A Human-Powered Watercraft Skills Course for Adults

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1) Introduction

My EDIT 704 instructional design challenge is an eLearning[i] skills and safety course for human-powered watercraft operators utilizing nationally-approved training standards.

2) Background

The use of human-propelled watercraft including canoes, kayaks, rafts, and Stand-Up Paddleboards (SUP) are an increasingly popular recreational activity, broadly categorized as "Paddlesports". Within the Paddlesports category, recreational kayaking is the most popular form of boating[ii]. On the negative side, in 2017 the US Coast Guard, which is tasked with collecting boating safety data, reported that deaths and injuries from canoes and kayaks were the fourth most common type of boating accidents with 245 combined deaths and injuries. Kayaks alone accounted for fifteen percent of all fatal accidents and account for the second highest percentage of deaths of all vessels categorized.[iii]

a) All states within the United States have some mandated boating education for power boat operators. The training standard has been developed under the oversight of the National Association of State Boating Law Administrators (NASBLA) Education Committee to "emphasize generic safety and emergency procedures" for the recreational boater[iv].

b) Boating safety laws vary by state. All states offer free or low-cost instructor-led boating safety courses through organizations such as the US Coast Guard Auxiliary and the United States Power Squadrons. Most states including Virginia also accept free NASBLA -approved on-line boating safety courses. In most states, it is legally-mandatory for all power boat operators to have completed a NASBLA-certified power boat safety course and carry proof of completion when operating a power boat.

c) Although all states have guidelines for safety equipment and vessel registration of human-powered watercraft, no state requires human-powered watercraft-specific safety training. No state requires people who only operate human-powered boats to take the NASBLA-certified power boating safety course, on basis that too little of the course applies to Paddlesports.

d) The US Coast Guard accident data shows that "No Education" [boating education of the Operator] was the largest category of "Education" for people involved in fatal 2017 boating accidents.[v]

e) In response to a recognized need for Paddlesport-specific safety training the NASBLA, in cooperation with the American Canoe Association (ACA), published a training standard for Paddlesport vessels in 2009 and revised them in 2017. This standard, supplemented with a technical report providing course certification requirements, call for a course of six to eight hours duration. However, this training standard does not appear to have translated into readily accessible safety programs. An Internet search revealed there is very little Paddlesport training of any type (eLearning or instructor-led) readily available or promoted.

3) Issue

There is a lack of availability and lack of visibility of Paddlesports-specific safety training programs.

Given that kayaks and canoes account for the fourth highest percentage of deaths among all vessels categorized in 2017, and people with no boating education suffer the highest rate of fatal accidents, I believe Paddlesports skills and safety training programs should be more commonly available and more heavily promoted.

4) Proposed Solution

I propose developing Paddlesports safety course fully compliant with current NASBLA training standards for human-powered watercraft. The purpose of this course will be to inform learners of boating safety practices, and promote an attitude change of pursuing continuous adult learning in boating safety and best practices.

a) The course will be free to learners and incorporate a bulletin board comments section which allows current and previous learners to post comments on various topics and ask questions.
b) This course will include referrals to web-based Paddlesports Communities of Practice (CoP) and social media Paddlesports groups.
c) Referrals to these groups and CoPs may also lead to reciprocal promotions back to the safety course, thereby increasing course visibility and receptiveness of existing Paddlesports participants to take the course.
d) Initial promotion for the course will be through outdoor equipment retailers at merchandise point-of-sale to people purchasing Paddlesports equipment. Follow-on promotion will be via social networking utilizing opinion leaders and peer-to-peer referrals.

5) Target Audience (Learners)

As of 2014, (the last year public data is available) the demographics between kayaking, canoeing, rafting, and SUPs are generally consistent.[vi] Demographics show the majority of Paddlesports participation is by Caucasian adults age 18 or older, educated with at least some college, with an annual income $50,000 or higher, for a total population of 21.7 million Paddlesports participants (some participants engage in multiple Paddlesports activities) spread across all states and territories.

a) The geographical dispersion suggests a self-paced eLearning course with no human facilitator as the most cost-effective means of reaching prospective learners.
b) The prime targeted learner will be a first-time human-powered boat owner purchasing Paddlesports equipment who has not previously received Paddlesports safety training.
  i. Given the large number of existing NASBLA-certified self-paced instructorless eLearning power boat safety courses, this media has already proven to be effective for boating safety training.

