ACHIEVING SCALE IN PERSONALIZED LEARNING: ADAPTIVE COURSEWARE DEPLOYMENTS AT EIGHT PUBLIC UNIVERSITIES

KAREN VIGNARE, APLU
What is Adaptive Learning?

“As an approach to creating a personalized learning experience for students, adaptive learning takes a sophisticated, data-driven, and in some cases, non-linear approach to instruction and remediation, adjusting to a learner’s interactions and demonstrated performance level and subsequently anticipating what types of content and resources learners’ need at a specific point in time to make progress.”

APLU Accelerating the Adoption of Adaptive Courseware Grant

CROSS-INSTITUTION COLLABORATION

- Targeting similar programs and courses
- Adopting from a list of approved adaptive courseware suppliers and products
- Sharing information within the cohort by campus-based program managers
- Common reporting requirements

FACULTY ENGAGEMENT METHODS

- Incentives (money, time, teaching support)
- Training and instructional design support
- Department-level adoption decisions
- Peer learning communities
- Senior leadership investment and recognition
Types of Adaptive Learning Products

ADAPTIVE COURSEWARE

Includes most popular courses
Limited flexibility to customize
Not all dashboards are the same
Faculty Roles

ADAPTIVE PLATFORMS

Content Customization
Authoring
  ▪ Content
  ▪ Assessment
Redesign Process
Can Be More Time Intensive

Customizable
Adaptive Courseware Suppliers & Products

1. Acrobatiq
2. Cerego (Macroeconomics, Introduction to Statistics)
3. Cengage Learning Mindtap (Cerego)
4. CogBooks
5. Fishtree
6. Fulcrum Labs
7. Knewton
8. LeAP by D2L
9. Learning Objects
10. LoudCloud
11. Lumen Waymaker
12. McGraw-Hill Education ALEKS and Smartbook
13. Macmillan Learning Curves
15. Open Learning Initiative at Stanford University
16. OpenStax Tutor
17. Pearson MyLab and Mastering with Adaptive Practice
18. Realizeit
19. Smart Sparrow
20. WileyPlus with ORION (Snapwiz)
Results: After Six Months: 22,000 enrollments

Disciplines adopting courseware

- Economics: 17%
- Mathematics: 14%
- Chemistry: 12%
- Biology/Life Sciences: 14%
- Physics: 9%
- Modern Languages: 11%
- Psychology: 8%
- Business: 5%
- History: 3%
- English Comp: 1%
- Other: 6%

1/29/2018 2018 THE PERSONALIZED LEARNING CONSORTIUM AT APLU
Adoptions by Product, Fall 2017

Count of Courses Adoptions by Product Fall 2017

- Pearson MyLab & Mastering with Adaptive Practice: 18
- McGraw-Hill Education Smartbook: 17
- McGraw-Hill Education ALEKS: 9
- Macmillan Learning Curves: 4
- CogBooks: 4
- Cengage Learning Mindtap (Cerego): 4
- WileyPlus with ORION (Snapwiz): 3
- Lumen Waymaker: 2
- Learning Objects: 2
- Realizeit: 1
- OpenStax Tutor: 1

Approved products not in use during Fall 2017:
- Acrobatiq
- Cerego
- Fishtree
- Fulcrum Labs
- Knewton
- LeAP by D2L
- LoudCloud
- Open Learning Initiative at Carnegie Mellon University
- Open Learning Initiative at Stanford University
- Smart Sparrow

Note: Includes actual adoptions, Fall 2017 term only.
Source: Grantee Program Manager meetings, December 2017.

12/30/2017
2018 THE PERSONALIZED LEARNING CONSORTIUM AT APLU
ELI 2018
APLU Adaptive Workshop

January 2018
Dale P. Johnson
Adaptive Program Manager
Why do something new?

ASU College Math
August to December 2012
Concepts completed by each student
What is the promise of adaptivity?

From mass production to mass PERSONALIZATION.
How has it worked for ASU?

