

Usability Test about Google Sites

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Description of the web authoring tool

1. Description the web authoring tool

Google Sites is part of the Google Apps and a structured wiki- and web page-creation tool. The goal of Google Sites is for anyone to be able to create a personal and team-oriented site. Google Sites is the easiest way to make information accessible to people who need quick, up-to-date access. People can work together on a site to add file attachments, information from other Google applications (like Google Docs, Google Calendar, YouTube and Picasa), and new free-form content. Creating a site together is as easy as editing a text document. People can even publish Sites to the world. The Google Sites web application is accessible from any Internet connected computer. Table 1 shows the difference between each free web hosting services. We can understand Google Sites' features.

Table 1. Comparison of free web hosting services, Wikipedia (2012)

	Storage	Band width	File size limit	Templates	Ad-free	Blog	Domain registration	Custom HTML	Custom CSS	Custom JavaScript
Google Sites	100 MiByte	1GiByte/day	Limited	Yes	Yes	Yes	Yes	Partly	No	No
Weebly	Unlimited	Unlimited	5 MiByte	Yes	Yes	Yes	Yes	Yes	Yes	Yes
WordPress.com	3 GiByte	Unlimited	Unlimited	Yes	No	Yes	Yes	No	Yes	No

2. Target audience

Google Sites concentrates on the end-user experience to create a tool anyone can use.

Google Sites is great for people who want to create a collaborative website for multiple users.

Therefore, the target audience's age range, gender, and reading level is the average person.

However, according to Google Sites, the web authoring tool is great for anyone who wants to create a collaborative website for multiple users, and it offers templates for specific audiences:

Company intranet, Team project, Employee profile, Classroom, Student club. Similarly, Google Sites is useful for multiple users like teachers, students, and employers.

3. Web authoring tool functions for users

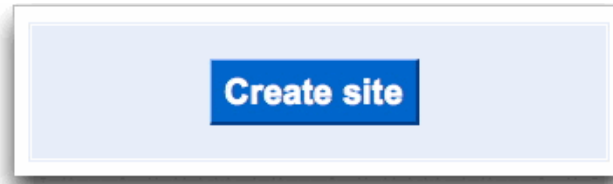
Google Sites offers a lot of functions for users to be able to create and manage websites. Our team assigned each function to one of five categories: Creating site and page, Editing site, Adding objects and apps, Managing site, and Other functions.

Creating site and page

People can create their own site by clicking the Create site button and enter site name and the URL where it will be located as well as an optional description of the site. After a site is created, people can create a new page by clicking the Create page button. Below are specific functions about creating site and page.

- Creating a site (name, URL, sharing options)
- Creating a page (name, type, location)
- Using page and site templates
- Deleting a site

