


Career & Technical Education (CTE) and STEM Office

December 2016

DACCTE

Recruitment & Retention of Non-Traditional CTE Students

Delaware
Department of Education

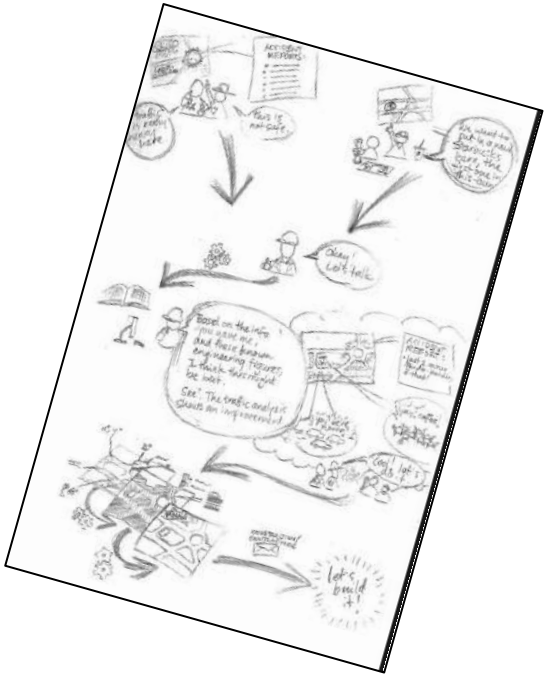
Non-Traditional Student Recruitment and Retention

Since 2014-15 & 2016-17, several schools have partnered with the National Alliance for Partnerships in Equity's **Program Improvement Process for Equity™** (PIPE) in an effort to implement a data-driven, research-based process to improve performance on the nontraditional core indicators in the Perkins accountability system.

Action Research Process ⟶

Non-Traditional Student Recruitment and Retention

LAKE FOREST SCHOOL DISTRICT



In 2014-15, Lake Forest High School chose their lowest performing programs, Early Childhood Education (ECE) and Process of Design and Engineering (PDE), as the focus of their implementation efforts.

In 2015-16, Lake Forest added teachers from the Agricultural Power & Technical Systems (APTS) program and the Drafting and Design (DD) program to participate as well as continuing to work with the teachers of the ECE and PDE programs.

Non-Traditional Student Recruitment and Retention

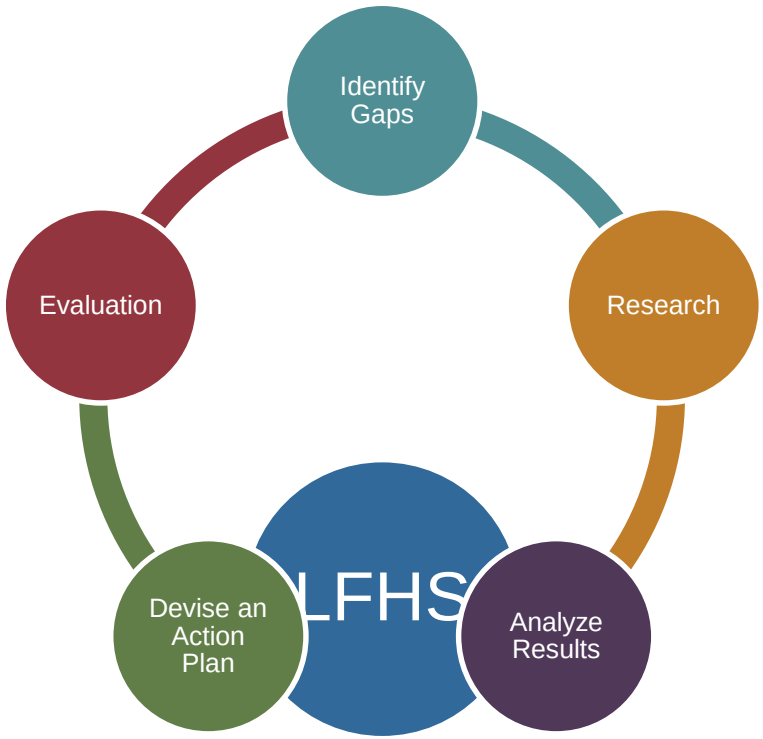
- 2015 SMART Goal: To increase the percentage of **female student** enrollment in ***Process of Design & Engineering I*** from 8.33% in SY14-15 to 15% in SY15-16.
  - **2014-15: 8.33%**
  - 2015-16: 13.2%
  - **2016-17: 17.5%**
- 2015 SMART Goal: To increase the percentage of **male students** in ***Human Development*** from 9% in SY14-15 to 15% in SY15-16.
  - **2014-15: 9.00%**
  - 2015-16: 23.3% (as of *4/24/15 - two male students moved and three transferred from the course*) = 19.5%
  - **2016-17: 19.0%**