College Algebra – Fall ‘16 switch to ALEKS adaptive math system

- ~ 5000 students per year; Same curriculum and assessments

![Graph showing percentage of students completing College Algebra within one year across different academic years.]

- All Students: +20.5%
- Math placement below Algebra: +28.3%

* ~ 5000 students per year; Same curriculum and assessments
How has it worked for ASU?

Intro Biology – Fall ‘15 switch to CogBooks adaptive courseware

* ~ 1000 students per year; Same instructor, curriculum and assessment
How has it worked at ASU?

Microeconomics Fall 2016 and 2017
Midterm Exam #1  Grade Distribution

- Fall 16
- Fall 17

Microeconomics Fall 2016 and 2017
Midterm Exam #2  Grade Distribution

- Fall 16
- Fall 17
Deliver the –

Right lesson
Right student
Right time

What do we mean by adaptive courseware?
How are the adaptive systems different?

<table>
<thead>
<tr>
<th></th>
<th>LMS</th>
<th>ADAPTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson Plan</td>
<td>Fixed</td>
<td>Variable</td>
</tr>
<tr>
<td>Presentation</td>
<td>Group</td>
<td>Individual</td>
</tr>
<tr>
<td>Content</td>
<td>Common</td>
<td>Personalized</td>
</tr>
</tbody>
</table>
Where are we in the technology cycle?

Adaptive learning systems are evolving rapidly.
Commitment to Student Success

Six-year graduation rate of 80% for Fall 2020 cohort

Eliminate all success gaps

Adaptive Courseware Grant Course Targets

- High-enrollment
- High D/F/W rate
- High number of Pell-eligible students
- General education
- Gateway courses within a discipline area
- CSU Top 10 First Year Courses that predict graduation
Implementation Progress to Date

Goal 12,300-16,300 enrollments

DATE

YEAR 1
3,124 enrollments
First Year French I
First Year French II
First Year German I
First Year German II
First Year Spanish I
First Year Spanish II
General Physics I
General Physics II
Principles of Microeconomics

YEAR 2
Anticipate 8,300 enrollments
Appreciation of Philosophy
Attributes of Living Systems
Fundamentals of Accounting
Introduction to Astronomy
Introduction to Mechanical Engineering
Humans and Other Animals
Principles of Human Biology
Principles of Macroeconomics

YEAR 3
Anticipate 15,000-22,000 enrollments
American Government & Politics
Biology of Organisms - Animals & Plants
General Chemistry series
General Psychology
General Sociology
Introduction to Financial Accounting
Introduction to Managerial Accounting
Media in Society
Moral and Social Problems (Philosophy)
Physics for Scientists & Engineers I
Physics for Scientists & Engineers II

Currently Recruiting

Designing / Piloting
# Courseware Redesign Process

<table>
<thead>
<tr>
<th>Phase</th>
<th>Details</th>
</tr>
</thead>
</table>
| (Re)Design    | • Courseware selection  
                 • Courseware integration  
                 • Backward design & principles of learning science  
                 • High Impact Practices  
                 • Assessment techniques for large classes  
                 • Community of Practice |
| Implementation| • Instructional Designers troubleshoot  
                 • Courseware hiccups  
                 • Active learning strategies  
                 • Community of Practice |
| Revision      | • Open door  
                 • Community of Practice |
Experienced, persuasive faculty = Evidence of success + Trust + Influence

• Leverage faculty allies to capitalize on successful relationships
  • Previous redesign partners

• Instructional innovators
  • Technology “power users” – LMS, clickers, mobile learning, etc.
  • Strong attendance at professional development events
  • Already have dabbled with adaptive platforms

• Identify courses with the greatest potential for successful outcomes
  • Greatest need based on student performance
  • Close match with targeted courses (DFW, Pell eligible, etc.)

