

UNDERSTANDING THE CURRICULUM DESIGN PROCESS

■ The curriculum design process involves four steps. These steps take information from a subject matter expert and, through multiple iterations, create instruction. Each step produces outcomes that become the building blocks for the next step. The first step, “Gathering Information,” works to create filters in order to extract the information that the learner needs. The first step answers the basic questions of “who” and “what” that the team needs to create a blueprint. This blueprint is made in the second step, “Design.” With a map of how the instruction will progress in hand, the team is ready to develop the material in the “Building the Content” step. Finally, the team performs a summative evaluation of the content in the “Final Evaluation” step. Despite the “Final Evaluation” step being last, the team is constantly evaluating the material as it cycles through many iterations. The curriculum design process involves a team composed of important players including: project managers, instructional designers, developers, writers, copy editors, and subject matter experts. As each step progresses, there is constant communication amongst the team to ensure that the content they are building is effective for learner and in line with the created objectives. The model below shows a snapshot of each stage. As you can see, formative evaluation or evaluation of a partially completed unit, is a key part to each step.

THE CURRICULUM DESIGN PROCESS



1. GATHERING INFORMATION

■ The first step of the design process involves planning and identifying who the learner is and what they need to know about the subject. The team needs to identify this before they can extract the information from the subject matter expert. The team begins by conducting a needs assessment. According to researchers from the University of Idaho, a needs assessment is a “systematic approach to studying the state of knowledge, ability, interest, or attitude of a defined audience or group involving a particular subject.” To summarize, we need to know who the learners are and what they need to learn. In order to discover more about the learner, the team answers questions such:

- Who will take the course?
- Are the learners traditional or nontraditional?
- What prerequisites does the learner need prior to taking the course?
- What is their attitude towards the subject?
- Is this a required course or an elective?

The instructional designer works with the subject matter expert to answer these questions. The team may do additional research to study the learners’ demographics. Answering these questions is crucial to building a course that will best fulfill the learners needs. Now that we can imagine who our learner is, what they know and how they feel about the subject, we can plan what content they need to fill in the gap.

Instructional designers use information from the needs assessment to create questions that will extract the information that the learner will need. The team is first and foremost an advocate for the learner. The instructional designer will work with the subject matter expert and obtain the necessary information. The answers to these questions translate into the information the instructional designer will use in the curriculum. As the team selects the content based on the needs assessment, they adjust it as needed, and so begins the first iteration. Once the team selects the content, they can move on to the second step.

Outcomes

1. Needs Assessment
 - Identifies who the learner is and what they need to know
2. Content Selection
 - The instructional designer gets information from the subject matter expert

2. DESIGN

■ With the information selected, the team can now create the blueprint for the course. But before the careful mapping of the course and detailed storyboards, there must be clear and measurable objectives. These objectives are based on the needs of the learner that were identified from the needs assessment. Clear objectives include action words such as:

- Identify
- Compare
- Modify
- Plan
- Evaluate

As the instructional designer works with the writers to create the objectives, they carefully connect them to the content. Action words lead to measurable outcomes. We can measure if a student can “recall three important events”, but we cannot measure if they “understand the chapter.” These specific objectives ensure



that learning outcomes can occur. The copy editors assist by making the learning objectives clear and consistent in style.

Next the team examines the environment where the learner will be taking the curriculum, in order to determine the best delivery method. They ask questions such as:

- Will the learners access the material on their mobile phones or in a classroom?
- Will the material need to be printable?
- Do the learners have access to internet or will the material need be viewable without internet access?

According to research on curriculum design from the FAO, a useful exercise for the team to engage in is a recall exercise. This recall exercise involves the team putting themselves in the place of the learner and listing any challenges they may face if they were to be in the class. These challenges are then listed, categorized and used to better understand the learner.

The team plans how to sequence the content. This involves creating a storyboard. In addition to giving a visual of how they will sequence the material, the storyboard includes detailed notes of what to build in the next step. The instructional designer makes requests for graphics, suggests interactions if the curriculum is online and selects activities and assessments. The team evaluates the storyboard and makes any changes that are needed. The storyboard acts as a blueprint for the curriculum and gives all of the information needed to build the course.

Outcomes

- Objectives
 - Measurable and clear leading to desired learning outcomes
- Delivery Method
 - Selects delivery method based on learner characteristics and environment
- Storyboard
 - Creates a map of what to build and how

3. BUILDING THE CONTENT

- With a detailed storyboard in hand, the team can now build the content into a workable instructional unit. This step can involve a developer if the curriculum needs multimedia such as videos or interactive online lessons. The storyboard guides the team on how to combine material and create new assets such as videos, online lessons or graphics. They work together to develop the material.

As the team builds the material, there is constant communication between team members. If something is unclear on the storyboard, the team communicates until there is a clear consensus. Throughout this step, copy editors work to keep the content consistent by ensuring the work is in the correct style and lines up with the learning objectives. The instructional designer acts as the advocate for the learner, referring back to the needs assessment and ensuring that the curriculum satisfies the needs of the learner.



When the curriculum does not align with the objectives or the needs assessment, the team evaluates it and makes any needed changes. Multiple iterations may occur as the team scrutinizes and tests the curriculum.

Outcomes

- Instructional Unit
 - Built instructional unit from the specifications of the storyboard

4. FINAL EVALUATION

- The final step is evaluation. Although the material has gone through multiple iterations, it is evaluated once more, which is the summative evaluation. The FAO defines the summative evaluation as the process of stepping back, putting all the parts together and then deciding if course achieves the intended outcomes. The summative evaluation answers the question, “Did we achieve what we intended?”



The team creates an evaluation strategy to develop a criteria to conduct the summative evaluation. The needs assessment and learning objectives create a checklist of what the learner needs to know and how they will learn it. The team matches the curriculum against the checklist and changes anything that does not meet the criteria.

If there is time in the project, the evaluation strategy includes a plan for collecting data from learners who have completed the course. The team decides what method they will use to collect the data, whether it be a focus group or an online survey. The data is then created into a report that details what was successful and what needs improving. Anything that they need to add to the curriculum cycles through the four steps and is then part of the curriculum.

Outcomes

- Evaluation Strategy
 - Creates a checklist to evaluate the curriculum against
- Summative evaluation
 - Tests that the curriculum did what it was planned to do

The curriculum design process ends as it begins with evaluation. In the beginning the team carefully evaluates who the learner is and what they need. Once it is clear who the learner is, the team strives to always improve the material so that it best meets the needs of the learner. The role of evaluation in each step ensures that the material is evolving as it cycles through multiple steps and team members. In order for the curriculum design process to be successful, it is important that each team member feels empowered to speak out. If a writer sees that an objective is not measurable, they should bring it up to the team. A team that openly communicates has the ability to create quality curriculum.

Sources: Overview of the Curriculum Development Process. (n.d.). <http://www.fao.org/docrep/009/ah650e/AH650E03.html>; m University of Idaho. <https://www.cals.uidaho.edu/edcomm/pdf/BUL/BUL0870.pdf>



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