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ADAPTIVE COURSEWARE IMPLEMENTATION GUIDE

Workbook

What is this resource?

Each phase in the implementation process will require a considerable amount of work from the targeted courses' Course Instructor, Course Designer, and Project Lead. This resource is meant to provide you with guiding questions, checklists, and additional resources and to help you navigate the implementation process more effectively.

Who is it for?

This workbook is for Course Instructors, Course Designers, and Project Leads implementing adaptive learning technology (referred to as *courseware* hereonafter) in gateway courses at two-year and four-year higher education institutions.
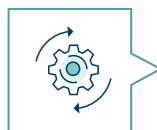
How to use this workbook:

This workbook will contain worksheets, guiding questions, checklists, surveys, additional reading, and research that you can utilize throughout the phases of the courseware implementation process. Use the table of contents below to navigate to the phase you'd like additional resources for.
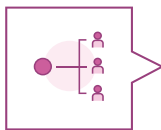
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> **TOOLKIT**
> This supplemental resource is published as part of the Adaptive Courseware Implementation Guide on Solve.

Find more resources at everylearnereverywhere.org

For questions, contact resources@everylearner.org

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Design

In the Design phase you are designing for several elements including crafting project goals, redesigning the course, and selecting adaptive courseware that aligns with the target course goals and needs for the targeted course. This section will include guiding questions for each workstream that should be addressed as you move through the phase.
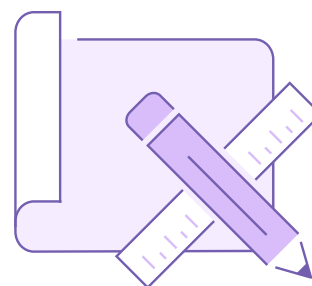
Guiding Questions

The guiding questions in this section are categorized by the workstream found in the **Phase 1: Design** section of the Adaptive Courseware Implementation Guide. In some cases the questions are sub-categorized by topic or issue area.

WORKSTREAM
Team building

- Has an Executive Sponsor within institutional leadership been identified?

- Is department leadership involved in the project?

- Has a Project Lead been identified?

- How can students be involved in the project? What financial incentives can be created to ensure student participation and time are compensated?

- Have students, especially students from racially minoritized groups, been invited to participate on the team?

- Besides instructional staff and institutional leadership, what other departments can be involved in the project?

- Has the Project Lead clearly defined roles and responsibilities for each member of the implementation project?

- Has the Project Lead identified a project management process to ensure all stakeholders are appropriately communicated with and project goals are clear?

WORKSTREAM
Goal setting

- How will the pilot be evaluated?

- Based on historical course-level and institutional data, what are the course-level student outcomes that will be measured and reported?

- What and when will quantitative and qualitative data be gathered throughout the pilot process?

- Has institutional leadership or Executive Sponsor reviewed the project goals and aligned them to the broader department and institutional goals?

- Does the Course Instructor and Project Lead have a clear plan for communication throughout the project?

- Is the Project Lead confident in making the case for adaptive tools to institutional stakeholders including department leadership, institutional leadership, and other stakeholders on campus who may be resistant to change?

WORKSTREAM
Designing course content

└ **Click here** to download the Backward Design workbook.

- How would adaptive courseware change the existing structure of the target course (e.g., lecture, lab time, discussion sections)?

- What academic interventions are making a difference at other institutions?

- How will each chosen functionality impact how the course is taught?

- What instructional strategies can be used to maximize student motivation, engagement, meta-cognition, and active learning?

- What instructional purpose(s) do you envision the courseware having? Consider:
  – A homework/quizzing system.
  – Exam preparation tools.
  – An extra help/self-remediation component.
  – A textbook replacement.
  – A system for student collaboration on activities.
  – Resources that the instructor can access and use during class.

WORKSTREAM
Technology considerations

INSTITUTIONAL AND COURSE CONSIDERATIONS

- Who in IT or institutional leadership has to be involved in the tool selection process?

- What kind of training and technical support can they provide to instructors and/or students?

- Does IT have the capacity to integrate adaptive courseware into their current infrastructure?

- What data security protocols must be met to access student-level data? Who has access to the data?

- Who will facilitate the ongoing communication and technical needs between the vendor and IT?

- Will the products work with your existing infrastructure and institution policies (e.g., accessibility, data security)?

STUDENT CONSIDERATIONS

- Can students access the course materials using any electronic device (laptop, tablet, cell phone)?

- What browser (if any) is required for optimal performance?

- Can the course materials be accessed by students in areas on campus and in the community with low internet bandwidth?

- Can the course materials be downloaded for offline usage? Have I included instructions for students to know this capability exists?

- If students do not have electronic devices, are there programs or services on campus that I can refer them to?

