

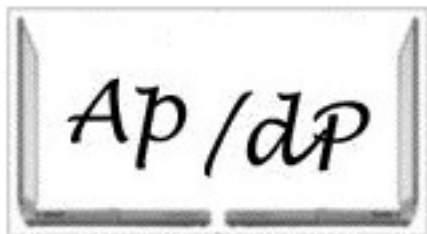
# Constructing Knowledge in a Public Forum: Student Projects in Wikipedia

Kent L. Norman & Stuart A. Cohn

Department of Psychology, University of Maryland

College Park

May 29, 2008





# Student Projects

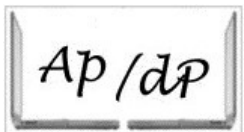
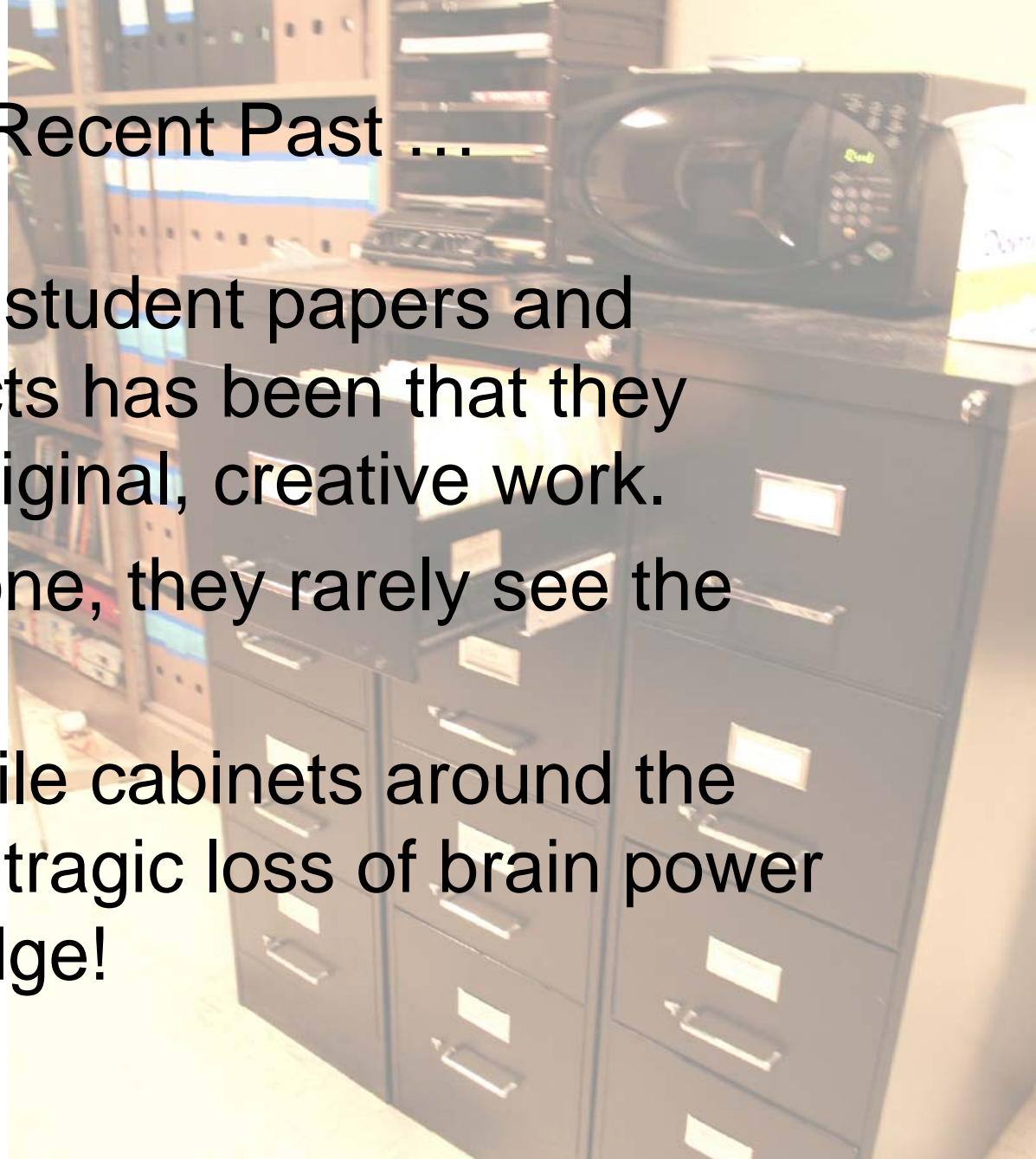
- For years many instructors in undergraduate courses across the disciplines have struggled with group projects.
  - What projects should be given?
  - How do we monitor the teams?
  - How do we evaluate the group product and the individual efforts?





## In the Recent Past ...

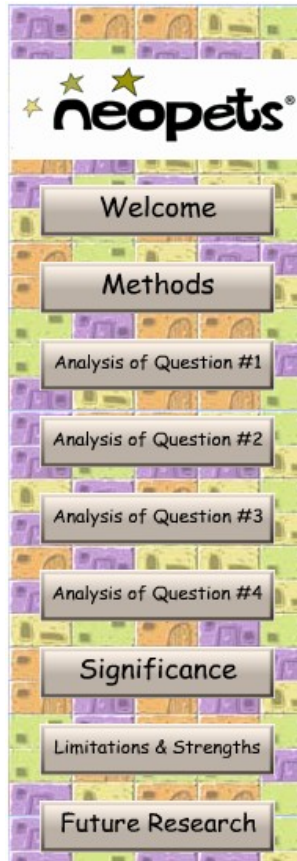
- The point of student papers and group projects has been that they should be original, creative work.
- But when done, they rarely see the light of day.
- They die in file cabinets around the world! What tragic loss of brain power and knowledge!



