Biological Suppression of Velvetleaf (*Abutilon theophrasti*) in an Eastern Nebraska Soil

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Teaching Tips

Up to eight people can edit the Prezi at the same time. For those in larger classes, this could be accomplished by dividing students into groups. This allows for a construction and presentation of students’ knowledge, which could appeal to different learning styles. Prezi is made more accessible for students and instructors through its free online format. Students can view the Prezi during and after class by using an online link.

Many of the negative points of Prezi stem from poor planning and understanding of how to use it effectively and differently than traditional slide-based software. For example, overzealousness in using the zooming features can create visual discomfort for viewers. Another possible downside of the program is designing it essentially as a PowerPoint without applying any of the added design benefits; this could result in a resemblance to an over-animated slideshow. Also, text-heavy presentations are not best displayed in Prezi. While you can print a PDF of a Prezi, because of the non-linear nature of most Prezi presentations these PDFs do not make good handouts or notes to provide to students. Because Prezi is still being developed and is free, occasionally designers may encounter glitches; however, they are few and far between.

Prezi removes many of the restrictions that traditional presentation programs foster. How ideas are displayed and what visual components are included in the presentation are largely up to the presenter. As such, it is necessary to understand how the information can be displayed to optimize learning of the content. Be prepared to think outside the constraints of slideshows.

While there are presets available, there is also the ability to customize the presentation. For most people, customization means changing the colors of different elements, changing font faces, and the ability to add in a logo. For those with knowledge of Web coding (CSS), there is the ability to write code to further customize the presentation.

By being able to alter the location and size of different elements in Prezi, relationships are more easily displayed than they would be in traditional slideshows. Because non-linear relationships are more common than linear relationships, Prezi has an advantage over other programs.

The ability to move about the canvas is Prezi’s strength and weakness. While the approach can create interest and facilitate learning, it can also be used excessively or ineffectively. Think about movement when you are implementing. Think about how it can best be used to facilitate understanding of the material.

Students have the ability to be collaborators in Prezi. This process can get students more engaged in actively constructing knowledge. Another means of getting students involved is to allow them to navigate the Prezi on their own. Because there is the option to deviate from the path on Prezi, students can navigate the Prezi to look at information in a manner that best suits their learning needs.

Prezi is a visual medium. While text can be displayed, Prezi is not the most conducive environment for displaying lengthy text.

Prezi should not be used simply because for its novelty factor. While this will initially garner student interest, novelty will wear off and student interest will fade. The authors of this paper have noticed this in their classrooms. Prezi has specific abilities. By using Prezi with these abilities in mind, instructors can be better able to garner student engagement.

The decision to use Prezi is the decision of the instructor. Be mindful of its capabilities and its limitations before implementing it into courses. It has a place in education, but it will not become the dominant presentation medium. For more information or to view tutorials, please visit www.prezi.com.

Adding Value to Graduate Education: The Comprehensive Examination

Virtually all graduate study requirements for M.S. or Ph.D. degrees include a written comprehensive and an oral exam, the latter most often a presentation of thesis or dissertation results. The written exam takes many forms, but the goals are to test the candidate for technical competence and affirm that the prior program course work has been effective in bringing the candidate to an acceptable level of understanding of the discipline in which she or he has
been immersed. Although long accepted as a useful hurdle on the path to a degree, for some exceptional students who have already demonstrated competence in multiple ways, especially at the Ph.D. level, this has become an unnecessary chore for both students and supervisory committee members. All would rather devote quality time to something valuable for the student, rather than just busy work to re-validate what everyone already knows about the candidate. We have tested a new method of examination in a few situations, one that is focused on the student’s ability to explain science to a lay audience.

_Learning objectives_ are to 1) encourage the student to reflect on the broad importance of the courses and research project and how this can impact society, and 2) practice writing for a general audience about the topics of courses or research. With current skepticism about science and our research in many quarters, it is increasingly important to find effective ways to communicate with the public.

_Methods_ include the framing of comprehensive exam questions that lend themselves to interpretation, clear articulation, and application to society’s perceived challenges – quite a different challenge than writing for a journal. A recent comprehensive exam at University of Nebraska for a PhD student in practical applications of his research on use of diverse cover crop mixtures in sustainable farming systems included these five questions:

1. Select one important topic in soil microbiology relevant to organic agriculture and write an essay for a popular publication
2. What is a standard error? Explain this calculation and concept to a general audience outside of academia
3. Your research on mixtures of cover crops has potentially wide impacts on design of future farming systems; describe this practice to a general audience
4. Write an essay for the general public discussing the environmental benefits and drawbacks of agricultural intensification compared to organic agriculture
5. You have just been appointed to a farming systems and organic agriculture position at a major Land Grant University; using the advertised position description, prepare a draft of your first Hatch project

There were no further guidelines, nor time constraints put on the student to answer these questions, but rather he was urged to do as well as possible with the idea of submitting one or more of them for publication in a general interest journal in agriculture, natural sciences, or related area.

_Observed impacts_ of this type of comprehensive exam were both immediate and striking. The student said up front in a meeting with the committee that this assignment “raised the stakes” of the exercise, since he understood that some of the results would actually be published, and not just languish in the file of his supervisory committee. It was also said to be a new way of looking at science, and a challenge to write in a way and with language that was comprehensible to a lay audience. In fact, by the time of the oral exam over the questions, one had already been submitted and accepted for publication in PrairieFire Newspaper, a publication from Lincoln, Nebraska that circulates across the Great Plains (Wortman and Francis, 2011).

Another PhD student in Agricultural Leadership, Education and Communications was afforded the same opportunity as an alternative to the traditional comprehensive examination. She had two articles accepted and published in this same regional publication, in the June and July 2011 issues (Quinn and Francis, 2011a, 2011b). These follow on a theme of two previous student articles in PrairieFire, one last August on the history of organic certification, and one early this year on the importance of introducing local and organic foods into schools.

Supervisory committee members for these students were equally pleased with the results. Since they already had the grad students in class and knew their technical capabilities, it was good to present a new type of challenge rather than revisit topics where the candidate’s legitimacy had already been established. We do recognize that this approach is not necessarily for all students, and that the comprehensive written exam is an important way to assess technical knowledge. But for some students we feel that this is an innovative approach to broadening the capacities of a young professional to reach the general public.

References

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