

05. Evaluative tools and testing instruments

05/A1 Analysis for the development of evaluative tools

E-learning (MOOC) allows students and dieticians to learn anywhere and at any time. They can learn from virtually any place with a computer or mobile device and internet connection. It is important to know what students engages in order to offer effective online learning environments. Research about this topic offers three conclusions: (1)

- 1) Online instructions can be as effective as traditional instructions.
Students were often required to do more in online courses than in traditional courses (Maki and Maki, 2007). Another conclusion was that, to be effective, **online instruction required strong methodology and opportunities for students to interact with each other and the instructor.**
- 2) Online courses need cooperative/collaborative (**active**) learning, such as: **group discussions, and other forms of student-student interaction.** (Gayton and McEwen, 2007). A “well designed discussion facilitates meaningful cooperation” (Graham et al., 2001). **Interactive activities seem to be a necessary component to effective online instruction.** Some articles state that a variety of instructional methods (games, case studies, etc.) are needed for effective online instruction (Chickering and Ehrmann, 1996).
- 3) Strong instructor presence. Emphasis on the social presence of instructors makes sense in light of research findings that students need to feel connected to the instructor and other students in the course (Garrison, Anderson and Archer, 2001; Lewis and Abdul-Hamid, 2006).

Other conclusions of the experiment: Students report application activities as engaging (having to apply the concepts to case studies or problem solving). Important in student-student communication are: discussion forums, group work, peer reviews and chat/connect sessions.

Instructors need to create active learning situations in which students can apply what they are learning. Meaningful communication opportunities also need to be integrated in online courses. (2) It is also important to give clear expectations: clear expectations about how long each item should take to complete.

In this fast moving world of e-learning the available technologies to make a course inspiring are always changing, and program content can and should be updated quickly, to give students and dieticians the very last information. (3)

E-learning is independent from place and time, offers flexibility and a wide variety of programs from an international market.

Different software can be used for creating a learning management system (LMS) and can be used to create interactive courses. Below we will make a first step to analyse different programs which can be used to create evaluative tools.

Adobe captive 9

- Create any kind of e-learning.
- For all devices.
- Cost: 36.29 euro/ month (free trial for a month)
- Product is available in the following languages (English, French, German, Japanese, Korean, Portuguese, Spanish).
- A program, for windows, Mac OS, iPad with IOS 8.3 (or later).
- SWF: flash player 10 or more.
- HTML5: internet explorer (versions 9,10,11), Chrome 43 (or later), Firefox 38 (or later), Safari 8.0.6 (or later). Import HTML5 animations into Adobe Captive projects without requiring any plug-ins.
- Adobe Captive Draft: Convert ideas into storyboards.
- eLearning elements: content and question slides, branching logic and more.
- Reviewers do not need to have either the app or Adobe Captive. The storyboard can be published.
- Import PowerPoint slides into eLearning projects.
- Bring in objects, animations, and multimedia in the eLearning projects.
- Intuitive user interface: makes authoring easy and efficient.
- Attractive project templates (backgrounds, styles, fonts and layouts).
- Interaction library: by customizing any of the templates such as in-course YouTube video streaming and web browsing (Hangman, Jigsaw, Process Cycle, Glossary, Accordion, Pyramid, Animated Rollover, and Accelerometer-Based interactions). Also enable learners to add and edit notes.
- Can be used on desktops, tablets and mobile phones.
- Multi-touch technology: allow learners to tap, scroll, pinch and swipe their way through courses.
- Games, interactions, layout, scenarios to dress up the courses.
- Adobe Captive provides the options to make our project SCORM/AICC-compliant and also creates the necessary files required for compliance to these standards. We can directly upload the published package to an LMS.

Assessment

- Comprehensive quizzing: a wide range of attractive quizzes.
- Question types include: matching, short answer, and fill-in-the-blanks.
- Leverage HTML5 supports to deliver quizzes across all devices.
- A variety of smart shapes for more effective feedback to learner selections.
- Knowledge check questions.
- Responsive drag-and-drop interactions: drag-and-drop games, quizzes, learning modules that can run on any device.
- Multiple question types (matching, short answer, fill-in-the-blanks) and more.
- Remediation: when users answer a quiz question incorrectly, they can revisit the relevant section, understand the concept correctly and retry the question.



Articulate <ul style="list-style-type: none">• \$1.389, a free trial for 30 days.• Intuitive user interface• Text Editing (easily customize text spacing, alignment, size, and colour, font characters and bullets). Publishing: <ul style="list-style-type: none">• To HTML5, Flash and the Articulate Mobile Player app for iPad and Android tablets.• To Microsoft Word• Publish Tin Can API 1.0- SCORM, and AICC-compliant content that works with our learning management system/ publish online.
Assessment <ul style="list-style-type: none">• Quizzing: Easily assess learners progress. Choose from 20 predefined, form-based questions.• Freeform questions: Turn objects on slide into an engaging, decision-making activity.• Multiple-Quizzes• Negative scoring: create more accurate testing by subtracting points from learners scores when they answer incorrectly.• Question import: Import questions from Excel or text files from a database or subject matter experts.• Question banks: Easily group and manage the questions by pooling them in banks, which can be randomized or even imported into other courses for reuse.