Non-Traditional Student Recruitment and Retention

- 2016 SMART Goal: To increase the percentage of **female students** in ***Ag Power and Mechanics (Level I)*** from 12% in SY15-16 to 15% in SY16-17.
  - 2015-16: 12%
  - **2016-17: 13.8%**
- 2016 SMART Goal: To increase the percentage of **female students** in ***Drafting and Design (Level I)*** from 18.3% in SY15-16 to 20% in SY16-17.
  - 2015-16: 18.3%
  - **2016-17: 18.2%**

What We Have Done…

- Identified gaps in enrollment.
  - Completed
- Implemented Action Research
  - Paper Survey of all 10th & 11th grade students
  - Focus Groups
  - Schoology surveys
- Analyzed Results
- Devised a Plan of Action
  - Timeline
  - Responsible Parties
- Evaluation (success!)



Programs of Study targeted with an enrollment overabundance of one particular gender:

- Early Childhood Education
- Processes of Design & Engineering
- Agricultural Power & Technical Systems
- Drafting & Design

Early Childhood Ed.	Females	127	91%
	Males	14	9%
Process of Design/Eng.	Females	10	8%
	Males	113	92%
Ag. Power & Technical Systems	Females	12	10.3%
	Males	104	89.7
Drafting & Design	Females	18	17.3
	Males	86	82.7

Early Childhood Education

Early Childhood Education

Root Causes

- Males are fearful of enrolling in our Early Childhood Education courses due to the expected ridicule that will accompany this choice (discovered through a survey and focus group in January 2016).

Goals

- Increase enrollment in Human Development (1st level course) to 8 males for SY2017.
- Retain 80% of the current males who are eligible to continue in the program and are still enrolled in the district during SY2017

Early Childhood Education

Implemented Strategies

- Focus group with male students - Conducted in January, 2016
- Attended 8th grade Scheduling Nights to promote the ECE program to prospective male student – Feb. 2-4, 2016
- Freshman Seminar Push-In program – Ongoing

Proposed Strategies

- NAPE Professional Development on Micro-Messaging – Fall 2016
- Introduce a positive male mentor teacher to the class – Fall 2016
- Obtain photos of male teachers, counselors, and administrators within the district for a bulletin board, highlighting non-traditional career choices within education – Fall 2016.

Ag Power & Technical Systems

POWER, STRUCTURAL
& TECHNICAL SYSTEMS

Ag Power & Technical Systems

Root Causes- Hypothesis (our educated guess Fall 2015)

- Many Females seem have the misconception of the pathway and the industry as a male dominated career field with gender basis.
- Guidance counselors unknowingly misguide the students to other pathways due to lack of knowledge, understandings , and opportunities that exists in the pathway for both males and females.
- Female students avoid taking the class/pathway because they believe that the male students are immature ultimately reducing female enrollment in the class/pathway.

Implemented strategies: Testing the Root Causes for accuracy and plausibility (Winter, 2015-16)

AG POWER & TECHNICAL SYSTEMS

Focus group discussion

On several occasions we held small focus group discussion with the females in the pathway

FRESHMAN SEMINAR

SCHOOL WIDE INITIATIVE TO INTRODUCE THE FRESHMEN TO CTE OPPORTUNITIES.