Figure 1. Create Site

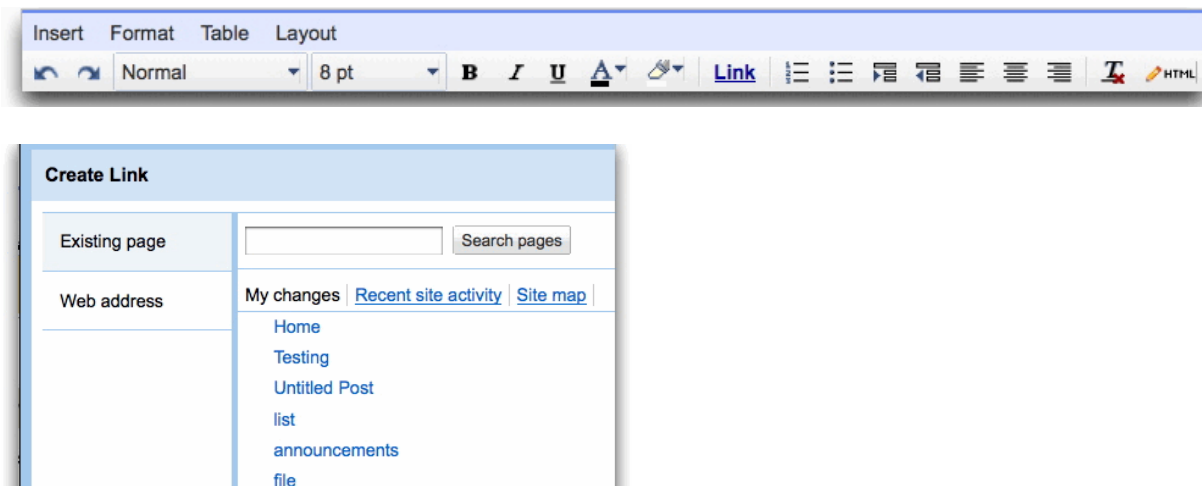


Editing site

To edit a site, people can click the Edit Page button in the upper right hand corner of the screen. The edit toolbar provides users with the tools necessary to edit the site. People can undo and redo changes, change the font type and size, and edit text by using this toolbar. Additionally, people can create a link and list, remove formatting, and edit HTML. Below are specific functions about editing site.

- Changing the font type and size
- Editing and aligning text
- Creating a link
- Creating, indenting and moving list
- Removing formatting and editing HTML

Figure 2. Toolbar and Create Link

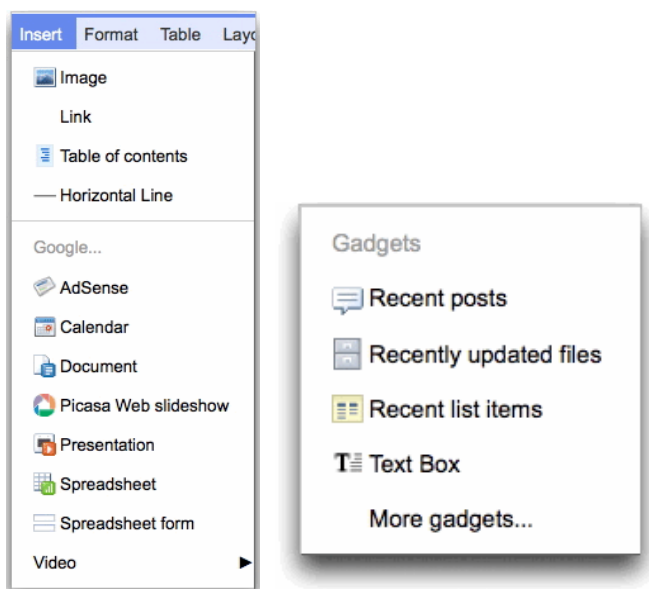


Adding objects and apps

People can add objects and apps to their site. To add objects and apps to a site, users click Edit page, select Insert, and pick the object or app they would like to insert. When the embedded app (a Google Docs Presentation, for example) is updated at its source and published (in this example, within Google Docs), it gets updated automatically within Google Sites. To embed rich media, retrieve feeds, or perform tasks like managing a to-do list, people can insert gadgets into their site. Below are specific functions about adding objects and apps.

- Adding text and images
- Adding docs, calendars and other gadgets
- Modifying pages and sub-pages
- Adding attachments, comments and files
- Embedding photos from Picasa

Figure 3. Insert function and Gadgets



Managing site

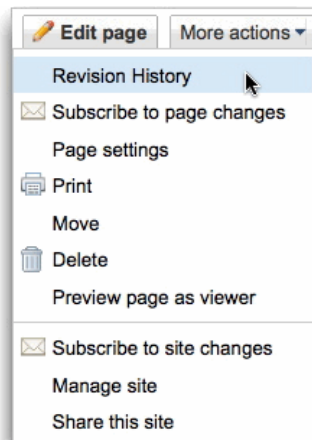
Below are specific functions about managing site.

- Searching options and special administrative actions
- Subscriptions and notifications
- Controlling access to site
- Changing site's URL, site's layout, site's appearance
- Inserting custom HTML, CSS, and JavaScript

Other Functions

Function	Description
Sharing site	Sharing the site lets people choose who views, edits, and owns content on site. Choose Share this site from the More actions drop-down menu.
Inviting	People can send up to 50 invites per day. If people make site public, they don't need to send invitations for people to be able to view it.
Using Revision history	While people and their collaborators are editing their site, people can keep track of changes (and of the person who made them), and even revert to an older version by using 'Revision history.'

