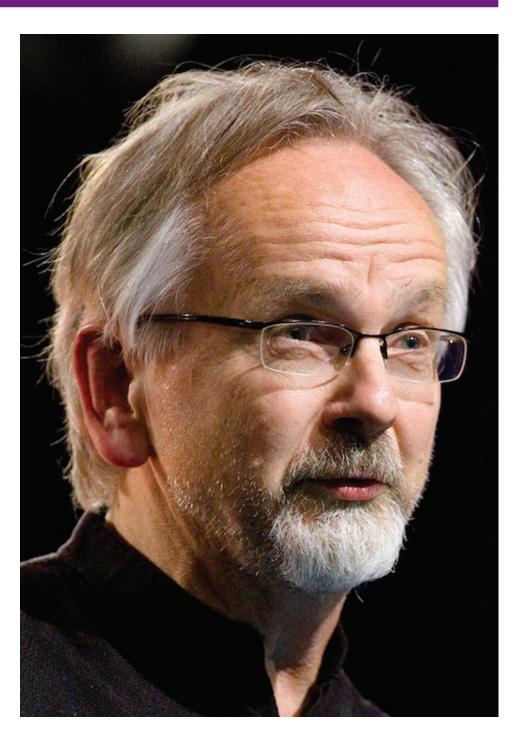


University of Michigan **Teaching Innovation** Prize

2009 WINNER



PERRY SAMSON Arthur F. Thurnau Professor Professor Atmospheric, Oceanic and Space Sciences College of Engineering samson@umich.edu

Sponsors:

Office of the Provost

Center for Research on Learning and Teaching (CRLT)

University Libraries

Innovations for Larger Classes: LectureTools and Online Textbooks (XamPREP)

Innovation Description

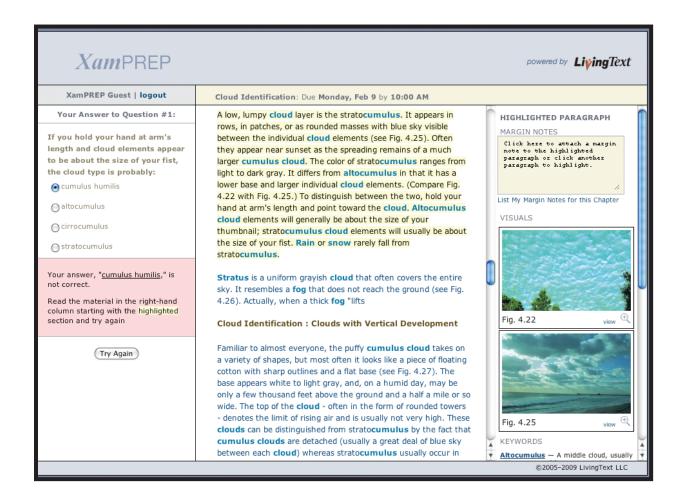
LectureTools is designed as an alternative to 'click and provides a wider range of question types for instructors. Additionally, LectureTools allows stude to pose questions during lecture, and GSIs in the room can answer their questions for them in real tin Students can also type their notes synchronized to the instructor's slides and even draw on the slides with a Mac or PC. The tool originated from Samson desire to expand the use of student discussion in la lecture classes and the realization that clickers cou not accommodate the kinds of questions he wished to pose, including free response, lists to reorder, an image-based questions.

XamPREP redesigns textbook content (in collabora with publishers) to promote inquiry and timely read Students log in to answer questions posed by the instructor in preparation for each class, and they ratheir confidence in each answer. Whether right or wrong, each response takes the student directly to content germane to the question. At the very least students are exposed to key concepts before lectu and are able to search the textbook, view animation and quiz themselves on concepts prior to exams.

https://www.lecturetools.org

http://www.xamprep.com

Examples of Teaching Innovation



Before lecture, students respond to questions that are linked to relevant textbook content.

	Student Comments
kers'	"Students can also rank their understandii so that Professor Samson notices immedi
ents	are getting lost. A student who is uncomfo questions can type it in, and it will be answ
me.	(maintaining anonymity) by the GSIs. This
)	feature because it encourages questions, do not disrupt the class."
on's	
arge	"I completely forgot that I was in a large le
JId	everyone interacted with each other and I
ed nd	others were thinking through LectureTools
	"I rarely encounter a student who complete
ration ling.	assigned reading. However, in Professor S students do."
ate	"By completing the practice questions [in able to assess my knowledge of the subje
o the	follow up on the material with the exact pa
L	particular concept being brought to the so
r, Jre,	missing a question."
ns	"Each of us finds ourselves wishing we ha
	XamPREP Live Lecture and interactive lea

and our backs."

	Lectu	reTools	My Lecture	Tools Logout
USER: Perry Samson	Play Podcast	G Jednesday, April 9, 2008	My Notes	Rate
COURSE: Extreme Weather My Courses			1	10 9 8
This Lecture Lecture Slides Activities		nadoes,		6
Animations Print Lecture		tning		5
Links	Oh my	Hail		3
	Draw	on this † slide Ask a question	Your notes 1 have been saved.	
	1. Go to the south			9 6 5 3 2 2
	Fujita Scale: F0		This scale of tornado is entry level and while menacing, particularly destructive.	not 10 9 8
	Maximum Wind Speeds	Typical Effects		7 6 (C
	40-72 mph	Gale Tornado. Light Damage: Some damage to chimneys; breaks twigs and branches off tress; pushes over shallow- rooted trees; damages signboards; some windows broken; hurricane wind speed begins at 73 mph.		5
	E Draw	on this 1 slide Ask a question	Your notes 1 have been saved.	1

aporating rain and what? environmental winds temperature and dew point are What are squall lines has heavy precipitation, lightning, hail, etc. what are derechos we just went over it precipitation Is the third exam still april 20th? as so patchy. Is there anyway to check know what to look for emailed. falling down through the cloud. They can be wet (containing rain) microbursts or ain evaporated on its way to surface) microbursts. When this rain hits the

Notes taken via laptop are synched with lecture slides. The bar on the right indicates students' confidence in their grasp of the material.

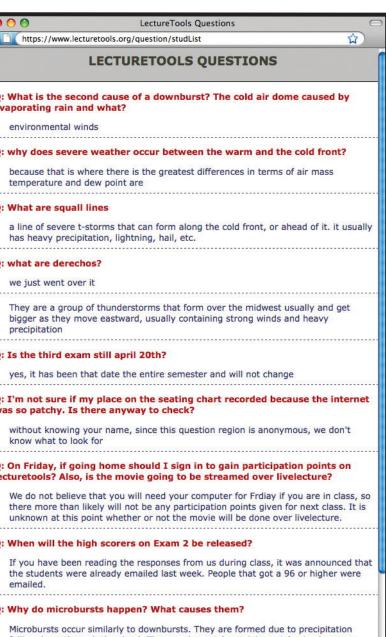
ng slide-to-slide, liately if people fortable asking wered publicly is a particularly nice and the questions

ecture. I felt like could see what , "

etes all of their Samson's class,

XamPREP] I am ect, and also to bage containing the screen upon my

ad LectureTools, arning tools in other courses. We would love to be able to jot notes next to the images our Art History professor flies through or read our 500 page chemistry books on our laptops, instead of killing trees



Instructor and/or assistants answer students' questions during lecture. Everyone can see these exchanges.