Homework	7
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Word Count
1. Executive Summary [496]
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Blogger Redesign & Retrospection

Walk Up & Blog!

An Editable Preview Mode When Creating & Editing a Blog Post

Table of Contents

1. Executive Summary

There are systems that appear to function as an extension of our mind and hands; these systems support our tasks and processes so fluently that they do not require users to become expert before knowing how to use the system. These systems simply understand our tasks and provide ways to accomplish our goals without requiring us to figure out *how* to accomplish these goals either from their intuitive user interfaces or their consistency with other commonly-used applications.

We believe a blogging system such as Blogger should be such a 'walk up and use' intuitive interface for the everyday professional who would simply like to have his/her voice published in the World Wide Web.

Our redesign team comprises of two computer scientists, a cognitive scientist and an architect who all have varying degrees of fluency in web development either from the back-end web infrastructure to the client-side interface design. We realize that members of our design team are not exemplary users of the everyday professional whose exposure to web applications may vary from infrequent to second nature, so we have applied usability methods to research and understand our target users. The results from our studies allow us to design for professionals who do not want to deal with the ambiguity of HTML code and would like to simply 'walk up and blog'.

The system usability methodologies we have conducted that best provide feedback on the scope of our redesign are: Contextual Inquiry, Sequence & Flow Model from Contextual Design, Heuristic Evaluation, Cognitive Walkthrough, and Think Aloud.

In our studies, we have found that the current Blogger system design causes hurdles and even discourages professionals from the idea of blogging.

Users had trouble navigating from the expert (web-skill-necessary) 'Edit Html' mode to the hassle-free non-html 'Compose' mode. Non html-adept users also had difficulty understanding that the 'Compose' mode provided an easier WYSIWYG interface that simulated a published blog. The WYSIWYG blog view in both the 'Compose' and 'Preview' mode also failed to display what the blog would actually look like when published onto the

> **We want to give people information.**
>
> **Maybe somebody will also need [this information].**
>
> Reasons why our user blogs.
> (CI, L27,33)

> **I don't have any mental model whatsoever of the distinction between the 'Compose' & 'Edit HTML' mode.**
>
> (TA, 24:25)

blog site, thus resulting in further impediment and discouragement to professionals from accomplishing their goals.

As a result, we have chosen the scope of our redesign to focus on the facilitation of composing a blog in an improved WYSIWYG interface that makes composing more understandable and simultaneously shows what the blog post would actually look like when published inside the blog site. The current scope of our redesign will attempt to resolve 40% of the problems and breakdowns found in our usability studies.

We believe that a blogger system should be intuitive; not only do novice web users want an html hassle free environment, but even expert web users want to simply voice their thoughts and share information in the most straightforward manner. We believe that users' energy should be spent on crafting expressive messages instead of fighting against a debilitating system. In our redesigned Blogger, any professional can simply 'walk up and blog'!

Word count [496].

> **" The preview was supposed to show what it really looks like.**
> (CI, L366) **"**

2. Redesign

2.1 Redesign Storyboard

Karen is a business professional working at a consulting firm in Boston, MA for the past 20 years. She enjoys her job but her real passion is digital photography. She has built up quite a portfolio over the years and wants to share her work with her friends and family. Her husband Dan suggested that she start a blog where she can post her photos and write descriptions about her work.

This past weekend, she rented out time in a studio. She liked one photo in particular and wants to create a new post to share and describe the photo.

She uploads the photo to the desktop on her computer. Then she opens a web browser, and loads www.blogger.com. She registers for her blog, starts a new blog, and creates a new post for the first time.

Step 1

Karen wants to first add the image of her photo to her blog. She sees instructions in the editable post region that tells her to use the toolbar to insert an image. She looks at the toolbar and sees the "Insert" group of functions. She clicks the "Image" button.
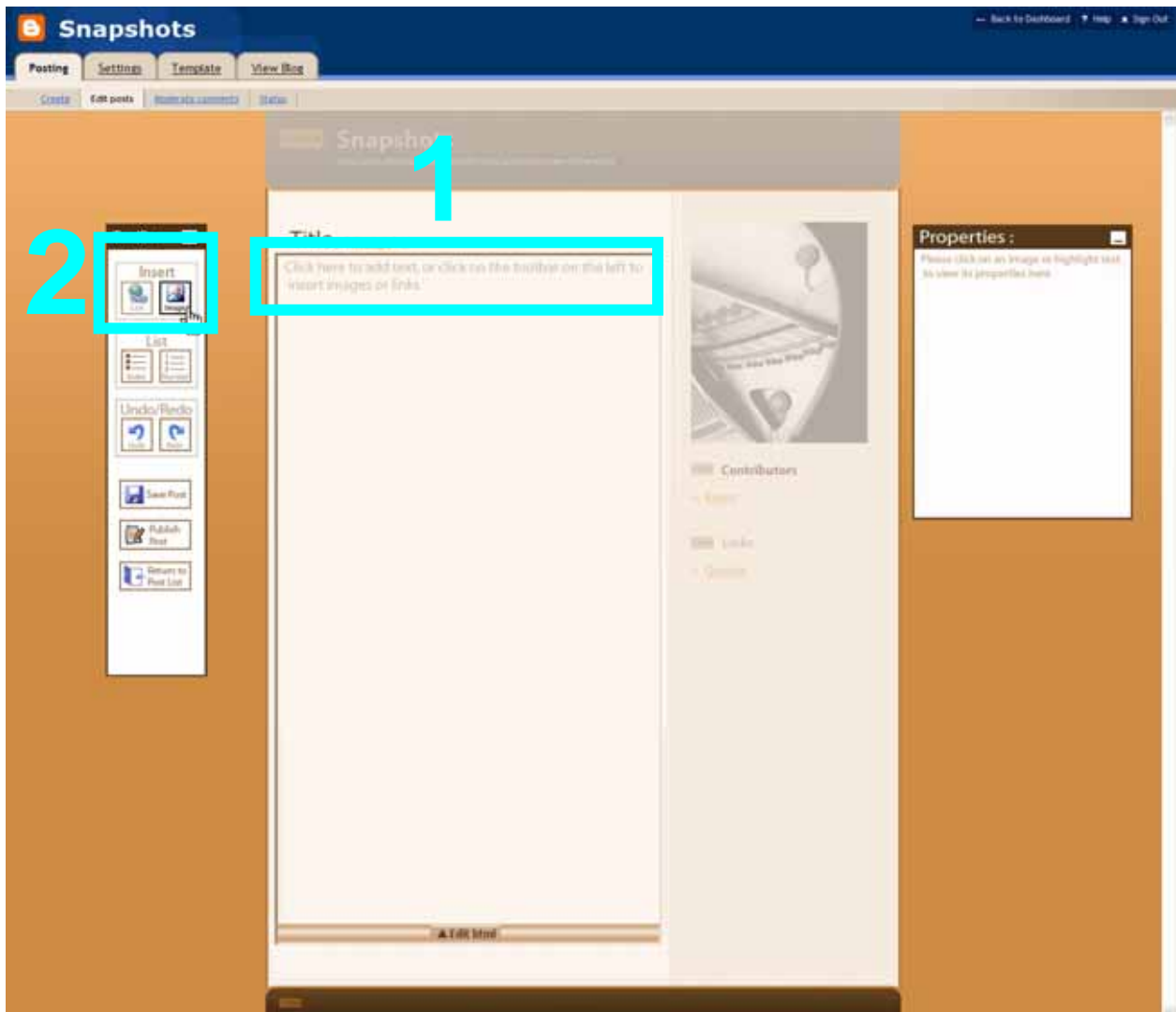
Step 2

An image dialog box pops up which provides a few options for Karen to insert an image. She clicks "browse" to find the image on her desktop. She then hits OK to close the dialog box.
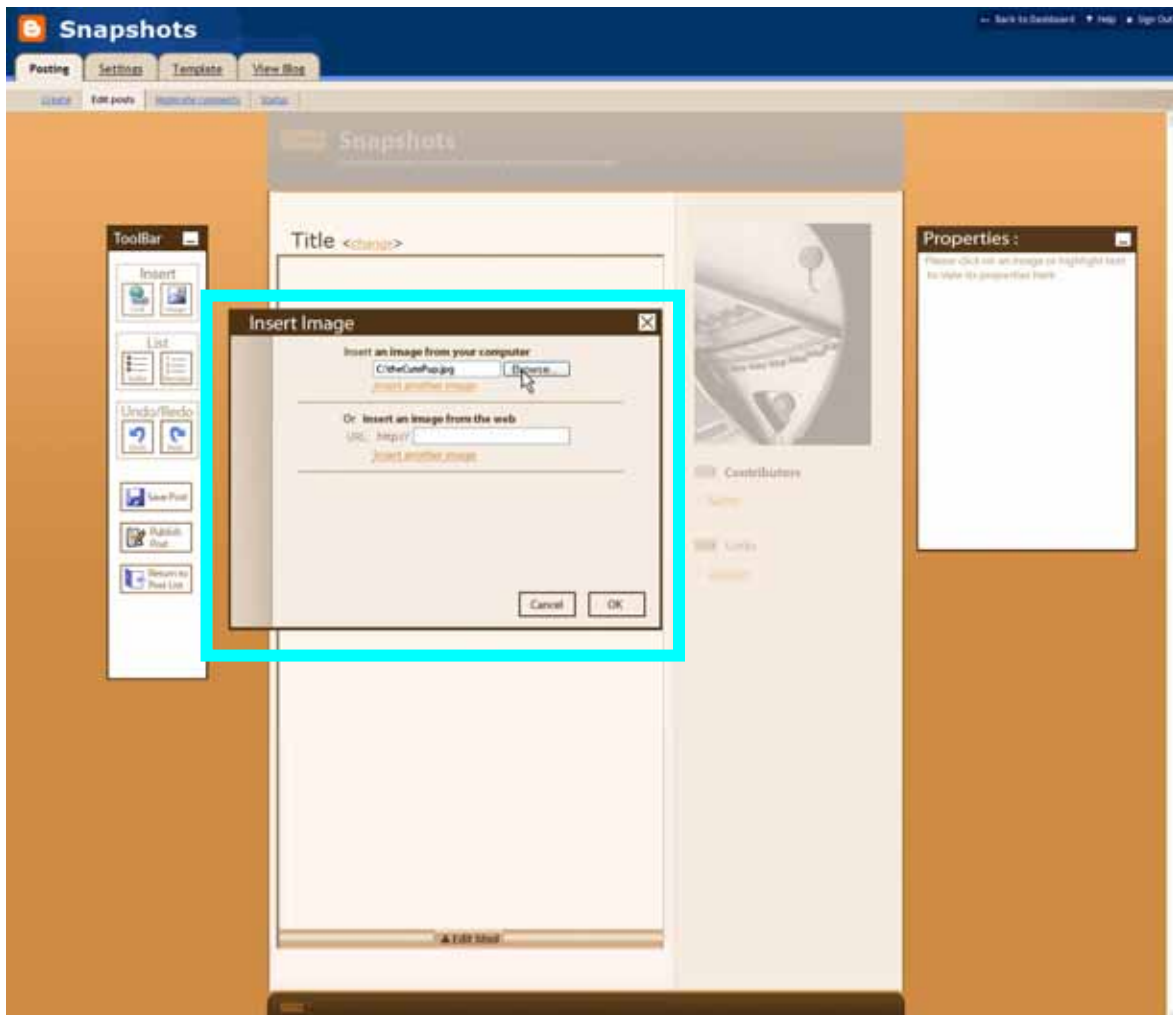
Step 3

