Engineering Support for the Wikipedia Education Program

Signup and tracking of students
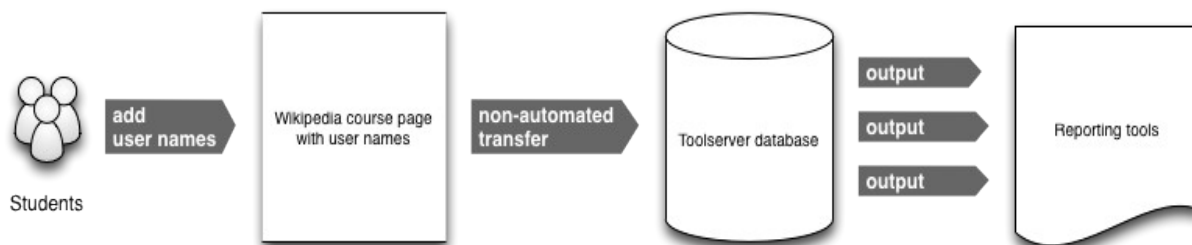
Issue

To measure the success of the program, we need the Wikipedia user names for all students participating. So far, we have asked the Wikipedia Ambassadors and teachers to make sure that the students in their course put their Wikipedia user names on Wikipedia course pages. We have then collected the user names either manually (copy-and-paste) or semi-automated and transferred them into a database table on the toolserver operated by Wikimedia Germany. This process has five main issues:

1. students forget to put their user names on the course pages, which resulted in us not being able to measure the full amount of content contributed to the Wikipedia article name space;
2. students don't add their user names to the course pages at the same time. Every time during the semester, when new students add their user names to the course pages on Wikipedia, new data needs to be transferred to the toolserver database;
3. the process is not scalable. With the number of students enrolled in the program growing at a fast rate we need an automated process in place;
4. the process adds an additional workload on top of the educators' teaching requirements and on the work done by the volunteer Campus and Online Ambassadors;
5. the toolserver is unstable. The reports generated with the data are not always available.
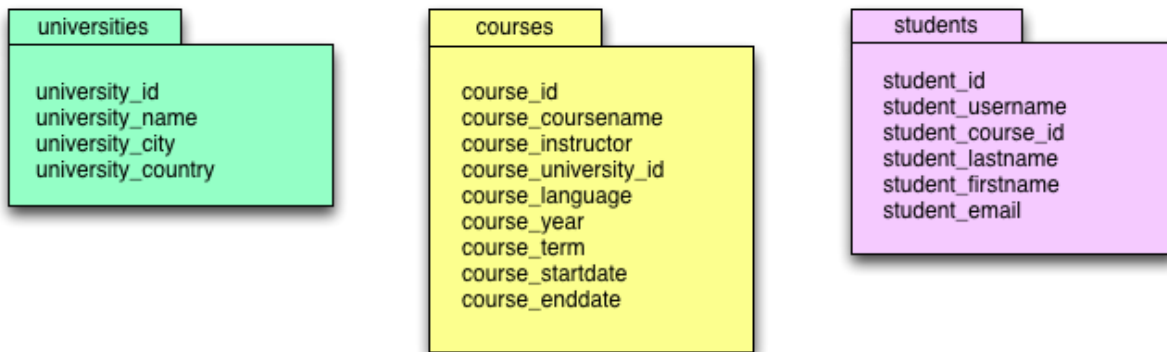
Current workflow

Proposed solution

Add new tables to Mediawiki (universities, courses, students). Add a workflow to the Wikipedia signup process that let's students indicate that they are particpants of the Wikipedia Education Program.

Rationale
With an automated process in place, workload will be taken off the professors, Ambassadors and Wikimedia staff. We will be able to track all students enrolled in the program.

Required infrastructure
The current database schema on the toolserver looks like this:

universities

university_id
university_name
university_city
university_country

courses

course_id
course_coursename
course_instructor
course_university_id
course_language
course_year
course_term
course_startdate
course_enddate

students

student_id
student_username
student_course_id
student_lastname
student_firstname
student_email

In the future, more tables need to be added: e.g. teachers (field "course_instructor") are hardwired to a course as by now. Also, currently students cannot be enrolled in more than one course.