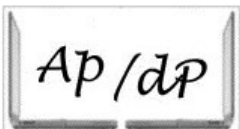
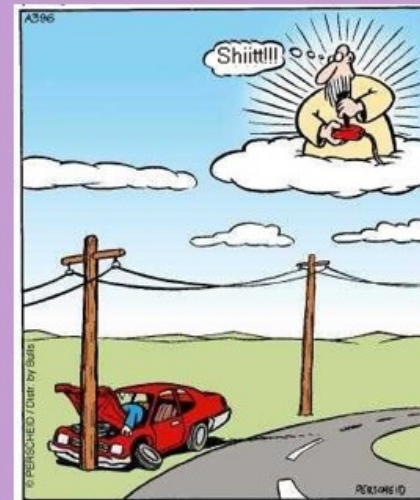


# What about Constructing Websites?

- Students generate a website for the project.
- Example --->
- But too much
- time is spend
- on design and
- HTML



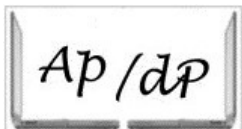
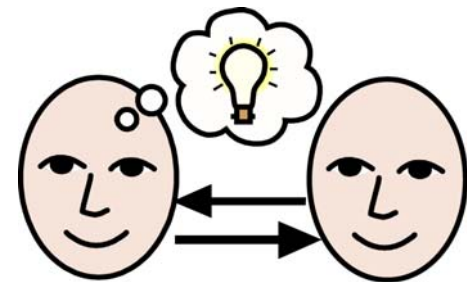
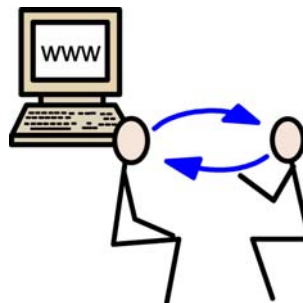
Welcome to Team  
6's Website





# Team-Projectware

- In past few years, there has been rapid development of a new breed of software for Computer Supported Collaboration Work (CSCW).
- “Groupware” was originally designed to facilitate collaborative efforts in business and industry, but it has clear applications in science and education.
- Electronic communication tools, Electronic conferencing tools, and Collaborative management tools

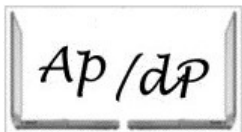


Constructing Knowledge in a Public Forum: Student Projects in Wikipedia



# What about a Wiki?

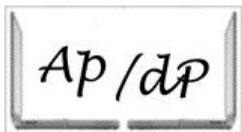
- A **wiki** ([IPA](#): ['wɪ.ki:] <WICK-ee> or ['wi:.ki:] <WEE-kee>[\[1\]](#)) is a type of [website](#) that allows the visitors themselves to easily add, remove and otherwise [edit](#) and change some available content, sometimes without the need for registration. This ease of interaction and operation makes a wiki an effective tool for [collaborative authoring](#). The term wiki can also refer to the [collaborative software](#) itself ([wiki engine](#)) that facilitates the operation of such a website, or to certain specific wiki sites, including the computer science site (an original wiki), [WikiWikiWeb](#), and online encyclopedias such as [Wikipedia](#).





# What about Wikipedia?

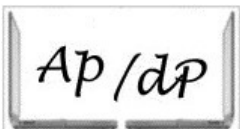
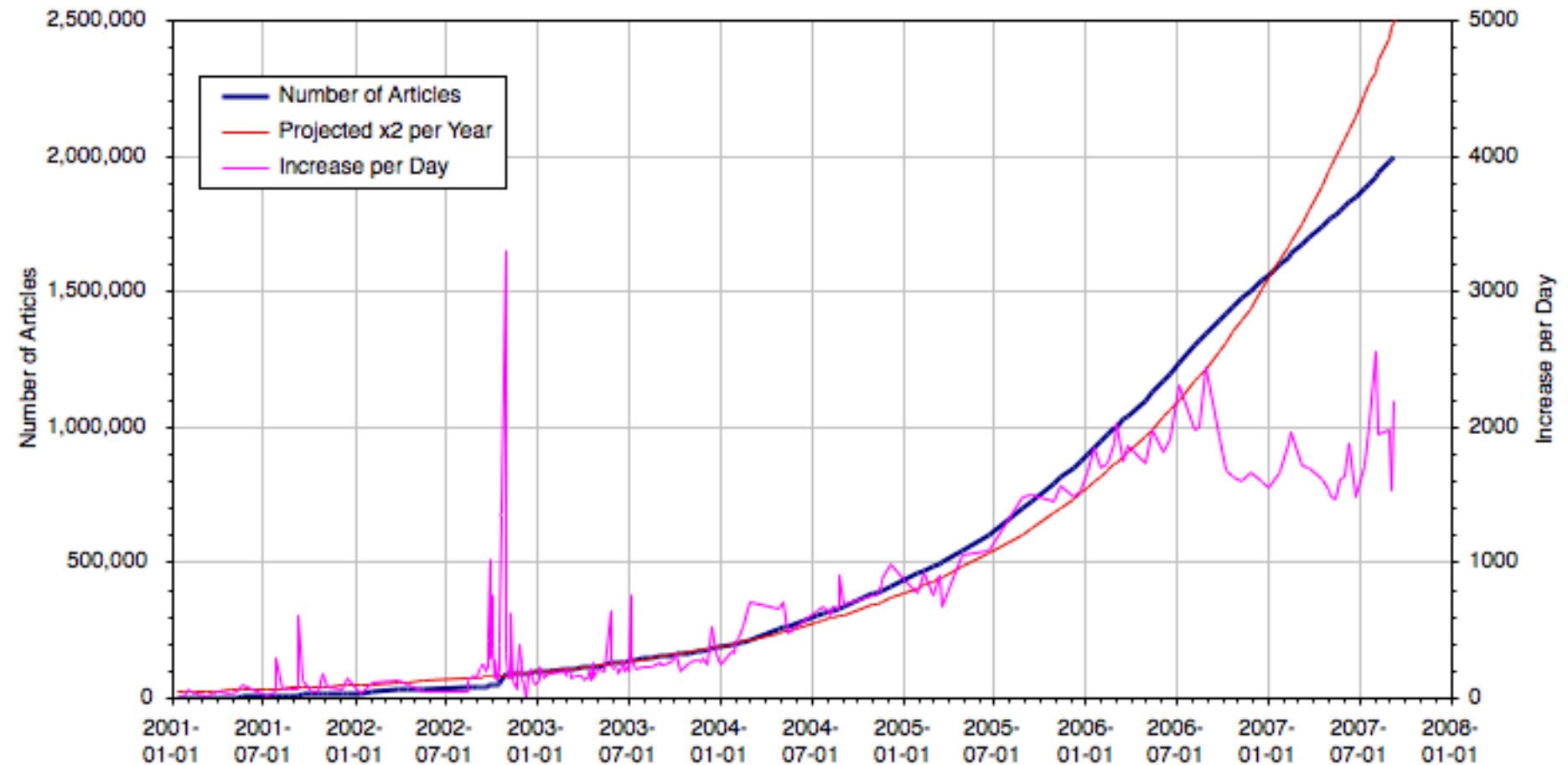
- Welcome to [Wikipedia](#),
  - the free [encyclopedia](#) that [anyone can edit](#).
  - [2,373,749](#) articles in [English](#)
  - [15 May](#) 2008
- 
- The number of English Wikipedia articles grew exponentially from 2002 to 2006, with a doubling time of roughly 1 year (Wikipedia, 2007).







