



## **Google technology for teachers**

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### **Abstract**

Google.com is a most popular search engine which people prefer to choose whenever they want to search something on internet. Google.com is ranked #1 in the world according to the three-month Alexa traffic rankings, and the site has been online for more than fourteen years<sup>8</sup>. Google developed several services in recent years which are more valuable for searching information quickly. Teacher is a most important part in learning process. Consequently, teachers must know the use of technology for inclusion into learning process. Hence, in this paper, the author attempts to present an overview of some of the important services of Google and their application for teachers.

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**Key Words:** Google, search engine, teacher, etc.

### **INTRODUCTION**

Google's corporate history page has a pretty strong background on Google, starting from when Larry met Sergey at Stanford right up to present day. In 1995 Larry Page met Sergey Brin at Stanford.

By January of 1996, Larry and Sergey had begun collaboration on a search engine called BackRub, named for its unique ability to analyze the "back links" pointing to a

given website. Larry, who had always enjoyed tinkering with machinery and had gained some notoriety for building a working printer out of Lego™ bricks, took on the task of creating a new kind of server environment that used low-end PCs instead of big expensive machines. Afflicted by the perennial shortage of cash common to graduate students everywhere, the pair took to haunting the department's loading docks in hopes of tracking down newly arrived computers that they could borrow for their network.

A year later, their unique approach to link analysis was earning BackRub a growing reputation among those who had seen it. Buzz about the new search technology began to build as word spread around campus.

BackRub ranked pages using citation notation, a concept which is popular in academic circles. If someone cites a source they usually think it is important. On the web, links act as citations. In the PageRank algorithm links count as votes, but some votes count more than others. Your ability to rank and the strength of your ability to vote for others depends upon your authority: how many people link to you and how trustworthy those links are.

In 1998, Google was launched. Sergey tried to shop their PageRank technology, but nobody was interested in buying or licensing their search technology at that time<sup>7</sup>.

In next section, the author provided overview of some of the important services of Google and their application for teachers.

- 1. Google Books**
- 2. Google Scholar**
- 3. Google News**
- 4. Google advanced search**
- 5. Google Docs**
- 6. Google Maps**
- 7. Google Custom Search**
- 8. Google Site**
- 9. Google Alerts**
- 10. Google Groups**

## 1. Google Books

In the homepage of Google one option called “More” is there at the top. When we click on that option we can see all Google Products. One of the most important products is Google Books (See fig. 1). In Google Books Advanced Search (See fig. 2) you can search books by Title, Author, Publisher, Subject, etc. Those same books can also be embedded into your blog or website and can also be added to the “My library” in Google Books (See fig. 3). The teacher can give students an assignment in which they have to read and analyze a book. One can even create a Virtual Bookshelf in Google Books (See fig. 4) and Name the bookshelf and select Public or Private view (See fig. 5).

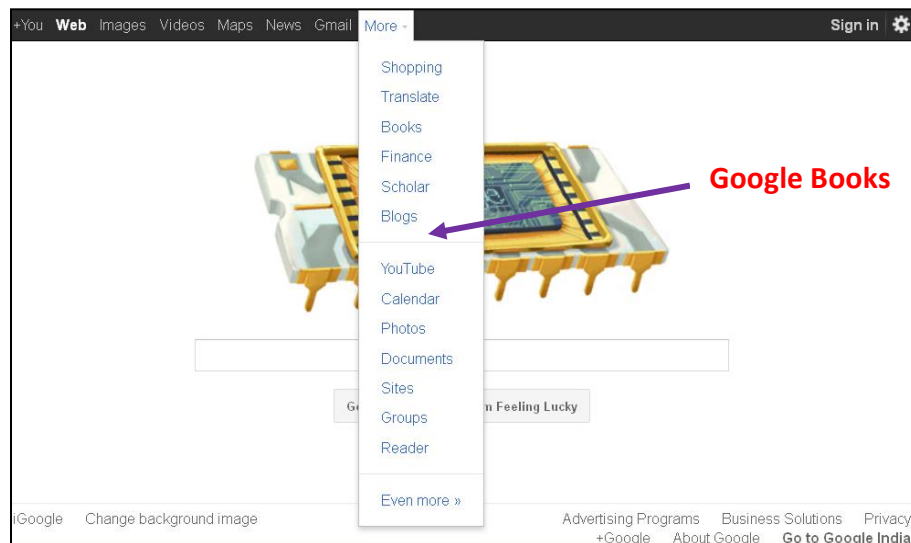


Figure 1: Google Books

Google books **Advanced Book Search** [About Google](#)

**Find results** with **all** of the words  10 results

with the **exact phrase**

with **at least one** of the words

**without** the words

**Search:**  All books  Limited preview and full view  Full view only  Google eBooks only

**Content:**  All content  Books  Magazines

**Language** Return pages written in

**Title** Return books with the title

e.g. Books and Culture

**Author** Return books written by

e.g. Hamilton Mabie or "Hamilton Wright Mabie"

**Publisher** Return books published by

e.g. O'Reilly

**Subject** Return books on subject

e.g. Medieval History or "Medieval History"

**Publication Date**  Return content published anytime  Return content published between  and

e.g. 1999 and 2000, or Jan 1999 and Dec 2000

**ISBN** Return books with the ISBN

e.g. 0060930314

**ISSN** Return serials with the ISSN

e.g. 0161-7370

Figure 2: Google Books Advanced Search

**Library of the World's Best Literature** By Charles Dudley Warner

2

Result 1 of 17 in this book for library - [Previous](#) [Next](#) - [View all](#)

Copy this embed and paste into your blog

Paste link in email or IM  
[http://books.google.co.in/books?id=o74kL\\_zrVTsC&pg=PF](http://books.google.co.in/books?id=o74kL_zrVTsC&pg=PF)  
 Embed

library  [Add to My Library](#)

Get this book  
[A1Books.co.in](#)  
[Rediff Books](#)  
[Flipkart](#)  
[Infibeam](#)  
[Find in a library](#)  
[All sellers >](#)  
 Related books

**LIBRARY OF THE WORLD'S BEST LITERATURE**  
 ANCIENT AND MODERN, VOL. I  
 CHARLES DUDLEY WARNER  
 EDITOR  
 HAMILTON WRIGHT MABIE  
 LUCIA GILBERT RUNKLE  
 GEORGE HENRY WARNER