Survey

A survey went out to the females in the pathway and data was collected

Ag Power & Technical Systems

Proposed Strategies for Fall 2016

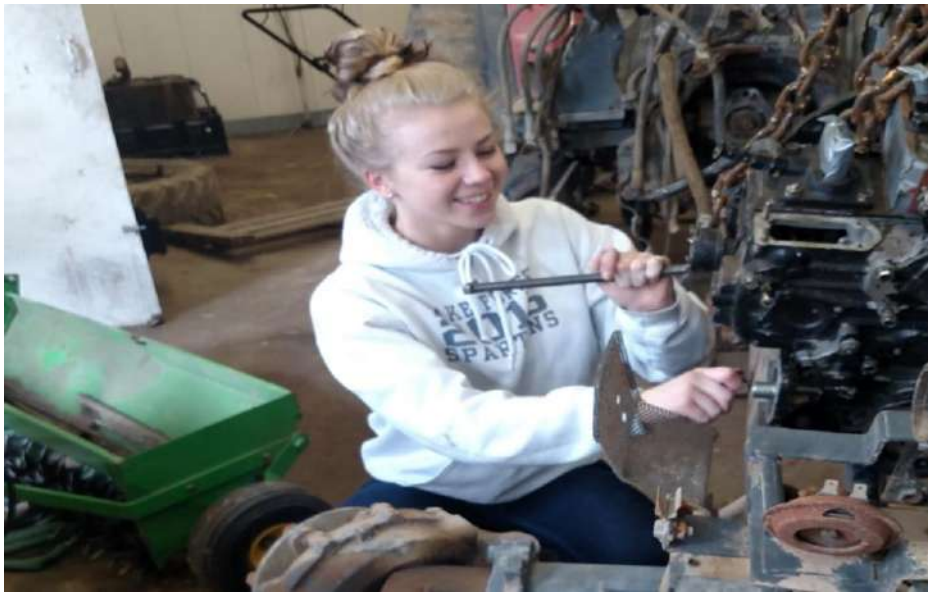
- Expand the survey to the entire Agriscience department to gain a broader perspective of the student perceptions
- Conducted a focus group with the males to gain and understanding of their perspectives of females in the pathway
- Conduct a micro-messaging workshop during Professional development time –begin to change school culture and mind set.
- Conduct a interactive “hands-on” virtual welding demonstration during “I love lake forest day” to expose non-traditional students to the industry.
- Training for guidance counselors to promote non-traditional students to the various pathways
- Promote “women in industry” through guest speakers and role models for the females.

Ag Power & Technical Systems Survey Results

Out of the 13 females interviewed in the focus group, the results determined that:

- 77% of the females took the class because their friends took the class.
- 92% of the females believe that Ag mechanics pathway is a male denominated career field and that it is not a friendly environment for females to work in.
- 100% of the females surveyed are frustrated with the immaturity of the males in class.
- 85% of the females confirmed that the guidance counselors encouraged them to pursue alternative pathway when registering for classes.
- 100% of the females interviewed saw the industry as dirty and physically demanding.
- 38% of the participants reported that their parents supported them taking this pathway
- 23% of the participants reported being bullied or harassed for being part of the Ag Mech pathway.

Ag Power & Technical Systems



Level III Ag Mech student Installing an engine into a compact diesel tractor

Gender breakdown as of 8/23/16

CTE Area	Course	Males	Females	% of Non-Trad.
Early Childhood Education	Human Dev.	12	42	19%
	Child Dev.	5	44	10.2%
	Exp. Early Childhood	6	35	14.6%
Ag. Power & Tech. Systems	Ag Power & Mechanics I	50	8	13.8%
	Ag Power & Mechanics II	34	3	8.11%
	Ag Power & Mechanics III	22	1	4.35%
Processes of Design & Engineering	PD&E I	52	11	17.5%
	PD&E II	33	1	2.94%
	PD&E III	19	0	0%
Drafting & Design/CAD	D&D/CAD I	44	12	18.2%
	D&D/CAD II	31	3	8.8%
	D&D/CAD III	16	4	20%

Lake Forest High School

Any Questions?

CTE Workgroup

Name/Email	Phone	Career Cluster
Luke Rhine luke.rhine@doe.k12.de.us	302 735-4015	CTE & STEM Director
Lisa Stoner-Torbert lisa.stoner-torbert@doe.k12.de.us	302 857-3322	Policy Advisor
Lisa Wilson lisa.wilson@doe.k12.de.us	302 857-3323	Business/Management/Administration, Marketing, Finance
April McCrae april.mccrae@doe.k12.de.us	302 735-4093	Science/Technology/Engineering/ Mathematics, Information Technology
Rita Hovermale rita.hovermale@doe.k12.de.us	302 857-3381	Education, Hospitality/Tourism, Human Services
Bart Gill bart.gill@doe.k12.de.us	302 735-4019	Agriculture/ Food/Natural Resources, Transportation/Distribution/Logistics
Mike Fitzgerald mike.fitzgerald@doe.k12.de.us	302 857-3334	Architecture/Construction, Arts/ Audio/Video Technology/Communication, Manufacturing
Peg Enslen peggy.enslen@doe.k12.de.us	302 857-3339	Health Sciences, Law/Public Safety/Corrections/Security