# Wikipedia's Exponential Growth







# Wikipedia Article



WIKIPEDIA  
The Free Encyclopedia

navigation

- Main Page
- Community Portal
- Featured articles
- Current events
- Recent changes
- Random article
- Help
- Contact Wikipedia
- Donations

search

Go Search

toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link
- Cite this article

[article](#) [discussion](#) [edit this page](#) [history](#) [move](#) [unwatch](#)

## Functional fixedness

From Wikipedia, the free encyclopedia

**Functional fixedness** is a [cognitive bias](#) that limits a person to using an object only in the way it is traditionally used.

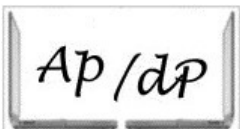
**Contents** [\[hide\]](#)

- 1 Introduction to Functional Fixedness
- 2 Examples in Research
  - 2.1 Duncker (1945)
    - 2.1.1 Candle Box
    - 2.1.2 Tumor Diagram
  - 2.2 Adamson
  - 2.3 Birch and Rabinowitz
- 3 Current Conceptual Relevance
  - 3.1 Functional Fixedness Universal?
  - 3.2 Following the Wrong Footsteps: Fixation Effects of Pictorial Examples in a Design Problem-Solving Task
- 4 Techniques to Avoid Functional Fixedness
  - 4.1 Overcoming Functional Fixedness in Science Classrooms with Analogical Transfer
  - 4.2 Uncommitting
  - 4.3 Overcoming Prototypes
- 5 References
- 6 External links

### Introduction to Functional Fixedness [\[edit\]](#)

The concept of functional fixedness originated in [Gestalt Psychology](#), which is a movement in psychology that emphasizes wholistic processing where the whole is seen as being separate from the sum of its parts. Duncker defined functional fixedness as being a "mental block against using an object in a new way that is required to solve a problem." This "block" then limits that ability of an individual to use the components given to them to make a specific item, as they can not move past the original intention of the object.

Experimental paradigms typically involve solving problems in novel situations in which the subject has to use of a familiar object in an unfamiliar context. The object may be familiar from the subject's past experience or from previous tasks within an experiment. The end result is that the subject typically unable to overcome the bias which hinders or completely prevents the subject from completing the task rather than making use of the available objects in a novel but more efficacious manner.



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## A History Department Bans Citing Wikipedia as a Research Source

By NOAM COHEN

Published: February 21, 2007

When half a dozen students in Neil Waters's Japanese history class at Middlebury College asserted on exams that the Jesuits supported the Shimabara Rebellion in 17th-century Japan, he knew something was wrong. The Jesuits were in "no position to aid a revolution," he said; the few of them in Japan were in hiding.


He figured out the problem soon enough. The obscure, though incorrect, information was from Wikipedia, the collaborative online encyclopedia, and the students had picked it up cramming for his exam.

Dr. Waters and other professors in the history department had begun noticing about a year ago that students were citing Wikipedia as a source in their papers. When confronted, many would say that their high school teachers had allowed the practice.

But the errors on the Japanese history test last semester were the last straw. At Dr. Waters's urging, the Middlebury history department notified its students this month that Wikipedia could not be cited in papers or exams, and that students could not "point to Wikipedia or any similar source that may appear in the future to escape the consequences of errors."

 E-MAIL

 PRINT

 SAVE

 SHARE

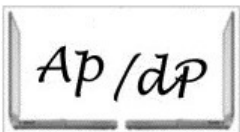
ARTICLE TOOLS  
SPONSORED BY

**NOTORIOUS**  
in theaters 09



# Student Projects Hosted in Wikipedia

- There is much debate over reliability of articles.
- So rather than use it as a resource, we decided to use it as a repository!
- Students could focus on content not web site design.
- Articles would accurate and authoritative, monitored by university faculty.









## For some professors, a rare embrace of Wikipedia

**CARRIE WELLS**

Issue date: 11/16/07 Section: **News**

 Print  Email  Article Tools

 Page 1 of 2 next >

Most term papers have a limited audience. It's you, your professor, and that's pretty much it.

Maybe your mom, too, or anyone who passes it hanging on the fridge.

That is, unless the paper is for one of a growing number of professors who have students posting written material for a potential audience of millions. Professors have recently been assigning their students articles to write or edit on Wikipedia, the online encyclopedia that anyone can change.

The value of the website is more than gaining a wider audience. Professors and students involved say the website's greatest value as a teaching tool is the feedback that the audience offers.

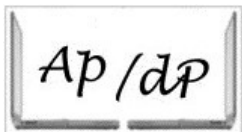
"It creates new knowledge instead of the paper getting thrown in a file cabinet and thrown away after seven years," psychology associate professor Kent Norman said. "I have submitted articles to encyclopedias, but I am just one person. I've probably never written anything without a mistake; with Wikipedia, you can have 30 other experts editing your work."

Norman decided to have his students write articles for Wikipedia in one undergraduate and one graduate class he taught last spring semester, in addition to the class he is teaching this semester.