The image appears in the blog post. The image is highlighted and a properties window fades in on the right side of the screen displaying properties about the image. Karen notices an option to add a caption, and types in "Freddy in the studio" in the properties window. After she types this in, the "Apply changes" button at the bottom of the properties window becomes enabled and she clicks this.
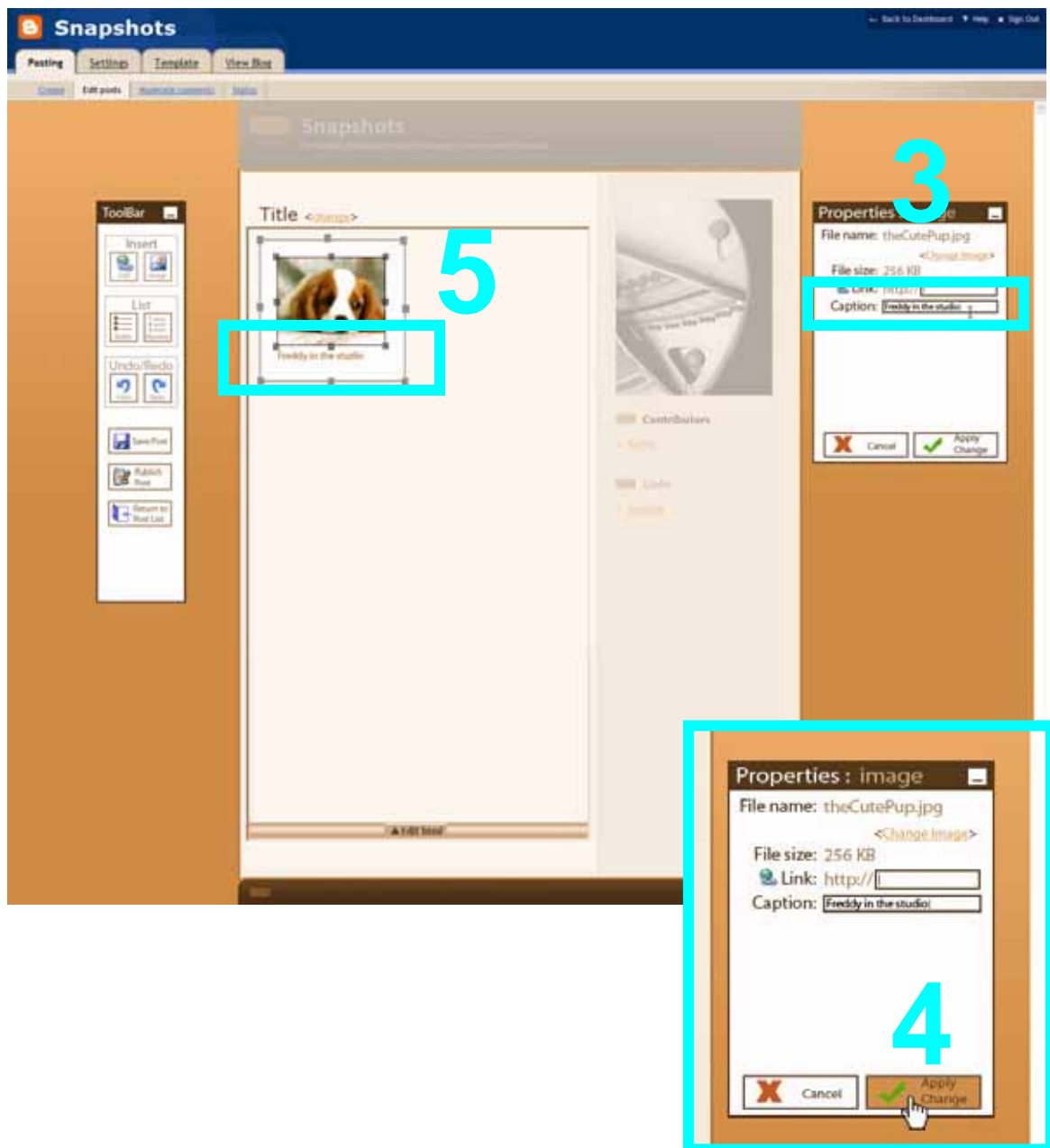
Step 4

The caption appears underneath the photo in the padding area of the image. She decides to move the image to the right side of the post so that she can write about Freddy on the left. She drags the image to the right side of the post.
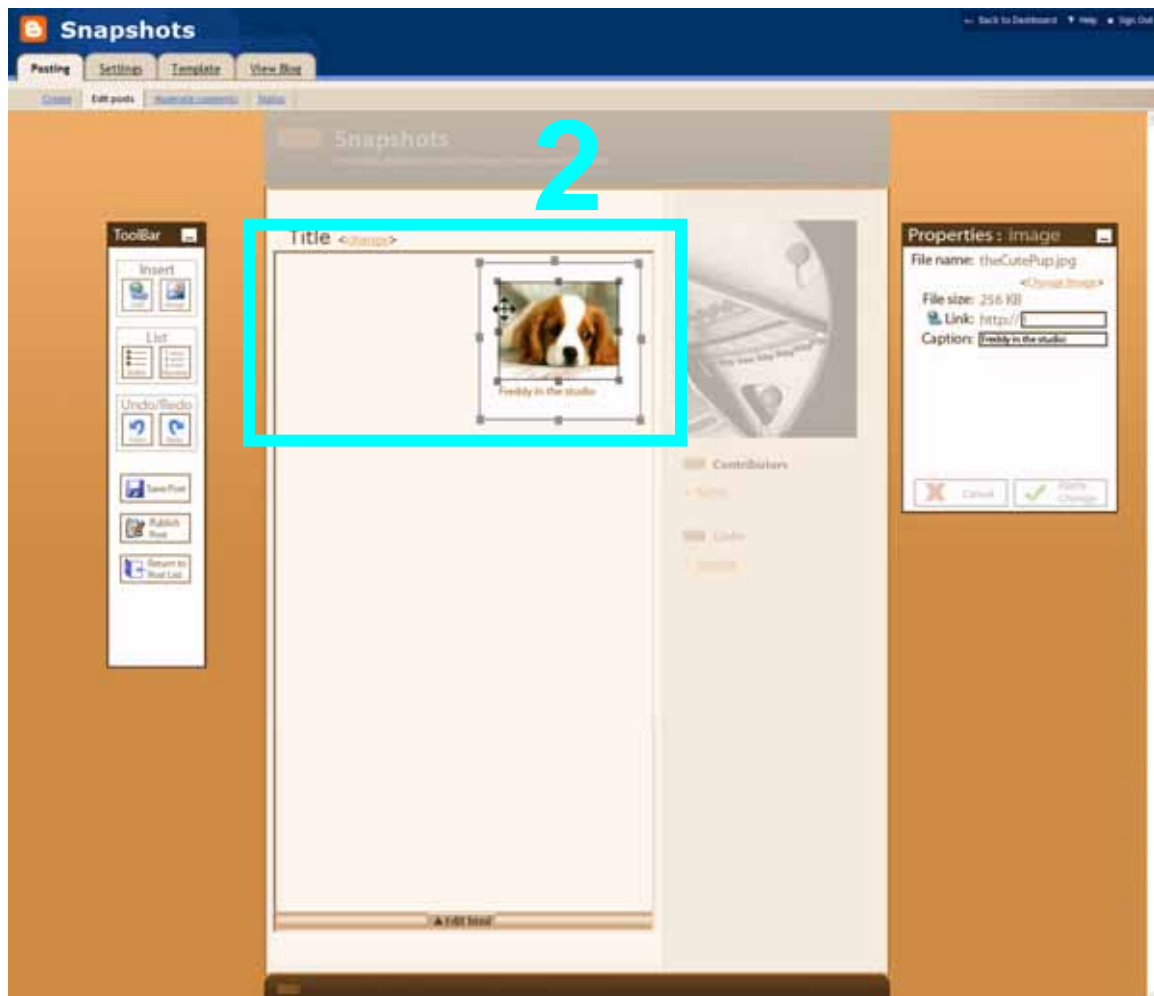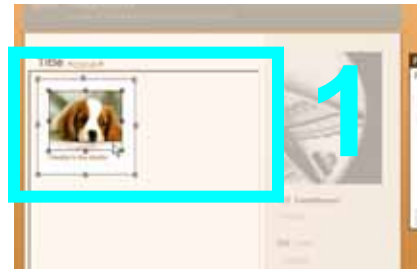
Step 5

