American International College

Reconceiving Developmental Education with Technology and Academic Self-efficacy Support

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Introductions

- Susan L. Petrucelli – Director of Developmental Education
- Carol Sitterly – Dean of the Center for Academic Success
Overview of the College

American International College
Springfield, MA
Role of Developmental Education
Reflection

- What made you believe you could succeed in college?
- What learning tools did you have to help you succeed in college?
“Developmental education is the integration of academic courses and support services guided by the principles of adult learning and development” (Boylan, 2002)
Feldman and Zimbler (2012) study:

- 34% of all new entering college students needed at least one developmental course
- Instructors report that developmental education students lack the motivation to succeed
Elements of a Successful Developmental Education Program

- Personalized Instruction: give feedback
- Modules: the curriculum in smaller chunks
- Scalability: college credit and focus on achievement levels to complete to motivate
- Use Data-Driven, Evidence-Based Best Practices

(Feldman and Zimbler, 2012)
Recognizing Developmental Education Students in our Program

- High school grade point average
- SAT writing and math scores
- Placement Tests
Developmental Courses

- **Writing and Math**
- **3 credit course – meets 3 hours a week**
- **Hybrid model – blended learning**
- **Address the skill deficiencies of students through technology and provide scaffolding experiences (Bowen, 2012)**
Walker and Jorn (2009) study

- Students want to use technology but also want to retain face-to-face instruction and interaction with professors

Smart and Cappel (2006) study

Students more positive about being engaged for shorter exercises and simulations
1) Grammar and Practice: Adaptation Software
- Pre-Diagnostic
- Progress monitored by instructor four times during the semester
Brophy (2010) – replace letter and number grades to increase academic confidence

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2) Writing and Feedback Opportunity

work on brainstorming, writing, correcting grammar in context, and feedback

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The Williams sisters

Serena and Venus Williams are sisters with similarities and different features and personalities. Serena Williams is the youngest sister; she is the only female player to have won over $30 million in prize money. She began to play tennis after her older sister Venus. Serena Williams was born September 26, 1981, she still lives till this day. Serena is 32 years old. Serena Williams holds the most Major singles, doubles, and mixed doubles titles combined amongst active players, male or female. Along from her sister she became the World No. 1 for the first time on July 8, 2002, and regained this ranking for the sixth time on February 18, 2013, becoming the oldest world no. 1 player in WTA’s history. Venus Williams is the oldest sister of Serena Williams; she was born June 17, 1980. She still lives till this day. Venus Williams is 33 years old. Venus is credited as changing the women’s game and ushering a new, modern era of power on the women’s professional tennis sport. At the age of 14, Venus Williams went professional on October 31, 1994. She continues to play tennis till this day. Both Venus and Serena Williams are right-handed, and are both number one for highest doubles rankings on June 7, 2010. The Williams sisters both have won four gold medals at the summer Olympics games. They remain very close, often watching each other’s matches in support, even after one of them has been knocked out of a tournament. On that note the Williams sisters are both similar and different in their own special ways even though they both competed against each other and one had to lose they both support each other and stick together through thick and thin watching over each other during matches.
Offer two developmental math courses:

- Conceptual Understanding of Statistics
- Basic Algebra of Finite Math
Introduced and practice new concepts and build math skills using the Hawk’s Learning System.
In class, apply the statistics concept and work in groups on projects.

Limited lecture presentations, online activities, and cooperative learning group work can help students become engaged in their coursework (Shesky, 2010).
Adaptable Programs

A(n) ______ might be as simple as a typo in the data set, which is also known as a processing error.

Fill in the blank with the most appropriate word.

Answer:
- Informed Consent
- Bias
- Researcher Bias
- Sampling Error(s)
- Dropout

- Participation Bias
- Non-Sampling Error(s)
- Processing Error(s)
- Non-Adhere(s)
- Confounding Variable(s)
Assessing Developmental Courses

- Triangulate Data from the Course
  - Course Grade
  - Pre-Post Diagnostic
  - Accuplacer Score (use as pre and post)
Statistics from Developmental English since 2010

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Mainstreaming Success to Statistics Pilot

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Students Who Passed PSY 302

Developmental Math Numbers
Teaching and Learning with Technology

- The value of technology in the course work depends on how it is used (Wenglinksy, 2005)
Teaching and Learning Locations at American International College

Computer Classroom
20 workstations
Paperless
Schunk (1991) and Jarvela (2001) Students who follow or model the progress of other students may raise their self-beliefs.
Learning in the Developmental Education Computer Classroom

- Classroom Management System helps increase the academic confidence of our students
Learning in the iPad lab at American International College

- Overview of the Evolution of the lab

- Encourage meaningful and motivational experiences with the content, peers, and instructors (Garrison & Kanuka, 2004)
Teaching and Learning Locations at American International College

- iPad lab
iPad instructional techniques

- Undergraduate Seminar – Common Reading
iPad instructional techniques

- Undergraduate Seminar – Common Reading
iPad instructional techniques

- Developmental English

Lesson: Vocabulary

Incorporated Technology

Engagement

Used in Writing
iPad instructional techniques

Future of the AIC iPad lab

- Pilot Courses
  - Finite Math
  - Statistics
  - Pre-statistics
  - Developmental English

- Individual Skill Building
iPad instructional techniques

- Future of the AIC iPad lab . . .
- Faculty Training “What is an iPad?”
- Retention and Advising Initiative Workshops for spring semester freshman and transfer students
The Future for the iPads at AIC

Applications we are working with currently:

**ShowMe** – Virtual office hours and instructional videos

**KeyNotes** – for Presentations

**Popplet** – Organizer for thoughts/brainstorm

ADD an app from Nunzio here
In this case ....

Words do speak louder
(at least on the assessment)
In my opinion, I feel like it is more valuable for people to be themselves and be unique and different than try to fit in with everyone else when you are being yourself.

A person that has a strong influence on me is my mother. She has affected the way I think and carry myself when I’m out in the world.
Accuplacer Proficiency Rates
“The task of the modern educator is not to cut down jungles, but to irrigate deserts”
Thank you!

- Questions?
- Contact

- Susan Petrucelli – susan.petrucelli@aic.edu
- Dr. Carol Sitterly – carol.sitterly@aic.edu
References