# Grading and Assessment of Contributions

- How do we assign partial credit for the process?
- Tracking progress:
- Follow the emails and cc's to the instructor
- Follow the discussion spaces
- Monitor the versions and contributions





# Wiki History

[article](#) [discussion](#) [edit this page](#) [history](#) [move](#) [unwatch](#)

kinorman my t

## Functional fixedness

From Wikipedia, the free encyclopedia

[Revision history](#)  
[View logs for this page](#)

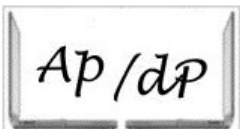
([Latest](#) | [Earliest](#)) [View](#) ([previous 50](#)) ([next 50](#)) ([20](#) | [50](#) | [100](#) | [250](#) | [500](#)).

For any version listed below, click on its date to view it. For more help, see [Help:Page history](#).

Legend: (cur) = difference with current version, (last) = difference with preceding version, **m** = [Minor edit](#).

Compare selected versions

<input type="checkbox"/>	(cur) (last)	<input checked="" type="radio"/>	03:48, 8 May 2006 128.8.128.33 ( <a href="#">Talk</a> ) ( <a href="#">→ Uncommitting</a> )
<input type="checkbox"/>	(cur) (last)	<input checked="" type="radio"/>	03:45, 8 May 2006 128.8.128.33 ( <a href="#">Talk</a> ) ( <a href="#">→ References</a> )
<input type="checkbox"/>	(cur) (last)	<input type="radio"/>	03:42, 8 May 2006 128.8.128.33 ( <a href="#">Talk</a> ) ( <a href="#">→ Techniques to Avoid Functional Fixedness</a> )
<input type="checkbox"/>	(cur) (last)	<input type="radio"/>	03:17, 8 May 2006 128.8.128.33 ( <a href="#">Talk</a> ) ( <a href="#">→ Techniques to Avoid Functional Fixedness</a> )
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<input type="checkbox"/>	(cur) (last)	<input type="radio"/>	23:46, 5 May 2006 69.138.180.97 ( <a href="#">Talk</a> ) ( <a href="#">→ Candle Box</a> )
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Constructing Knowledge in a Public Forum: Student Projects in Wikipedia





# Wiki History: “Diffs” Between Two Revisions

## Line 29:

== Current Conceptual Relevance ==

### - Functional Fixedness Universal?

We may ask ourselves if functional fixedness varies across environments, cultures, or history. In a recent study,

## Line 37:

The Shuar community had only been exposed to a limited amount of industrialized artifacts, such as machetes, axes, cooking pots, nails, shotguns, and fishhooks, all considered “low-tech”. Two tasks were assessed to participants for the study: the box task, where participants had to build a tower to help a character from a fictional storyline to reach another character with a limited set of varied materials; the spoon task, where participants were also given a problem to solve based on a fictional story of a rabbit that had to cross a river (materials were used to represent settings) and they were given varied materials including a spoon. In the box-task, participants were slower to select the materials than participants in control conditions, but no difference in time to solve the problem was seen. In the spoon task, participants were slower in selection and completion of task. Results showed that Individuals from non-industrial (“technologically sparse cultures”) were susceptible to functional fixedness. They were faster to use artifacts without priming than when design function was explained to them. This occurred even though participants were less exposed to industrialized manufactured artifacts, and that the few artifacts they currently were used in multiple ways regardless of their design. (German & Barret, 2005)

- **Overcoming Functional Fixedness in Science Classrooms with Analogical Transfer (Solomon, 1994)**

## Line 29:

== Current Conceptual Relevance ==

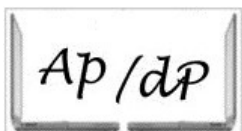
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+ **== Following the Wrong Footsteps: Fixation Effects of Pictorial Examples in a Design Problem-Solving Task (Chrysikou, E.G., & Weisberg, R.W., 2005) ==**

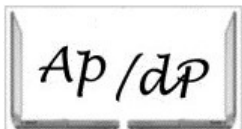






## Study

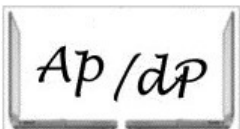
- In the Spring of 2006, two small classes engaged in Wikipedia contributions. (Currently collecting results from Fall 2007 class.)
- Psyc 443: "Thinking and Problem Solving" ( $n = 22$ ). Taught in an electronic classroom.
- Psyc 779: "Seminar on the Psychology of Human/Computer Interaction" ( $n = 4$ ). All of the students had laptops connected to the Internet via a campus wireless network.





# Warmup: Short Edit Assignment

- For this assignment, you are to find an article that interests you in [Wikipedia](#) and contribute some change or addition to it.
  - 1. What article did you choose and why? Copy the link and paste it in the field below.
  - 2. What did you add or change and why?





# Short Edit Assignment

I choose an article about change blindness

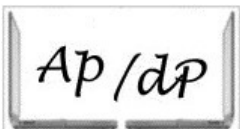
([http://en.wikipedia.org/wiki/Change\\_blindness](http://en.wikipedia.org/wiki/Change_blindness)). I chose it because last semester, I performed an experiment and wrote a paper about it for psyc440.

Lion Dance [http://en.wikipedia.org/wiki/Lion\\_dance](http://en.wikipedia.org/wiki/Lion_dance) I was expecting to find a very short, general post about lion dance and how it's used to bless the new year and scare away spirits, but what I found was a lot more interesting: my own research paper is used as the reference for this article! So I decided to read it, and to add on a part of my paper that was left out, that I think was important. Lion dance is a very important aspect of my life. It is why I decided to do an extensive research paper on it for a class project a few years ago, and it still does interest and intrigue me.

A chose an article about 'hotdogs'(I'm not sure if that was an appropriate word or not). Although, it seems like a random term, my friend suggested it and after reading the article I was irritated. I don't eat red meat (pork/beef/anything else with four legs). There was no mention or turkey hot dogs; everyone sort of glazes over special dietary restrictions. [http://en.wikipedia.org/wiki/Hotdog#General\\_description](http://en.wikipedia.org/wiki/Hotdog#General_description)

[http://en.wikipedia.org/wiki/Georges\\_Rousse](http://en.wikipedia.org/wiki/Georges_Rousse) This is an article on a french artist I discovered a few years ago. There was just a little description of his work, but no pictures.