Figure 4. Revision History



Usability testing low cost methods

1. Survey method

Each possible usability testing method has its positives and negatives. Our group chose to use surveys to test the usability of Google Sites. Rubin and Chisnell (2008) point out that using surveys allows for “use of larger samples to generalize to an entire population.” On the other hand, care must be taken when writing the survey questions so that all participants understand the questions the same way (Rubin and Chisnell, 2008).

We originally were going to use SurveyMonkey.com, a web-based survey tool, to collect our survey data; however, we could only ask 10 questions for free. We decided the next best method would be to conduct the survey using a paper-based version instead, following the guidelines set by Usability.gov. While our survey had a possibility of 44 responses, most responses were grouped in a way where respondents marked their choice on a scale of 1 to 5, thereby keeping our survey relatively brief as it could be completed in 5-10 minutes.

2. Developing a survey questions

Our team leader devised the survey questions. To devise questions, he gathered information about criteria for websites, visited OIT Google Sites, and gathered information about Google Sites. Finally, he devised 44 questions. Figure 3 shows the interview questions. The questions are devised for these purposes:

- To understand the overall satisfaction with Google Sites
- To understand the level of satisfaction with specific functions of Google Sites

After the team leader designed the survey, team members were responsible for finding survey participants. Jaewoo distributed paper surveys to classmates outside of IT 595 and

colleagues at the Korean Graduate Student Association; Angela emailed IT 595 classmates the “paper” survey in Microsoft Word format. The response rate was not as high as we expected, especially for IT 595 classmates, but we feel we were able to get enough respondents to assess the usability of Google Sites.

Figure 5. Survey Questions (1)

Survey about Google Sites

Part 1: Personal Information

1. Please indicate your gender. Male___ Female___ Prefer not to say___

2. Which range includes your age?

Younger than 18	25 – 34	45 – 54	65 or older
18 – 24	35 – 44	55 – 64	Prefer not to answer

3. What is your job?

4. How long have you used a computer?

5. On a five point scale, how would you describe your overall computer literacy skills?

Beginner - Basic - Intermediate - Proficient - Expert

6. Please select the free web hosting service(s) you have used.

Angelfire	Google Sites	Jimdo	Moonfruit
Tripod.com	uCoz	Webnode	Webs
Weebly	Wix.com	WordPress.com	Yola
Other ()			

Part 2: Overall Satisfaction about Google Sites

7. How long have you been using the Google Sites? ()

8. What is your main purpose of using Google Sites?

9. What do you think are the most useful features in Google Sites?

10. Do you have any suggestions to improve Google Sites?

Figure 5. Survey Questions (2)

Overall Satisfaction

On a five point scale, please check your satisfaction level about Google Sites' services.

Overall Satisfaction		Very dissatisfied	Somewhat dissatisfied	Neutral	Somewhat satisfied	Very satisfied
11	Customer Service: Google Sites help					
12	Technical Support					
13	Storage Space: 100 MiByte					
14	Tech Response Time and Uptime					
15	Ease of use					
16	Bandwidth limit: 1GiByte/day					
17	File restrictions:					
18	Advertisements: Free (no forced ads)					

Part 3: Questions about Specific Functions

On a five point scale, please check the usability level(easy to use) about Google Sites' functions.

