DEVELOPING INTERACTIVE ONLINE COURSES

Petr Kosina, Cheryl Reynolds, and Tunyalee Martin

UC Statewide IPM Program



ONLINE COURSE – 'QUICK AND DIRTY'



Record presentation with audio narration as a video file using for example **ZOOM**.

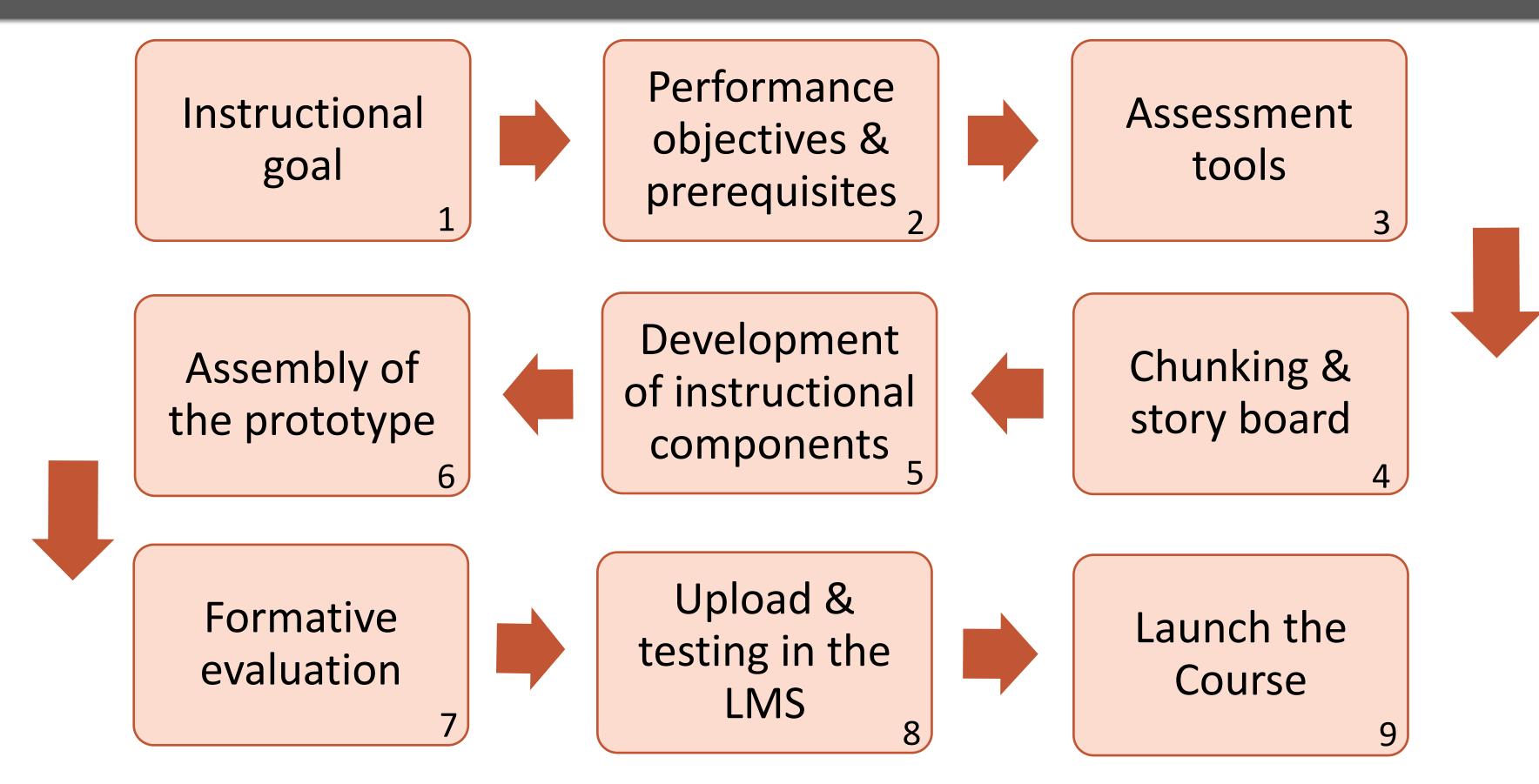
Chunk, insert quizzes or tests, and branching interactions using H5P - HTML 5 PACKAGE.