• Evidence supporting success of adaptive courseware and high impact teaching practices
  • Evidence-based practices with discipline
Faculty Adoption = quality content + functionality + ease of use + student cost
amount of time faculty can allocate to the process

- Negotiation skills require patience, persistence and creativity
- Flexible scaling strategy – Full vs partial implementation
  - Pilot sections
- Plan for sustainability – potential for staffing changes after implementation
- Don’t underestimate the power of departmental culture
  - Faculty autonomy -- *one* section vs *all* the sections...
  - Regular check-ins are needed to keep up departmental staffing changes
- Formalize the recruitment and implementation process
  - Share expectations and MOU early in the process
- Support adaptive courseware, high-impact practices *and access to active learning classrooms*
Looking Forward

• Showcase faculty and their successes
  http://tinyurl.com/CSU-AdaptiveCourse

• Stay the course
  • Continue to recruit faculty participants
  • Transition faculty from participants to champion/recruiter
INCREASING STUDENT SUCCESS THROUGH ADAPTIVE LEARNING IN HIGH IMPACT COURSES
### GSU APPROACH: DATA-DRIVEN & COLLABORATIVE

#### Year 1: Exploration (2016-2017)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educating &amp; Community Building</td>
<td>Courseware Evaluation &amp; Selection</td>
</tr>
<tr>
<td></td>
<td>Faculty Training &amp; Proficiency</td>
</tr>
<tr>
<td></td>
<td>Course Design</td>
</tr>
<tr>
<td></td>
<td>Research Design</td>
</tr>
</tbody>
</table>

#### Year 2: Pilot Study (2017-2018)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation</td>
<td>Adaptive vs. Non-Adaptive</td>
</tr>
<tr>
<td></td>
<td>Data Collection &amp; Analysis</td>
</tr>
<tr>
<td></td>
<td>Refinements</td>
</tr>
<tr>
<td></td>
<td>Training &amp; Prep for Scale</td>
</tr>
</tbody>
</table>

#### Year 3: Scale (2018-2019)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation at Scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Continued Data Collection &amp; Analysis</td>
</tr>
<tr>
<td></td>
<td>Continued Refinements as Needed</td>
</tr>
</tbody>
</table>
YEAR 1: COURSEWARE EVALUATION & SELECTION

- Collaborative Modification of Courseware in Context (CWiC) Framework
- Request for Information (21 Vendors—16 Submissions Received)
- Faculty Evaluation of Vendors (Select Top Choices)
- Sandbox Evaluations
- Courseware Fair—Seven Vendor Site Visit
  - Structured Vendor Demos & One-on-One Meetings with Faculty

<table>
<thead>
<tr>
<th>Course</th>
<th>Courseware Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Government</td>
<td>Realizeit—In Development</td>
</tr>
<tr>
<td>Global Issues</td>
<td>Realizeit</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>Macmillan</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>McGraw-Hill</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>McGraw-Hill</td>
</tr>
</tbody>
</table>
## Year 2 & 3: Pilot & Scale Years

### Year 2 Enrollments

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall 2017 (As of 9/1/17)</th>
<th>Tentative Spring 2018</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enrollments</td>
<td>Enrollments</td>
<td></td>
</tr>
<tr>
<td>American Government</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Global Issues</td>
<td>12 sections, 1237 students</td>
<td>4 sections, 526 students</td>
<td>1,763</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>2 sections, 194 students</td>
<td>3 sections, 240 students</td>
<td>434</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>1 section, 169 students</td>
<td>2 sections, 375 students</td>
<td>544</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>1 section, 168 students</td>
<td>2 sections, 375 students</td>
<td>543</td>
</tr>
<tr>
<td></td>
<td>17 sections, 1,768 students</td>
<td>11 sections, 1,516 students</td>
<td>3,284</td>
</tr>
</tbody>
</table>