Figure 3: embed books into your blog or website

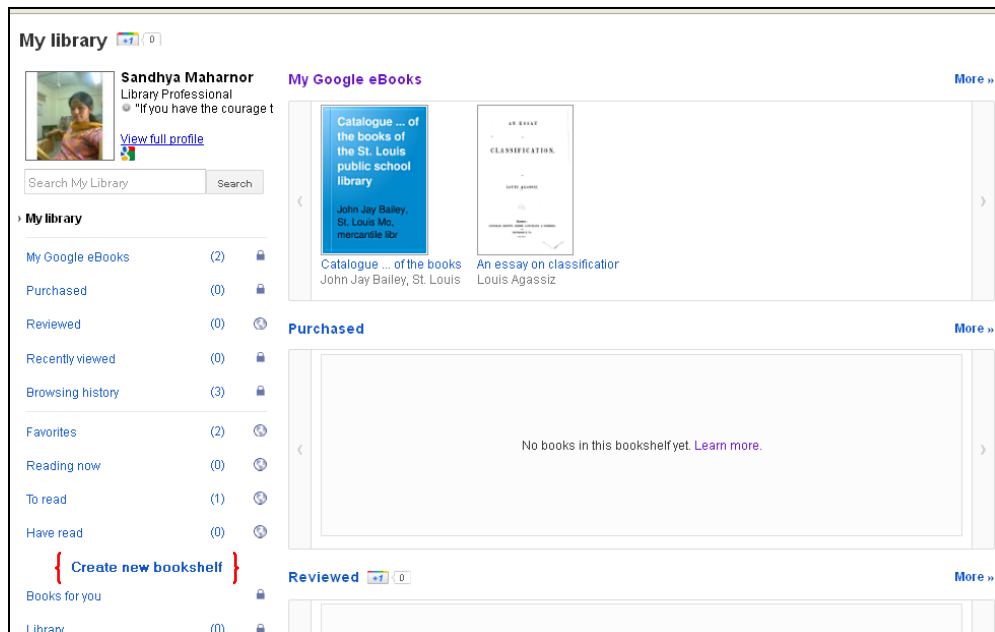


Figure 4: Virtual Bookshelf in Google Books

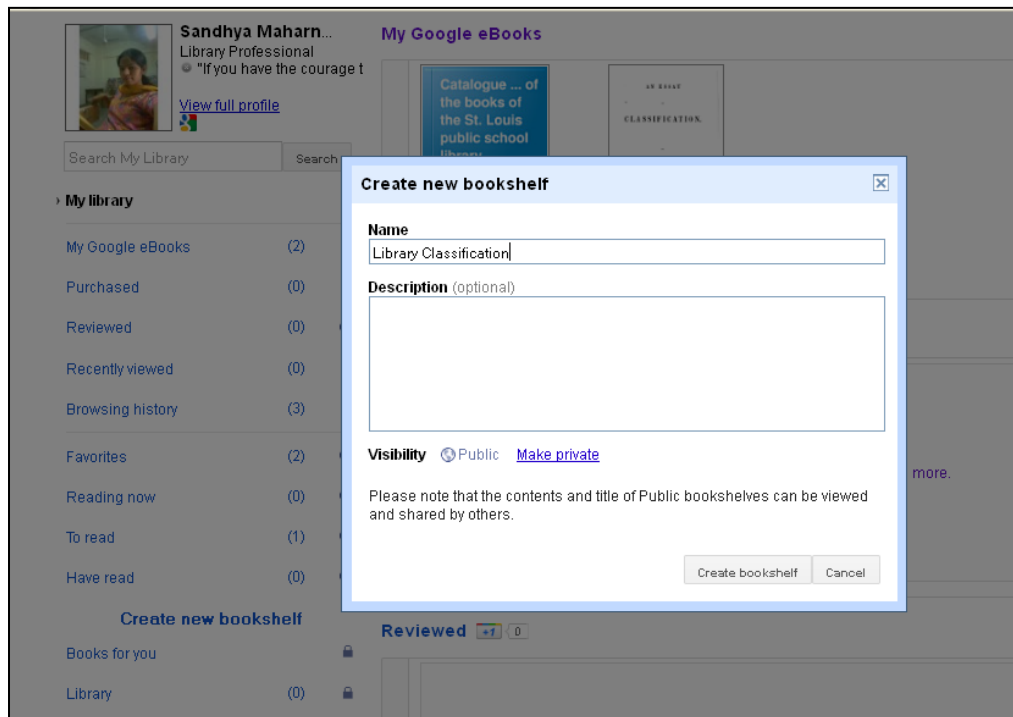


Figure 5: Name the bookshelf and select Public or Private view

## 2. Google Scholar

Find Google Scholar at <http://scholar.google.co.in>

Google Scholar provides a simple search and “My citations” option to see citations to your paper (See fig. 6) as well as advanced search (See fig. 7) for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites. Google Scholar helps you find relevant work across the world of scholarly research<sup>1</sup>.

### Features of Google Scholar

- **Search** diverse sources from one convenient place
- **Find** articles, theses, books, abstracts or court opinions
- **Locate** the complete document through your library or on the web
- **Learn** about key scholarly literature in any area of research

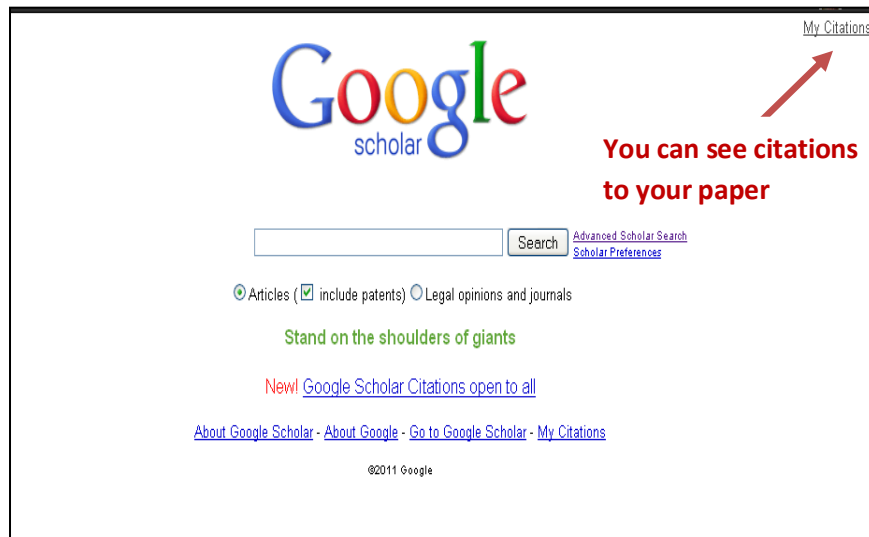


Figure 6: Google Scholar's simple search

**Google scholar Advanced Scholar Search** [Advanced Search Tips](#) | [About Google Scholar](#)

Find articles with **all of the words**  Results per page: 10

with the **exact phrase**

with **at least one** of the words

**without** the words

where my words occur

**Author** Return articles written by  e.g., "P.J. Hayes" or McCarthy

**Publication** Return articles published in  e.g., J Biol Chem or Nature

**Date** Return articles published between  -  e.g., 1996

**Collections**

**Articles and patents**

Search articles in all subject areas ( include patents).