Karen wants to add text to the left of the photo, so she clicks on the area to the left, and describes her day with Freddy. The text is inserted to the left of the photo.
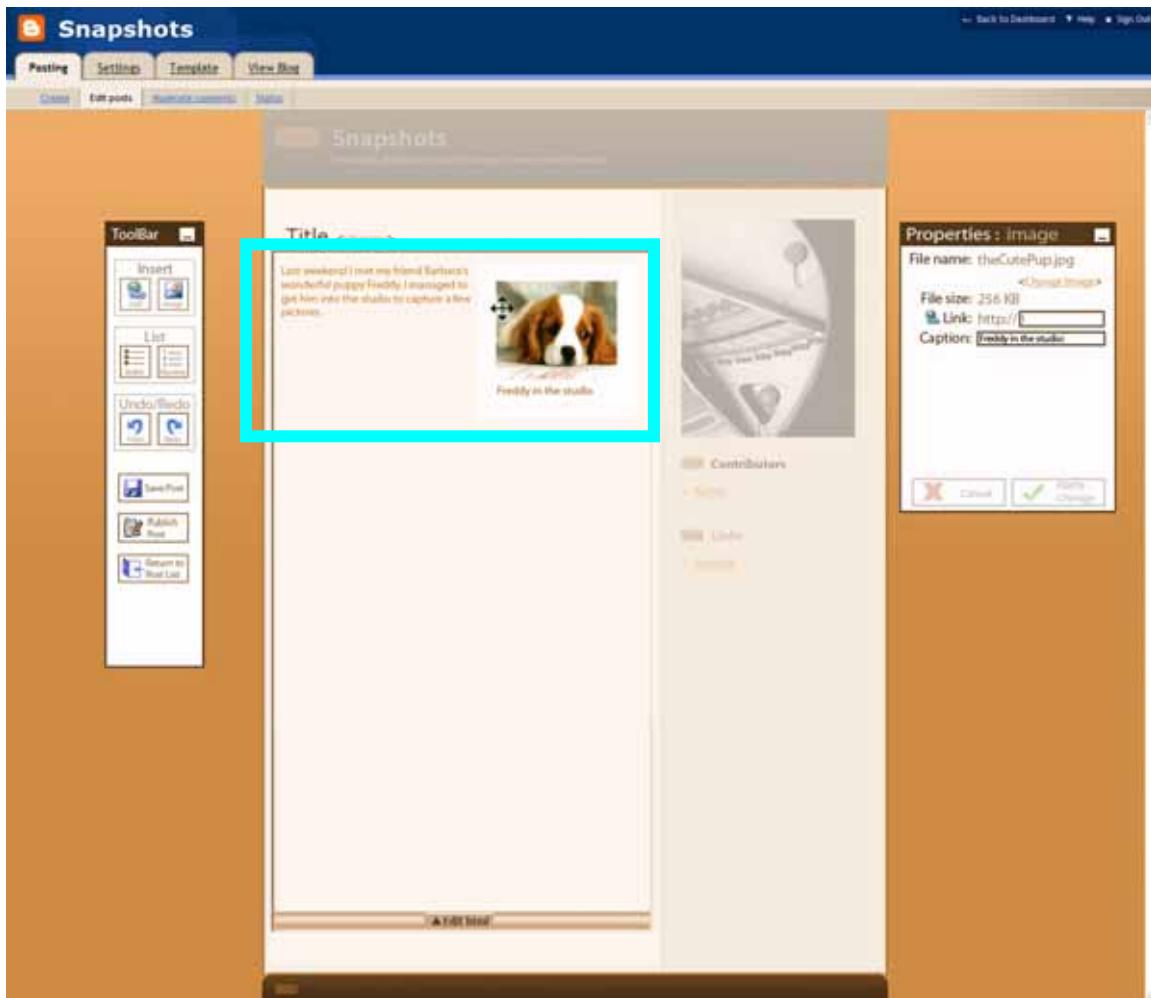
Step 6

Karen decides that the image needs to be larger within the post. She clicks on the image and grabs the inner border and drags outwards to make the image larger. She then clicks on the outer border on the left and drags towards the text to increase the padding between the image and the text.
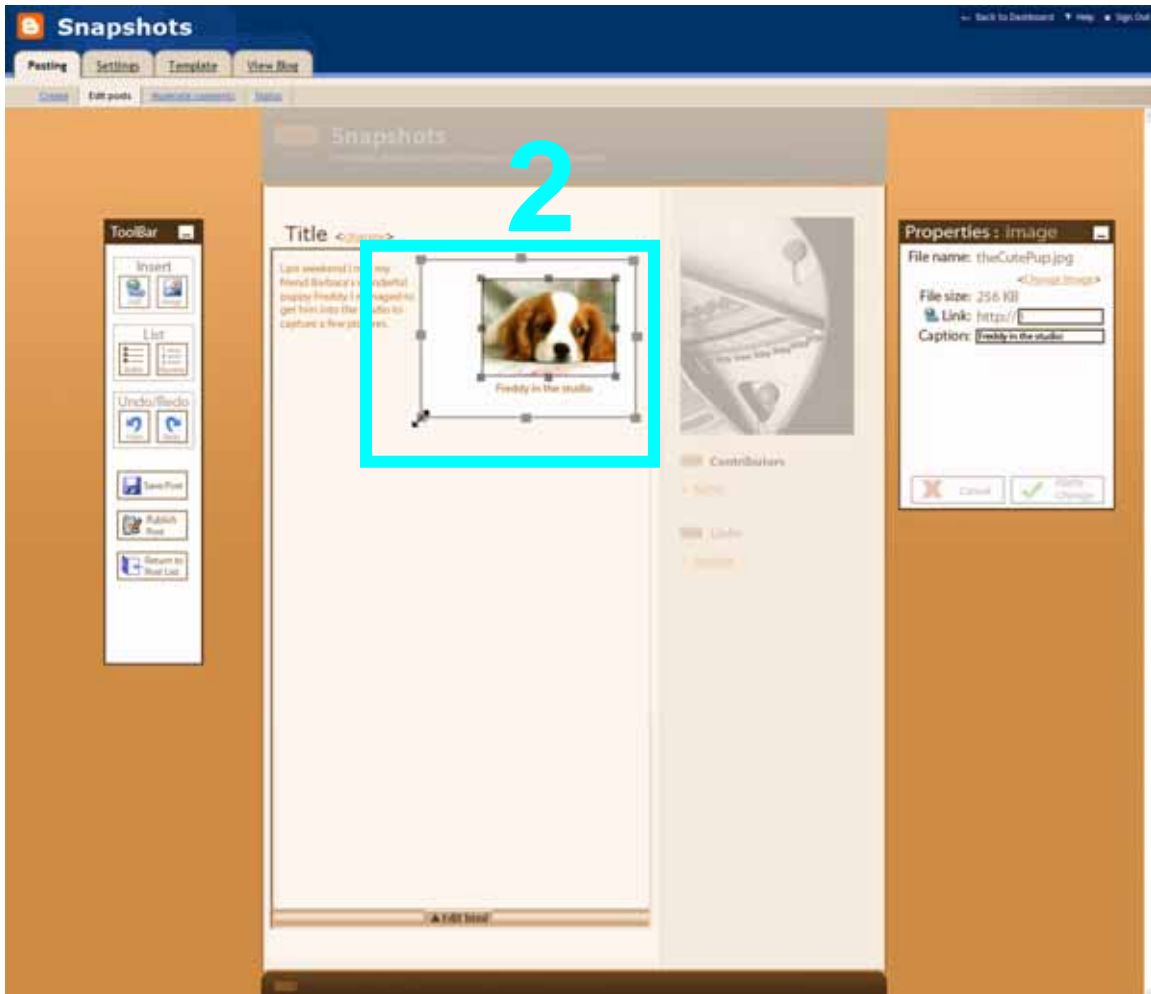
Step 7

She remembers the power outage last week, and decides to save her work. She finds the option to "Save Post" in the toolbar on the left.
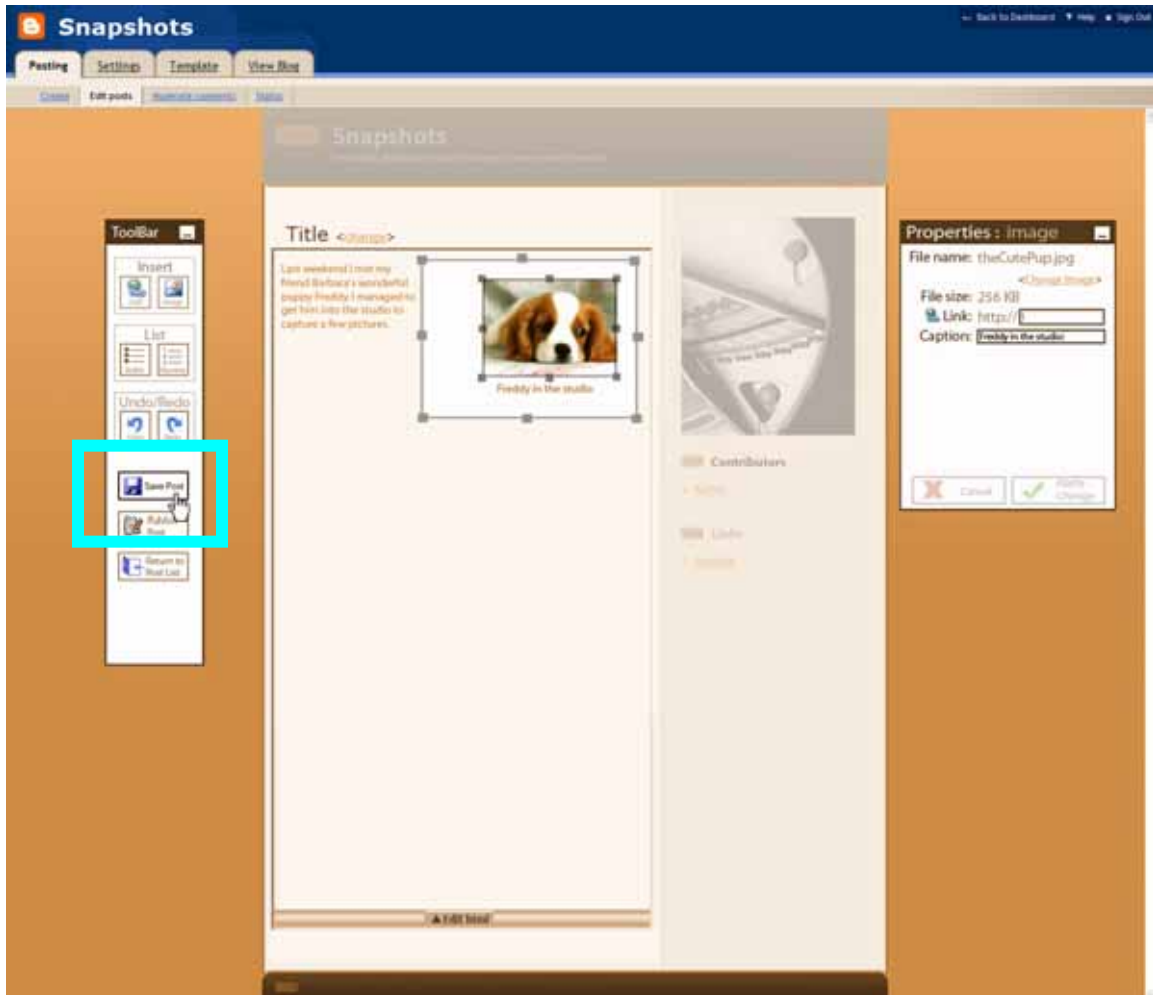
Step 8

