Creating Interactive Online Courses With Articulate 360

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ABSTRACT

Slide-based lectures are not the optimal approach for learning new content or rehearsing materials for all students. An alternative is using online courses, which allow students to proceed at their own pace. We discuss a software package that allows flexible interactivity and thus gives students a chance to actively participate and to easily measure their level of understanding.

CCS CONCEPTS

• **Social and professional topics → Computer science education**;

KEYWORDS

Articulate 360, online course, interactive, self-training

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1 CREATING INTERACTIVE ONLINE COURSES USING ARTICULATE STORYLINE

Online materials of different kinds have become a common addition to current teaching. However, many online materials are non-interactive, for example copies, lecture recordings or YouTube videos. This may cause the students accessing the materials to be mostly passive, and thus less engaged, as they have no proper way to adapt the materials to their level of understanding, apart from skipping ahead or pausing the materials as needed.

Creating interactive course materials may appear to be a daunting challenge, in terms of invested time and money and perceived required skills. This impression is often correct: software that can make content lively and interesting, such as GoAnimate for creating short videos with animated characters [1], often has a limited scope but already a moderately high price. Other approaches, for example the quiz options integrated into current learning management systems such as Moodle [2], are too limited in scope to allow much flexibility. More advanced features, such as the Moodle "lesson" activity which allows branching depending on the user's answer to questions, can easily lead to dead-ends or unexpected results on branching, as there is no visualization of the "branching graph".

Based on our experience, many of these issues can be overcome when using Articulate 360 [3], a commercial tool with a yearly subscription price of currently $499 per user with an academic discount. With a GUI that is similar to Microsoft PowerPoint, learning to use Storyline to build a "story" out of existing slides or from scratch is not hard. Beyond the functionality of PowerPoint, Storyline 360 offers the following (incomplete) set of interesting features for interactive courses that we have used to build several course units for self-study purposes:

- boolean, numeric, and String variables to remember past actions or input, such as the user's name, current score, or last action(s) chosen,
- arbitrary branching is possible on each slide, based on different user actions (such as clicking on a concrete button), or the current values of variables,
- each slide can have an arbitrary number of layers that overlay the basic layer with (different) pieces of information and reduce the number of required slides,
- a decent "scene view" in which the structure of a story is visualized and the branching is clearly shown,
- photographic or illustrated characters in a large set of different poses and with different facial expressions and gestures,
- the ability to modify a character's state based on user actions or variable values. For example, a "bad choice" can be used to give the character a disapproving expression, providing additional visual clues to the quality of the user's choice,
- a large set of predefined automatically graded quizzes, including drag and drop as well as "free form" quizzes based on the correct arrangement of arbitrary screen elements,
- the ability to record the screen and use this recoding as a direct playback, a segmented tutorial video, or an interactive "click after me" tutorial (with automatically generated hints).
- the courses can be embedded on a web server, inside an LMS such as Moodle [2] or published on a web-based reviewing platform where any user can comment on the contents if the link was shared and they register with their mail address.

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