Search only articles in the following subject areas:

Biology, Life Sciences, and Environmental Science  Medicine, Pharmacology, and Veterinary Science

Business, Administration, Finance, and Economics  Physics, Astronomy, and Planetary Science

Chemistry and Materials Science  Social Sciences, Arts, and Humanities

Engineering, Computer Science, and Mathematics

**Legal opinions and journals**

Search all legal opinions and journals.

Figure 7: Google Scholar's advanced search

### 3. Google News

Find Google News at <http://news.google.co.in>

Google News is a computer-generated news site that aggregates headlines from more than 4,500 English-language news sources worldwide, groups similar stories together and displays them according to each reader's personalized interests<sup>2</sup>.

You can refine searches by date to look at current stories (default setting) or to look back at news stories from years ago. You can also refine their searches by specifying a particular news source and or a particular location (See fig. 8).

**Google**

**News**

Find news stories that have

all these words:

this exact phrase:

at least one of these words:

none of these words:

occurring:

Date added to Google News:

between  and

Source:

Location:

**Top Stories**

- Dilip Kumar
- Virender Sehwag
- Defence Research and Development Organisation
- Vladimir Putin
- Lunar eclipse
- Higgs boson
- Yuri Gagarin
- Green card
- Shilpa Shetty
- Dinosaurs
- Maharashtra
- India
- World
- Business
- Technology
- Entertainment
- Sports
- Science
- Health
- More Top Stories

**Number of jailed journalists skyrockets worldwide**

News near you > - Edit

'We are normal people with different sexual orientation'

Daily News & Analysis - 17 minutes ago

Pune's Saiwal Gandharva Mahotsav ends on a soulful note

Daily News & Analysis - 1 hour ago

28000 smart card driving licences in Pune not recognised by readers

Daily News & Analysis - 1 hour ago

**Current Cricket Matches**

Cricket Ban 135/10 | Pak 594/5(dec) | Ban 275/10-10 (Pakistan won by an innings and 184 runs)

NZ 150/10 | Aus 136/10 | NZ 226/10 | Aus 233/10 - (New Zealand won by 7 runs)

Ind 267/6(50) | WI 233/10(44-1)- (India won by 34 runs)

criobuzz.com

Cricbuzz Cricinfo

Editors' Picks

**NDTV**

KBC winner Sushil Kumar still waits for

Figure 8: refine news search

### 4. Google advanced search

Sometimes from Google Basic search, if we cannot find relevant information, then you can use Google advanced search option<sup>3</sup>. It limits your search by providing some search refinement tools such as Phrase search (""), Search within a specific website (site:), The Boolean operators (and, or, not), Terms you want to exclude (-), filetype, language, region, etc. (See fig. 9 & 10)

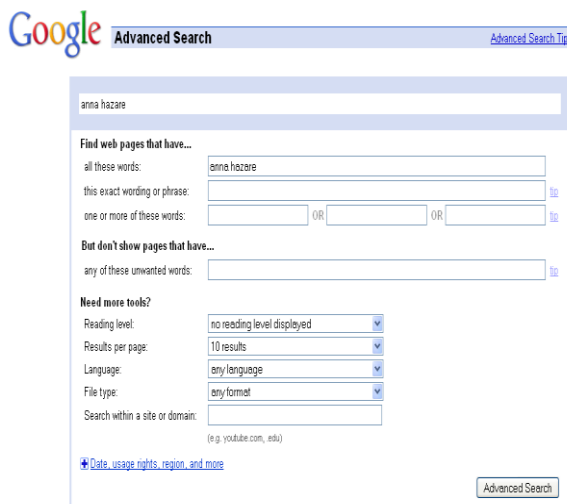


Figure 9: Google advanced search

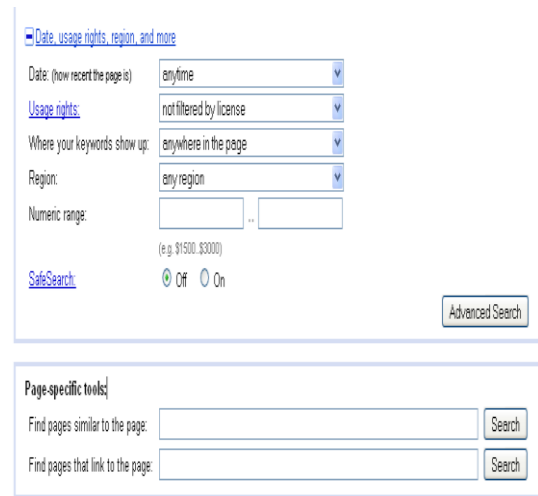


Figure 10: Google advanced search

## 5. Google Docs

You can create and share your work online, upload your files from your desktop such as

- Documents
- Spreadsheets
- Presentations
- Drawings
- Forms

### Advantages

- a) It's easy to get started and
- b) It's free!
- c) Access anywhere
- d) Edit and view your docs from any computer or smart phone.



e) Share your work.

Google Docs contains an integrated thesaurus, dictionary, and encyclopedia tool. It is a simple tool to use. Simply highlight a word in your document then select "look up word" from the "tools" drop-down menu. From there you can find a synonym, a definition, of your selected word (See fig. 11).

