INTERNATIONAL FOCUS ON STATISTICS EDUCATION

Kai Ruggeri   **Dr. Carmen Díaz**

Background

Basis

- Statistics is critical in research
  - Many take only one course

- Academic dual commitment
  - Develop future researchers
  - Develop skills beyond immediate focus

- Methodologies and statistics are inseparable

Educating Future Researchers

- Commonly viewed aspects of teaching statistics
  - Attitudes toward statistics
    - SATS, ATS, SAS

  - Statistics anxiety
    - STARS, Revised MARS, SAI

- Research-based degrees generally at center

Issues

- Expectations and teaching variations

- Broad-focus studies are difficult, but necessary
  - Anticipated issues

- Language

- International Support

Design

Testing

- Spanish (Spain), English (US, UK)
- 323 Undergraduate psychology students
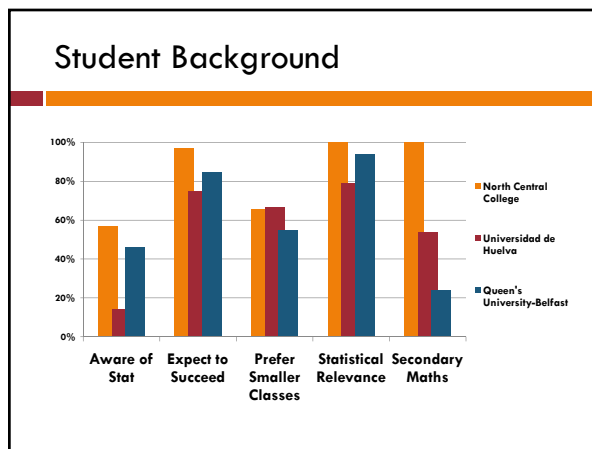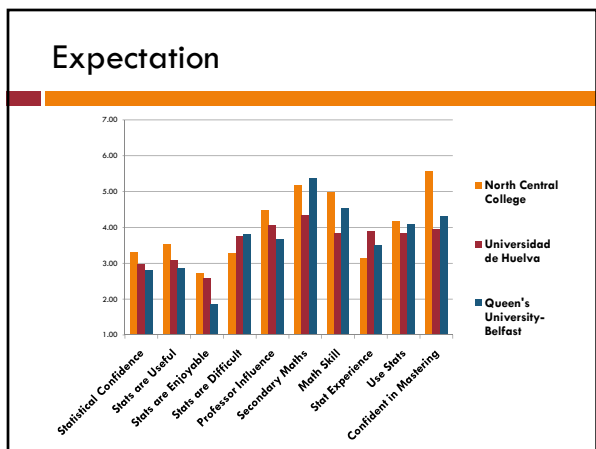- Previous work in all places, combined effort lacking

NORTH CENTRAL COLLEGE

Queen's University Belfast

Universidad de Huelva

Measure

- COSSAA
  - STARS (α = .80)
  - SATS (α = .85)
  - Expectations/Experiences
  - Background Questions
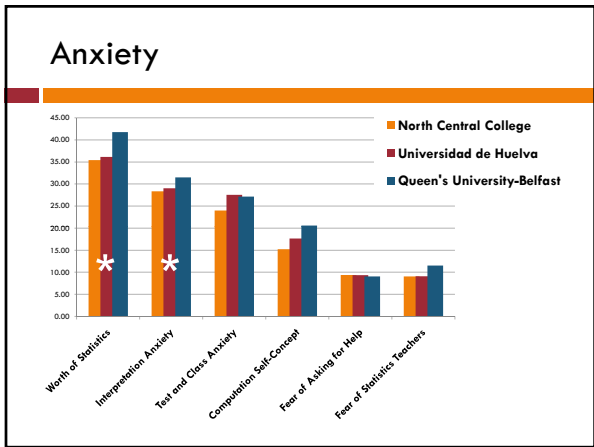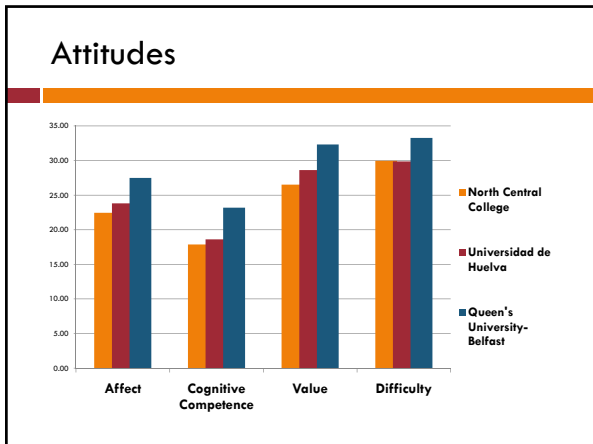
Results

Results

- Varied Feedback
  - Personal background
  - Expectations
  - Statistics anxiety
  - Attitudes toward statistics
- Unique, specific attention to issues
- Widespread barriers to learning statistics exist
- Teaching → Attitudes → Anxiety
  - Model not supported

Expectation

Student Background

Expectation

- Lack of Awareness
  - Worth, Value affected
  - Spanish, 14%
  - British, 46%

- Confidence in Success (50.1% of the variance)
- Teacher Influence (17.4% of the variance)

Attitudes

Anxiety

Discussion

Improvements

- Approaches will vary

- Must be addressed:
  - Attitudes
  - Anxieties
  - Expectations

- Problems with classroom-specific intervention

Limitations

- Non-homogenous Samples
  - Spanish (85)
  - American (42)
  - British/Irish (196)
- Test interpretation biases
- Environment

Conclusion

- Critical in Research
  - Statistics education must become a focal point (Batanero, 2004)
  - "Double-edged sword" (Zeidner, 1991)
    - Don't want, must have
  - Teachers and students dislike (Garfield *et al*, 2002)

Lesson

- Academic dual commitment (Bakker *et al*, 2004)
  - Develop future researchers
  - Develop skills beyond immediate focus

- Methodologies and statistics are inseparable (Divelko, 2000)

- Most students take only one course (Schau, 2003)
  - One chance to get it right

Universidad de Huelva

Queen's University Belfast

NORTH CENTRAL COLLEGE
NAPERVILLE, ILLINOIS
Founded 1861

Questions?

Se puede preguntar en español también…despacio.

druggeri01@qub.ac.uk