Teaching in the Open with Sakai

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Since you are a software architect for a learning management system - you need to hear this. We need to switch from the default of having everything hidden inside the LMS and having to fight to get it open in LMS systems - to the point where everything is open and you have to fight to get something hidden from public view.

Hal Abelson, MIT

(paraphrased - personal communication)

One View

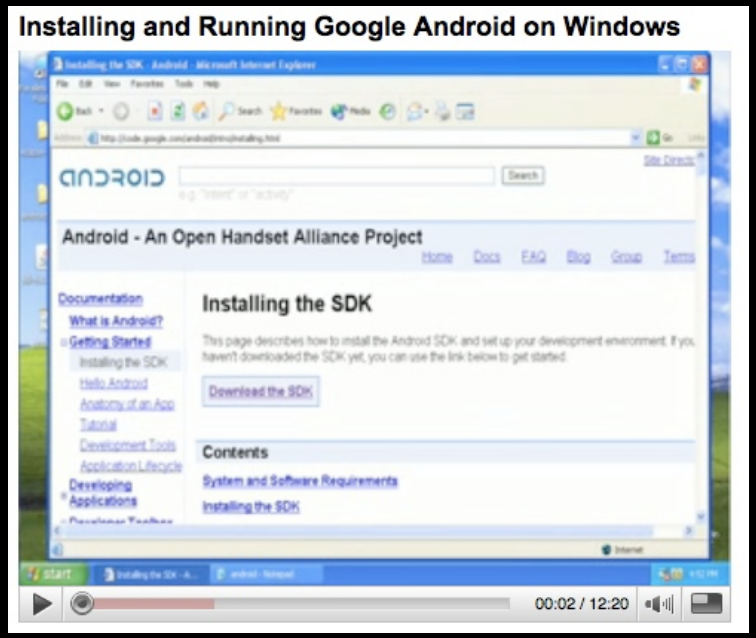
- Chief Architect / Executive Director
  - It was always about the next feature or the next adoption
  - Adoptions are driven by large lists of features - www edutools.org

Another View

- Faculty Member
  - There is only one choice I have on my campus - it is Sakai
  - There is a lot of stuff here. What fits with my teaching approach?
  - What are the tricks to bend a feature to my purposes?
  - I have an idea - How do I extend this thing?

YouTube Hits

365 Views



5945 Views

School of Information Students

- MSI - Masters Degree
- Library Science, Social Computing, Human Computer Interaction
- Average student is non-technical - some are techno-phobic
- Very hip to Web 2.0 - it is our curriculum

http://youtube.com/watch?v=dGCJ46vyR9o

SI502 - Technology Foundations

- Computer Architecture
- Programming
- Databases
- Internet
- HTTP
- HTML
- Web Services
- XML
- Security
- Scalability

SI539 - Design of Complex Web Sites

- HTML / CSS
- Programming - Python (Last Year: Ruby on Rails)
- Model - View - Controller - Google App EngineDatabase
- PHP

www.si539.com

My Ideal SI502 Environment

- www.pythonlearn.com
- www.si502.com
- http://ctools.umich.edu/ - SI502 project site
- http://ctools.umich.edu/ - SI502 Fall 2008 Course Site
- Sakai is my content host for all large files (media/presentations)

www.pythonlearn.com

- Self-paced site to learn Python - Googlable
- Structure for getting started
- Presentations
- Audio Recording
- Some day: I want a "one class" LMS - peer learning / tracking / bbs

www.si502.com

- Compensates for the fact that Sakai has poor URLs :)
- Shows the public materials with a short URL
- Invites folks to join the learning community in CTools/Sakai
- Information architecture for first time visitors
- No login
- Someday - This might be a Sakai feature - “Publish my site as”

CTools - SI502 Project Site

- Set with anonymous role and open membership - materials are public
- 90% of course content
- Contextualized to community members on the mailing list
- Can lurk - E-mail + podcasts + resource notifications

CTools SI502 - Course Site

- Fair Use Materials - I avoid these
- Grading
- Assignments
- UM Policy: Course sites cannot be public