Constructing Knowledge in a Public Forum: Student Projects in Wikipedia



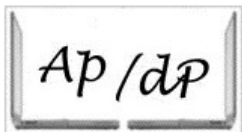


# Team Projects

Team Projects: This semester we are going to do something totally different. Rather than writing a 10-20 page paper on some aspect of Thinking and Problem Solving you will be writing an article for Wikipedia.

To ensure a high quality for the articles, you will work in teams of 5-6.

At the end of the semester you will give a 15 minute presentation of your article and the experiences you had writing it, editing it, and maintaining it.





# Team Composition

- What topics or issues in Thinking and Problem Solving are you interested in for this project?  
(Articles had to be within the domain of the course)
- Rate your knowledge/abilities in the following areas: knowledge of psychology, graphic design/art, knowledge of the Internet, writing ability, group leadership, and experience with Wikipedia.
- Teams were composed with balanced levels of experience and common interests.



# Process

- Teams used collaborative project spaces in HyperCourseware.



## [Projects](#)

### [Team 1](#)

Heather Everson  
Joshua Harshman  
ImHan Kim  
Stephanie Lawton

### [Team 2](#)

Andrea Bento  
Stuart Cohn  
Noelle Jones  
Jamie Mondics  
Jay Templin

### [Team 3](#)

Cassandra Hitt  
Michael Hober  
Divya Jalota  
Vivek Muralidhar  
Sylvia Zaouch-Zimmers

### [Team 4](#)

Kristina Edmonds  
Paul Franzen  
Derrick Hayford  
Emily Noord  
Jessica Sauer

### [Team 5](#)

James Dick  
Elizabeth Hum  
Adi Shaked  
Amanda Smith  
Florescia Sosa

## Topic: Team Notes

Record your team notes here. For each meeting list the members present and the topics discussed.



**Noelle Jones** 2/20/2006 11:52:13 AM

Members present- Noelle, Andrea, Jamie We figured out that we all are interested in social problems and agreed to start looking for a specific problem to discuss. We also found out that Andrea and Jamie both put down collector, and I put down curator.



**Kent Norman** 2/20/2006 6:20:35 PM

OK, good start. Now to come with an article title.



**Jay Templin** 2/24/2006 11:54:13 AM

Me and Andrea perused the index, table of contents in our textbook, and didn't find anything about social problems. We also searched on wikipedia, but searching for social problems only presented some broad ideas, so we still need to find a focus.



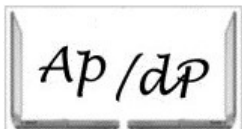
**Kent Norman** 2/24/2006 11:07:56 PM

I was going to suggest "prisoner's dilemma" or "group think" or "social cognition" but there are already a long articles. However, if you look at some of these, they have terms that do not have articles.



**Stuart Cohn** 2/25/2006 4:44:45 PM

From the "Prisoner's dilemma" and "Groupthink," the terms defect and dissent are not defined. Separately, the term "Peer pressure" just has a sociology-related stub and not an article in place. A new article could be created for the psychology-related term of "Peer pressure," with emphasis on how it affects problem solving.

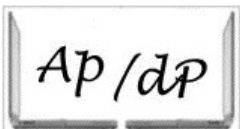




# Products

- Five articles were written by teams of 4-6 in Psyc 443 and 5 articles were written by students in Psyc 779:

Course	Article	URL	
Psyc 443	Functional fixedness	<a href="http://en.wikipedia.org/wiki/Functional_fixedness">http://en.wikipedia.org/wiki/Functional_fixedness</a>	
	Interface metaphor	<a href="http://en.wikipedia.org/wiki/Interface_Metaphor">http://en.wikipedia.org/wiki/Interface_Metaphor</a>	
	Mental chronometry	<a href="http://en.wikipedia.org/wiki/Mental_chronometry">http://en.wikipedia.org/wiki/Mental_chronometry</a>	
	Plato's problem	<a href="http://en.wikipedia.org/wiki/Plato's_Problem">http://en.wikipedia.org/wiki/Plato's_Problem</a>	
	Tip of the tongue	<a href="http://en.wikipedia.org/wiki/Tip_of_the_tongue">http://en.wikipedia.org/wiki/Tip_of_the_tongue</a>	
Psyc 779	Construction field computing	<a href="http://en.wikipedia.org/wiki/Construction_Field_Computing">http://en.wikipedia.org/wiki/Construction_Field_Computing</a>	
	Cosmobot	<a href="http://en.wikipedia.org/wiki/Cosmobot">http://en.wikipedia.org/wiki/Cosmobot</a>	
	Interface apparency	<a href="http://en.wikipedia.org/wiki/Interface_apparency">http://en.wikipedia.org/wiki/Interface_apparency</a>	
	Spatial visualization ability	<a href="http://en.wikipedia.org/wiki/Spatial_Visualization_Ability">http://en.wikipedia.org/wiki/Spatial_Visualization_Ability</a>	
	Universal usability	<a href="http://en.wikipedia.org/wiki/Universal_Usability">http://en.wikipedia.org/wiki/Universal_Usability</a>	



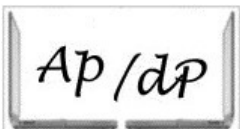




# Results: Prominence

- The resulting articles are prominent and assessable on the Internet.

Course	Article	Google Ranking	Yahoo Search Ranking
Psyc 443	Functional fixedness	#1	#1 Mirror #2
	Interface metaphor	#7	#1
	Mental chronometry	#1	Mirrors #1 & #2
	Plato's problem	#3	#1
	Tip of the tongue	#1	#1 Mirror #2
Psyc 779	Construction field computing	#1	#1
	Cosmobot	#2	#2 Mirror #3
	Interface apparency	#1	#1 Mirror #2
	Spatial visualization ability	#1	#1
	Universal usability	#5	#3

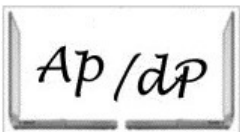




# Expanded Reach of Wikipedia

## Content: Mirrors and Forks

- The **GNU Free Documentation License (GFDL)** removes restrictions on distributing copies of Wikipedia content.
- [http://en.wikipedia.org/wiki/GNU\\_Free\\_Documentation\\_License](http://en.wikipedia.org/wiki/GNU_Free_Documentation_License)
- Wikipedia's reach is greater than its own website. Several for profit sites make use of the freely available content. A list of the mirrors and forks:
- [http://en.wikipedia.org/wiki/Wikipedia:Mirrors\\_and\\_forks](http://en.wikipedia.org/wiki/Wikipedia:Mirrors_and_forks)
- While Wikipedia articles are constantly evolving through the process of editing, the mirror sites contain a “snapshot” of a single version.