Karen wants to add a link in her post to her friend Barbara's blog which has more pictures of Freddy. She remembers seeing the link button in the toolbar next to the image button, so she finds this easily and clicks.
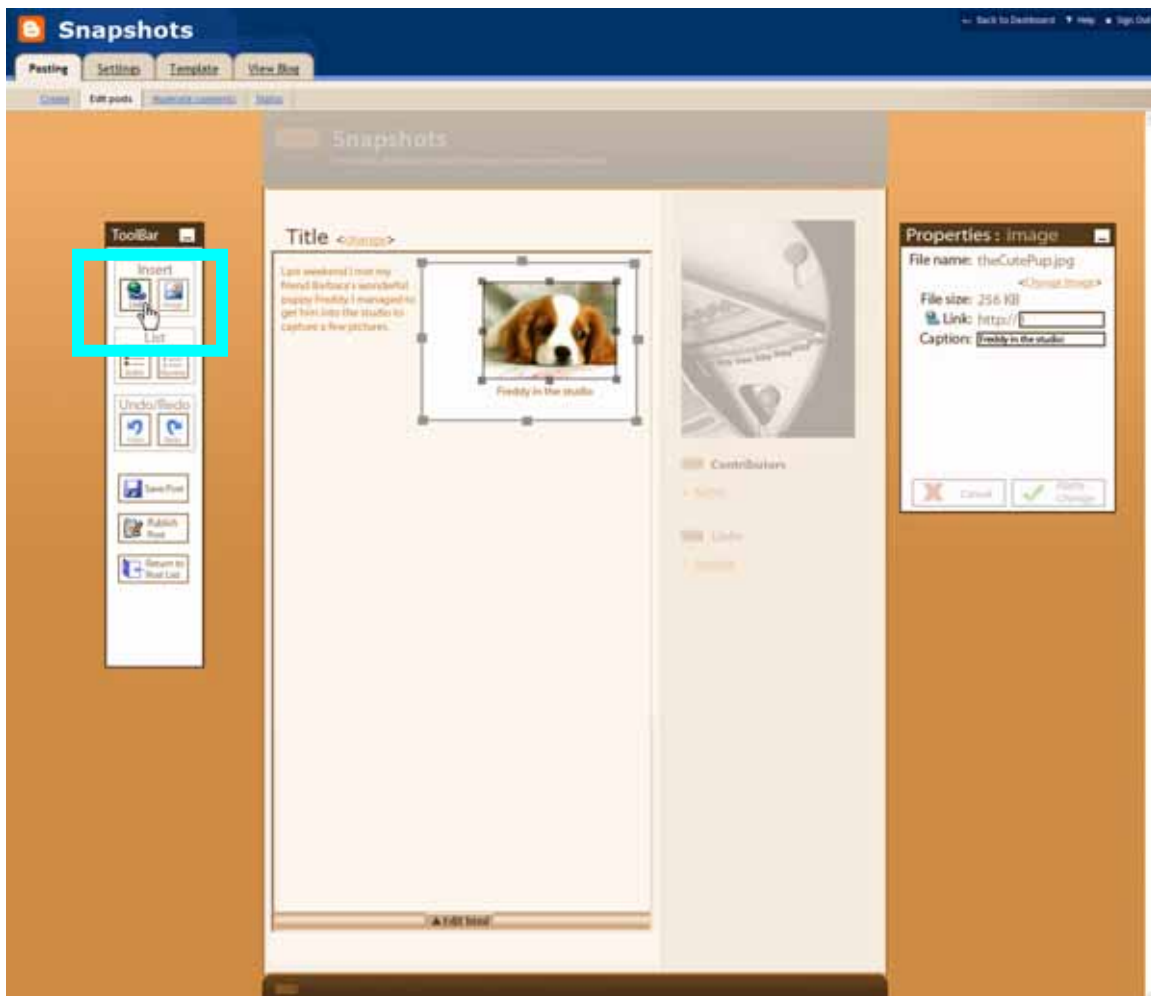
Step 9

A dialog box pops up that prompts Karen to enter in a URL and title for the link. She enters in http://www.barbarasdog.com for the URL and the title of "Barbara's blog". The dialog box understands this to be the full link and does not add the extra http://. She clicks OK.
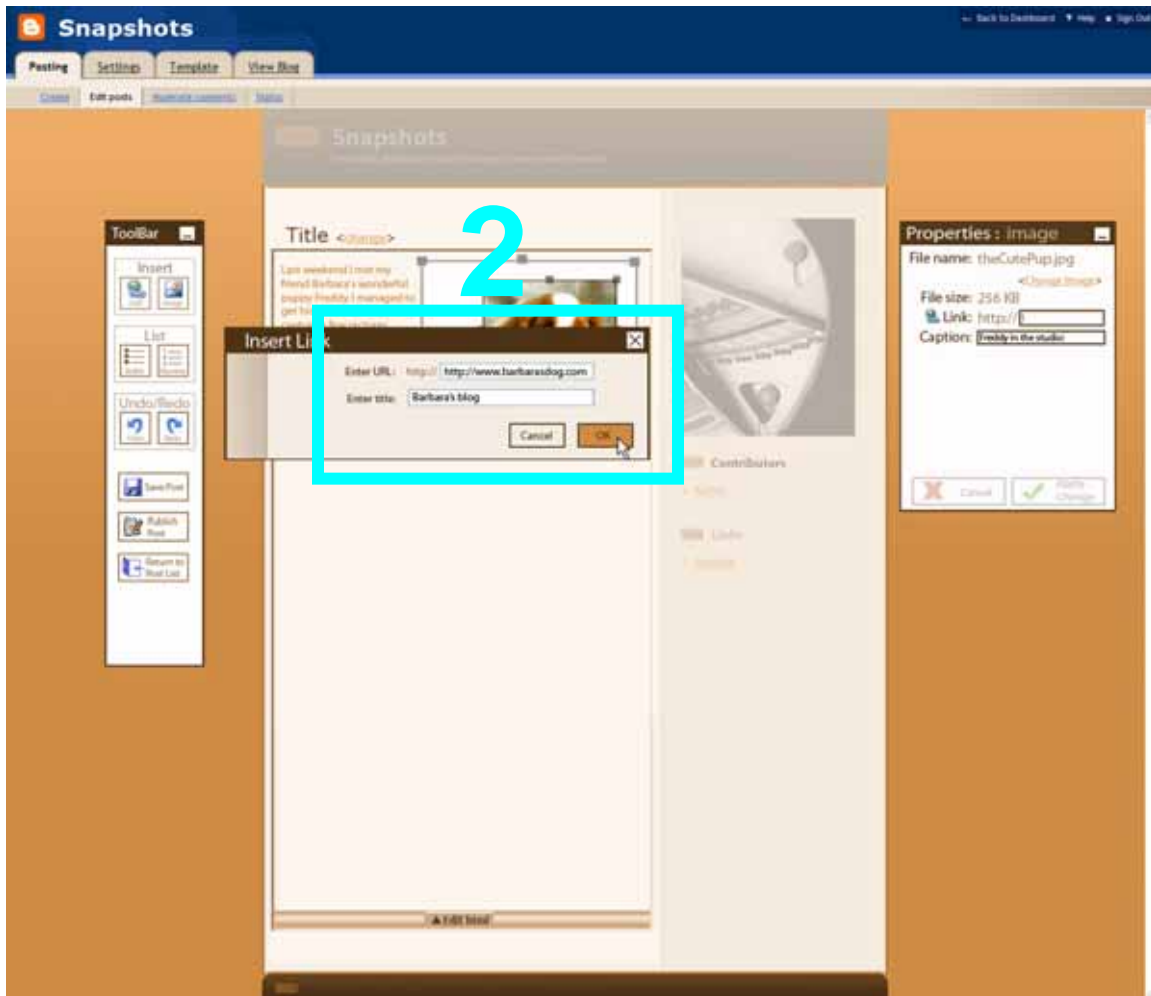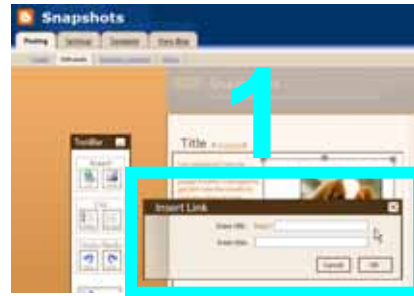
Step 10

The link is inserted into the post and is highlighted. The current properties window fades out and fades in with a link properties window. She changes the title of the link to be "Barbara's dog blog" and clicks "Apply changes". The text is updated in the blog. She adds text before the link to say "If you want to see more pictures of Freddy, check out".
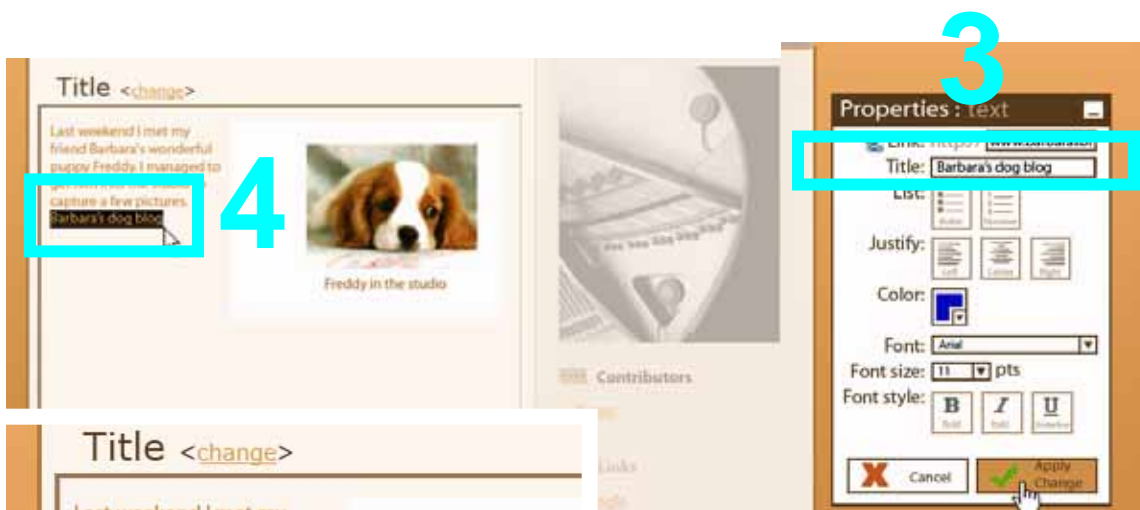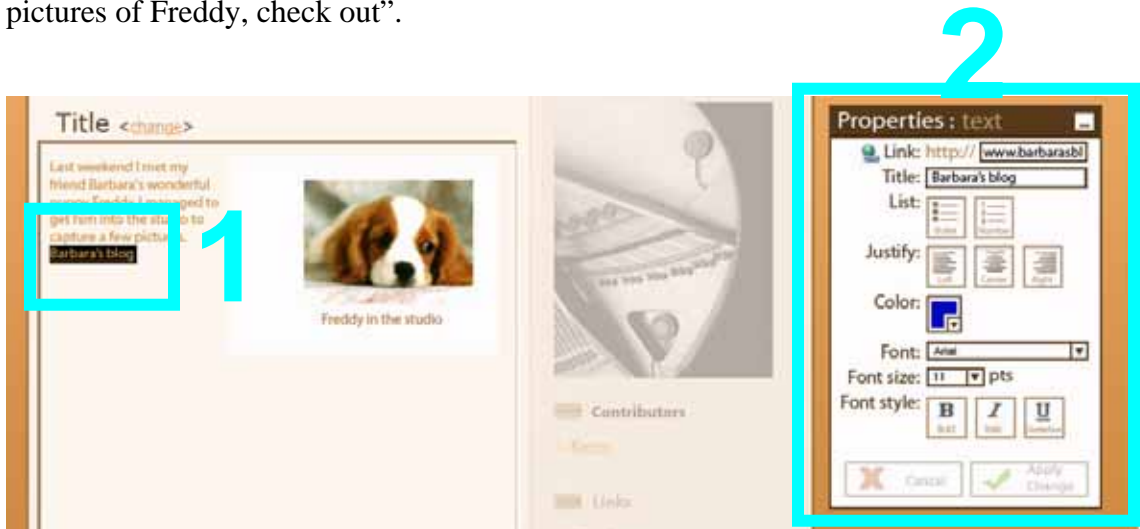
Step 11

Karen decides to add a title to this post and clicks, to the right of 'Title', the link <change>. The title textbox appears, with the text highlighted. She types in a title and clicks 'OK'. The title "Freddy the Puppy" appears above the post in the text format as it would appear when the post is published.