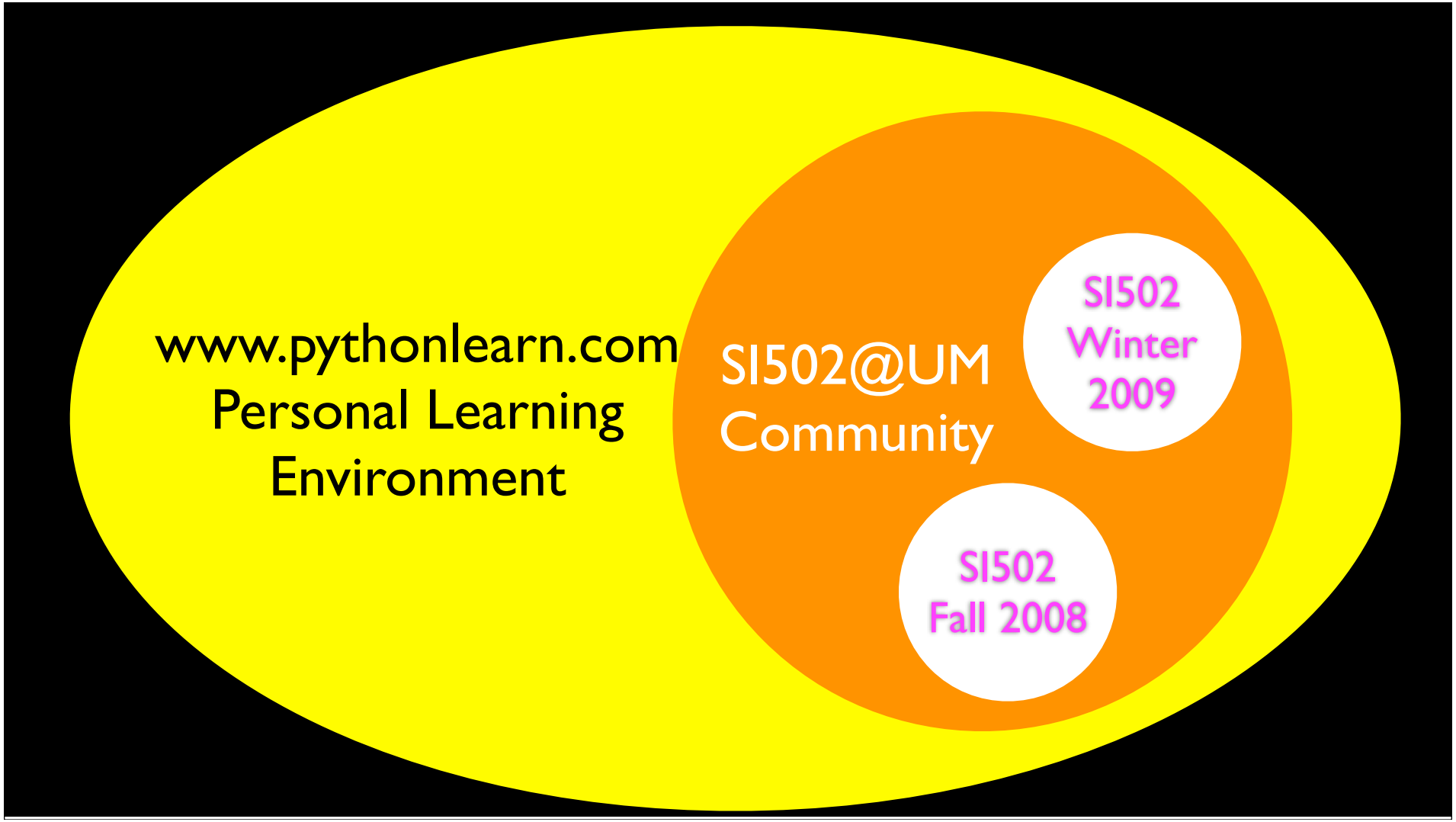
Demo

A Time View

- After the semester - focus on public materials
  - Clean up and extract / re-contextualize materials and make them publicly available
- During the semester - focus on learning community - students + lurkers
  - Use my public materials wherever possible
  - New materials are public - context is the community in the moment
- Repeat - focus on learning how to build materials for multiple contexts

Stakeholders

- Students registered for my course this semester
- Former students (Alumni)
- Colleagues (teachers and others)
- Self-directed learners
- People searching on Google “Ruby on Rails”


www.pythonlearn.com
Personal Learning
Environment
SI502@UM
Community
SI502
Winter
2009
SI502
Fall 2008

Pedagogy

My Approach / Ideas

- Lectures - Recorded / Not Recorded
- Podcasts - Scaffolding - try to move students forward more quickly
- Lecture / Lab - Having me teach both allowed me to see areas I missed and needed to revisit
- Email is key - the course list is a dev-list - cooperative learning
- No office hours - soetimes I would send out an E-Mail and hang out in the student lounge for a few hours if students were broadly stuck

My Approach / Ideas

- It takes a community - not just one teacher - former students, teachers, pals etc.
- Riffing and remixing as a teaching pattern - starting with something gets students into more complex learning moments more quickly
- Have students do focused work in larger applications - also provides sample code - typical assignment - I did X - you do Y
- In class practical midterm and final - allows collaborative learning the rest of the time

My Approach / Ideas

- Like group work and collective learning - do not like group grades
- Make programming assignments - required + optional challenges
  - Helps with students of different background - allows me to teach to the beginning without boring the advanced students
- Don’t use synchronous time to do asynchronous things - but what if the students don’t listen to the podcasts. Sheesh

It Takes a Community to Teach

Howdy,

Got a couple questions about the midterm which I'm having trouble with. What is Pass-by-value (primitives) and Pass-by-reference (objects)? And what is Formal parameters versus actual parameters?