# Mirror Sites

A recent  
Wikipedia  
version of the  
article *Mental  
chronometry*:

**Mental chronometry** - Wikipedia, the free encyclopedia - Microsoft Internet Explorer

From Wikipedia, the free encyclopedia

**Mental chronometry** can be defined as the study of the temporal sequencing of information processing in the [human brain](#), or as a precise measure of the time taken for a mental operation. Mental chronometric tasks have been used extensively in [cognitive psychology](#) and [behavioral neuroscience](#) to elucidate mechanisms underlying information processing.

**Contents** [hide]

- 1 History
  - 1.1 Donders' experiment
- 2 Application of mental chronometry in cognitive psychology
  - 2.1 Posner's letter matching studies
  - 2.2 Sternberg's memory-scanning tasks
  - 2.3 Cooper and Shepard's mental rotation task
  - 2.4 Sentence-picture verification
  - 2.5 Mental chronometry and models of memory
- 3 Application of mental chronometry in neuroscience
- 4 External links
- 5 References

**History**

Psychologists have investigated mental chronometry for over 100 years. Mental chronometry is based on early studies in [reaction time](#) conducted by psychologists.

**Donders' experiment**

Donders conducted experiments using [reaction time](#) tasks. Donders' work attempts to describe the processes going on in the [mind](#), by analyzing cognitive activity into separate stages. Until Donders' work, many scientists had assumed that the mental operations involved in responding to a stimulus occurred instantaneously. Donders was particularly interested in "timing the mind" and used a subtraction technique to [time](#) the different [mental processes](#) that the brain goes through when faced with different tasks.

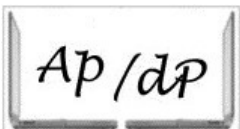
Donders performed experiments using reaction time tasks in 1868. His was the first attempt to analyze and measure the component processes of a simple task. He used three tasks:

1. A simple reaction time task. For example, you are seated in front of a panel that contains a light bulb and a button. When the light bulb is lit, you press the button. The time between the light being lit and the button being pressed is the reaction time.

1 light 1 button Task 1 S

2 lights 2 buttons Task 2 S

Donders (1868's) method of subtraction



Constructing Knowledge in a Public Forum: Student Projects in Wikipedia

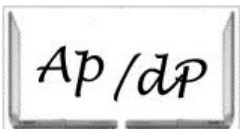


# Mirror Sites

*Mental  
chronometry at  
Answers.com*

<http://www.answers.com/topic/mental-chronometry>

The screenshot shows a Microsoft Internet Explorer browser window displaying the Answers.com website. The address bar shows the URL <http://www.answers.com/topic/mental-chronometry>. The page title is "mental chronometry: Information from Answers.com". The main content area features the "mental chronometry" article, which includes a Wikipedia link, a definition of mental chronometry, a history section, and a section on Donders' experiment. A diagram of Donders' experiment is shown, illustrating the sequence of events: a light stimulus (S) followed by a response (R) with a time interval. The diagram includes a timeline from 0 to 300 milliseconds, with a red box labeled "Stimulus" and a blue box labeled "Response".



Constructing Knowledge in a Public Forum: Student Projects in Wikipedia



Mental chronometry at AllExperts.com  
[http://en.allexperts.com/e/m/me/mental\\_chronometry.htm](http://en.allexperts.com/e/m/me/mental_chronometry.htm)

Mental chronometry at AllExperts - Microsoft Internet Explorer

http://en.allexperts.com/e/m/me/mental\_chronometry.htm

Google

Mental chronometry at AllExperts

AllExperts Search

**Mental chronometry: Encyclopedia** BETA

Apply Now Free Encyclopedia

Home · Index · Browse A-Z

Questions and Answers · Make this Site Your Homepage!

Sponsored Links

<b>New Neuroscience Gateway</b> The free resource from Allen Institute/Nature for brain research <a href="http://www.brainias.org">www.brainias.org</a>	<b>Sharpen Your Memory</b> Improve your memory with 10 fun and challenging memory exercises <a href="http://brain-exercises.playwithyourmind.co">brain-exercises.playwithyourmind.co</a>	<b>Prepare to be Shocked</b> You may be younger than you think. Take the RealAge test and find out. <a href="http://www.RealAge.com">www.RealAge.com</a>	<b>Software for the Brain</b> Use Brainwaves, Psychology for Greater Focus, Memory and Speed <a href="http://www.transparentcorp.com/">www.transparentcorp.com/</a>
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**Encyclopedia**

Contents

- History
- Application of mental chronometry in cognitive psychology
- Application of mental chronometry in neuroscience
- External links
- References

Mental chronometry Offers

- Psychology Memory
- Neuroscience Brain
- Brain Scan
- Memory Upgrade
- Psychological Journals

ABCDEFGHIJKLMNOPQRSTUVWXYZ Misc

**Mental chronometry**

Mental chronometry can be defined as the study of the temporal sequencing of information processing in the [human brain](#), or as a precise measurement of psychological processes. Ment

**History**

[Psychologists](#) have investigated mental chronometry for over 100 years. Mental chronometry is based on early studies in [reaction time](#) conducted by Donders (1868).