Step 12

Karen notices the 'Edit HTML' bar at the bottom of the post and curiously clicks on the button. The HTML split window opens up and she notices unfamiliar text, which she realizes is HTML code. She clicks on Freddy's picture and notices that certain text in the HTML becomes highlighted in blue. She notices within the text that the highlighted code image of Freddy because of the file name. She knows she is not familiar with HTML and does not want to mess with the code of her post and so she tries to click on the Edit HTML bar and the window is minimized.
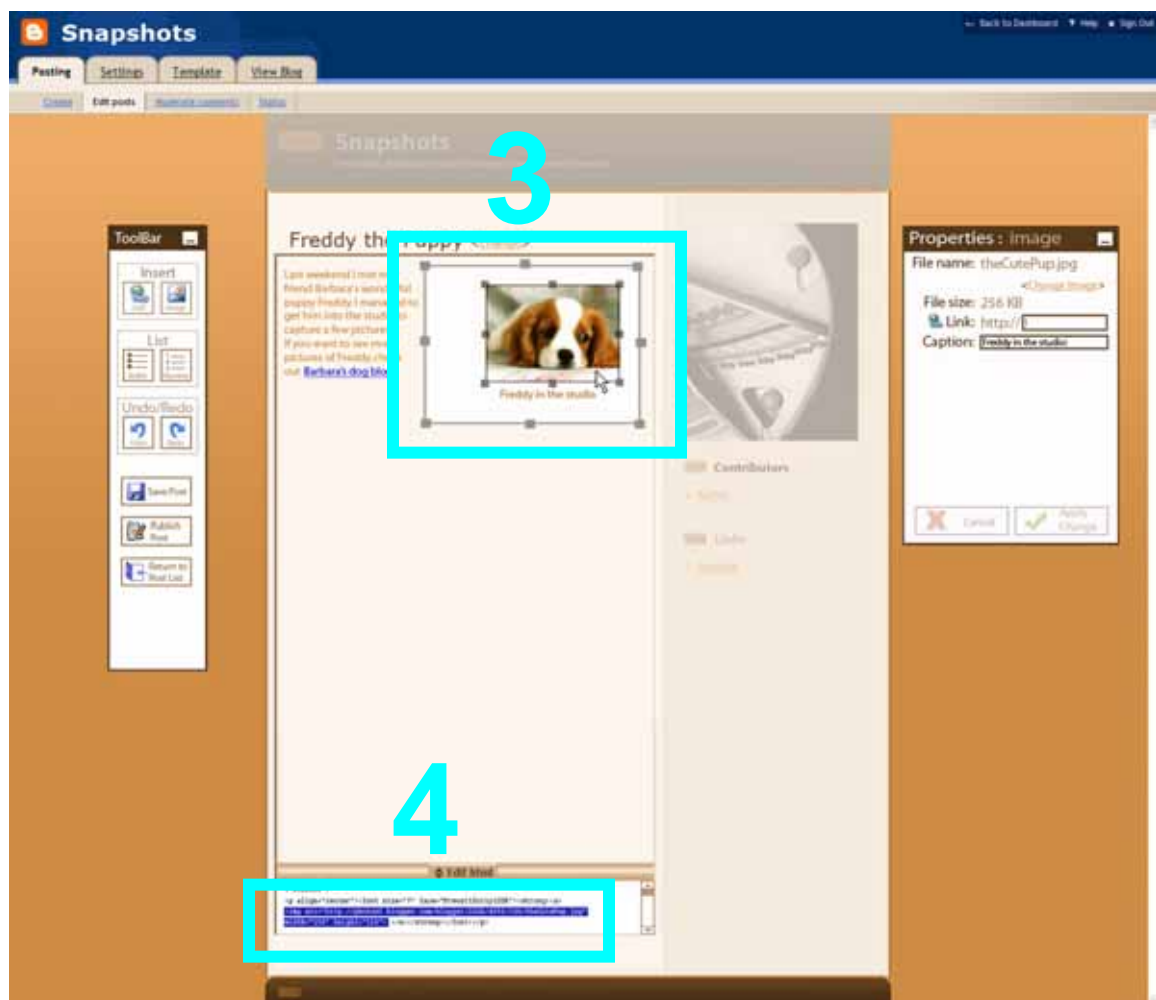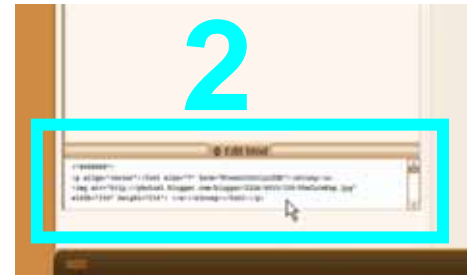
Step 13
Her post is complete, and she clicks the Publish Post button
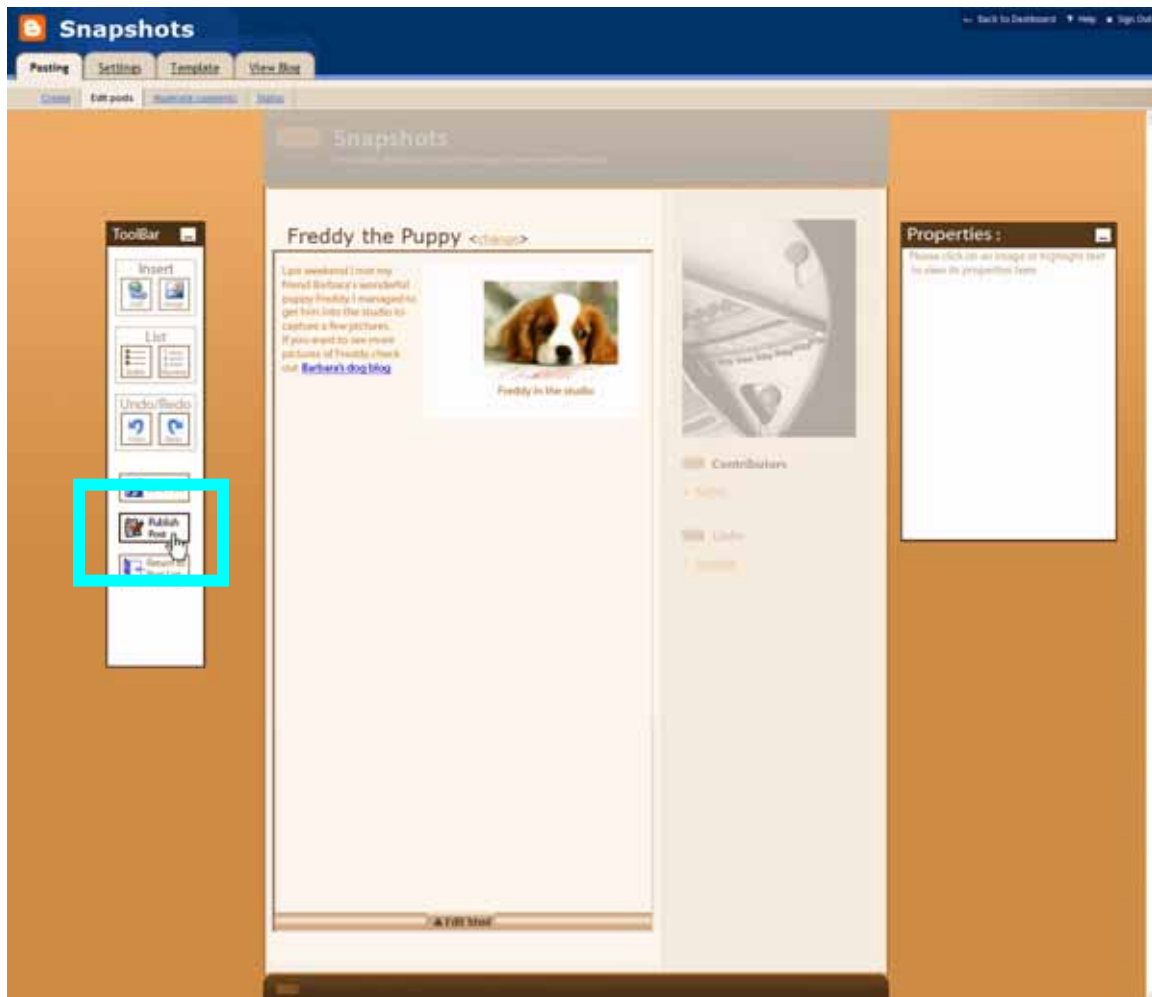
2.2 Redesign Features

2.2.1. **3-in-1**
Edit / Preview Mode

2.2.2. **Floating Toolbar**

2.2.3. **Properties**

2.2.4. **Title bar**

2.2.5. **Image Manipulation**
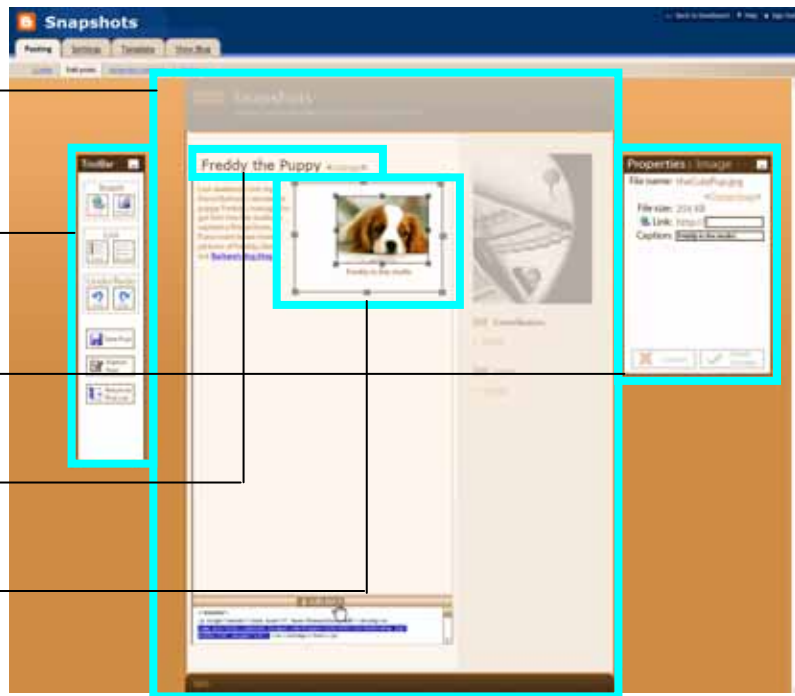
I. Three - Modes - In - One

Design

In our redesign, we allow users to preview, see changes that need to be made, and make those changes in either Compose or HTML mode all within the same view. Users will be able to edit in Compose mode in the context of a blog preview. The new post will appear embedded in a visual representation of the actual blog so that users will be able to see how their post will look once published. The areas surrounding the post will be grayed out so that users know they can only edit the blog post.