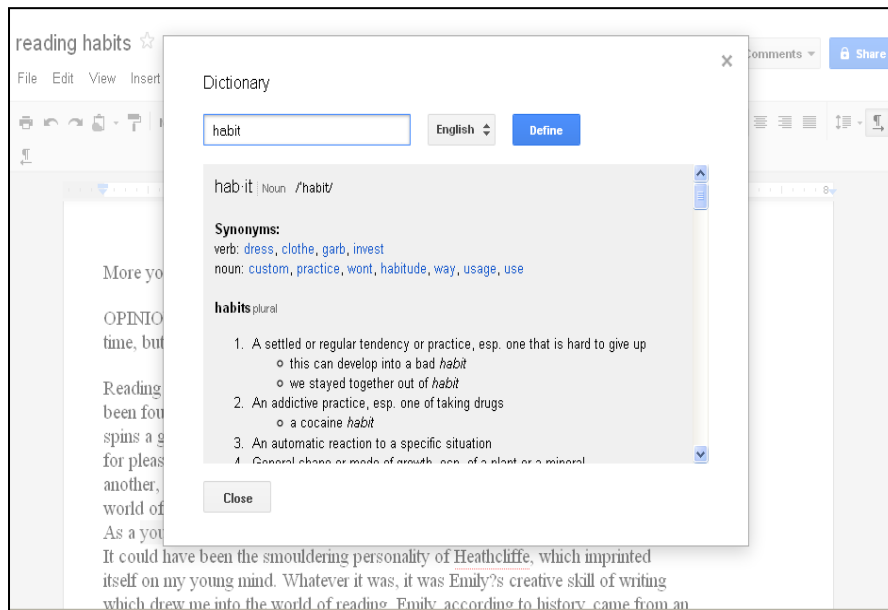


Figure 11: look up word in Google Docs

## 6. Google Maps

Google Maps is a map service that you view in your web browser (See fig. 12). Depending on your location, you can view basic or custom maps and local business information, including business locations, contact information, and driving directions (See fig. 13).

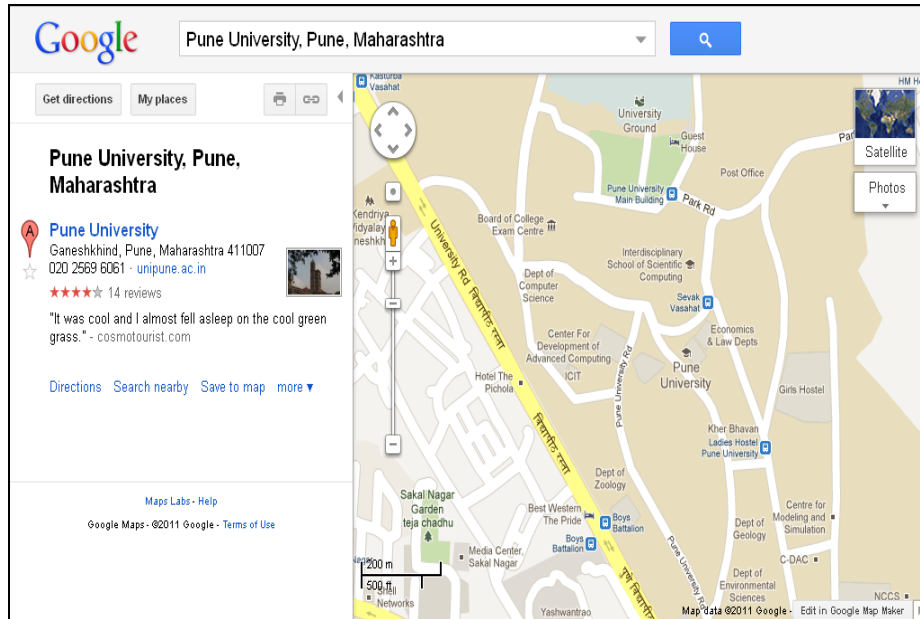


Figure 12: Pune University on Google map

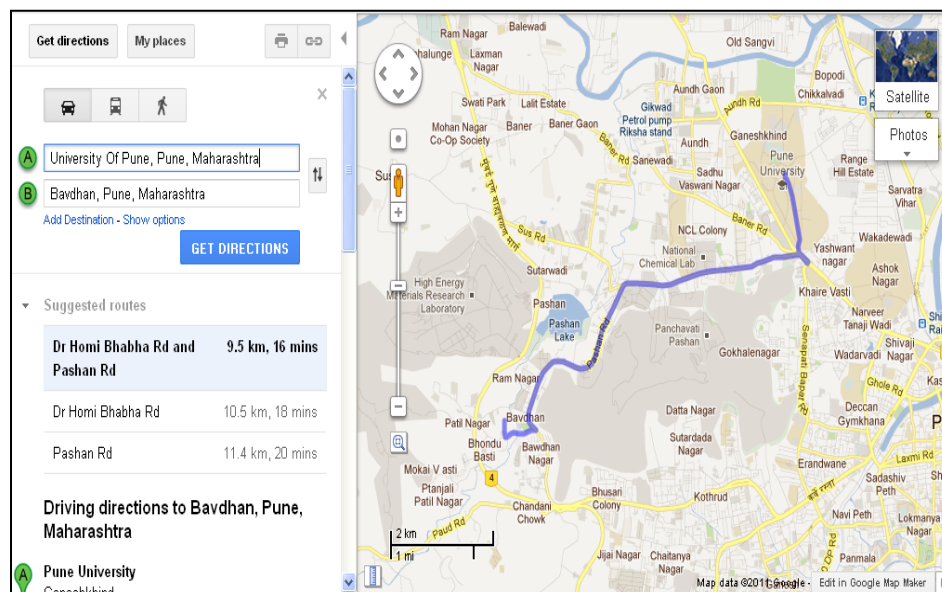


Figure 13: Get directions to Pune University from Bavdhan

## 7. Google Custom Search

Google Custom Search<sup>4</sup> (<http://www.google.com/cse/>) allows you to create your own custom search engine (See fig. 14). In creating your custom search engine

- you can specify the sites that you want Google to search when someone uses your search engine (See fig. 15).
- Host the search box and results on your own website (See fig. 17)

- Customize the look and feel of the results to match your site (See fig. 16)

### Applications for Teachers

- Teachers and school librarians can have students conducting searches without worrying that they'll stumble upon inappropriate websites or other sites they don't want students to see.
- Once you have created your custom search engine you can embed it into your blog or website. You can create as many custom search engines as you like. If you teach multiple subjects, you may want to create a search engine for each of those classes.

### Steps to create your own Google Custom Search Engine

If you don't have a Google Account, it is best to create one before beginning to create your custom search engine. You can create an account by going to Google.com then clicking "sign in." Clicking "sign in" will bring you to a registration field.