Camtasia <ul style="list-style-type: none">• Screen recording,• Mobile video,• Visual effects• Add quizzes to the video, monitor who is watching, and know which parts they've viewed.• Interact with viewers: share videos with anyone, anywhere.• Quick and easy sharing.

Composica <ul style="list-style-type: none">• Price: \$150/month, request for free trial.• Serious games: employ powerful motivational elements (competition, humor and satisfaction of winning through applying a skill.) Games are an extension of assessments, and therefore support all features offered by assessments – including SCORM reporting.• All interactions can contain all types of media (images, movies, animation, sound), as well as make use of visual effects.• Interactions may also be limited in time using visual timer elements.• Social learning: add blogs to courses, the ability to comment on anything in the course. Let learners rate all objects in the course.



- Publish options: Courses can be published using any of the available delivery methods: web server, Zip file, SCORM (1.2004), executable Application, installation package.

Assessment

- Multiple choice – single or multiple correct answers, unlimited number of choices.
- Drag and Drop: sorting, sequencing, and matching questions.
- Fill in the blank.
- Hot spots: create dynamic time-based or event-based scenarios.
- Points and Click
- Surveys

Lectora

- \$777
- Quickly and easily create mobile courses
- Games and quizzes
- Interactions
- Page layouts
- Scenarios
- Icons and graphics
- No further features on the website

Mohive

- e-learning content development platform.
- Use a wide array of learning experiences: blended learning, corporate MOOC, learning channels.
- User-friendly, allowing anyone to create e-learning content.
- It is a web application
- Localised content,
- Reusable content,
- Publishing options,
- Testing/discussion groups,
- Conversion to PowerPoint
- Audio/video
- SCORM and AICC compliant.

Assessment

- Offers a series of 29 templates that allow a wide range of exercises, including multiple-choice questionnaires, drag-and-drop exercises, videos and discovery exercises.

Rapid intake and Easy Generator

\$ 39 per month/ author

Co-authoring: collaboration: co-authoring and review: create and review courses and assessments with a team.

Publishing:

- Via social media
- To our Learning management system. The course will be downloaded into a zip file in SCORM 1.2 format. The file can be uploaded into any SCORM 1.2 compliant LMS.
- Result tracking.
- Inside a website.

Assessment

Question types:

- Content
- Single choice
- Multiple choice
- Single choice image
- Fill in the blank
- Text matching
- Drag and drop text
- Statement
- Hotspot
- Open question
- Scenario
- Ranking text

Xerte

- A fully featured e-learning environment.
- Xerte is a freely available tool developed by the University of Nottingham.
- Xerte is an XML editor that makes it easy to create and deploy interactive learning objects that are highly approachable and SCORM compliant.
- Xerte helps the creator focus on interactive design by providing forms that are easy to use and fit for purpose.
- Xerte supports a quick way to create learning objects with font size preferences, colour preferences, keyboard navigation, alt text and text to speech (viewed via Internet Explorer). It enables to import images (png and jpg), video and audio (mp3), flash or animations files directly into the learning object and arrange these items on the page as they prefer.
- The software automatically maintains these items in a folder for every project.
- The user-friendly, highly non-technical templates.



- Keyboard access: all content can be handled by the keyboard, using the arrow keys, enter, tab and space.
- Users can choose from a seven colour schemes.
- Users can resize movies in their browser.
- Users can hear the text on the screen being read out loud (using Internet Explorer).
- The software helps the author to include text equivalents to visual images or audio files.
- Drag and drop, items can be picked up and dropped by using the space bar.

Assessments

- You can add images on text pages. (insert → media advanced image)
- Long texts can be split over tabs.
- With a 'hotspot image', the user can first learn the theory, and then apply it to exercises.
- Training with different categories (insert → interactivity → categories), students will learn the differences between different parts of the theory.
- Multiple choice questions: (select: single answer/ multiple answer) + feedback, even if the student/ dietician gives the wrong answer.
- *Nearpod is another website for devising quizzes, but you cannot give feedback after an erroneous answer.*
- Timeline: student/ dietician can put elements in the correct order. (For example, the dietician's consult)
- Jing-movie is part of the Xerte-tool. (students get more information in this little movie + they can train their knowledge in exercises.) Jing is a free screenshot/ screencast program. We can also comment on cases with this program.

Disadvantage

- Static program: not the most performing program on the market (but free and easy to use).

Usability within our online platform and budget are important parameters to consider in making a further decision.

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