The HTML for the post will be shown in a resizable split window below the editable preview area, similar to the layout of Dreamweaver. To help users connect the HTML code to the preview, the selected item in the preview will be highlighted in the HTML code.

A tradeoff with this solution is that showing the post in the context of the whole blog reduces the screen real estate allotted for the post editing area. Additionally, the split HTML window reduces this editing space further.   However, we believe that the benefits of showing the blog post within the context of the blog outweigh the cost of reduced space, and that there is still sufficient space to provide a good editing experience. Also, we made sure that the split window is resizable and can be minimized.

Figure 2.2.1.1 – All-in-one edit and preview mode.

Rationale

Merged Compose/Edit HTML mode: One of the primary problems we found over the course of the semester is the confusion between the functionality of the Compose and Edit HTML modes.   Primarily novice users inefficiently switch back and forth between the two modes (Table I, 4.2.2, #39 – tables located at the end of each section), or don't realize that the "Compose mode" exists due to lack of visibility. Both the users in the CI and in the TA never really understood that the "Compose" mode could facilitate the process of editing a post (Table I, 4.6, #17, #5). In

the CI, the user states "What does compose do? Isn't that what I was doing? I'm so confused….What view was I in if it wasn't composing?" (Table I, 4.1, L368). Additionally, there are fewer text formatting options available in the current "Edit HTML" mode, so users need to switch to "Compose mode" to change certain items (Table I, 4.6, #1). With our redesign, users will be less likely to confuse the two editing modes because it will be easier to see differences when the two are visible simultaneously. Distinctions will be more apparent since the preview/Compose editing mode will conform to the blog text formatting, and the code will not. Highlighting the corresponding items in the two modes should solve the problems where the CI user had trouble finding code that she wanted to edit, and the split window should address the issue where the TA user had trouble changing the text formatting in Edit HTML mode.

Preview within blog context: The current preview mode is not indicative of how the actual blog will appear. In the CI, the user explicitly expresses her frustration, "all that work…and it doesn't look like what I expected" (Table I, 4.1, L363). Users were surprised that the preview mode did not format the title of the post and place the images in the same areas as they would appear in the actual blog (Table I, 4.6, #9). With our redesign, users will no longer encounter unexpected changes to their post once it is published, for example, post width will not be resized in the actual blog—"my window is wide and it decided to smack it into that size" (Table I, 4.1, L365). Users will also no longer have to open two browser windows to preview the published blog and edit their current post at the same time.

Editable preview: Users often want to see updates to their blog post in real-time as they edit, particularly when they are in HTML mode where only the code is shown (Table I, 4.1, L320, 343). This desire was demonstrated in the CI when the user said "Well there I don't like that I can't see where it is." and "Why can't I see the code and the preview at the same time?" (Table I, 4.1, L320, 343). It is a frustrating experience to preview the blog, see what is wrong, and then be unable to make changes at the same time. By
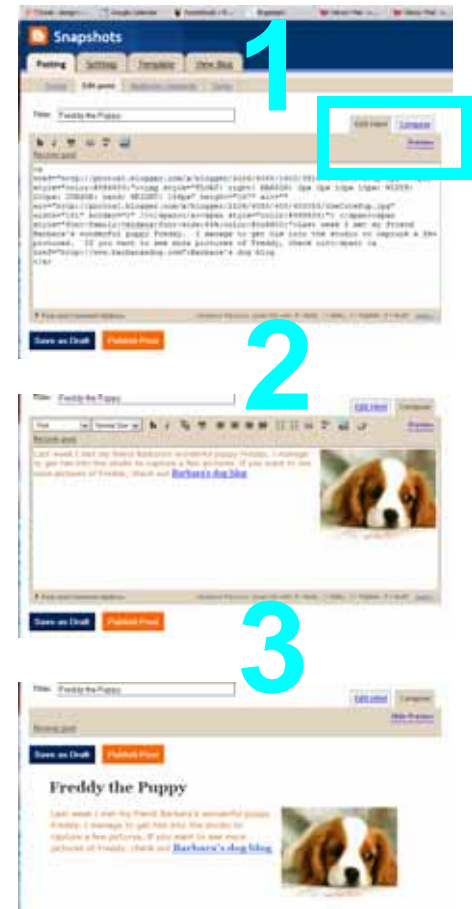
Figure 2.2.1.2 – From the top: 'Edit HTML', 'Compose', and 'Preview' mode.

Figure 2.2.1.3 – Preview mode does not accurately display preview of the post in the blog.

combining the three modes, users will not encounter the current problem of figuring out how to switch back from Preview mode to the post editing page, as evidenced in the TA and in our HE (Table I, 4.6, #15; 4.4, #14).

From the CI and the TA, we found that users already expect the preview to be editable. Both users tried to edit the preview page (Table I, 4.1, L291; 4.6, #10), and are surprised they cannot. For example, in the CI, the participant attempts edit in the preview by dragging an image, but when the system "says I can't edit in there", she realizes that she is unable to" (Table I, 4.1, L367). We believe that providing an editable preview adds great value to the user experience.

I. References	CI [4.1]	CD [4.2.2]	TA [4.6]	HE [4.4]
Merged Compose/Edit HTML mode	L326, L361, L368, L370	39	1, 5, 17	10
Preview within blog context	L363, L365		4, 9	15
Editable preview	L320, L343, L367 L291		10, 15	14

II. Floating Toolbar

Design

We propose a simplified toolbar with the following options:

- Two buttons to insert a link or image, grouped within a box labeled "Insert"
- Two buttons to create a numbered or bulleted list of text or images grouped within a box labeled "List"
- Two buttons to undo/redo changes users make within a blog post grouped within a box labeled "Undo/Redo"
- Three buttons that allow users to save the post, publish the post, or return to the post list.

"Save Post" will now behave similarly to saving in other applications to that users remain on the post editing page after clicking save. We have instead added a separate buttons to allow users to return to the post listings page. Upon clicking this button, users will be prompted to save the post if changes have been made since the last save.

Rationale

Simplified toolbar: We removed several buttons from the toolbar to reduce clutter and confusion and moved options to properties windows so that users do not need to see options irrelevant to the object they are manipulating. We maintained only the options that are applicable to all items within a post, and removed those specific to text or to images, etc. We were motivated by the confusion caused by the number of buttons in the existing toolbar. The CI participant stated that it "…seems like a weird…number of buttons…." (Table II, 4.1, L139). It was easy for buttons to be overlooked or hard to distinguish (Table II, 4.6, #11, #6).

We allow users to drag the toolbar to account for varying templates, which may have their profile on opposite sides. In these cases, they may want to drag

Figure 2.2.2.1 – Minimized floating toolbar.

Figure 2.2.2.2 – Format text, insert objects, editing view modes are currently all found in the system's cluttered toolbar.

the toolbar to an open area on the page so that it does not cover up information in their blog. Although not commonly prevalent, drag-able window functionality used for our Toolbar involves preexisting functionality available in web browsers and can be implemented with CSS divs and JavaScript.

Our design could mean that users may not realize some options are possible since they are no longer all in the toolbar. For example, if a user wants to first indicate a justified text format before typing, they may not realize that this is possible until they click the editable area and start typing. However, we believe that this is not a severe problem as existing systems (including the current Blogger) also require users to click on the text area so that a text cursor is visible before text can be formatted.

Meaningful Labels: Users in the CI and TA did not understand what some of the icons on the buttons imply, such as the eraser button (Table II, 4.1, L395-397; 4.6, #24), and needed to hover over each button in order to read the explanation. Additionally, the tooltips that describe the buttons were not very understandable to novice users, such as "blockquote", which is terminology used primarily in HTML (Table II, 4.4, #5). For these reasons, we labeled each option in the toolbar so that users no longer need to hover over each image in the toolbar to find the relevant option. We also added the groupings with meaningful labels around similar options to aid visual search so that users can easily find options they are looking for and filter through groupings.

Conventional Saving: We added the save/publish post options to the toolbar so that finding ways of saving and publishing the post is more obvious. In the current system, users in the CI and TA could not find the "Save as draft" button on the bottom of the page, and additionally did not expect this to navigate them away from their editing page.

The "Save Post" will now behave similarly to saving in other applications so that users are not directed to navigate away from the post after saving. Users can return to the post listings page by clicking a separate button such that the user is not forced down a fixed

Figure 2.2.2.3 – Related functions are grouped together.

Figure 2.2.2.4 – Locating Save, Publish and 'Return to Post List' functions on the toolbar ensures their permanent visibility.

path; users will also be prompted to save the post if changes have been made since the last page.

II. References	CI [4.1]	TA [4.6]	HE [4.4]
Simplified toolbar	L139,	6, 11	4
Meaningful Labels	L395-7, I:294		5
Conventional Saving	L301	12, 16, 17	28

III. Properties: See It When You Need It

Design

A floating property window will appear on the side of the page, displaying properties that are relevant to the selected item. The properties displayed will vary according to whether the selected item is text, an image, or a link. The properties displayed will provide important features such as inserting a caption underneath a picture, and modifying the display text or URL of a link. When the user clicks on a different type of item (e.g. moving from text to an image), the text property window fades out and the image property window fades in to draw attention to the change.

Rationale

Image Captions: In the CI, the user desires the capability of inserting a caption with the image, but the interface does not provide this feature. (Table III, 4.1, L373: "I was trying to get these to be like... captions, on this.")

Contextual Properties Window: The current system does not allow users to easily modify link titles, URLs, or images. In order to rename a link, for example, users need to click on the "Erase Formatting" button to unlink text and then re-create the link with new display text. The TA user was increasingly frustrated by the challenge of creating and changing the text displayed for a link. There was no option provided to view and/or change the currently linked text in either Edit HTML mode or Compose mode. Also, due to the number of icons in the current editing toolbar and the misleading tooltips, the user took a long time to find how to unlink a link (Table III, 4.6, #21, #23). Our redesign provides the user only with relevant properties that the user would need or want to modify, rather than confusing the user with irrelevant icons such as text properties when the user has selected an image.