**A. Step 1** - Go to <http://www.google.com/cse/>

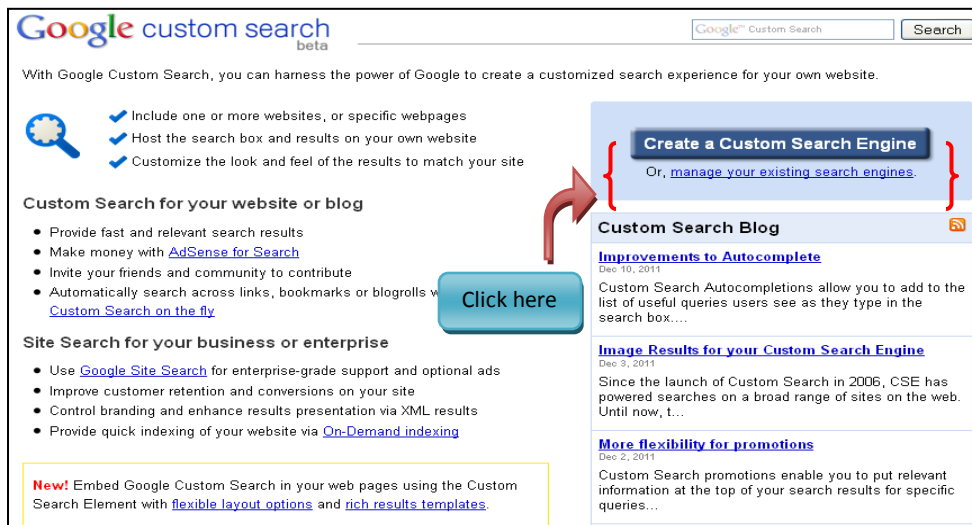


Figure 14: Create a custom search engine

**B. Step 2** - Enter basic information such as title, description, language. Then enter search specifics.

Figure 15: Enter title, description, language, specific sites to search

**C. Step 3 - Select a style and try your search engine.**

Figure 16: Choose style and try your search engine

**D. Step 4 - Copy code for your search engine and place it into your blog or website. If you're using Blogger, I provide the steps for you in later pages.**

Google custom search mahamorsandhya1@gmail.com | [My Account](#) | [Help](#) | [Sign out](#)

1. Set up your search engine 2. Try it out 3. Get the code

To get code for other hosting options, adjust your settings on the [Look and feel](#) page.

**Custom Search element code**

Paste this code in the page where you'd like the Custom Search element to appear. **Note:** For the most cross-browser compatibility, it is recommended that your HTML pages use a supported doctype such as `<!DOCTYPE html>`. CSS hover effects require a supported doctype.

```
<script src="http://www.google.com/jsapi" type="text/javascript">
<script type="text/javascript">
  google.load('search', '1', {language : 'en', style : google.la
  google.setOnLoadCallback(function() {
    var customSearchControl = new google.search.CustomSearchContr
    '013503873867717065354:qf-f2kooxw');

    customSearchControl.setResultsetSize(google.search.Search.FIL
    customSearchControl.draw('cse');
  }, true);
</script>
```

Copy code and paste into your site

Congratulations, you've finished creating the search engine "Sandhya Shinde's Library".

Figure 17: Copy code and paste into your site

## 8. Google Sites

Google Sites ([sites.google.com](http://sites.google.com)) is a free service that allows anyone to create his or her own website. You do not need to have any technical skills in order to build a website using Google Sites.

### Applications for teacher

In this modern era of Information and Communication Technology, every teacher should have some type of blog or website through which they can communicate information to students and their parents. Google Sites makes it possible for you to build your own website free of charge.

If haven't built a website for your course(s) before here are some things to keep in mind when building your first website.

- An FAQ or “homework help” section enables students and their parents to quickly get answers to their questions without having to wait for your email reply.
- A calendar section will help keep students aware of important due dates. Posting assignment descriptors and other hand-outs on your website will dramatically decrease the number of photocopies you have to make for your students.

- Google Sites allows you to quickly add document files to your website. So if you already have a lot of hand-outs written, you can simply upload them to your new Google Site without having to retype them.

Creating a website with Google Sites can be a collaborative process. By giving others permission to edit your site, they can add content to make the site better. If you're on a teaching team, each teacher can edit his or her own page within a team site.

Students can use Google Sites to create a wiki about the topics they're studying in your class. Students can also use Google Sites to create a digital portfolio of the work they've created in your classroom and or as they progress through grade levels in school.