### Year 3 Scale

<table>
<thead>
<tr>
<th>Course</th>
<th>Fall 2018</th>
<th>Spring 2019</th>
<th>Total Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enrollments</td>
<td>Enrollments</td>
<td></td>
</tr>
<tr>
<td>American Government</td>
<td>28 sections, 2240 students</td>
<td>28 sections, 2240 students</td>
<td>4480</td>
</tr>
<tr>
<td>Global Issues</td>
<td>18 sections, 900 students</td>
<td>18 sections, 900 students</td>
<td>1800</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>13 sections, 975 students</td>
<td>13 sections, 975 students</td>
<td>1950</td>
</tr>
<tr>
<td>Macroeconomics</td>
<td>19 sections, 1900 students</td>
<td>19 sections, 1900 students</td>
<td>3800</td>
</tr>
<tr>
<td>Microeconomics</td>
<td>16 sections, 1600 students</td>
<td>16 sections, 1600 students</td>
<td>3200</td>
</tr>
<tr>
<td></td>
<td>94 sections, 7,615 students</td>
<td>94 sections, 7,615 students</td>
<td>15,230</td>
</tr>
</tbody>
</table>
WHAT’S NEXT? PREPARING FOR SCALE

• Coordinating with Department Chairs & Faculty
  • Developing Department Specific Paths to Scale

• Data Collection & Analysis (Fall 2017—Spring 2018)
  • End Term Findings (DFW, Student Outcomes, Student & Faculty Satisfaction)
  • Faculty Initial Impressions, Experiences, & Feedback
  • Continued Research Collaboration
    • Development & Refinement

• Community Building & Education (Phase 2: Spring 2018)
  • Course Coordinator Presentations & Discussion Facilitation
  • CETL Workshops, Seminars, Panels
  • Vendor Training & Support
  • Instructional Design Support
  • Adaptive Website
Public State University: Flagstaff, AZ (pop. 71,500)

31,057 students (27,086 Undergrad, 3,971 Grad)

22,740 Flagstaff (main campus)
1,960 Community Campuses (statewide)
5,846 Online
511 Branch Campuses

61% female, 23% Hispanic, 4% Native American, 58% white
46% of freshmen are first generation college students

Top programs by enrollment

Undergraduate: Biomedical Science, Criminal Justice, Nursing,
Mechanical Engineering, Elementary Education

Graduate: Educational Leadership, Physical Therapy,
Master of Administration

Distance programs for over 45 years

Over 65 Fully online Degrees & Certificates
NAU Goals for Adaptive Learning

- Develop, and support, a CULTURE of Active and Adaptive Learning across the university
- Increase SUCCESS and retention of UNDERSERVED student population
- 28 courses EFFECTIVELY using adaptive courseware in 42 months
- TRANSFER lessons learned and faculty expertise to TRANSFORM our blended and online programs
Kick-Off August 2016
Culture Activities

• Kick-off (August 2016)
  ➢ 2-1/2 day event, workshop style
  ➢ 30 faculty representing 14 of our target courses
  ➢ Vendor showcase
  ➢ Vendor training of support staff

• College & Department orientations (Fall 2016 & 2017)

• Mini-conference (August 2017)
  ➢ 2 day event, conference style
  ➢ 125 faculty & staff
  ➢ Presentations from program participants from NAU and others
  ➢ Vendor presentations

• Learning Community of Practice for Active & Adaptive Learning (15 participants AY17-18)
One session of 27 – August 2017
Increase Student Success & Retention

• Previous Blended Learning Redesign program (2012-2016) generally increased success (ABC rates) 3-4%

• Collaborations
  - Frontier Set Activities
  - Office of Student Success
  - Retention Task Forces & Institution Retention Plan
    - A few targeted courses with high DFW are on Adaptive List
  - First-Gen Office
  - Native American Success Team
Courses for AY17-18

Full Implementation
AY Total Enrolled=9,304, Fall17-5,290, Sp18-4014

• Introductory Biology (McGraw-Hill Connect)
  BIO181 (Fall17- 2,031, Sp18- 392, AY Total Enrolled= 2,423)
  BIO182 (Fall17- 392, Sp18- 996, AY Total Enrolled = 1,388)