Figure 2.2.3.1 – Properties window for image (top) and text (bottom).
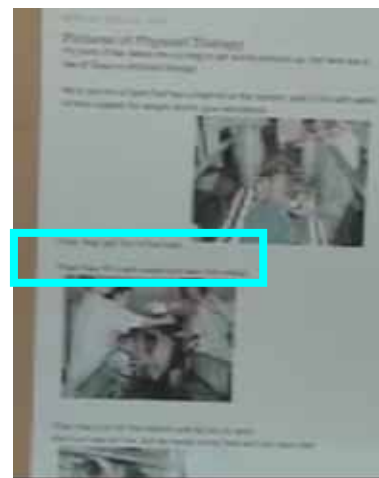

Figure 2.2.3.2 – CI user trying to caption photos on the post.

III. References	CI [4.1]	TA [4.6]	HE [4.4]
Image Captions	L373		
Contextual Properties Window		1, 21, 23, 24	3

IV. Instant Title

Design

We propose permanently displaying the title above the post editing textbox. Clicking "<change>" next to the title will prompt the title to appear within an editable textbox in which users can modify the title text. If users do not want a title for a certain post, they can simply delete the title text.

Since all the editing is done within the context of a blog preview, the title will appear as it would using the blog's template settings.

Rationale

Always Show the Title: In the current system, a setting controls whether the title textbox is displayed. During our HE, visibility of the title textbox control varied across our blogs—the setting to display the textbox may have been unintentionally set differently during blog set-up (Table IV, 4.4, #11). Users may not even realize that a title textbox should exist. We believe that users should not have to hunt for a setting, and we will always provide them the option of a title, and they can modify/remove the text as needed.

Consistent Text Formatting: The user in the think-aloud study did not understand why the color in the title bar did not look like the titles in the actual blog (Table IV, 4.6, #26). Though he tries to change the color of the title using the text color toolbar button, he does not realize that text formatting does not apply for blog post titles. In our redesign, we do not want users to be confused by discrepancy of text formatting from the actual blog template. The title is presented within the preview, so it uses the blog's template formatting.

Figure 2.2.4.1 – Users directly edit the post title above the post. Titles are formatted to appear as it would when published.

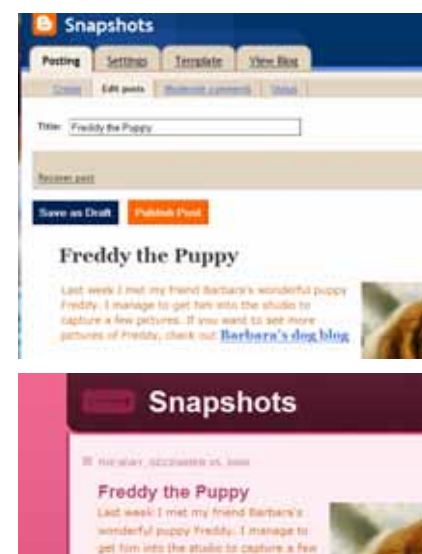**Figure 2.2.4.2** – The discrepancy of the title text formatting when previewing the blog and viewing the actual blog.

IV. References	TA [4.6]	HE [4.4]
Always Show the Title		11
Consistent Text Formatting	26	

V. Image & Text Manipulation

Design

We redesigned the wizards for inserting a link or image. The Insert Link wizard allows users to enter in both the display text and the URL in a dialog box. The Insert Image wizard provides the user two options of adding an image – browsing for the file or referencing a URL. The image is then inserted at the user's cursor.

We are providing an easy way for users to manipulate text and images within their blog post. The entire post area is available for image placement so users can drag images around anywhere within the boundaries of the post.

Additionally, the user will have a more enjoyable interactive experience modifying the padding and text wrapping around an image by merely resizing the boundaries of an image. There will be an immediate boundary around the image itself and then another boundary to indicate the current padding. Users can manipulate the outer and inner nodes to increase/decrease padding and to resize the image itself.

Figure 2.2.5.1 – Redesign interface allows user to manipulate an image while simultaneously previewing the blog post.

Figure 2.2.5.2 – Current system's Insert Image and Link icons.

Rationale

Easier Inserting: The current process of inserting links and images is not intuitive for novice users. The TA user initially missed the browse for image option within the wizard. (Table V, 4.6, #7). In the CI, the user was confused by options to specify layout and size within the "Insert image" dialog box. When choosing a layout, she clicks on the image instead of the radio button and says "I can't click on the picture, I have to click on the little dot." (Table V, 4.1, L277) Both users also had trouble with the "Insert link" dialog box. The CI user had trouble copying and pasting a link, saying, "Arg-- i want to copy you, it won't let me copy. I hate modal dialogue boxes." (Table V, 4.1, L207). The TA participant spent the majority of his time struggling with the wizard to add a

link and edit the text for this inserted link (Table V, 4.6, #14, #22).

Our redesign improves the Insert Link wizard by allowing users to enter in both the display text and the URL in the same dialog box when adding a link, so that it is not necessary to first highlight the text and then click the Insert Link button. This provides a more intuitive way for users to insert display text and a URL. If a text to be made into a link is already highlighted, that text will automatically appear in the 'title' line of the properties dialog box; users can edit the title of the link within this same text box.

Based on the issues faced by both the TA and CI users, we concluded that the current add image wizard was overcomplicated and does not successfully support the task of inserting an image. Therefore, we simplified the Insert Image wizard to only ask users to specify the image they want inserted.

Drag and Drop: The current interface makes it hard to place pictures, causing the user to be less inclined to post many pictures. For example, in the CI, the image is not inserted where her cursor is, and instead, the image often appears in an unexpected position. ("I expected it to be in, down here, where I thought I inserted it in the bottom", Table V, 4.1, L288-289). Although the image is draggable to the desired position in the "Compose" mode, it only snaps inline with the text (Table V, 4.1, L370). The user resorts to editing the location of the image in HTML even though she is not comfortable with editing HTML code (Table V, 4.1, L297, L306). Our solution inserts images at the cursor location, and allows users to drag images anywhere within the boundaries of the editing area. This solves the problem of users needing to edit HTML code to move an image, and removes the problem of having the images placed in the wrong position.

Text Wrapping: The user in the CI is frustrated by the experience of wrapping text around a photo, is discouraged from completing her task, and blames herself for the breakdown, "float right, I just don't know how to do that….I'm just going to give up."
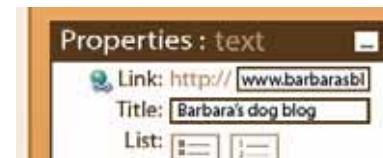

Figure 2.2.5.3 – Rename title of link feature in text properties window.
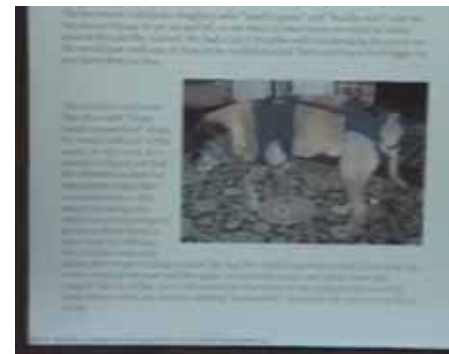
Figure 2.2.5.4 – CI user struggling with the placement of an image in the blog post.

(Table V, 4.1, L308-309).   She also has much difficulty modifying the margins and padding around the photo and indicates that she does not know enough HTML to wrap the text around the picture the way she would like (Table V, 4.1, L305-309, L311, L326, L329). We address this problem by allowing the user to change the padding of an image by interacting with the actual image rather than via HTML code. The text will wrap around these boundaries automatically.

The resizable padding feature for images is possibly an innovative technology.   This   however   can   be implemented as a div tag with css style.
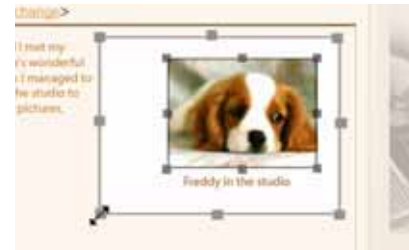
Figure 2.2.5.5 – Resizable padding feature.

V. References	CI [4.1]	TA [4.6]	HE [4.4]
Drag and Drop	L243, L288-9, L291, L292-3, L297, L316, L370-1, L306, L341, L354, L373, I:297, I:347,	8	
Wrapping and Padding	L231, L301, L305-9, L308-9, L311, L326, L329, L354,		
Easier Inserts	L207, L289-90, L336	7, 14, 22	1

2.3 Redesign Future Work

Due to the scope of our redesign and not having evidence for certain improvements, we have intentionally left out features currently found in the 'Edit Post' page that, if considering a complete redesign of the Blogger system, should otherwise be implemented – i.e. keyboard shortcut guidelines and edit post time stamp features.

Our innovation of editing in the context of the actual blog template can also be extended and used to edit the blog template. One could imagine that a user could edit the blogger's profile picture or blog title and caption. We did not cover this in our redesign because it is outside the scope of the WYSIWYG window, however we believe expanding our design to encompass the whole blog would be an interesting future direction.

[Word count: 2997]

3 Retrospective

During the course of semester, we discovered the qualities of each of the methodologies covered in the course. The exploratory methods allowed us to investigate the blogging space and expand upon the scope of our study, formulate our foci, apply our foci and knowledge to the data collection process, organize and visualize data collected. The evaluation methods provided us with concrete techniques to assess, analyze, and compare the qualitative and quantitative data of the Blogger system. Together, these methods produced a well-formed analysis upon which we synthesized the final redesign. In the following section, these methods will be revisited and discussed.

Exploratory Methods

3.1 Contextual Inquiry (CI)

3.1.1 Focus Setting: Affinity Diagram

The affinity diagramming performed during our focus setting session was essential for developing a shared direction for the group. Collecting the ideas together helped us visualize the qualitative relationships between aspects of the system. In lab, the Translation Correction Tool group found that the affinity diagram method could even be adapted to find relationships between two distinct domains, by using different colored post-its for the two domains to find overlapping areas. Large clusters of post-its validated the need to focus on a certain part of the system. Establishing the scope of foci was useful preparation for the CI, so that interviewers had shared understanding of which areas to cover and could bring the inquiry back within the scope if tangential to the foci.
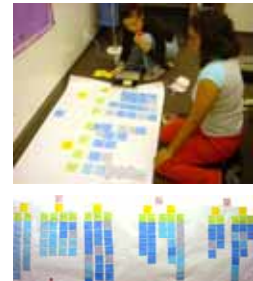
Affinity diagramming was especially beneficial for considering all types of users and examining different uses/intents, unlike other methods such as CI and TA that probed a particular set of users, generalizing their behavior to the general target population. A suggestion to ensure that the full scope of the system is considered is first determining and categorizing all users of the system (e.g. novice v. expert users, information blog vs. interest blog), and then developing questions specific to the different divisions. Foci and target users would then be chosen from each division to cover the range of users.

