Adaptive Courseware Options:

Before Selection, Understand Your Implementation Requirements and Assess Your Instructional Design Resources
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A TALE OF TWO PROJECTS:
LESSONS LEARNED FROM IMPLEMENTING ADAPTIVE SYSTEMS

“IT WAS THE BEST OF TIMES, IT WAS THE WORST OF TIMES,
IT WAS THE AGE OF WISDOM, IT WAS THE AGE OF FOOLISHNESS,
IT WAS THE EPOCH OF BELIEF, IT WAS THE EPOCH OF INCREDULITY…”

(OUR THANKS TO DICKENS FOR SUMMING UP OUR EXPERIENCES SO WELL)

... SO LET’S ADAPT!
TOPICS FOR CONSIDERATION

CONTEXT
- What are your goals? How should you organize the process? (people, pedagogy, process and technology)

CONSIDERATIONS FOR VENDOR
- What are the types of adaptive learning products? Are you looking for a platform or content provider?

CONTENT
- What are the curriculum, content, and pedagogical challenges?

COST
- What will this cost your organization? Students?
What are your organization’s goals for adaptive learning?

Is there a strategy and defined responsibility for AL on campus?

What program(s) at the institution would be most interested in using AL?

Do we have a way to recruit and engage faculty members in aligning their teaching to AL tools?

Do we have resources to develop the AL program or course and provide ongoing support?

Who will be responsible for ALP content development, system integration, reporting, and data analysis?

What are the key roles required in deployment of AL courses and programs?

How much institutional IT support is needed to incorporate the ALP into the learning environment?

What is the right approach for introducing and testing adaptive? (Approach and Methodology)

How should you organize the process for validating the solution’s ability to solve your problem? (Organizing - people, pedagogy, process and technology)
CONSIDERATIONS WHEN SELECTING A VENDOR

- What Domain(s) will you use AL for?
- Do existing vendors provide AL products or will you plan to RFP for ALP? Or Both?
- What are the types of adaptive learning products? Are you looking for a platform or content provider? Or a hybrid?
- This is an emerging area of product development. What is your comfort level with new vendors, vendors with new products? Do you prefer vendors with established AL products?
- What are the key differentiators of available ALPs?
- How customizable will the AL products need to be? Will faculty need to add their own objectives, activities, content, assessments?
- How suitable is the AL product for formative assessments? For summative assessments?
- Are test banks large enough to support multiple attempts to achieve mastery?
- Does the product support testing and comparing alternative activities, content, assessments for achieving effectiveness?
Is the ALP able to work with publisher, or OER, content that your faculty already use?

Are there particular ALPs that are more suited to your programmatic needs than others (such as science, technology, medical, math)?

Who will be responsible for customizing the courses/content? Faculty, Instructional designers, vendors?
  - Can we customize the adaptive content tools?
  - Can we add or edit competencies associated with adaptive content?
  - What is customizable among ALP?

Can I make my own links between learning objectives, activities, and assessments?

Who is responsible for connecting AL data to analytics tools, LMS or dashboards? IT, faculty, instructional designers? Learning engineers? Vendor services?

What are best practices for integrating ALP products with existing systems and curriculum?
COST

- How much time and money will it take your institution to deploy an AL course or program?
- Do we have resources to develop the AL program or course and provide ongoing support?
- Do you have the resources to measure the effectiveness of an ALP?
- How do students purchase access to the ALP?
- What pricing models are generally used for ALP (i.e., enterprise and individual student)?
- What are the different pricing options for commercial providers?
CAPELLA PROJECT OVERVIEW

**Project Approach:** Create custom courses

**Timeframe:** 12 months

**Two courses:** Undergrad business first course and graduate level psychology research methods course

**Design:** Faculty members and instructional designers developed a design process using concept mapping

**Instructional Model:** More self-paced, reduced discussions and weekly deadlines
ASU PROJECT OVERVIEW

- **Project Approach:** Configure existing system
- **Timeframe:** 2 months
- **One course:** College Algebra
- **Design:** Faculty members and instructional designers set up course in MML and LearningStudio
- **Instructional Model:** Self-paced with weekly study sessions and monthly exam deadlines
COURSEWARE

