Supporting Teachers to Encourage Pursuit of Undergraduate Physics for Women

Theodore Hodapp
APS Director of Project Development
Undergraduate Physics Degrees Awarded to Women

Source: National Center for Education Statistics and APS
Fraction of Women Earning Undergraduate STEM Degrees

Source: National Center for Education Statistics and APS
Quiz Time:
Percentage of Women in Physics

1

2

3
Percentage of Women in Physics

Sources: NCES/IPEDS, AIP-SRC, HERI
Undergraduate Physics Degrees Awarded to Women

Percentage

Germany, USA, Canada, Australia, Italy, Argentina, India, Albania, Iran

Effects of Interventions

Hazari, Potvin, Lock, Lung, Sonnert, and Sadler, "Factors that affect the physical science career interest of female students: Testing five common hypotheses," PRST PER 9 020115 (2013)

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STEP UP for Women
Supporting Teachers to Encourage Pursuit of Undergraduate Physics for Women

• 4+ year project; 3 Phases:
  • 2017-18: Pilot (10 Master teachers across the US)
  • 2018-19: Controlled study (26+ randomly selected in 3 states)
  • 2019-20: National rollout (15,000 teachers)

• Designing curriculum/classroom strategies for high school teachers to encourage women to study undergraduate physics:
  • Lessons:
    • Discussion of underrepresentation
    • Discussion of careers in physics
  • Classroom strategies:
    • Personal recruiting
    • Public recognition of women in classroom
STEP UP for Women
Supporting Teachers to Encourage Pursuit of Undergraduate Physics for Women

• Rollout (Phase 3): Pilot ideas in 2017, 2018
  • APS CUWiP workshops and “challenges”
  • APS sponsored Women in Physics Groups
  • SPS Chapters
  • National, state, and regional meetings for science teachers
  • Establish teacher networks
  • Develop Professional Development “lessons”
  • Website: tools, video, resources
  • Assessment: rate of adoption, problems of implementation, etc.
APS Conferences for Undergraduate Women in Physics (CUWiP)

US Female Physics Degrees

Canada

CUWiP Attendance


0 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800


0 200 400 600 800 1000 1200 1400 1600 1800 2000

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Project Team: Go Big or Go Home!