- Is there money in the implementation budget to purchase laptops and wifi hotspots for students? If so, what process must happen to ensure they are purchased and distributed to students without an interruption to their learning?

- If funding is not available, are there grants myself or someone on the implementation teams can apply for?

- If students do not have regular, uninterrupted access to the internet at home, how can my assignment expectations be revised to accommodate these students?

WORKSTREAM
Tool selection

GENERAL TOOL SELECTION

- What challenges do instructors and students face that adaptive courseware might help solve?

- What kind of training and technical support do vendors offer?

- Does a product give you access to the kinds of data you need to evaluate if the initiative is a success?

- Is the vendor able to support your implementation at scale?

- What data is being collected about students by the courseware and who owns that data?

ACCESS AND ACCESSIBILITY

- Does the courseware enable offline downloading for students who do not have reliable and uninterrupted access to high-speed broadband internet?

- Can the courseware be accessed on all devices, including a mobile device?

- Can the product easily integrate with assistive technology for students with disabilities?

- Is the courseware easy to navigate for students with disabilities? What onboarding support does the product provide?

- How much instructional time will it take students to learn the new courseware products?

- What training is available to students to ensure they can interpret their data dashboard to maximize learning and mastery of content?

- Should students be unable to access the courseware, what alternative ways can students engage in the instructional content, coursework, and complete assessments without fear of being penalized?

Adaptive Courseware Tool Selection (continued)

COST

- How much will the product cost the students? Will students from poverty impacted households have barriers purchasing the courseware?

- Will the cost of the courseware create an undue financial burden on students from poverty-impacted households?

- Can the vendor provide scholarship codes to students? How do students access the scholarship codes in a safe, private, and equitable manner?

- If my institution has elected to distribute the textbook through inclusive access, can students opt-out and purchase the product elsewhere (i.e., the campus bookstore or a third-party seller)?

- Can the vendor provide a two-four week trial period to accommodate students that have delays in financial aid awarding and disbursement?

REPRESENTATION

- Are racially minoritized authors and scholars cited?

- Are the histories and communities of racially minoritized groups represented accurately?

- Are racially minoritized groups represented through a strength-based lens?

- Can non-native English speakers equitably engage with the instructional content?

WORKSTREAM
Professional development

- What professional development opportunities exist at my institution to engage in new teaching and learning approaches?

- What professional development opportunities exist at my institution to engage in training on racial and socioeconomic equity, cultural inclusiveness and anti-racist practices in the classroom and the institution as a whole?

- What professional development opportunities exist at my institution to learn how to interpret course-level or institutional data to make informed decisions in my course?

- What networking opportunities can be leveraged for instructors inside and outside of the institution?

- How much time and money can be spent on engaging in professional development opportunities outside of what the institution offers?

WORKSTREAM
Change management

INSTRUCTORS

- Which instructors are open to new teaching and learning initiatives?

- What incentives already exist that encourage instructors to change their approach to teaching?

- What might discourage instructors from changing their practice?

- Is your Executive Sponsor able to create new incentives or change policies that present hurdles for instructors to participate?

- What lessons have others at your institution learned from past instructional innovation initiatives?

STUDENTS

- What student services programs support racially minoritized students? (i.e. PUENTE, TRiO, Umoja, etc.) Are these programs informed about the project? How can the staff and advisors support students in their program enrolled in those courses?

- When students encounter technical problems is there support on campus they can be directed to? Can the vendor provide direct support to students? If so, how do students access this assistance and how often?

- How do students access tutoring? Are there virtual options available?

- Are students assigned advisors? Have I communicated the course change with the advising center/counselors and invited them to the implementation team?

- Is the Disability Services office aware of the new technology being used in the course? How can they provide me and students with disabilities with ongoing support?

- What support are students in the enrolled course already utilize on campus?

Pilot

In the Pilot phase you (the Course Instructor) will be focusing your attention to ensuring the tool(s) selected for your course will produce the student outcomes you outlined in the Design phase. This section of the workbook will provide you with worksheets that can be used as you are working through the Pilot phase.
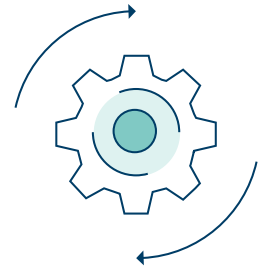
Pre-pilot Checklist Worksheets

For optimal use, the worksheets below should be used at least two weeks prior to the start of the course. If there are actions that have not been completed, two weeks can allow you, the Project Lead and the Course Designers to identify a plan to ensure the activity is completed within a timely manner.

