

On-Line Pesticide Training with Narrated PowerPoint Presentations

Abstract

UMaine Cooperative Extension is the primary educational delivery organization for pesticide recertification credits in Maine. Shrinking budgets and staff numbers are making traditional face-to-face delivery increasingly difficult to maintain. To address this issue, on-line pesticide applicator recertification training credits were developed. The on-line training is more flexible than traditional face-to-face delivery while maintaining the learning experience. Staff developed programs for web delivery, narrated the programs, and uploaded them. Clients purchased and took tests to obtain pesticide recertification credit. Steady increase in purchased tests from 2010 through 2014 verifies the acceptance by clients.

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Introduction

In Maine, purchasing and applying restricted-use pesticides or applying pesticides to food crops for resale (where total sales exceed \$1000 per year) requires a license from the Maine Board of Pesticides Control (MBPC). A number license types are available, depending on the situation (<http://www.maine.gov/dacf/php/pesticides/>). These licenses are renewed through accumulation of recertification credits. The most common license is a private pesticide applicator license, which requires six credits every 3 years or the license expires. UMaine Cooperative Extension is a primary educational delivery organization for recertification credits. These have been delivered through traditional face-to-face programs for many years. With shrinking budgets and shrinking staff numbers, this traditional model is becoming increasingly difficult to maintain at historic levels.

One aspect of under-used educational delivery in pesticide license recertification credit is through the World Wide Web. Web-based information delivery can range from real-time webinars (<http://www.extension.org/pages/15830/archived-dairy-cattle-webinars>) to more of an archive for traditional fact sheets with 24-hour access (<http://umaine.edu/potatoes/publications/>). The initial concept of Web-based delivery of on-line pesticide applicator recertification credits was to offer flexibility to clients and at the same time, manage workloads of those delivering credits. For example,

demand for recertification credits is greatest shortly before license renewal dates (31 October or 31 December, license dependent), and these can be difficult times to schedule meetings and deliver credits. The goal of this effort was to develop training options for delivering pesticide applicator recertification credits that are more flexible than traditional face-to-face delivery while maintaining the learning experience of face-to-face programs.

The Clients

Since pesticide licenses are not issued to persons under 18 years of age, the clients are adults, many of them categorized as adult-learners, with many preferring a learner-directed style (Wilkes & Burnham, 1991). Knowles (1973) elaborated on characteristics of adult learners, including that: adults are self-directed learners, seek to build on their previous experiences as they learn, have specific learning needs generated by real-life tasks, and wish to learn skills and/or knowledge that they can apply immediately in real-life situations. Equally important is the removal of constraints of fixed time and location to the programming. All of these fit well into Web-based learning.

The Process

Credits

In Maine, statutes exist that describe topics allowable for recertification credits. To be deemed credit worthy, presentations must provide information aimed at improving an audience member's ability to apply pesticides. The MBPC always has the final say on approved content. Recertification credits are accepted in whole units. Starting in late 2010, presentations of 25 to 30 minutes in length were developed. This allows shorter presentations and allowed the client can take a mix of presentations. PowerPoint was chosen as the delivery platform. Converting PowerPoint presentations to narrated video presentations is a straightforward process (Johnson, 2011).

Web Posting

The presentations are posted on a Web page (<http://umaine.edu/potatoes/recertification-credits/maine-board-of-pesticides-control/>) and are viewable with widely available video players. Links to take a test on the material are posted as well and direct the user to the UMaine publications catalog, where the cost per test is \$7.50. Upon purchasing a test, the client is sent a link that opens the test.

Tests

To receive credit from self-directed study, clients must take a test with questions derived from the presentation and pass the test with a mark of 80% or better. Tests with 15 questions were developed from the presented material and standardized with seven or eight true/false questions and the remaining as multiple-choice questions. Tests are taken online, where the client enters contact information and answers the questions. The test is not timed and is open book. Google forms or one of many online survey services such as Web Survey Creator (<https://www.websurveycreator.com>) can be used. All of these save the client-entered data in Excel or similar worksheet format.

Completion

Using Boolean formulas, the client's test can be cut and pasted into a specific line in a Google form or Excel spreadsheet and instantly graded. Results are then sent to the client and the MBPC so the recertification credits can be recorded.