Creating site and page		Very difficult	Somewhat difficult	Neutral	Somewhat easy	Very easy	N/A
19	Creating a site(name, URL, sharing options)						
20	Creating a page (name, type, location)						
21	Using page and site templates						
22	Deleting a site						

Editing site		Very difficult	Somewhat difficult	Neutral	Somewhat easy	Very easy	N/A
23	Changing the font type and size						
24	Editing and Aligning text						
25	Creating a link						
26	Creating, Indenting and moving list						
27	Removing formatting and editing HTML						

Figure 5. Survey Questions (3)

Adding objects and apps		Very difficult	Somewhat difficult	Neutral	Somewhat easy	Very easy	N/A
28	Adding text and images						
29	Adding Docs, Calendars and other gadgets						
30	Modifying pages and sub-pages						
31	Adding attachments, comments and files						
32	Embedding photos from Picasa						

Managing site		Very difficult	Somewhat difficult	Neutral	Somewhat easy	Very easy	N/A
33	Searching options and special administrative actions						
34	Subscriptions and notifications						
35	Controlling access to Site						
36	Changing Site's URL						
37	Changing Site's layout						
38	Changing Site's appearance						
39	Visitor subscriptions to site						
40	Inserting custom HTML, CSS, and Javascript						

Other Functions		Very difficult	Somewhat difficult	Neutral	Somewhat easy	Very easy	N/A
41	Use Google Sites with Google Apps - Enabling or disabling Google Sites in Google Apps accounts						
42	Sharing site: - Sharing the site lets you choose who views, edits, and owns content on site						
43	Inviting - You can send up to 50 invites per day						
44	Using Revision history - Using the Compare two versions link to see the differences highlighted						

Usability testing results

1. Survey Result

Our team conducted survey of Google Sites' usability testing on 12 people who have used Google Sites. Below show the results of survey.

Overall Satisfaction	Average satisfaction
- Customer Service: Google Sites help	3.42
- Technical Support	3.25
- Storage Space: 100 MiByte	3.90
- Tech Response Time and Uptime	3.01
- Ease of use	3.83
- Bandwidth limit: 1GiByte/day	3.83
- File restrictions:	3.50
- Advertisements: Free (no forced ads)	3.75

Google Sites' overall satisfaction rating is 3.56, on a scale of 1 to 5.

Main purpose of using Google Sites	Respondent(N)
- Individual homepage	5
- Portfolio	4
- Team project	2
- Friendship Club	1

Most of respondents are using the Google Sites for personal use like personal homepage and portfolio.

Most useful features in Google Sites	Respondent(N)
- Easy to use	5
- Easy to access	2
- Using with Google Apps	2
- Easy to collaborate	2
- High awareness	2

People pointed out easiness as the most useful feature in Google Sites. People said Google Sites is easy to use, access and collaborate. Additionally, Google Sites is one of the services from Google which is most popular website. In this respect, people gain the benefits to use Google Sites.

Creating site and page	Average usability	Not yet used(N)
- Creating a site(name, URL, sharing options)	4.50	-
- Creating a page (name, type, location)	4.42	-
- Using page and site templates	2.90	-
- Deleting a site	4.14	5

Respondents said creating a site and pages are very easy to do. However, they have some problems using page and site templates.

Editing site	Average usability	Not yet used(N)
- Changing the font type and size	4.67	-
- Editing and Aligning text	4.75	-
- Creating a link	3.83	-

- Creating, Indenting and moving list	3.50	-
- Removing formatting and editing HTML	3.10	2

Respondents said basic editing functions like changing font and editing text are very easy to do. On the other hand, they responded that creating links and lists are easy to do or they were neutral about being able to do that.

Adding objects and apps	Average usability	Not yet used(N)
- Adding text and images	4.75	-
- Adding Docs, Calendars and other gadgets	4.01	-
- Modifying pages and sub-pages	3.83	-
- Adding attachments, comments and files	4.50	-
- Embedding photos from Picasa	3.80	7

People responded that adding objects and apps are easy to do. However, the function of Embedding photos from Picasa is not used yet by respondents.

Managing site	Average usability	Not yet used(N)
- Searching options and special administrative actions	4.00	8
- Subscriptions and notifications	3.50	8
- Controlling access to Site	3.89	3
- Changing Site's URL	4.36	1
- Changing Site's layout	4.00	-
- Changing Site's appearance	4.10	1
- Visitor subscriptions to site	3.67	9
- Inserting custom HTML, CSS, and JavaScript	4.50	10

Survey results about managing site indicated that most of respondents didn't use many of functions about managing site like searching option, subscriptions, and inserting HTML.