📘 **Preflight Checklist**
UNIVERSITY OF MISSISSIPPI

📘 **Pre-pilot Checklist**
ARIZONA STATE UNIVERSITY

Guiding Questions

During the pilot phase you should be engaging in continuous improvement and documenting the areas where you have implemented iterations in your course based on courseware data and direct student feedback. The guiding questions in this section will provide you to be reflective as you're implementing improvements in your course. There will also be questions to ensure various logistics are documented and reported to the Project Lead.

> If you are gathering feedback from students and instructors during this phase, see the resources in Optimize for sample surveys and focus group questions.

WORKSTREAM
Continuous improvement

- Based on data from the courseware data dashboard, are there students in the course who may need additional instructor support?

- Based on the students enrolled in the course, is the grading policy equitable and allows each student to accomplish the course outcomes?

- Has an item analysis been completed on assessment items?

- After an item analysis has been completed what actions did you take?

- Since implementing the tool in the course has student engagement, motivation and/or collaboration increased or decreased from past classes? What quantitative and qualitative data do you have to support your claim?

- Have you documented the academic interventions you've utilized throughout the pilot?

- Midway through the pilot have you checked in your department dean/chair/coordinator to discuss progress in the course using the courseware?

- How will you document issues and concerns that arise during the pilot so that they are addressed in a timely manner?

- How can you incorporate qualitative data into the evaluation of your pilot?

WORKSTREAM
Change management

- Has the Project Lead identified and scheduled opportunities to share how the courseware tools are transforming your course and the student learning experience?

- Have you identified networking opportunities to connect with other instructors and institutions engaging in this process?

- Is the Project Lead, Course Designer, and/or Executive Sponsor aware of any challenges you or other instructors are experiencing during the pilot?

- Based on the budget for the project, how much money is left to engage in additional professional development or create new incentives for the implementation team members?

Optimize

During the Optimize phase you and your team will be engaging in a process to evaluate the results from the courseware and determining if the results warrants an expansion to additional courses and disciplines. The Course Instructor will also be engaging in a continuous improvement process to revise their course based on the courseware data dashboard and student feedback collected from surveys and focus groups.
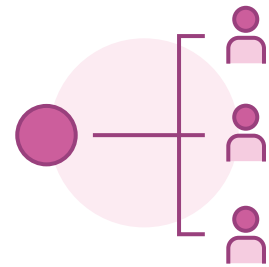
This section of the workbook will provide you with tools to use to conduct instructor and student surveys and additional resources to calculate the return on investment (ROI) on your project.

📑 Instructor Survey
DIGITAL PROMISE

This instructor survey is designed to collect information about the implementation and conditions for the use of adaptive courseware. The survey was administered to 1,005 instructors in 449 different higher education institutions during the three year period from 2015 to 2017. Over 40% of the institutions were public two-year colleges with the remainder being a mix of public and private, traditional or online, four-year institutions.

📑 Student Survey
DIGITAL PROMISE

This survey is designed to collect information about students' demographic background and experiences when using adaptive courseware.

📑 Student and Faculty Survey and Focus Group Questions
UNIVERSITY OF MISSISSIPPI

📑 Student Speaks 2020: Student Voices Informing Educational Strategies
EVERY LEARNER EVERYWHERE & GLOBAL MINDED ED

See page 4 of this linked resource for additional focus group questions.

📑 Defining Digital Courseware's Success in Terms of ROI
EDSURGE

📑 Return on Investment Toolkit
EDUCAUSE

Articles and Resources

Additional articles and resources that you and your team
can reference throughout the implementation process.

📖 **Inclusive Instruction with Adaptive Courseware**
EVERY LEARNER EVERYWHERE

📖 **Accessibility Resources**
EDUCAUSE

📖 **Building a Culture of Accessibility in Higher Education**
EDUCAUSE

📖 **Annotated Bibliography on Adaptive Learning**
GSU CENTER FOR EXCELLENCE IN TEACHING & LEARNING

📖 **7 Ways Faculty Use Adaptive Learning: Lessons From a Pilot of 40 Gateway Courses**
EVERY LEARNER EVERYWHERE

📖 **Adaptive Learning: Research-Based Principles for Developing Effective Courses**
WCET FRONTIERS

📖 **5 Principles of Equity by Design**
CENTER FOR URBAN EDUCATION

📖 **Equity by Design (ExD)**
EQUITY BY DESIGN COLLABORATIVE

📖 **Predictive Analytics in Higher Education**
NEW AMERICA

📖 **Course Design Rubric Standards**
QUALITY MATTERS

📖 **Online Equity Rubric**
PERALTA COMMUNITY COLLEGE DISTRICT

📖 **What Is Deficit Thinking? An Analysis of Conceptualizations of Deficit Thinking and Implications for Scholarly Research**
UNIVERSITY OF MICHIGAN

Find more resources at everylearnereverywhere.org 🔗

For questions, contact resources@everylearner.org ✉