• Introductory Chemistry (McGraw-Hill - ALEKS)
  CHM151 (Fall17- 1,043, Sp18- 891, AY Total Enrolled = 1,934)
  CHM152 (Fall17- 448, Sp18- 571, AY Total Enrolled = 1,019)

• Information Systems Management (Pearson MyITLab)
  ISM120 (Fall17- 960, Sp18- 695, AY Total Enrolled = 1,655)

• Developmental Psychology (McGraw-Hill Connect)
  PSY240 (Fall17- 416, Sp18- 469, AY Total Enrolled = 885)
Courses for AY17-18
Under Development – pilot Spring 2018

• Geologic Disasters (SmartSparrow)
  GLG112 (Sp18- 819 enrolled)

• Philosophies of the World (SmartSparrow)
  PHI150 (Sp18- 279 enrolled)

• Introductory Psychology (Cengage – Learning Objects)
  PSY101 (Sp18- 788 enrolled)

• PreCalculus (Pearson MyMathLab)
  MAT125 (Sp18- 942 enrolled)
Courses for Future: 2018-2019

- Intro to Crime and Justice (CCJ101)
- General Physics I (PHY111),
- University Physics I (PHY161: Pearson – Mastering Physics)
- Art Survey (ART100)
- Anatomy & Physiology I&II (BIO201, BIO202)
- Microbiology (BIO205)
- Personal Finance (FIN190: Pearson – MyFinanceLab)
- Intro to Nutrition and Foods (NTS135),
- Medical Nutrition (NTS256)
- American Politics (POS110),
- World Politics (POS120)
- Intro Sociology (SOC101)
Transfer & Transform future growth

- New Nutrition degree programs exploring entire program as adaptive
- Occupational Therapy, blended program, exploring adaptive to enhance out of class work
- Other courses currently requiring adaptive courseware but not effectively using features
- Upper level courses or non Gen-Ed courses expressing interest
- NAU’s Competency Based Education - Personalize Learning program expects to employ adaptive learning
Issues and Questions

• Not enough active learning classrooms
• Expanding the number of digital learning environments/platforms for students to learn, and staff to support
• New costs for students and the university
• Integration of the 15 week lockstep model and the each student on their personal learning journey (Time constant vs. Learning Constant)

• Assessment & Evaluation:
  ➢ Are we truly improving student learning [The big question is "how do students perform in subsequent courses?]  
  ➢ Are we effectively helping the underserved population
We are Launched
Why Adaptive Learning? Why Now?

- Focus
- Alignment
- Impact

**Potential Impact:**

- 22,009 Students
- 30% of Gen Ed Enrollment
Adaptive Learning as a Mechanism for Course Transformation

Flexible Policies
Course Structure
Class Size
Faculty Roles
Adaptive Learning Project
Faculty & Department
Sustainable Course Transformation
<table>
<thead>
<tr>
<th>Subject</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>College Algebra</td>
<td>• DFWU* rate decreased from 37% to 28%</td>
</tr>
<tr>
<td></td>
<td>• Ecampus decreased from 67% to 44%</td>
</tr>
<tr>
<td>Algebraic Reasoning</td>
<td>• DFWU* rate decreased from 33% to 19%</td>
</tr>
<tr>
<td>General Psychology</td>
<td>• Historic DFWU rate of 26%</td>
</tr>
<tr>
<td></td>
<td>• DFWU rates range 2-10% for the redesigned course (which includes many changes in addition to adaptive learning).</td>
</tr>
</tbody>
</table>

*DFWU Rate includes course withdraws as well as grades of D, F, or Unsatisfactory received.
Student Experience

Pre-term, mid-term, & post-term student surveys measuring motivation, learning approach, satisfaction, and perceived value.

I have become much more confident in doing math. I still make mistakes, but I can catch and correct them.

I got a deeper understanding of mathematical topics that I had struggled with in the past.

The OSU Math Department has really stepped up their game when it comes to the format and learning tools!