Other Functions	Average usability	Not yet used(N)
- Use Google Sites with Google Apps	3.40	7
- Sharing site	3.80	2
- Inviting	3.71	5
- Using Revision history	3.67	6

About half of respondents said that they have no experience about using Google Apps, inviting, and revision history function.

2. Conclusion

Based on survey results, Google Sites' overall satisfaction rating is 3.56, on a scale of 1 to 5 with a 5 indicating the respondent was "Very satisfied" and a 1 indicating the respondent was "Very dissatisfied" with the web service. Respondents were most satisfied with Google Sites' storage space and least satisfied with tech response time and uptime. All in all, the survey results indicated respondents were not overwhelmingly satisfied nor were they overwhelmingly dissatisfied with Google Sites overall.

Table 2. Overall Satisfaction about Google Sites

Overall Satisfaction	Average satisfaction
- Customer Service: Google Sites help	3.42
- Technical Support	3.25
- Storage Space: 100 MiByte	3.90
- Tech Response Time and Uptime	3.01
- Ease of use	3.83

- Bandwidth limit: 1GiByte/day	3.83
- File restrictions:	3.50
- Advertisements: Free (no forced ads)	3.75
Total	3.56

As with any web authoring tool, Google Sites has its strengths which can be different from user to user. Many respondents said they found Google Sites “easy to use,” “easy to collaborate,” and “easy to access.” Another respondent commented it was a “simple what you see is what you get interface.” Below are specific functions about adding objects and apps.

- No HTML required: In Google Sites, people don’t need to learn markup language to create a Google Site and edit a document.
- Embed rich content: Google Sites is integrated with other Google products, so people can insert videos, docs, spreadsheets, presentations, photo slide shows, and calendars directly onto their Google Sites pages.
- Single-click page creation: Creating a new page for your Google Site just takes the click of a button.

Just as Google Sites has strengths, it also has weaknesses. A number of respondents mentioned the themes were hard to use, with one person specifically saying the theme was hard to change once it was selected. Another difficulty respondents encountered was with navigation, specifically with “navigation to edit photos and text.” Finally, one respondent suggested an upgrade to storage, which is currently limited to 100 MB for free accounts and 10 GB for Google Apps users. In addition, survey results indicated that many useful functions, such as the ability to use Google Sites with Google Apps, are not used by respondents. Moreover, most of those functions are unknown to the respondents.

3. Recommendations for future design improvements

Our team recommends the following for future Google Sites design improvements. First, usability should always be a main focus when making design changes. One respondent stated that recent navigation changes make it more difficult for him. Here's a summary of the current navigation changes:

- The Create page and Edit page buttons have switched places, and are now represented by icons instead of text.
- Deleted Sites are now located on their own page instead of being included in your "My Sites" page.
- Action buttons have moved from the bottom of the page to the top of the page. These buttons include the **Create** and **Cancel** buttons on the "Create Site" and "Create Page" pages, as well as the **Save** and **Cancel** buttons on the "Manage Site" and "User Settings" pages.
- Icons next to the pages in the collaborator site map now indicate if a page has Page Level Permissions enabled.

While Google states their design changes were meant to “combine power with simplicity,” it does not seem Google took into account how their changes would affect users’ ability to navigate easily. Second, our team also recommends making it easier to change themes and templates.

Many respondents said they had a difficult time changing how their page or website looked once a template or theme was chosen. To apply these two recommendations, Google Sites have to test their functions **if which** they want to add or change **them** because they have to consider practical user **of about** Google Sites. Those problems related with change and theme are due to a lack of

understanding about users. The target user of Google Sites is average person. Third, many people didn't know and use useful functions like Revision history, Visitor subscriptions and using Google Apps. To improve usability and offer a high quality service as a web authorizing tool, Google Sites have to improve their "Customer Service". The Customer Service part must have information about Google Sites' useful functions with specific guidelines to facilitate to the utilization of each function. Finally, we would like to see an increase in storage space for users. We make this recommendation based on a respondent's suggestion that the 100 MB of storage be "upgraded."

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