### Steps to create a website using Google Site

**Step 1** - Go to <https://sites.google.com> and Log in with your Google account and then click "create new site."

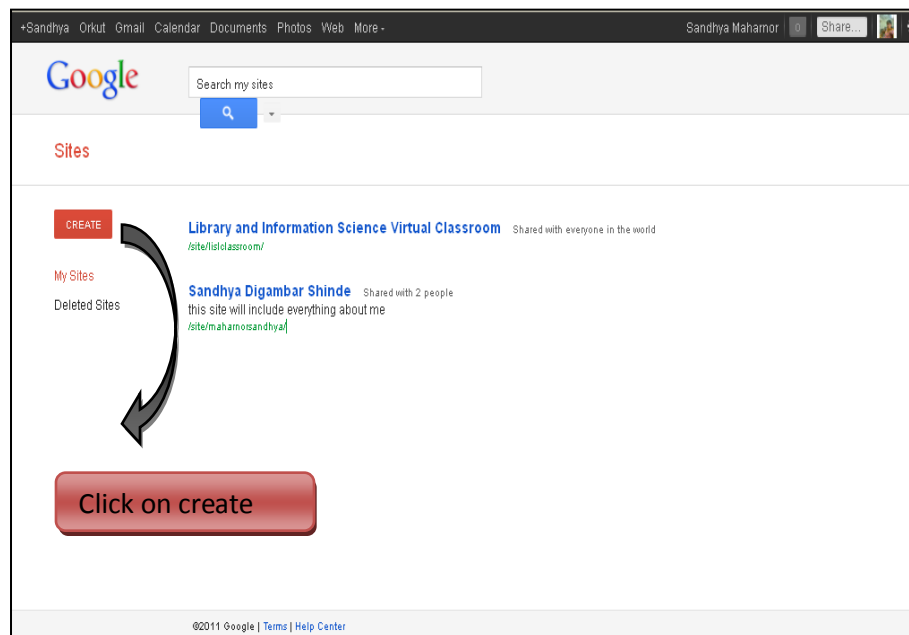


Figure 18: create a website

**Step 2** - Select a template, name your site and provide URL to your site

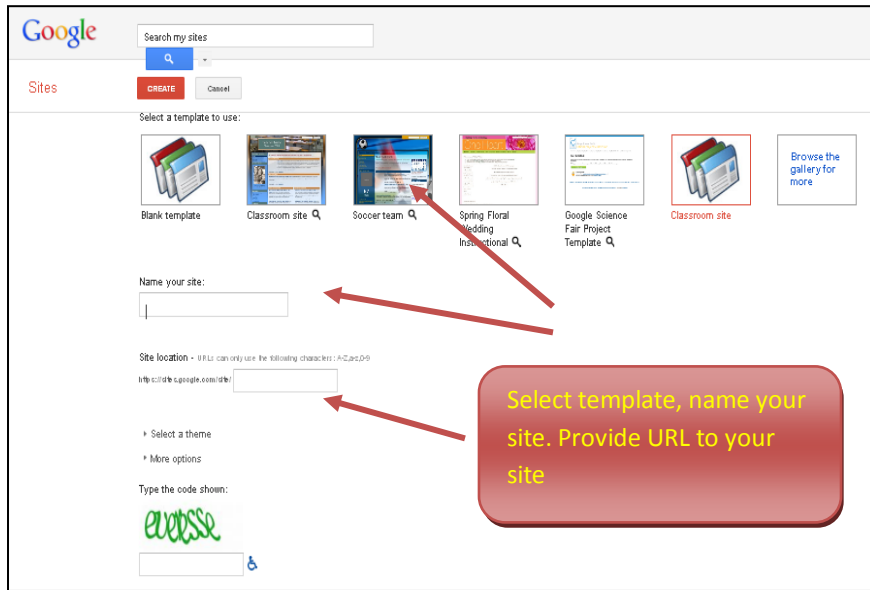


Figure 19: Select a template and name your site

**Step 4** – Select “New Page” to create a new page for your site and then select “edit page” to add content to your page.



Figure 20: Select “New Page” and then select “edit page”

**Step 6** - To add multimedia content select “insert” from editor menu. Then select the media type you want to insert.

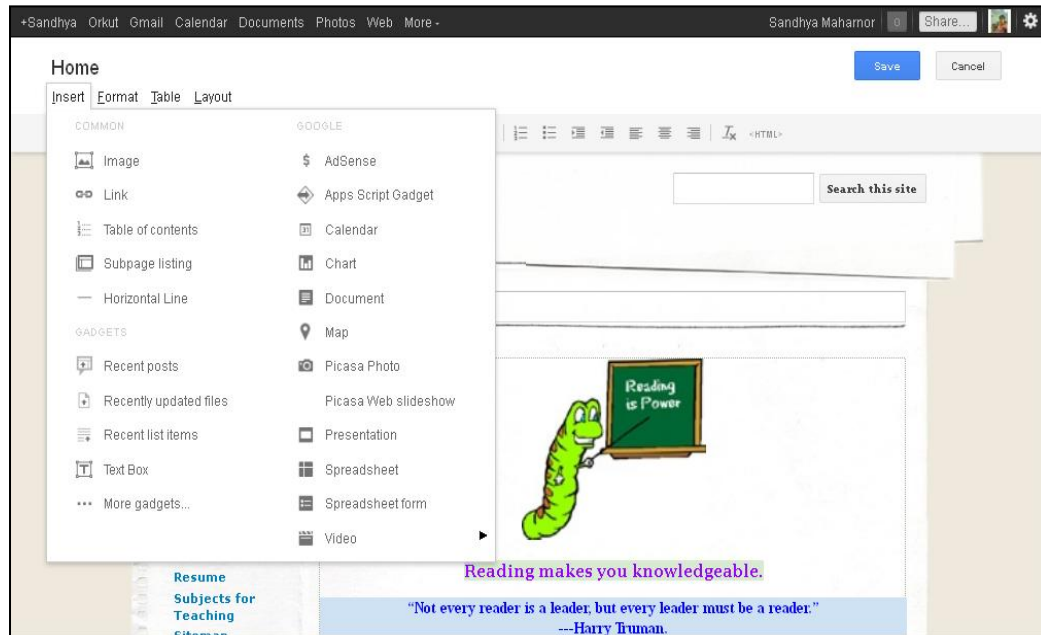


Figure 21: select “insert” to add multimedia content

## 9. Google Alerts

Google Alerts<sup>5</sup> are email updates of the latest relevant Google results (web, news, etc.) based on your queries. Enter a search query you wish to monitor. You will see a preview of the type of results you'll receive. Some handy uses of Google Alerts include:

- monitoring a developing news story
- keeping current on a competitor or industry
- getting the latest on a celebrity or event
- keeping tabs on your favorite sports teams

Google Alerts (<http://www.google.com/alerts>) brings the latest news about your specified topics to your email inbox or RSS reader. You can create an alert for any keyword or phrase.

### Applications for Teacher

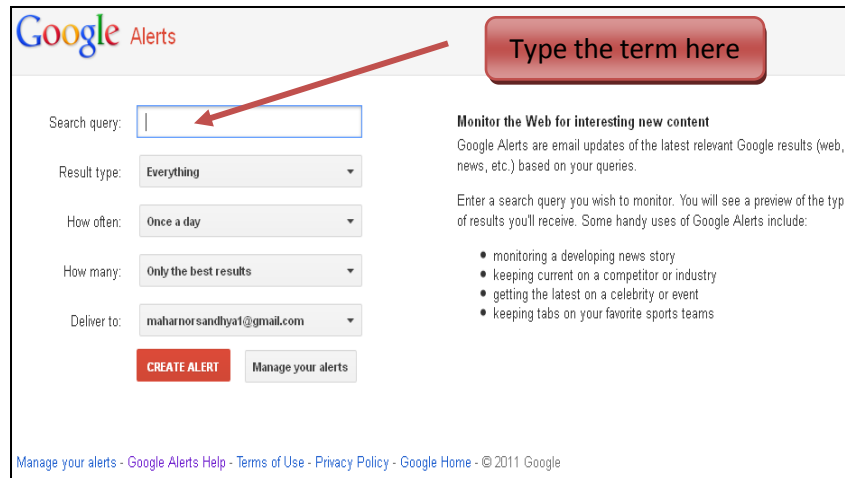
Google Alerts can be great for keeping up with the latest developments in a current events story. Google Alerts can also be helpful for learning about new web resources for teaching your subject field.



## Steps to create Google Alerts

### 1) Enter your query

Enter your query just as if you were doing a normal Google search. Enter your email address. Enter the email address you want your alerts delivered to (See fig. 22). Google will protect your email address in accordance with their privacy policy.



Google Alerts

Type the term here

Search query:

Result type:

How often:

How many:

Deliver to:

**Monitor the Web for interesting new content**  
Google Alerts are email updates of the latest relevant Google results (web, news, etc.) based on your queries.

