INTERNATIONAL FOCUS ON STATISTICS EDUCATION

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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

Measure

- COSSAA
- STARS ($\alpha = .80$)
- SATS ($\alpha = .85$)
- Expectations/Experiences
- Background Questions

Results

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

Expectation

Student Background
Expectation

- Lack of Awareness
  - Worth, Value affected
  - Spanish, 1.4%
  - British, 46%

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

Attitudes

![Bar chart showing attitudes](chart)

Anxiety

![Bar chart showing anxiety](chart)

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

Questions?

Se puede preguntar en español también... despacio.

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