This class was engaging, interactive, and educational.
Disaggregated Assessment

**Average Grade**

<table>
<thead>
<tr>
<th>Category</th>
<th>Average Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
<td>2.21</td>
</tr>
<tr>
<td>In-State Residents</td>
<td>2.31</td>
</tr>
<tr>
<td>First-Generation</td>
<td>1.86</td>
</tr>
<tr>
<td>Female</td>
<td>2.15</td>
</tr>
<tr>
<td>Male</td>
<td>2.27</td>
</tr>
<tr>
<td>US Minority</td>
<td>2.02</td>
</tr>
<tr>
<td>International</td>
<td>2.11</td>
</tr>
<tr>
<td>URM</td>
<td>1.83</td>
</tr>
</tbody>
</table>

**DFWU Rate**

<table>
<thead>
<tr>
<th>Category</th>
<th>DFWU Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
<td>25%</td>
</tr>
<tr>
<td>In-State Residents</td>
<td>22%</td>
</tr>
<tr>
<td>First-Generation</td>
<td>27%</td>
</tr>
<tr>
<td>Female</td>
<td>24%</td>
</tr>
<tr>
<td>Male</td>
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</tr>
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<td>33%</td>
</tr>
<tr>
<td>International</td>
<td>25%</td>
</tr>
<tr>
<td>URM</td>
<td>37%</td>
</tr>
</tbody>
</table>
What We’ve Learned

▪ Faculty are the best champions for scaling adaptive learning on campus.
▪ Build faculty teams with diverse perspectives.
▪ Organize implementation as a faculty and department driven process.
▪ Engage faculty with patience and allow flexibility with implementation process.
Active + Adaptive

Accelerating the Use of Adaptive Courseware to Improve Undergraduate Education at Portland State University

Johannes De Gruyter, Executive Director - Office of Academic Innovation
Kevin Berg, Project Manager - Office of Academic Innovation
The Active + Adaptive Program at Portland State University is about experimenting with adaptive platforms as part of a university-wide effort to improve student success.
PSU’s general education classes are high enrollment courses with engagement and retention challenges. At the same time our student population continues to diversify; requiring strategies that address individual learners’ needs.

The A+A Program at PSU is about experimenting with adaptive technology in those high enrollment courses in an effort to personalize the learning experience. All experiments take place in blended learning settings where the individual, self-paced nature of adaptive courseware is combined with social and collaborative activities in the classroom.

The A+A Program builds on past initiatives, including programs focused on hybrid course design, textbook cost reduction, engagement in large enrollment settings, open educational resources, and general efforts to build capacity around digital learning.
## Active + Adaptive - Roadmap (November 2017)

<table>
<thead>
<tr>
<th>Year Range</th>
<th>Activities</th>
<th>Pilot</th>
<th>Scale up</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 - 2017</td>
<td>Kick-off Early pilots, planning Partner institution visits</td>
<td>Typically 1 section</td>
<td>Typically all sections</td>
</tr>
<tr>
<td>2017 - 2018</td>
<td>Mostly pilots, prepare for scale Early research results Campus-wide show &amp; ask</td>
<td>Mathematics* MTH 111 Chemistry* CH 221 Business* BA 205</td>
<td>Mathematics MTH 111, 112 Statistics STAT 241, 243 Chemistry CH 199, 221, 222, 223 Business BA 101, 211 Biology BIO 203</td>
</tr>
</tbody>
</table>