**The Donders' experiment**

Donders (1868) conducted experiments using [reaction time](#) tasks. Donders' work attempts to describe the processes going on in the [mind](#), by analyzing cognitive activity into separate stag

Donders performed experiments using reaction time tasks in [1868](#). His was the first attempt to analyze and measure the component processes of a simple task. He used three tasks: # A simple reaction time task. For example, you are seated in front of a panel that contains a light bulb and a response button. When the light comes on, you must pr

Donders then predicted the kinds of processes that might be involved in each task: # A simple time task would require perception and motor stages - time to receive and then execute the s

As expected, simple tasks take the shortest amount of time, followed by discrimination tasks, with choice tasks taking the longest amount of time. Donders calculated the time required for

This demonstrated a simple conclusion: more stages should require more time.

Start Mental chronometry at A... Microsoft PowerPoint - [...] Additional slides\_Wikiped... Mental chronometry ...

Internet 100% 1:33 PM

Ap/dp

Constructing Knowledge in a Public Forum: Student Projects in Wikipedia





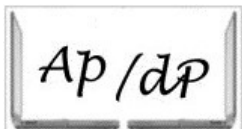
# Edits to Articles During Semester

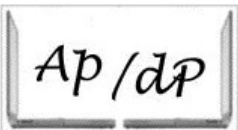
At least 20 of the 26 students directly made edits to Wikipedia for the article project. one undergraduate group of 5 students utilized a shared login, username *Group4\_443*.

15 unique usernames were registered as Wikipedia accounts for the project, including all 4 graduate students. 5 undergraduate students contributed edits anonymously as evidenced by their static IP addresses.

1 undergraduate student was removed from the data analysis as an outlier; this student contributed heavily as a regular editor of Wikipedia, with >2000 edits and >1000 pages edited.

	N	Minimum	Maximum	Mean	Std. Deviation
Number of edits	19	2	54	20.16	14.875
Distinct pages edited	19	1	13	4.05	3.808





Constructing Knowledge in a Public Forum: Student Projects in Wikipedia





# Results

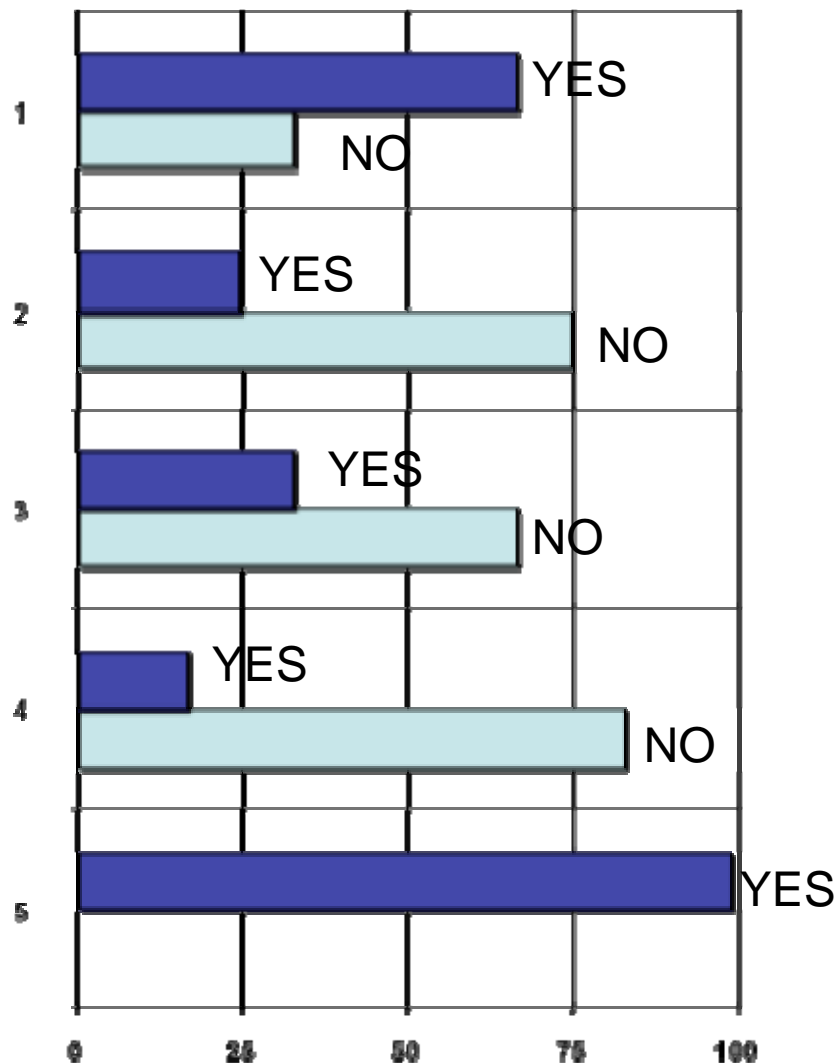
Since completing the Wikipedia article, have you looked at the article?

Did you make any edits to your article?

Have you looked at any articles written by other class members?

Did you make any edits to them?

Have you used Wikipedia as a resource for information?