“A man’s got to know his limitations.”
(Thanks Clint)

Create Custom Courses
- Capella & Cogbooks
- Starts in Blackboard and authentic assessments remain in Blackboard
- Adaptive recommendations panel, quiz failure path, get help path

Configure Existing System
- ASU & MyMathLab
- Adaptive recommendations preset
- Rapid, ready-to-go, but “black box”
- Supplemented with instructional videos
FACULTY ROLES

“...Teach them to fish and you feed them for life.”
(Thanks Lao Tzu)

Design Team
- Capella multiple faculty, Cogbooks ID, Capella ID, UXA, course producer, editor, and PM
- Faculty SMEs taught the course and on-boarded new teaching faculty

Course Coordinator
- ASU math faculty member created and set up the course materials
- Quick course decisions
- Requires getting buy-in later
RESULTS & NEXT STEPS

“I’ll be back.”
(Thanks Arnold)

**Arizona State University**
- Persistence increased 12% (less Ws)
- Performance increased 2% (more A,B,Cs)
- Faculty evaluation scores increased
- Analyze, analyze, analyze
- Simplify, simplify, simplify

**Capella University**
- Reregistration and grades positive but not statistically significant
- Satisfaction mixed
- Iterating on design of courses
- Seeking to include scoring guide data in algorithms and improve UX/ADA
- Expanding to 5 courses in July
PSY7650 – Research Methods

Learner experience: 100% of course time; 10 Units, 10 Weeks; Linear path

Discussions Weekly, Studies, Assignments
Adaptive Learning – Shift to Non-Linear, Personalized Model

PSY7653 – Research Methods

Section 1

Section 2

Section 3
PSY7653 – Research Methods

- Activity: Characteristics of Quantitative Research
- Activity: Practice with Persistent Links
- Activity: Sampling, Constructs, and Scientific Merit
- Activity: Types of Variables and Quantifying/Analyzing Data
- Activity: Practice Identifying Variables, Independent Variables, and Dependent Variables

Quantitative Design
- Mixed Research: Quantitative and Qualitative Design
- Deciding between Paradigms for Research Diagrams
- More about Experimental Designs
- Non-Experimental Research Questions

Quasi-Experimental Research Questions
- More about Quasi-Experimental Designs
- Scientific Merit Explained: Transcript
- Scientific Merit
- Scientific Merit Explained

Variables
- Constructs
- Operational Definitions
- Data Analysis
- Levels of Measurement
- Measurement
- Independent and Dependent Variables in Quasi-Experiments

Scales of Measurement
- Independent and Dependent Variables in Experiments

Probability Sampling
- Importance of Selecting Good Operational Definitions
- Non-Probability Sampling
- Sampling Terminology
- Sampling

Experimental Research Questions
- Translating a Problem into a Research Problem

“Supplemental materials” available as needed

PSY7653 – Research Methods
Joseph’s Story
• 28 years old
• Some Full-time quarters
• MS, Counseling Psychology Specialization
• Program is 95% complete
• 3.7 grade point
January 2015 – Actual Learner Experience

- Competency Map
- Grade = A
Andrea’s Story
- 45 years old
- Part-time Student
- MS, Industrial/ Organizational Psychology Specialization
- Program is 77% complete
- 3.8 grade point
January 2015 – Actual Learner Experience

PSY7653
Research Methods - Winter 15
Contact Academic Advising

You have completed 12 of 12 Criteria, towards 12 TOTAL CRITERIA.

You have completed 4 of 4 Assignments, out of 4 TOTAL ASSIGNMENTS.

You have 4 COMPETENCIES in this course:

- Competency 1: Comprehend the scientific methods of inquiry. 6 of 6 Criteria, distinguished.
- Competency 2: Comprehend methodology used in scientific research. 2 of 2 Criteria, distinguished.
- Competency 3: Comprehend research ethics. 1 of 1 Criteria, distinguished.
- Competency 4: Communicate in a manner that is scholarly, professional, and consistent. 3 of 3 Criteria, distinguished.

- Competency Map
- Grade = A
January 2015 – Actual Learner Experience

- Competency Map
- Grade = A