- 2,400 enrollments
- 7,720 enrollments

* one or more sections were already using some type of adaptive courseware before the grant.
# Active + Adaptive - Roadmap (November 2017)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Kick-off</strong></td>
<td>Kick-off Steering Committee</td>
<td>Mostly pilots, prepare for scale</td>
<td>Mostly scale, add'l Pilots</td>
</tr>
<tr>
<td>Early pilots, planning</td>
<td>Define Program Charter</td>
<td>Early research results</td>
<td>Second round research results</td>
</tr>
<tr>
<td>Partner institution visits</td>
<td>Start Program Manager</td>
<td>Campus-wide show &amp; ask</td>
<td>Planning for expansion</td>
</tr>
<tr>
<td><strong>Program Management</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Faculty Outreach</strong></td>
<td>Identify and confirm partners</td>
<td>Continued outreach</td>
<td></td>
</tr>
<tr>
<td>- Define project plans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Faculty Development</strong></td>
<td>Set up internal support team</td>
<td>Integrate with GA/TA certificate</td>
<td></td>
</tr>
<tr>
<td>- Build internal capacity</td>
<td>- Work on blended/integration</td>
<td>efforts</td>
<td></td>
</tr>
<tr>
<td>- Start design consultations</td>
<td>- Continue design consultations</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Adaptive Technology</strong></td>
<td>Organize vendor demonstrations</td>
<td>Continue demonstrations</td>
<td>Streamline integrations</td>
</tr>
<tr>
<td>- Reach out to partner institutions</td>
<td>- Deep training in selected</td>
<td>- Executive research</td>
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<td>- Explore CWIC framework</td>
<td>platforms</td>
<td>- Share findings</td>
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<tr>
<td><strong>Impact Research</strong></td>
<td>Project specific IRB applications</td>
<td>Hire GRA to start data collection</td>
<td>- Organize second Faculty Event</td>
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<tr>
<td>- Blanket IRB application</td>
<td>- Collect data in pilots</td>
<td>- Present at conferences</td>
<td>- Publish</td>
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<tr>
<td>- Development of custom research</td>
<td>- Share findings</td>
<td>- Expand web page, campaign with first results</td>
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<tr>
<td>plans for each pilot project</td>
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<td>- Organize PSU Faculty Event (May 2018)</td>
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<tr>
<td><strong>Communication</strong></td>
<td>Build page on OAI website</td>
<td>- Participate in national</td>
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<tr>
<td>- Present at conferences</td>
<td>- Present at conferences</td>
<td>conferences</td>
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<tr>
<td>- Expand web page, campaign with</td>
<td></td>
<td>- Present, paper(s)</td>
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</tr>
<tr>
<td>first results</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Organize PSU Faculty Event (May 2018)</td>
<td></td>
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</tr>
</tbody>
</table>
Active + Adaptive - *First feedback*

**Mathematics**
- Jump in passing rates for Mathematics in sections with ALEKS vs. non-ALEKS (75.4% - 85%)
- Jump in students registered for next level Mathematics if they passed the ALEKS sections.
  - Large variation across different sections in terms of active learning > GA training
  - Ongoing refinement of alignment between adaptive and in-person activities

**Statistics**
- Better insight in student learning *in week 2* (“was never able to intervene this early in the term”)
- Ability to identify strong performers and experiment with peer support structures in the classroom

**Business**
- Strong student opinions about the experience and the importance of student onboarding

**Chemistry**
- Unclear yet if/where adaptive is having an impact. Very much like any learning technology, adaptive triggers conversations about broader design and student support. Is homework the way to go? Or is it time to redesign the sequence? What about the textbook?
Active + Adaptive - Lessons Learned

Common themes across projects

+ Adaptive is a great opportunity to redesign and entire course (sequence).
+ Adaptive triggers deeper conversations about learning, student engagement, the value of a textbook, the cost of materials and the potential of OER alternatives.
+ Adaptive is seen as an add-on (homework) instead of an integral part to the course. As with all hybrid course design, the integration of online and in person activities is complex and challenging.
+ The use of (live) learning analytics is new. There is a need for guidelines, processes and training on how to effectively use this data to inform teaching, course design and student support.
+ Active learning is seen as a must in combination with adaptive learning, but there are concerns about student readiness, availability of good classroom space and scheduling support.

Topics to discuss at college - institutional level

+ How can we work together when dealing with the same vendors/publishers across disciplines?
+ How can we make sure that faculty are informed about the implications of choosing a digital/adaptive courseware product for their courses (e.g. in terms of data ownership, FERPA, copyright, signature authority, access and security concerns, student support, cost implications)
+ How can we better support faculty with the design of hybrid courses, i.e. the effective integration of online and in person activities?
+ How can we improve learning space design? How can we make sure scheduling takes pedagogical strategy into consideration?
Questions? Contact Us!