Enter a search query you wish to monitor. You will see a preview of the type of results you'll receive. Some handy uses of Google Alerts include:

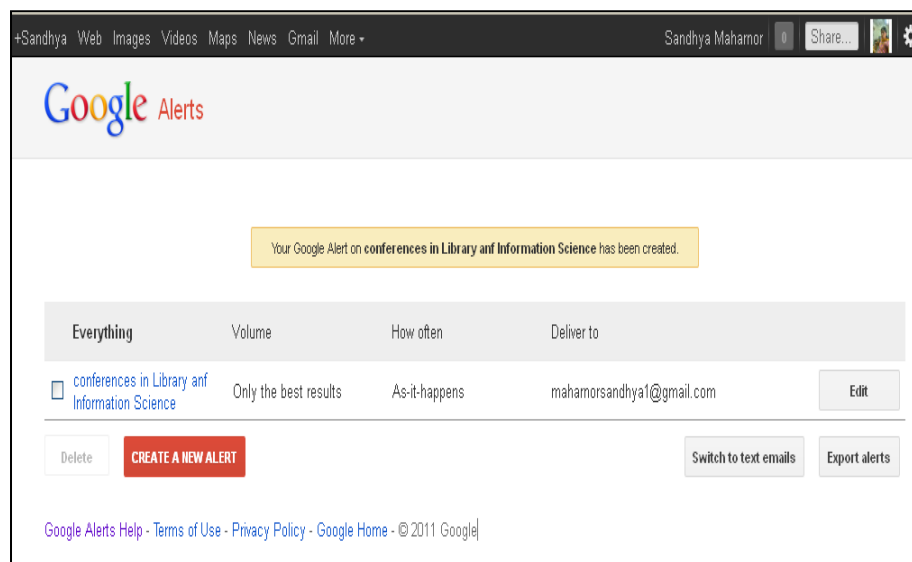
- monitoring a developing news story
- keeping current on a competitor or industry
- getting the latest on a celebrity or event
- keeping tabs on your favorite sports teams

[Manage your alerts](#) - [Google Alerts Help](#) - [Terms of Use](#) - [Privacy Policy](#) - [Google Home](#) - © 2011 Google

Figure 22: Creating Google alert

### 2) Done!

That's it! Your alert is active, and you'll receive an email whenever Google Alerts finds new results for your search. Each email you receive contains a link to delete the alert, so you can cancel any time you want. After creating an alert, you can edit it (See fig. 23).



+Sandhya Web Images Videos Maps News Gmail More ▾

Sandhya Mahamor

Google Alerts

Your Google Alert on conferences in Library and Information Science has been created.

Everything	Volume	How often	Deliver to	
<input type="checkbox"/> conferences in Library and Information Science	Only the best results	As-it-happens	mahamorsandhya1@gmail.com	<input type="button" value="Edit"/>

[Google Alerts Help](#) - [Terms of Use](#) - [Privacy Policy](#) - [Google Home](#) - © 2011 Google

Figure 23: edit alert

## 10. Google Groups

Google Groups<sup>6</sup> (<http://groups.google.com>) allows anyone to quickly create private or public discussion groups. Groups can be as large or as small as you make them.

### Applications for Teacher

Google Groups can be created by teachers to host a discussion forum for their students. A teacher can post a “latest issue” or “debate” for students to respond to. Teachers can also use Google Groups to post reminders of important due dates.

### Steps for creating Google Group

**Step 1** - If you don't have a Google Account, create one. Otherwise click “create a group.”

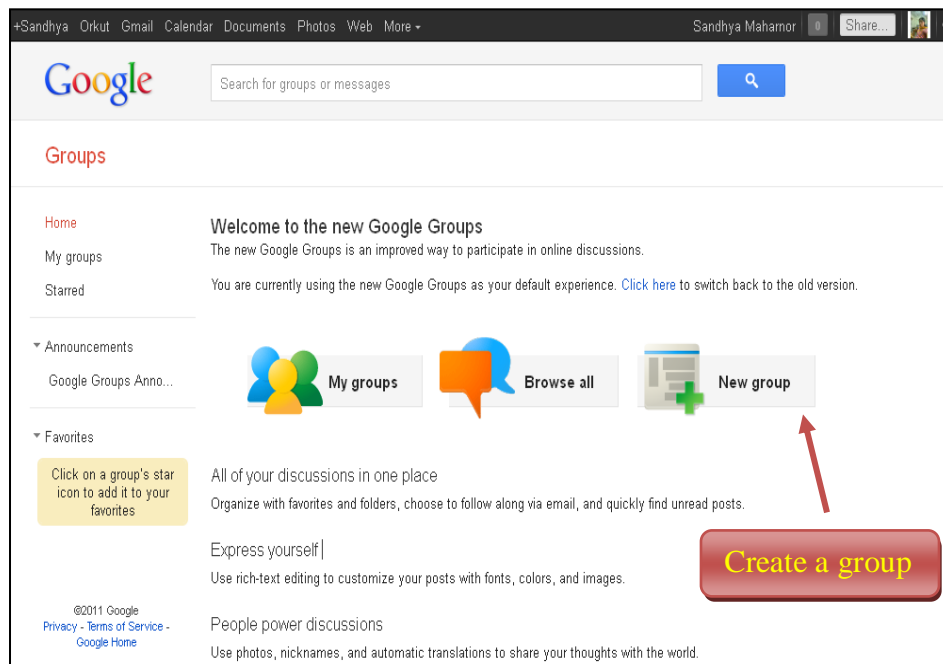
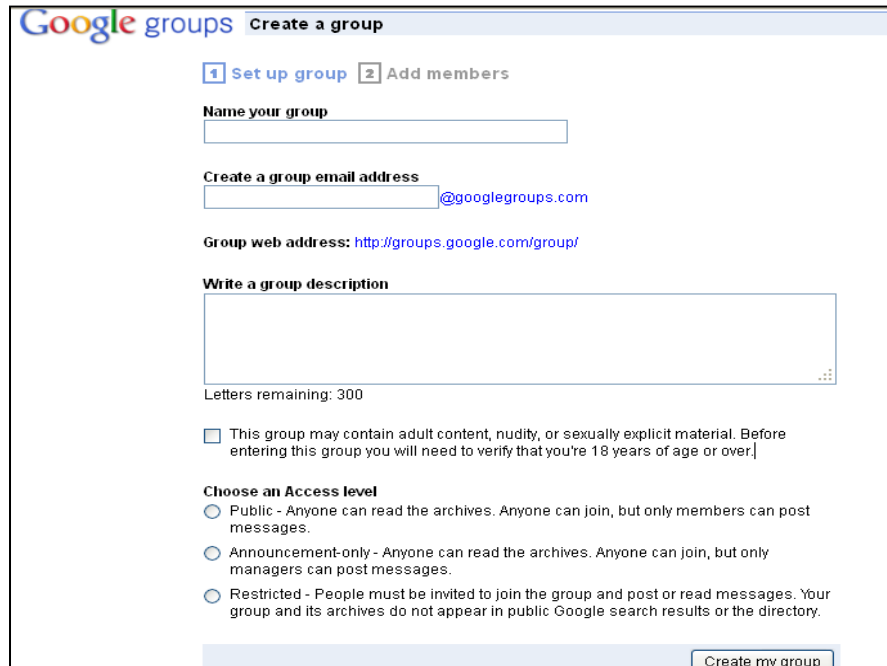