Grading student's work on Wikipedia

Issue
The grading of the students' work on Wikipedia keeps being complicated and time-consuming.

Current workflow
All students in a given class indicate on the Wikipedia course page for the class which articles they are working on. During the evaluation period, there are three manual ways for grading students work. The first two put the onus on the professor and the third requires student to accumulate their for the professor. Currently, the grading process includes:

1. **History Tab (Diff):** Professors manually go through the History Tabs (Diff) of each article for every student in their class. Class sizes vary tremendously from 12 to 150. Depending on the goals, learning objectives and Wikipedia assignments for each class, students may work on a single article or multiple articles. Unlike traditional papers, student contributions are spread over multiple days and saved version (time stamp). Professors will need to look at each time stamp version where the students name appears to see the contribution. Student work may also include contributions on the Discussion Tab, requiring professors to review this History Tab as well. Again, this is a time consuming process for professors.

Revision as of 22:05, 30 October 2011 (edit)	Latest revision as of 23:22, 31 October 2011 (edit) (undo)
Gadfium (talk I contribs)	Muhandes (talk I contribs)
(→Personal life: copyedit)	(→External links: {{Neil Finn}})
← Previous edit	
Line 290:	**Line 290:**
*[http://www.myspace.com/neilfinn Neil Finn on Myspace.com]	*[http://www.myspace.com/neilfinn Neil Finn on Myspace.com]
*[http://www.performing-musician.com/pm/nov09/articles/neilfinn.htm Neil Finn: Songwriter]	*[http://www.performing-musician.com/pm/nov09/articles/neilfinn.htm Neil Finn: Songwriter]
	+
	+ {{Neil Finn}}
{{crowded enz}}	{{crowded enz}}

2. **Username Contribs:** Similar to the History Tab process, professors manually go through the "Username Contribs" for every student in their class. The more students in a class the more work this is for professors.

User contributions

For Basilisk4u (talk I block log I uploads I logs I filter log)

Search for contributions

○ Show contributions of new accounts only
◉ User: Basilisk4u   Namespace: all ▢ □ Deleted only
□ Only show edits that are latest revisions
Tag filter:
From year (and earlier): ___ From month (and earlier): all ▢ (Search)

(latest I earliest) View (newer 50 I older 50) (20 I 50 I 100 I 250 I 500)

- 19:45, 9 November 2011 (diff I hist) Folie à Deux (album) (→Critical response) **(top)**
- 19:42, 9 November 2011 (diff I hist) Folie à Deux (album) (→Critical response: added publishers)
- 19:27, 9 November 2011 (diff I hist) Folie à Deux (album) (→Background)
- 19:26, 9 November 2011 (diff I hist) Folie à Deux (album) (→Background)
- 19:24, 9 November 2011 (diff I hist) Folie à Deux (album) (working on consistency with sources)
- 18:05, 9 November 2011 (diff I hist) Folie à Deux (album) (→Composition: added more to song descriptions)
- 17:54, 9 November 2011 (diff I hist) Folie à Deux (album) (→Lyrics)
- 17:45, 9 November 2011 (diff I hist) Folie à Deux (album) (→Music)

3. **Portfolio/Reflective Paper:** Some professors require their students to write a portfolio paper that includes their work in Wikipedia. Although this may have valid learning pedagogy, professors use this method as a kind of workaround for grading student work on Wikipedia. A portfolio paper is a kind of traditional writing assignment where students copy their work from Wikipedia and add it to a paper describing their contribution to Wikipedia and relevance to the article. The professor then grades the paper as a traditional assignment.

Proposed solution
Develop an automated grading tool that pulls student contributions from Wikipedia and displays the information in way that allows the professor to see the overall contribution of each student in his class without adding a lot of additional time to the professors workload.

Rationale
Grading student work on Wikipedia has been an issue from the beginning of the Public Policy Initiative. We have heard from several professors that the current manual systems is overwhelmingly tedious and time-comsuming. They have requested an easy to use, automated process for grading student work on Wikipedia.