Office of Academic Innovation, Portland State University

Sukhwant Jhaj, Vice Provost Innovation, Planning and Student Success
Johannes De Gruyter, Executive Director
Kevin Berg, Program Manager

www.pdx.edu/oai
ALLI
(Adaptive Learning Leadership Initiative)
University of Louisville

Ryan Luke
Ph.D.
Adaptive Learning Program Director
Challenges

- Personnel Changes
- Time Commitment
- Resistance to Change
- In some cases, overwhelmed by vendors
- Focusing Forward
Unique Approach after Turnover

1. Re-evaluate current participants and those identified as champions

2. Re-establish office as a center of support services

3. Reach out with a plan and list of narrowed down options
Getting Started

1. Find out who is using any kind of software
2. Find anyone using active learning
3. Find anyone attending workshops
4. Find out who is using books or content from publishers on list
5. Cross-Reference these lists
# Beginning

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<tr>
<th>Course</th>
<th>Sections</th>
<th>Enrollment</th>
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Currently

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<td><strong>Total</strong></td>
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Next Steps

1. Continue Moving Down List

2. Looking for opportunities to put Faculty Champions in front of other faculty

3. Active and Adaptive Learning Conference
1. Our 5-pronged approach
2. Accomplishments
3. Challenges/ What we have learned
1. Identify and showcase early adopters

Writing instructors, Karen Forgette, Guy Krueger, and Andrew Davis collaborated with peers at Georgia State University, Montclair State University, and the University of Georgia to build out adaptive modules for English Composition in a 2015 APLU grant.

Dr. Kerri Scott, Instructional Assistant Professor of Chemistry, has worked with Pearson since 2012 to develop Mastering for Chemistry.

Julia Bussade, Director of the Basic Spanish Program has worked with Pearson since 2014 to develop adaptive features in MySpanishLab.

All of these faculty had previous relationships with courseware vendors and were familiar with adaptive products.
2. Identify and support new users

Course materials search
Outreach to courseware reps
Capitalize on course materials decisions already made by faculty
Frame courseware as a way to solve problems, not as a top-down initiative.
3. Shift the focus from adaptive learning to active learning

Create a grant oversight program that emphasizes teaching as well as learning.

Collaborate with CETL to provide faculty development programming emphasizing active learning, flipped classroom strategies, and teaching critical thinking skills.
4. Promote the grant program

- Internal and external presentations and PR
- Faculty development programs
- Awards ceremony to show administrative support for faculty-led efforts
5. Execute a research agenda

- Qualitative research on student perception of learning with adaptive courseware

- Quantitative research comparing student grades in classes utilizing adaptive tools and those not utilizing adaptive tools
## Accomplishments thus far

<table>
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<tr>
<th>Year 1 (June 2016-May 2017)</th>
<th>Year 2 (June 2017 – May 2018)</th>
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<tbody>
<tr>
<td>4 Departments</td>
<td>9 Departments</td>
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<tr>
<td>13 Faculty</td>
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</tr>
<tr>
<td>1 Faculty-built course</td>
<td>3 Faculty-built courses</td>
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<tr>
<td>&lt;1,000.00 Enrollments in courses using adaptive courseware</td>
<td>&gt;10,000 Enrollments in courses using adaptive courseware</td>
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<td>Qualitative research on student use of adaptive courseware</td>
<td>Qualitative research on student use of adaptive courseware underway.</td>
</tr>
<tr>
<td>Quantitative research comparing student outcomes with and without use of adaptive tools.</td>
<td>Quantitative research comparing student outcomes with and without use of adaptive tools.</td>
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</tbody>
</table>
For More Information

Karen Vignare, Executive Director, Personalized Learning Consortium,
kvignare@aplu.org
240.462.2160
www.aplu.org/plc