Figure 24: create a group

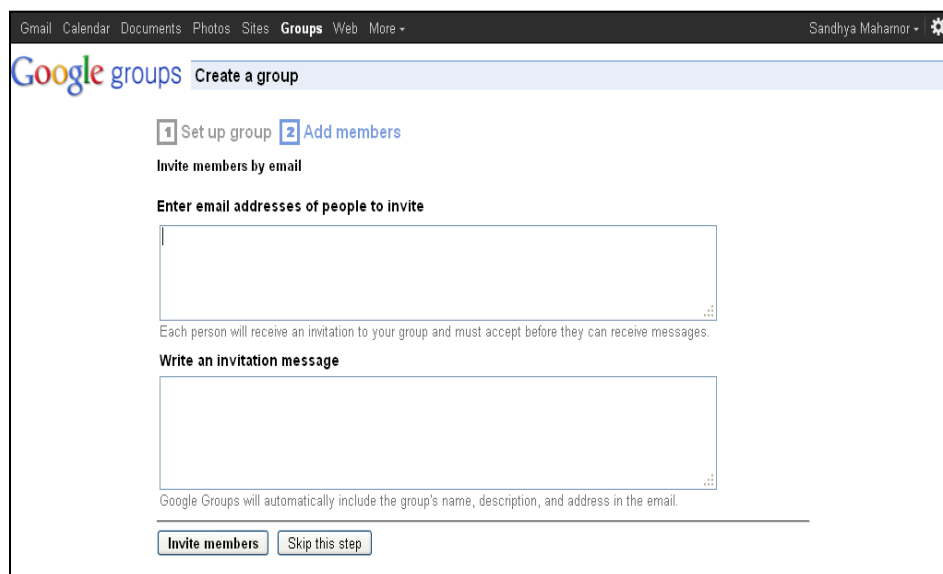
**Step 2** - Name your group. A unique URL will be assigned to your group. You can restrict access to your group by selecting an access level for your group.



The screenshot shows the 'Create a group' page on Google Groups. At the top, it says 'Google groups Create a group'. Below this, there are two steps: '1 Set up group' and '2 Add members'. The current step is 'Name your group'. There is a text input field for the group name. Below that is a field for the group email address, with a dropdown menu showing '@googlegroups.com'. The group web address is displayed as 'http://groups.google.com/group/'. There is a large text area for writing a group description, with a 'Letters remaining: 300' indicator. Below the description field is a checkbox for 'This group may contain adult content, nudity, or sexually explicit material. Before entering this group you will need to verify that you're 18 years of age or over.' There are three radio button options for 'Choose an Access level': 'Public - Anyone can read the archives. Anyone can join, but only members can post messages.', 'Announcement-only - Anyone can read the archives. Anyone can join, but only managers can post messages.', and 'Restricted - People must be invited to join the group and post or read messages. Your group and its archives do not appear in public Google search results or the directory.' At the bottom right, there is a 'Create my group' button.

Figure 25: Name your group

**Step 3** - Invite people to join your group.



The screenshot shows the 'Create a group' page on Google Groups, Step 3: Invite people to join your group. At the top, it says 'Google groups Create a group'. Below this, there are two steps: '1 Set up group' and '2 Add members'. The current step is 'Add members'. There is a section for 'Invite members by email'. There is a text input field for 'Enter email addresses of people to invite'. Below this field is a note: 'Each person will receive an invitation to your group and must accept before they can receive messages.' There is a text area for 'Write an invitation message'. Below this text area is a note: 'Google Groups will automatically include the group's name, description, and address in the email.' At the bottom, there are two buttons: 'Invite members' and 'Skip this step'.

Figure 26: Invite people to join your group

#### Step 4 - Start discussions and post it on your group.

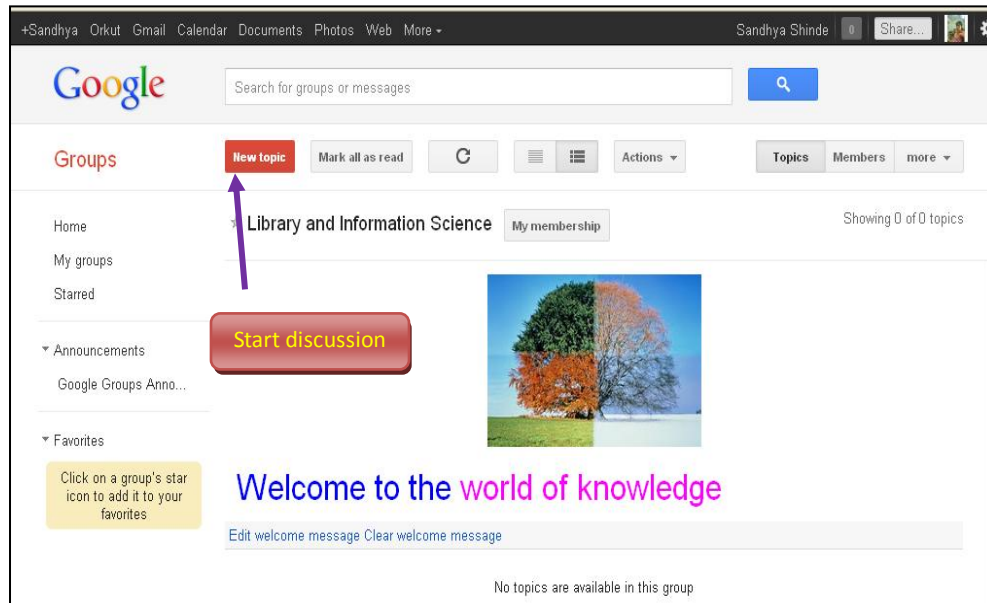


Figure 27: Start discussions

#### Conclusion

As Google is most popular search engine, the teachers are adopting Google technology in their teaching-learning process as a medium. There are more services or Google products which are also useful for teachers. Teacher should explore them.

#### References

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3. <http://support.google.com/websearch/bin/answer> (accessed on 12 December 2011)
4. <http://www.google.com/cse/> (accessed on 12 December 2011)
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8. <http://www.alexa.com/siteinfo/google.com+yahoo.com+altavista.com> (accessed on 15 December 2011)