6) Learning Theory Model

Focusing a course on adults aged 18 and older would target that vast majority of all Paddlesport participants and support an andragogy-based design. Promoting the course when a potential learner is starting a new activity with purchase of equipment suggests synergistic self-directed voluntary learning and shaping new values.

a) As a voluntary learner, the course should be designed to engage learners, create personal relevance, build confidence in their learning, and finish with a sense of satisfaction. This design is best expressed with the ARCS model of adult learning.

b) The course must comply with NASBLA human-powered watercraft training standards to earn NASBLA certification.

c) Referrals to on-line CoPs and social media groups follow participation in the course to encourage continual learning.

d) Follow-on referrals to on-line CoPs and social media groups is based on social cognitive theories that human learning occurs best in a social setting, and people acquire knowledge, beliefs, attitudes and model behaviors from other participants in those social settings.

   i) In this case, providing referrals to selected Cops and social media groups' offers course creates an opportunity to reinforce concepts of safe Paddlesports and learn additional skills in a supportive self-directed format.

7) Extrinsic Motivators

As part of the overall motivational strategy, the course will offer two physical rewards for completion.

a) The first will be a printable certificate of completion certifying Continuous Educational Credits (CEU), useful for many professionals who are required to attain annual continuing education credits.

b) The second will be a smartphone app developed as part of the overall course package that provides just-in-time learning information for specific Paddlesports situations, and provides state-by-state Paddlesports regulations information.

   i) This app will be made available as a free download only to learners who complete the eLearning training course and functions as an extrinsic motivational item providing follow-on reinforcement of course material.

c) Awarding CEUs and access to the app will be included in the overall course promotions.

8) Special Course Features

As states have different safety equipment and registration requirements for human-powered watercraft, one module of the course will need to address these topics and will need to be state-specific. This state-selection can be made by the individual learner during the course, providing choice to the adult learner.

a) Learners will not be limited to selecting one state, as some learners enjoy Paddlesports in multiple states.
b) This enhances the relevance and perceived value of the course by offering state-specific knowledge on Paddlesports regulations.

9) Assessment of Effectiveness

As participation in this course is voluntary, part of the overall assessment of effectiveness will be number of participants who complete the course versus participants who do not complete.

a) The course ends with a post-assessment which functions as a review and lead-in to Social Network Referrals for continuing learning, and together with the pre-assessment provides metrics back to course developers for learning effectiveness.
b) Monitoring acceptance among opinion leaders within the Paddlesport community and voluntary promotion to increase participation will be another assessment of effectiveness of the program.
c) The most important metric of effectiveness of this course would be a measurable reduction in the number of fatal accidents involving human-powered watercraft.

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[i] **Definition** –eLearning, as per Dictionary.com, is defined as "Learning conducted via electronic media, typically on the Internet."
[ii] Physical (Physical Activity Council (PAC), 2015) Activity Council (PAC). (2015). *2015 Special Report on Paddlesports Kayaking Canoeing Rafting Stand up paddling.* Retrieved from https://www.americancanoe.org
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[iv] National Association of State Boating Law Administrators. (2018 August 16). *Technical Report – Basic Boating Knowledge – Human-Propelled A Technical Report prepared by the National Boating Education* Standards *Panel and registered with ANSI ESP TR 101-2018*
[v] U.S. Coast Guard Office of Auxiliary and Boating Safety COMMANDANT PUBLICATION P16754.31. (2018 May 11). *2017 Recreational Boating Statistic*. Retrieved from https://www.uscgboating.org
[vi] Physical Activity Council (PAC), 2015. (2015). *2015 Special Report on Paddlesports Kayaking Canoeing Rafting Stand up paddling.* Retrieved from https://www.americancanoe.org