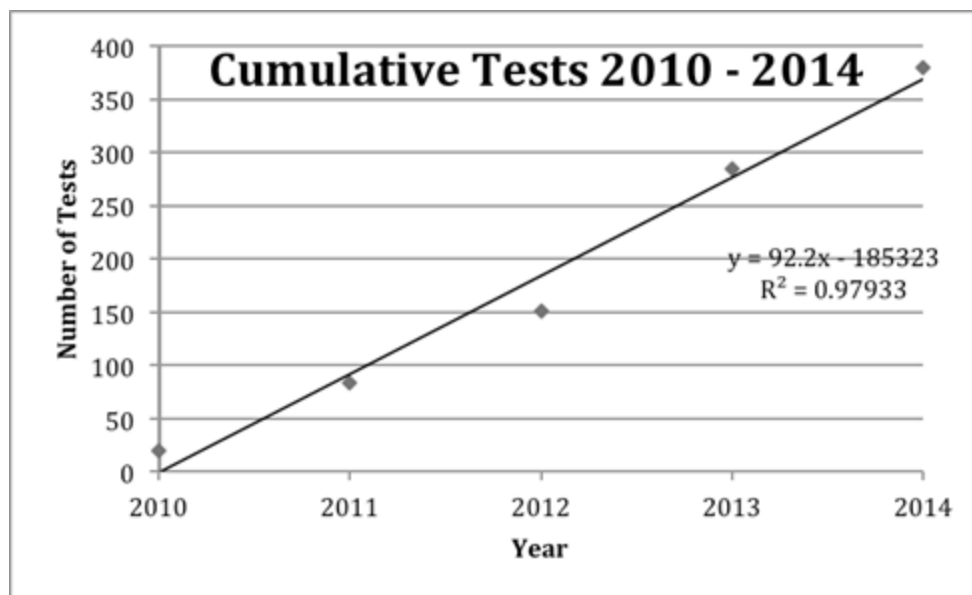
Discussion

Pitfalls in Web-based delivery listed by Cecil & Feltes (2002), such as working with frames, forward and aback arrows, and using a browser are not the issue today they were in 2002. Stafne, McCraw, and Mulder (2006) reported pitfalls such as no or poor Internet access, low computer literacy, and long download times. These too, are not the obstacles today they were in 2006. Offering pesticide license recertification credits has a different goal than development and delivery of an entire course (VanDerZanden, Rost, & Eckel, 2002). This approach does not offer meetings for social interaction or a cooperative learning environment. These are available from traditional face-to-face meetings that still occur.

This Web-based approach could be useful for other aspects of Extension programming. Web-based delivery of some routine programming is increasing in many areas, and this reflects the evolving nature of Extension. Figure 1 shows the linear increase in cumulative tests purchased from 2010 through 2014. This Web-based program for delivery of pesticide recertification credits is expected to continue owing to acceptance by clients.

Figure 1.

Pesticide Tests Purchased per Year 2010 – 2014.



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References

- Cecil, K., & Feltes, D. (2002). Distance education—A case study in practical application. *Journal of Extension* [On-line], 40(5) Article 5TOT4. Available at: <http://www.joe.org/joe/2002october/tt4.php>
- Johnson, S. B. (2011). Delivery of PowerPoint® videos on the World Wide Web [On-line], 49(2) Article 2TOT9. Available at: <http://www.joe.org/joe/2011april/tt9.php>
- Knowles, M. S. (1973). *The adult learner: A neglected species (Building Blocks of Human Potential)*. Huston; Gulf.
- Stafne, E. T., McCraw, B. D., & Mulder P. G. (2006). Evaluation of an e-learning online pecan management course. *Journal of Extension* [On-line], 44(4) Article 4TOT6. Available at: <http://www.joe.org/joe/2006august/tt7.php>
- VanDerZanden, C. P., Rost, B., & Eckel, R. (2002). Basic botany on-line: A training tool for the Master Gardener program. *Journal of Extension* [On-line], 40(5) Article 5RIB3. Available at: <http://www.joe.org/joe/2002october/rb3.php>
- Wilkes, W. C., & Burnham, B. R. (1991). Adult learner motivations and electronic distance education. *American Journal of Distance Education*. 5: 43-50.

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