Committee Report
Program Administration Charge 1 (EDU_PA-2016-1): Sections 9 and 10

Background:
The National Association of State Boating Law Administrator’s (NASBLA) Education and Outreach Committee was charged with reconsidering elements of NASBLA Policy – Basic Boating Education Course Approval¹, Sections 9 and 10. The charge was assigned to the Program Administration Subcommittee, Charge Team 1 under the Leadership of Betsy Woods (TN). Research and recommendations were presented to the charge team by three volunteer instructional designers who work in conjunction with currently approved course providers. The Charge Team makes the following policy recommendations for changes to Policies 9 and 10:

- Clearly separate assessment requirements for classroom courses from those required for internet courses;
- Rword assessment requirements to allow for interactive assessments for internet course;
- Remove chart in section 9.3.9 because it is confusing and redundant;
- Require internet courses to provide assessment feedback for correct and incorrect answers.
- Add a section requiring adherence to a defined editorial style for grammar.
- Add a requirement to use correct general boating language, terminology, and spelling.

In addition, state members of the Subcommittee drafted items for additional review by an independently selected instructional design professional with no previous ties to the RBS or course provider community. This individual will review this list of additional recommendations:

- Consider the overall impact of transition away from seat time, in favor of a structure that creates flexibility and allows students to progress as they demonstrate mastery of academic content, regardless of time, place or pace of learning;
- Implement pilot program to allow internet courses to continue with timed pages (minimum of 3 hours as currently prescribed) or provide interactive content throughout 30% of their course and every 3-5 pages of their course content;
- The targeted level of eLearning interactivity for this pilot program shall be moderate to high;
- Remove the requirement for timers for students who fail an assessment (9.3.2);
- Review all sections to remove reference to timers in order to allow for 30% enhanced interactive courses. (Section 10)

¹ Approved by Membership October 18, 2014, Bar Harbor, Maine
Instructional Design Selection

NASBLA’s BOAT Program Manager, Mr. Mark DuPont, holds credentials as a Master Instructor through the Association of Talent Development (ATD). As a member of ATD’s instructional design forum, Mr. DuPont posted a Request for Proposal to an individual for this project. A number of forum members recommend Ms. Julie Stelter of the Walden Group. NASBLA Education and Standards Director Pamela Dillon, with assistance of Subcommittee and Charge Team Charge Betsy Woods, reviewed the consultant credentials and obtained her services. The consultant selected is Walden Group...

_educational strategy and instructional design_, Julie Stelter, President (www.waldengroup.net). This document reflects Ms. Stelter’s professional opinion regarding the Charge Team’s recommendations for policy changes.

Purpose of this report:
The purpose of this report is to review the draft policies, identified above and specifically provide research and best practices regarding policies related to (1) student assessment, (2) course timers, and (3) levels of course interactivity.

Student Assessment

(Section 9.3.1) The role assessment plays in learning is currently undergoing a transformation in education circles. Based on brain research and scientific studies, low-stake and high-stake assessments are increasingly being viewed as a learning tool, not just an evaluative one. Low-stake assessments are often used in eLearning courses at the end of a module or section. One purpose of these assessments is to help the learner remember more on the final assessment and more importantly in the real-world. Research is showing that memory increases the more the learner accesses the information. So by placing low-stake assessments at the end of a module, the brain practices retrieving that knowledge thereby improving the amount of learning. In _Make it Stick: The Science of Successful Learning_, Brown, Roediger III, and McDaniel write “Empirical research shows us that the testing effect is real-that the act of retrieving a memory changes the memory, making it easier to retrieve again later” (41).

(Sections 9.3.5, 10.2.5) In addition, when assessments are coupled with feedback for both incorrect and correct answers, studies show that retention is even greater. Research is also indicating that testing, compared to rereading text, can “facilitate better transfer of knowledge to new contexts and problems, and that it improves one’s ability to retain and retrieve material that is related but not tested” (41-42). Because evaluating students on being a safe boat driver is challenging online, due to its practical nature, eLearning courses must be designed to encourage as much knowledge transfer as possible. Both low-stake and high-stake testing with feedback can help learners understand the rules and more importantly apply them on the water.
Course Timers
(Repeal of Section 9.3.2, Section 9.3.3) Post-assessment content review regardless of score and with no time constraints is another way that testing improves knowledge acquisition. Studies show that students who test and then restudy, learn more than students who study and then restudy, without testing in between. The testing and then feedback instructional design increases learners’ awareness of what they know and do not know as well as engages them in retrieval practice. Also, by removing the time constraint on the content review, learners are allowed to self-direct their learning both in terms of content and time. This is one of the six adult learning principles first identified by Malcolm Knowles in 1984 (Pappas, 2013).