Any help is greatly appreciated,

Mark (Student in Java Class)

With "pass by value", alterations made to the local argument inside the function body will not be reflected in the version held in the caller. In essence the function has a separate copy of the argument made at the point of the function call.
With "pass by reference", the caller and the function share the same object, and so modifications made within the function will be seen in the copy held outside after it returns.
In Java, the situation is a bit obscured since in true fact, it *always* uses pass-by-value, it's just that for non-primitive types, the type itself just consists of a reference, which is dereferenced automatically. That is, the reference is passed *by value* into the function, what is shared between the function and its caller is the object at the end of it.
If this last paragraph seems confusing, just ignore it :)

For the last question, "formal parameters" is the term used on the function's side to represent its local versions of the

For the last question, "formal parameters" is the term used on the function's side, to represent its local versions of the arguments. "actual parameters", or less ambiguously, "actual arguments" are the actual instances used at a particular time by a caller of the function to invoke it.

So, public void f(int x, int y) {
... stuff
here, x and y are formal parameters.

Whereas in the call f(2, 3), the actual arguments are 2 and 3, for this particular function call.

Hope this helps,
Cheers,
Antranig. (Sakai developer)

I think I need to dynamically generate divs for the ajax script visual_effect :highlight to work in a project site.

Background:
Each "story" has many "candidates". People cast "ballots", which belong to candidates. A collection of candidates are rendered with a partial. The partial links to remote javascript, which references the highlighted element. When people cast a ballot, the specific score should automatically reload and highlight.

-Jon (Student in Web Sites Course)

Hey Jon,

You probably want to identify each div uniquely, if I am interpreting your problem correctly. IDs in HTML *must* be unique (so having ballot_score as the ID many times is an HTML syntax error).

Javascript, when looking for IDs assume they are unique and stops search when it finds the first hit.

Try:
 Score:
<%= candidate.ballots_count %>
and
page["ballot_score_#{candidate.id}"].visual_effect :highlight

to give each ballot score div a unique identifier and later find it.

- Trek (Previous Instructor)

Sakai Tools and Features

- Access under *my* control - who what when why and how!
- Site Info Usability - I use this 2% of the time
- Resources 2.4 - Awesome - the right features and no more
- Assignments - wonderful - a bit clunky - hard to think about how to change it - it is so big that if you fix one thing - you might break something else - I would like a quick entry mode for grades

Sakai Tools and Features

- iCal feed - I want to see my course events in my Desktop calendar - and I want it right now!!! - read-only is fine
- Want to not see Observers in my Assignments - function for gradable in Assignments - Next semester I will have multiple sites per class
- Web Dav - Mostly for when another teacher gives me access to their course - there is a conflict between the logical hiding needs of something like a test engine or Melete and the need to exchange whole courses between instructors. It is better than nothing.

Sakai Tools and Features

- Download all assignments
- 100% offline grading - sweet Thursdays at 5AM...

Technical Bits

- All of this can be done by the instructor if they can make a project site
- Tech Support / Admin help
  - Optional: Get a “vainty site id” si502 instead of 44bef09-932ba9e
  - Add .anon role to the site once created

Looking forward for Sakai

- As a faculty member, Sakai is perfectly fine for me
- Weaknesses I still see in Sakai 2.4
  - Large courses
  - Distance Education - Melete / Threaded Discussion
  - Content Repository - I need 10GB per course with permanent URLs and *extremely fast upload and download speed

Summary

- I really like Sakai as a teacher - I am really glad my campus chose Sakai
- Because of Sakai - the CTools tech support team has so many tricks up their sleeve if I want to try something
- Teaching is a lot more fun in 2007 that it was in 2001 or 1997.
- Sakai can support teaching in the open right now with a little cleverness

Web Sites

- www.dr-chuck.com
- www.si543.com (java)
- www.si539.com (Ruby / Rails => Python)
- www.si182.com (Python)
- www.si502.com (Coming)