Course reporting and monitoring of individual student's contributions

Issue
As to date, we have three different reporting tools at hand:
- **Student-o-meter:** the tool lists the students who have been active in the article namespace within the last 24 hours. Its main target audience is Online Ambassadors who need to see which students are currently working in Wikipedia's namespace
- **CourseInfo:** the tool lists the students of a specific course and the articles they have worked on. Its main target audience is teachers who want to know which and how many different articles the students in their course are working on.
- **Heatmap:** the tool lists the percentage and number of students who have been active in the article namespace within the last 30 days. Its main target audience is teachers who want to know how many of their students are working on their Wikipedia assignments over time (e.g. are the students increasingly active on Wikipedia or not? how many of them have been active on which day?).

For screenshots of all three tools, see section "current implementation".

These tools have the following shortcomings:
1. They are hosted on the somewhat unreliable toolserver. The reporting funtionality is not always available to the volunteers and the teachers;
2. The scripts use tables that are linked to a private account. We don't want to share the data about the students with the public, but at the same time, no one else but the person who owns the private account has access to the tables. This keeps volunteers from writing their own scripts and build new reporting tools.

Also, the current method that is used for gathering information about the total amount of bytes added to the article namespace by students does not take into account that some user contributions get reverted. Finally, we have no tool that gives us a general overview of how many student total participate in the program, what their activity level is and how much content they have contributed to Wikipedia's article namespace.
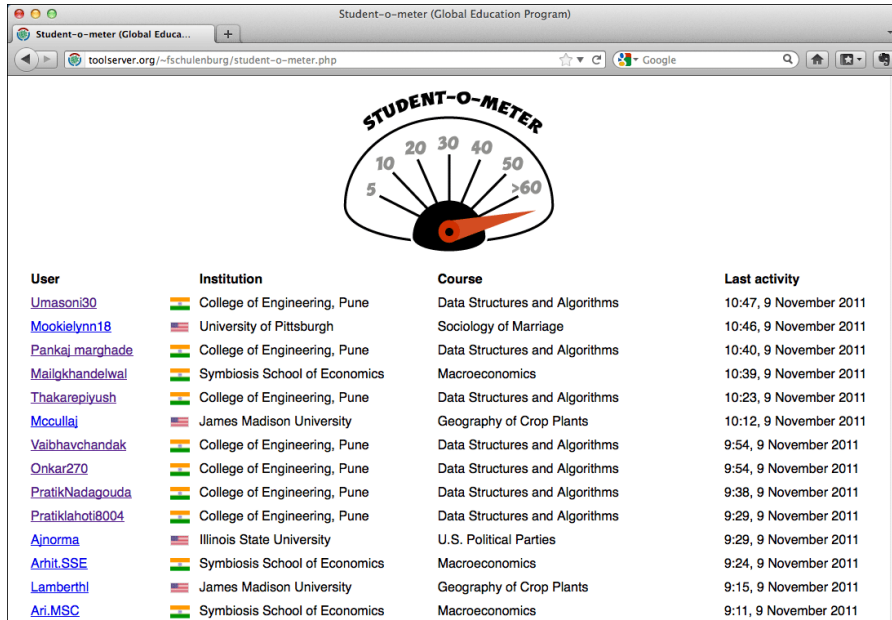
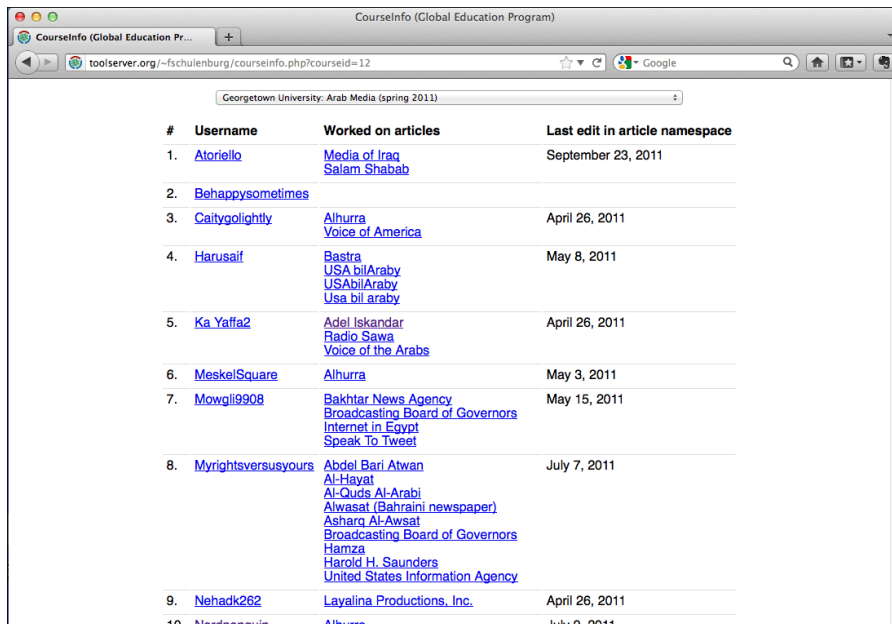# Current implementation
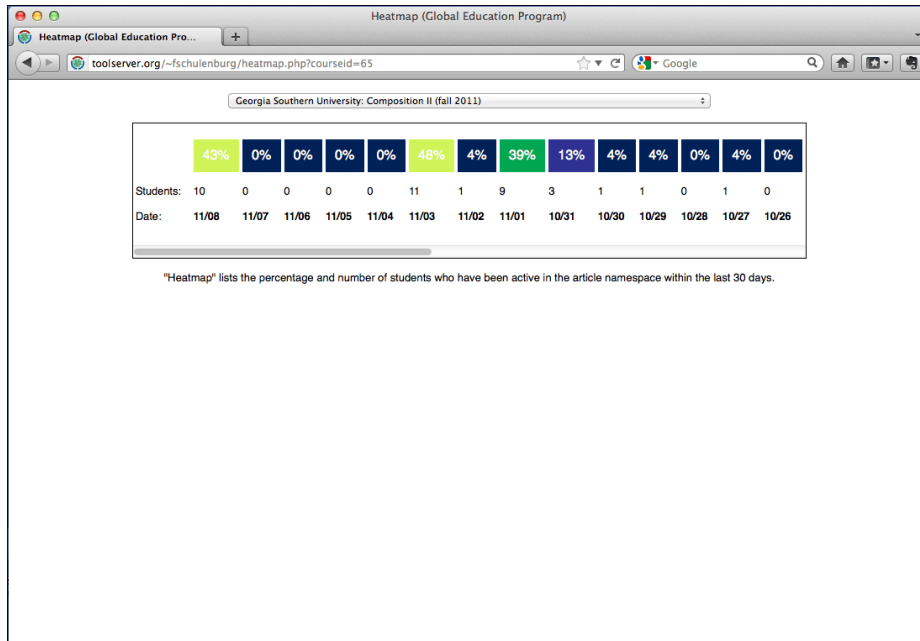