(Section 10.2.3, 10.2.4) Allowing learners to return to a course or assessment at the same place they exited is an example of sound eLearning design. As stated before, this allows adult learners to self-direct their time. More importantly though, it incorporates both spaced and interleaved practice, even though it may not be the intent of the course or the learner. *Spaced practice* is inserting intervals of time between content revisits. This provides for durable learning by allowing time for the brain to consolidate the new content. Spaced practiced also increases learning because of the retrieval practice it requires. *Interleaved practice* allows the brain to be learning more than one topic or skill at a time, thereby increasing the learning for both subjects. For example, a person, learning how to operate a boat while also taking driving lessons, benefits from the transfer knowledge from one topic to the other.

Levels of Course Interactivity
(Section 10.2.1, 10.2.2) Providing engaging eLearning by increasing the interactivity can keep the learner’s attention while also improving the amount of learning. The eLearning industry has identified four levels of interactivity to help the communication amongst eLearning stakeholders. (Pappas, 2015) *Level 3* interactivity is characterized by users having a moderate-level of control over their eLearning experience. Instructional designs often seen at this level include animated video, branching scenarios, or complex drag and drop interactions. In *Level 4*, users have a great deal of control over their own experience. Instructional designs at this level may include gamification, simulations, or avatars.

Levels 3 and 4 offer another learning design called *varied practice*. Like the spaced and interleaved practices discussed before, varied practice taps into yet a different part of the brain to “improve the ability to transfer learning from one situation and apply it successfully to another” (51). Varied practice can be designed in eLearning courses by using situational, scenario-based or problem-solving activities, for example. Research shows that the combination of interleaving and varied practice encourages higher cognitive processing in the learner. Referring to Bloom’s taxonomy, the learning is characterized not by *knowledge or comprehension* levels but by the *application, analysis, evaluative and creation* levels. As stated above, by designing varied practice into the eLearning course, learners may be able to apply their knowledge of boating safety in the water.
Finally, when learners read text they often fool themselves into thinking they know the information contained there. They are often tricked by the author’s good writing into thinking they too have the same flow of knowledge. Or perhaps they fool themselves in thinking the act of reading is equivalent to learning. Whatever the case may be, eLearning instructional designs can help learners improve their metacognition by offering feedback on low and high-stake assessments, designing for varied practice, and raising the level of interactivity.

Professional Opinion
In my professional opinion, the Charge Team’s movement toward a more interactive eLearning environment receives my complete support. Details regarding each recommendation is noted below.

Consider the overall impact of transition away from seat time, in favor of a structure that creates flexibility and allows students to progress as they demonstrate mastery of academic content, regardless of time, place or pace of learning;

In creating high-quality interactive eLearning content, the student’s learning will increase because of the varied, interleaved and retrieval practice it offers. Equally important though is this recommendation empowers the learner to take the boat safety training seriously. By allowing the learner to take more responsibility for their learning, I believe you’ll also see this responsibility transfer to their boating behavior.

Implement pilot program to allow internet courses to continue with timed pages (minimum of 3 hours as currently prescribed) or provide interactive content throughout 30% of their course and every 3-5 pages of their course content;

Although I support this effort, I encourage the Charge Team to consider increasing this recommendation to 50% or even 75%. If a company is going to invest to deliver 30% at levels 3 or 4, the increase to 50% will not be a significant design stretch or financial increase. However, the extra engagement and interaction will exponentially increase the learning.

The targeted level of eLearning interactivity for this pilot program shall be moderate to high; This is excellent.

Remove the requirement for timers for students who fail an assessment (9.3.2); This is another example of how the Charge team is moving toward an atmosphere of empowerment by eliminating a punishment in favor of a method to help the learner understand the content.
Review all sections to remove reference to timers in order to allow for 30% enhanced interactive courses. (Section 10)

See above recommendations.

Additional observations:

In addition to the recommendation above, the Charge Team should consider updating Section 9.1 to a more flexible terminology that will allow the Standards to grow with new technology. Instead of using distance learning, home-study and classroom, use the terms instructor-led and self-paced to distinguish the manner in which the courses are submitted for review. Instructor-led learning includes classroom and also live or recorded webcasts. Self-paced learning includes home-study, and self-paced distance learning. Since both the live and recorded webcasts are instructor-led they should be allowed to submit these course in outline form. Currently, webcasts fall under the distance learning term and thus a submittal in paragraph form is required.

The addition of Section 10.1.6 is commendable and necessary to establish credibility of self-paced eLearning courses. In the absence of an instructor, eLearning courses demonstrate authority over the knowledge by posing few technical problems, eliminating navigation confusion, utilizing high-quality videos and images and by practicing excellent grammar based on a recommended writing style. In addition, there should be no spelling errors and terminology should be consistent and at a level of expertise expected by the course objectives.

References


