

# **Using Institutional-Specific Research to Study Retention**

**Presented by:**

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# Retention Statistics

- 26% attrition rate for four-year colleges (Adams, 2011)
- 44% attrition rate for two-year colleges (Adams, 2011)
- Greatest percentage leave within first year (Braunstein & McGrath, 1997)
- Development of “Retention Models” began as early as 1970s

# Astin's Involvement Model

## Astin's Involvement Model

- Three pedagogical theories:
  - Subject-matter theory: Student learning depends on correct subject matter;
  - Resource theory: Student learning depends on resource availability;
  - Individualized theory: Student learning depends on bringing the right content and instructional methods to each individual student.
- All three theories view student as a passive recipient; what is missing is INVOLVEMENT.

# Tinto's Interactionalist Model

- Student's pass through three stages:
  - Separation Stage
  - Transitions Stage
  - Incorporation Stage
- The degree to which a student can successfully integrate into the academic and social systems will determine whether he/she persists.

# Practical Approaches

## Bridge Programs

- Designed to educate incoming students on study skills, time management, and college vernacular (College Parent Central, 2011);
- More intensive attempts to improve math and/or writing skills (College Parent Central, 2011);
- Many bridge programs do not contain an assessment piece (Garcia & Paz, 2009);
- In a comprehensive study, it appears that bridge programs do provide an advantage to participants (Canales, Gardner, Hughes, & Weissman, 2010).

# Practical Approaches

## First-Year Experience Courses

- An extension of bridge programs;
- Consist of regular class meetings, taught by college instructor or team of instructors, and introduce students to college environment (Jamelske, 2009);
- Started at the University of South Carolina with “University 101;”
- Academic and social integration at the core;
- Consistent positive and significant statistical impact of FYE on retention (Pascarella & Terenzini, 2005).

# Practical Approaches

## Intrusive Advising

- Intervention strategies that connote interest in and involve the advisor in the affairs of the student (Glennen, 1995);
- Retention Management Systems;
- Used in department-specific advising programs to more closely connect student to faculty advisor;
- Academic and social integration at the core.

# Research on Integration

- Overall, research has supported the constructs of academic and social integration (Pascarella & Terenzini, 2005);
- Support for Tinto's theoretical propositions can vary significantly depending on institutional type (Braxton, Sullivan, & Johnson, 1997);
- Tinto's model might not be as applicable in community college environments since it is based on a traditional four-year population (Wild & Ebbers, 2002; Mohammadi, 1996).

# Variables Related to Retention

## Voorhees (1987)

1. Sex
2. Purpose of Enrolling
3. Intent to Return

## Feldman (1993)

1. **High School GPA**
2. Gender
3. **Age (20-24)**
4. **Status (Full-Time vs. Part-Time)**
5. **Ethnicity (ethnic minorities other than Asian)**
6. Educational Goal
7. Basic Skill Need

# Variables Related to Retention

## Fike and Fike (2008)

1. Completion of a developmental reading course
2. Completion of a developmental math course
3. Receipt of financial aid
4. Completion of an online course
5. Semester hours enrolled in first semester
6. Participation in student support services

# Variables Related to Retention

## Wyman (1997)

- 16 community colleges in South Carolina;
- Identified 158 mostly “external” independent variables:
  - Revenue and expenditures
  - Faculty salaries
  - Unemployment
  - Crime
- 66% of the variance explained by two variables:
  - Regional employment per capita
  - Ratio of institutional instruction and academic support spending per headcount student to regional income per job
- Retention varied greatly across colleges, but very consistent within each college.

# Retention at Mid Michigan Community College

- High School GPA
- Age
- Gender
- Ethnicity
- Credit Hour Load
- Educational Goal
- Remedial Need
- Receipt of Financial Aid
- Program of Study
- Educational Level of Mother and Father
- Residency Status
- CIS.100

# Sample Population

- Analyzed students entering in 2007FA and 2010FA;
- Eliminated Graduates, Guest Students, Dual Enrolled Students, and those that transferred to a four-year institution;
- A sample size of 569 for 2007FA and 841 for 2010FA.

# Results

For 2007FA, Significant Chi Square Results for:

- Age (Under 18)
- Gender (Female)
- Program of Study (Occupational)
- CIS.100 Grade (Grade of C or better)

For 2010FA, Significant Chi Square Results for:

- Age (Under 18)
- Gender (Female)
- Program of Study (Occupational and Undecided Lowest)
- CIS.100 Grade (Grade of C or better)
- Ethnicity (White)
- Credit Hour Load (Full-Time)
- Math Placement (Non-Remedial)
- Receipt of Financial Aid (Received Aid)

# Effect Size

- Cramer's V
  - .10 is a small effect size;
  - .30 is a medium effect size;
  - .50 is a large effect size.
  
- For 2007FA Group
  - Age= .188
  - Gender= .095
  - Program of Study= .173
  - **CIS.100 Grade= .49**

# Effect Size

- For the 2010FA Group
  - Age= .139
  - Gender=.097
  - Program of Study= .142
  - **CIS.100 Grade= .372**
  - Ethnicity= .130
  - Course Load= .113
  - Math Placement= .123
  - Receipt of Aid= .091

# Logistical Regression

- For 2007FA Group
  - CIS.100
  - Age
  - Program of Study
- For 2010 Group
  - CIS.100
  - Age

# What Did We Learn?

1. A one-size fits all model might not exist;
2. Technology plays a role;
3. Variables can change over time;
4. Regular data collection/analysis procedures;
5. Significant portion of variance unexplained;

# Where To Go Next?

- Establishment of College-wide Retention Committee
  - Identify what interventions currently in place
  - Using AQIP Tools (Fishbone) to identify other variables
  - Focus Groups involving students
  - Creation of a survey
- Gap Analysis
  - Analyze current interventions vs. variables identified
- Design New Interventions
- Share

**Questions?**

# Citation

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