An Interactive Online Course to Raise Awareness about Diversity

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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 the development that allow interactivity and thus give 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

1 AN INTERACTIVE COURSE ABOUT DIVERSITY

Online materials of different kinds have become a common addition to current teaching. However, in many cases, the online materials are non-interactive, e.g., slide copies, lecture recordings, YouTube videos. This causes the students accessing the materials to be mostly passive, 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.

Interactive course materials appear to be hard and costly, in terms of invested time and money, to produce. In many cases, this impression is mostly correct, as 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" actiivity which allows branching depending on the user's answer to questions, can easily lead to dead-ends or unexpected results if multiple branches are used.

After some research, we found a tool that addressed these shortcoming: Articulate Storyline 360 [3]. With a GUI that is close to Microsoft PowerPoint in appearance, learning to use Storyline to build a "story" out of slides is very easy. Beyond the functionality of PowerPoint, Storyline 360 offers the following (incomplete) set of interesting features for interactive courses:

- boolean, numeric, and String variables to remember past actions or input, such as the user's current name, current score, or last action(s) chosen,
- arbitrary branching possible on each slide, based on different user actions (for example clicking on a 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 slides necessary,
- 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 by turning a character from a smiling expression into a disapproving expression if a "bad choice" was made, 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).

REFERENCES

[1] GoAnimate.com. 2018. GoAnimate web page. https://www.goanimate.com. (2018).
[2] Moodle HQ. 2018. Moodle Home Page. https://www.moodle.org. (2018).
[3] Articulate Inc. 2018. Articulate 360. https://www.articulate.com/360. (2018).