Add closed captions for the narration, test accessibility, and upload to your LMS - LEARNING MANAGEMENT SYSTEM.

Pros Cons

- + easy to learn course will be only as good as the recorded presentation
- + quick and cheap making content changes means re-recording presentation
- + can meet accessibility requirements limited customization and interactivity options

ONLINE COURSE SYSTEMATIC DESIGN PROCESS



- 1. What do you want the learner to come away with? For example: Californians will choose integrated pest management to manage all kinds of pests in urban, agricultural, and natural areas.
- 2. Break the overall goal into more specific pieces, keeping the audience in mind. Define the information, skills, and attitudes needed to be taught that will meet the overall goal.
 - Develop CHANGES IN BEHAVIOR: Follow IPM principles to solve the pest problem.
 - **Performance objective**: Given a real-world scenario, the learner will choose the appropriate steps to identify and solve a suspected pest problem.
 - Develop **SKILLS**: Evaluate whether pesticide application is appropriate in the given scenario.
 - **Performance objective**: Given a detailed scenario (crop, pest, abundance), the learner will consider relevant factors and decide whether the action threshold was reached.
 - Develop KNOWLEDGE: List examples of physical or mechanical weed control.
 - **Performance objective**: Given a set of statements, the learner will select those practices describing physical or mechanical weed control.
- 3. Translate objectives to questions for review of content or testing.
- **4.** Divide content into modules and decide on your teaching method for each topic to best present the content and motivate the learner (e.g., demonstration videos, cartoon animation, case scenarios, interaction).
- 5. Collect and produce the materials: script, media (images, video, audio), and collect examples and case studies.
- **6.** Assemble the final components and produce the prototype.
- 7. Evaluate with select learners and revise based on feedback.
- **8.** Upload of final modules into learning management system (LMS), test functionality including tracking learners' progress through the course, reporting scores from modules, and issuing course certificates.
- 9. Open course to public

ADDRESSING ACCESSIBILITY

To meet basic accessibility criteria, make sure to

- Use LARGE TEXT FONTS, PREFERABLY SANS SERIF to make text readable even on small screens like smartphones.
- Check COLOR CONTRAST of text and background combinations on your screens.
- Add ALT TEXT to all photos, diagrams, graphs and other visuals unless if used only for decorative purposes.
- Provide **DESCRIPTION TO ANY VIDEO** without narration.
- Add CAPTIONS FOR ALL AUDIO narration in your course (preferably with ability to turn off and on).
- Check that each button in your course has a clear **DIRECTION OF FUNCTION.**
- Ensure that learners can navigate through the course in the desired order using **KEYBOARD-ONLY NAVIGATION**.
- Prevent COGNITIVE OVERLOAD—use consistent format, white space, less text, structured and aligned content, disable autoplay, and avoid visual or auditive distractions.



1 in 4 adults

in the United States have some type of disability.

Accessible design is helpful for everyone!

Meeting accessibility standards is required by state and federal laws.



ONLINE COURSE EVALUATION

Evaluate the course before it is published with a select group of learners



Collect qualitative information with a sample group of your target learners. Observe what they do when they are taking the course, analyze their test results, and conduct interviews after.

Focus on learners' understanding of content, perceptions of course activities, course pace, and their overall engagement.

Use feedback to improve the course before it is published. The earlier you evaluate, the easier it is to incorporate important changes to your course.

Collect immediate feedback from learners who finished your online course

Survey your learners and continuously review the feedback to monitor the satisfaction of learners, effectiveness of the instructional approach, relevancy of your course to the target audience, usability and any technical issues that learners may have encountered due to, for example, software updates.

I found this course to be very informative.

Very excited to go out and check all my citrus trees! And everyone else's!

Sometimes the pages won't load up correctly and the sound will stop working, plus the bullet points would not fit in the screen.

Having the cc/
subtitle option was
really helpful for me.

It's easier for me to
focus on reading than
listening to a video.

Assess the use of knowledge and skills to improve course performance



Follow up with your course participants a few weeks or months after they take the course to learn about how they are using their new knowledge and skills acquired through your course. Ask what was missing or what they would change in the course. Feedback of this type is invaluable for the future improvement of current courses AND the development of new courses.