Figure A: Student-o-meter

Figure B: CourseInfo

Figure C: Heatmap

Proposed solution

Add a dashboard to MediaWiki that offers an overview of key metrics of the Wikipedia Education Program (as e.g. total number of students enrolled in the program (by country), total number of bytes contributed by the students, current activity level of the students, etc.). Also add reporting tools for teachers to MediaWiki, so that they can monitor what the students enrolled in their course are doing on Wikipedia (e.g. did all students in the course create a Wikipedia user account, which students started editing in the article namespace, etc.)

Rationale

Both professors and volunteer Ambassadors have a strong need to monitor the status of the student's work. Whereas the Online Ambassadors are long-term Wikipedians, teachers are not. Professors neither have the time nor the incentive to learn the nitty gritty details of how MediaWiki works. Their focus is on using Wikipedia as a teaching *tool*, not teaching or learning Wikipedia. If we want teachers to use Wikipedia in the classroom, easy-to-use reporting tools are of high importance for the program. Also, volunteers will benefit from tools that enable them to see what the students are doing on Wikipedia.

Course management

Issue

There is no easy way to add or remove students from the course page quickly and modify reporting tool adequately.

Current workflow

No formal workflow exists. A student may drop the course and a professor/ambassador may or may not remove the student from the course page.

Proposed solution

Develop an easy tool to easily add or remove students from the course page quickly and update all affected reporting tools.

Rationale

This will do accomplish three things:

1. Update student involvement in courses that are participating in the Global Education program
2. Keep ambassadors up-to-date on the number of students in classes they are supporting
3. Make program and student activity reports more effective and accurate