://www.napequity.org)
- [www.herownwords.com](http://www.herownwords.com)
- [www.careeronestop.org](http://www.careeronestop.org)
- [www.nontraditionalcareers.com](http://www.nontraditionalcareers.com)
Nontraditional Careers: Some strategies

**Strategy #4: Role Models**

Probably your most important strategy

**Resources**

- Former students are the best first choice
- Students working in the field are a second best choice
- Advisory boards and professional associations
- Self-employed and retired folks
- College students in NT programs
Nontraditional Careers: Some strategies

Strategy #5: Level the playing field for ALL students

- Close the experience gap—provide building block or bridge skills
- Teach an explicit problem-solving process
- Include spatial reasoning skills
- Teach tool identification, use, and the language of the occupation
- Teach math in context, and in a way that students can understand
Nontraditional Careers: Some strategies

Strategy #5: Level the playing field for ALL students, continued . . .

Venus vs. Mars

Girls

- Want to understand the whole picture
- Read the manual
- Anxious about making a mistake
- Prefer collaboration and creativity
- Computer/car/electronics is an acquired taste
- Value technology for how it helps others (engineering handicapped playground)
- Like robots to perform/help others
- View robots as animals

Boys

- Want to finish first
- Don’t look at documentation
- Mistakes are ok . . . as long as it works
- Enjoy heavy competition
- Computer/car/electronics = toys
- Value how the technology works (engineering rocket design)
- Like to destroy robots
- View robots as monsters
Nontraditional Careers: Some strategies

Strategy #5: Level the playing field for ALL students, continued . . .

Create a female-friendly and respectful environment

• Don’t single out females. Don’t make it obvious that they are uncommon. Make them feel welcome with an indirect, low key approach.

• Avoid the word “nontraditional”

• Don’t lecture on diversity or tell the guys how to treat the girls

• Don’t wait until class to figure out how to handle only one locker room

• Don’t wait for females to request proper-fitting equipment

• Don’t assume that all is going well and wait for females to seek assistance

Interesting fact:

Females don’t drop out because of grades. Study of 8,000 female students in 20 colleges shows that women who leave engineering have higher grades than males who leave. -- Women in Engineering ProActive Network

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Nontraditional Careers: Some strategies

Strategy #6: Change School Culture

• Start early—at ALL grade levels
• School staff—raise awareness and reduce barriers
• Classroom—create a “Speakers Bureau” of NT professionals
• Clubs & CTSO’s—support participation, create new clubs
• Personal encouragement—a VERY strong strategy
• Reduce gender bias—intentional or unintentional
• Change perceptions—encourage students to explore ALL career options
Nontraditional Careers: Some strategies

**Strategy #7: Engage the Community**

- Establish relationships with business and industry
- Advisory councils
- Community organizations
- After-school programs
- Colleges and universities
Nontraditional Careers: What’s going on in your area?

Labor Market Information:

• Texas Industry Profiles:  
  http://www.texasindustryprofiles.com

• Texas Labor Market Information:  
  http://www.tracer2.com/cgi/databrowsing/?PAGEID=4&SUBID=121

• Texas Labor Market Regional Extracts:  
  http://www.tracer2.com/default.asp?PAGEID=152
Nontraditional Careers: And finally . . .

Examine yourself:

Project Implicit:

https://implicit.harvard.edu/implicit/index.jsp

Survey: Gender-Career IAT
Questions & Answers?
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