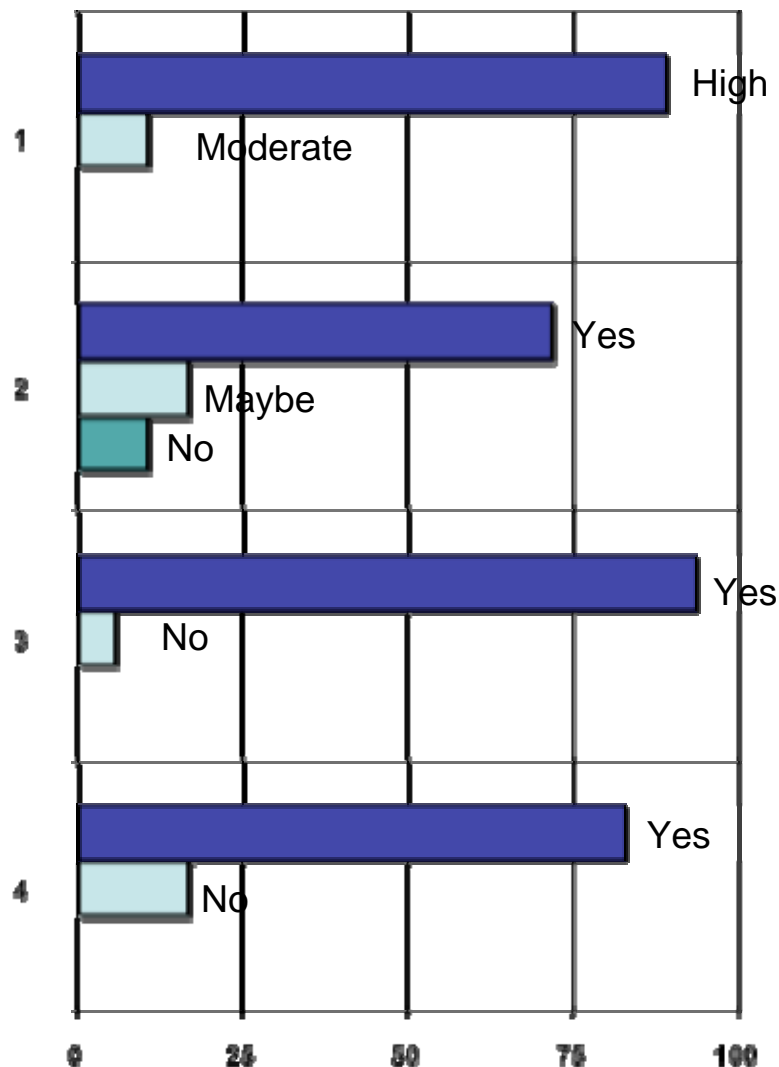
# Results

What has been your usage of the Web for accessing information since the end of the Spring semester?

Do you plan to continue (or start) using Wikipedia as a reference source for current or future courses?

Do you think that Wikipedia contains reliable and accurate information?

Were you aware of Wikipedia before taking this course?





# History Statistics

Wikipedia Page History Statistics - Mozilla Firefox

File Edit View Go Bookmarks Tools Help del\_jido.us

http://vs.aka-online.de/wppagehiststat/

PSYC 450 FitDay Dictionary.com MyUM USMAI Login EBSCOhost The Diamondback The IEUC Homepage Wikipedia Page Histo... Revision counter Article Contribution C... 22.html Message

Google Search PageRank ABC Check AutoLink AutoFill Options

Gmail - Collaborating on documents vs. on a wiki FitDay - Online Diet & Fitness Manager Wikipedia Page History Statistics

Gmail - Collaborating on documents vs. on a wiki

**Wikipedia Page History Statistics**  
a Wikipedia tool by [[user:aka]]

This site **builds an edit history overview page** for the article with the given name.

It uses **intelligent caching algorithms**. Unless you are the very first one requesting the statistics for an article, analyzing the whole history usually does not stress the Wikipedia server more then just checking the last 50 edits using the built-in functionality. If you are the first one and the article has many edits, retrieving the article history data may take a while.

This page is still **under construction**. If something does not work you may try it again later. If it still does not work please drop me a note. More Wikipedia languages will be added after this initial test.

Please select the Wikipedia language below and enter the title of the page exactly as it is written in the **article headline**.

Examples: [en] [Talk:Main Page], [en] [Current events] or [de] [User:Aka]

wikipedia  page

*If you have questions or comments, contact me using my [discussion site](#).*

Done

Start Wikipedia Page Histor... Microsoft Excel - Wiki\_ED... C:\Documents and Settin... Microsoft PowerPoint - [...]

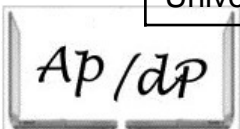
1:50 PM



# Changes to Articles After Completion of Semester

- Monitoring the articles from the end of the semester to February 20, 2007: (constructive edits do not include vandalism and its repair)

Article	Total Edits	Constructive Edits
Functional fixedness	23	23
Interface metaphor	21	21
Mental chronometry	15	13
Plato's Problem	14	8
Tip of the tongue	24	16
Construction Field Computing	19	9
Cosmobot	7	7
Interface apparency	8	8
Spatial Visualization Ability	25	8
Universal usability	15	14





# Some Lessons Learned

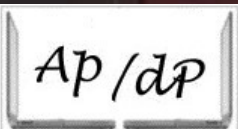
- Prepare the bulk of the article in SandBox and use CSCW tools to track collaboration.
- To facilitate the tracking of contributions in Wikipedia:
  - Require all students to register unique usernames for their edits.
  - Require students to share equally in contributing parts and edits of the articles.
- Unique usernames also allow for greater use of tracking tools, e.g., <http://vs.aka-online.de/wppagehiststat/>





# Some Lessons Learned

- To facilitate greater communication, to present a sense of the online community of Wikipedians, and to increase the likelihood of future Wikipedia contribution:
- Require students to create content for their account [User page](#)
- Encourage the use of Article and User [talk pages](#).
- Consider smaller groups and shorter articles.
- Consider groups rewriting existing articles.

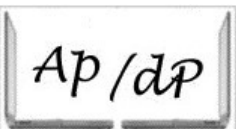






# Conclusions

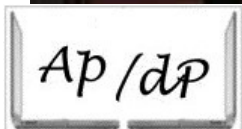
- There is a huge social incentive for students to do a good job:
- - “I think that writing an article as a project was a great idea. Just now as I did this survey I Googled "tip of the tongue". It was number 5 on Google. Returned: Results 1 - 10 of about 2,990,000 for tip of the tongue.
  - Number 5 out of 3 million is undeniably cool, that alone is satisfying enough that I'd do it all over again : )”





# Conclusions

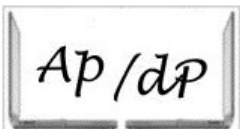
- The students became publishers of Internet content. One student commented,
  - “I loved this project, I think it's a really great way of spreading knowledge. This is the only class I've taken where I actually felt like my paper was going to do more than sit on a desk. I wish more professors would pick up an idea like this.”





# Future Use of Wikipedia

- Student projects can fill in missing articles and requests for articles (until Wikipedia is saturated).
- Students can fill out, clean, and improve current articles (no limit).
- Use course requirements to learn good Wikipedian behavior.
- Use faculty evaluation of projects to ensure quality of articles.





# Acknowledgements

- Undergraduate and graduate students at the University of Maryland
- The Center for Teaching Excellence (CTE)
- The Office of Information Technology (OIT)
- Wikipedia!