We found a few aspects of the affinity diagramming method to be challenging. While it was good to have prior knowledge of a system, such as Blogger, it was tempting to innovate on missing features rather than focusing on producing affinity questions. As a suggestion, these innovations can be saved for the later generative phase, when we have data to measure their usefulness.

Having little knowledge of a system, however, can limit the scope covered in affinity diagramming, resulting in affinity questions that do not align with actual user data, and missing important aspects of the work. For example, in lab the Translation Correction Tool group was surprised to discover in the CIs that users had such varying

motivations for playing games, and this variation was not covered in their foci. One way to overcome the mismatch between assumptions and real data is to adapt the foci during the CI according to user's processes. Another idea is to make sure that experts of the system can participate in the affinity diagramming process to share knowledge of the workings of the system to the group. The affinity diagram brainstorming session with the clients of the DARPA Coordinators Interactive Visualization group provided the first encounter of how the complex system actually works. Due to the esoteric nature of the domain, the session prepared the students to further understand what the system was about.

To become more informed about the system and users, the group could also spend time investigating the system with current users prior to the focus setting session. Groups could also redo the affinity diagram based on new information from initial CIs. In lab groups, affinity diagrams were performed more than once following the first CI such that further CIs were informed with foci more applicable to the actual work.

3.1.2. Contextual Inquiry

The contextual inquiry allowed us to observe users performing an activity in their natural setting and gain understanding of real user experiences. It is often difficult to articulate work processes and activities that have become so habitual that the user no longer notices. The CI method was significant because it "reveals hidden work structure" (Holtzblatt, p.37) exposing our users' frustrations and breakdowns, important aspects of the system, user goals, and the degree to which the system supports the work.

We did however find some problems with the CI. Due to lack of knowledge about the users' actual work, often the need to probe on necessary data during the CI is not evident until the modeling phase; thus, not enough data may be captured for valid interpretations. A follow-up session can be performed to ask more questions, but this may be less accurate due to reliance on retrospective memory. Instead, it may be better to probe as much as possible during the interview since later relevancy is unpredictable. Another problem found by Translation Correction Tool group was that some users prepared before CI began, making it hard to observe the natural work process. A suggestion would be to emphasize beforehand the importance of observing them naturally without preparation.

3.2 Contextual Design

Contextual design encouraged meticulous attention to CI findings, devising a comprehensive representation of the target user executing the activity. Analyzing actual users minimized preconceptions and assumptions. The transference of data into work models organized information in meaningful ways that provided better understanding of users' perspective and their work process, and visualization of what would otherwise be an overwhelming list of data points and not apparent — for example, the sequence model made redundancies and repetition of steps explicit by arrows and loops.. The models allowed us to consider the user process with different aspects in mind, capturing separate facets of the activity (e.g. artifacts, responsibilities, influencers, and breakdowns). The models also served as references to provide evidence for usability inspection methods (such as using sequence diagrams as a baseline to create work process for Cognitive Walkthrough). Consolidating and visualizing the data in structured forms made data easily extractable during the redesign phase, when necessary to recap findings in a short period of time. A solid assessment to eliminate redundancies while maintaining representative data was crucial. One suggestion is to capture all data and reiterate upon this data by weeding out irrelevant points with the foci and redesign in mind.
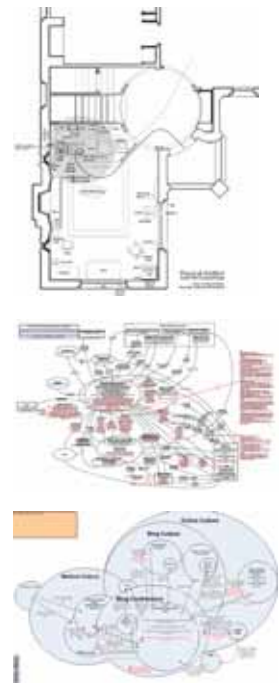
During our work modeling session, we performed the different models in parallel. However, it was difficult to switch modes between the different models—we were particularly prone to confusing the data assignment between flow and cultural models. Although sequentially progressing through the models increases time, the distinctions between the models would be more obvious.

Often the process of work modeling exposed uncertainties that were unconfirmed by the CI, leaving room to misinterpret data. A suggestion for reducing this difficulty is to base interpretations on the users' intents and goals surrounding the issue. Due to time constraints, it may be difficult to gain as much breadth in a CD as other methods. However, the contextual design is flexible such that work modeling practices can be tailored to accommodate project limitations. The Translation Correction Tool lab group altered the artifact model such that preceding CIs were not essential, but instead, comparable artifacts were analyzed independently to extract common themes and designs.

In general, we realized that data from our models was very useful in inspiring a number of ideas in our redesign. However, we also found that we often fell into the traps of focusing too much on distinct

individual breakdowns, resulting in designed solutions that were not holistic. Thus, it is necessary to regularly take a step back to see the big picture.

Evaluation Methods

Four evaluation Methods were used during the course to evaluate different aspects of systems. While Keystroke-level Modeling (KLM) focused on performance time of a system, Heuristic Evaluation (HE) was a good method to analyze a system as a whole based on established heuristics. Cognitive Walkthrough (CW) worked well in examining steps to complete task, while Think Aloud evaluated ease of use with more objective data from actual.

Usability Aspect Reports (UARs) were used to capture different aspects found during Heuristics Evaluation, Cognitive Walkthrough, and Think-Aloud. The rough UARs were an effective way to qualitatively organize evaluation data and prioritize problems in a succinct and quick way. The severity section enabled quantitative comparison between problems, examining the problem more objectively in terms of frequency, impact, and persistence. These ratings were also normalized between group members to assure a more accurate representation of severity judgment. In this way, different perspectives on system issues and importance of different facets could be represented. Overlap in individual UARs further validated the data. By brainstorming solutions and tradeoffs, useful cost/benefit analyses were documented to determine whether the problem was worth fixing or whether the tradeoff was worse.

3.3 Keystroke-Level Modeling (KLM)

The keystroke-level modeling method served as a quantitative comparison tool for predicting time to perform tasks by explaining how each step affect the overall performance time by indicating the mental and physical operators and their durations. KLM comparisons revealed useful findings for design. For example, in the homework, we found that tasks involving keyboard shortcuts have better performance than mouse-driven tasks because it reduced transitions between keyboard and mouse and number of steps required.
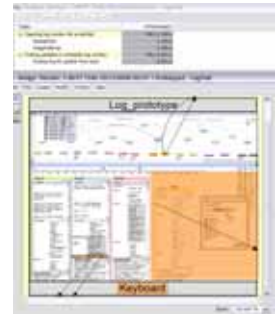
In the Translation Correction Tool lab group, KLM was used to compare use of keyboard shortcuts with mouse interactions, resulting in unexpected predictions. Analysis of operators integrated with sequence explained the results such that keyboard shortcuts may still be faster than using the mouse.

CogTool dramatically reduced tediousness in performing KLM the conventional way. Its algorithm decreased the possibility of missing steps or miscalculating prediction times. No prior knowledge is necessary for setting up the script – only learning how to use the program. To measure the time to perform a task, we needed to first form screenshots of each step containing widgets used. We were provided with screenshots for the homework assignment, but in lab we found that generating these screenshots was hard when only a prototype of a system exists. CogTool may be more appropriate for a later design phase of the system when the workflow has been better defined. Although we appreciated that CogTool decreased the time to perform KLM, it also made it easier for us to ignore concepts behind KLM, such as how psychological steps are calculated. We believe this was a good tradeoff since it allowed us to focus on the design; we were able to look at the ACT-R and scripts to learn some of the basics behind KLM to help us optimize the work process.

3.4 Heuristic Evaluation (HE)

In our opinion, the heuristic evaluation method was the most powerful method that required the least cost. The established heuristics were easy to learn and enabled us to examine systems both early and late design phases, current or new systems, early wire frames, or various stages of prototypes and interfaces. We were able to use the method repeatedly in the process to discover immediate violations and to iterate on the design accordingly. HE also covered a large scope of the system with concrete criteria, allowing us to address 30% of the system's usability in our redesign.

While the HE provided a robust indication of system problems, the violations were based on what the evaluators found critical and not on actual user experiences, so HE was somewhat subjective. However, one interesting suggestion from Usability Inspection Methods (Nielsen, 1994) that we think is applicable to this situation is to include outside users in the HE process, so that real user feedback is taken into account (p.59).

The HE criteria provided concrete usability guidelines that are intended to extend to all users' experiences. The only drawback to these defined criteria is that they cover a limited scope of usability heuristics. A suggestion could be to include additional heuristics that evaluators and/or designers find important in the work, upon which the basis of system redesign can be better implemented.

Lastly, as a suggestion, an affinity diagram can be used to classify and weigh different components. Groupings can be based on heuristic violated to aid the redesign process (e.g. accounting for all error prevention issues).

3.5 Cognitive Walkthrough (CW)

We found that Cognitive Walkthrough was the most helpful in evaluating work flow in a system and discovering missing features at its initial design phase. It provided a way for evaluators to filter out obvious ambiguities and breakdowns in the system. A TA could then be performed on the more refined prototype to test assumptions of user knowledge. For example, in the DARPA Coordinators Interactive Visualization system, the CW helped the student team to realize that the system depended entirely on the user having previous understanding of and experience with the domain; the interface was not a walk up and use system. But these experienced users still required guidance for specific system features, such as color labels and keyboard shortcuts. The CW helped the team to figure out what knowledge users of the system would already have and what help needed to be provided for to guide users through the specific interface.

The four questions regarding a specific task provided good reminders of standards the overall system should meet. The depth of analysis for each step of a defined task also appeared to be appropriate to assess the four usability aspects defined in the questions. Thus, the cognitive walkthrough, with all its benefits, is a usability method that required reasonable time and effort from the design team.

The small scope analyzed in the CW made it easier to discover breakdowns and discuss solutions. Additionally, the format of answering short questions facilitated the design improvement process as design ideas were written up as proposals to the breakdowns that were found in the four questions in each step. Nevertheless, the narrow analysis of the overall system could lead teams to redesign features based on this and not consider how this discrete redesign may conflict with the overall system scheme. Also, similar to HE, we had to make subjective assumptions on the knowledge and background experience of the hypothetical user performing this defined task. One way to make better assumptions of users' background experience and knowledge is to base assumptions from user data and findings from the CI.

Another improvement that could benefit the CW was rewording the four questions in order to improve understandings of the considered aspects; our groups actually reworded the four groups to 1) Will the user achieve the **overall goal** of this step, 2) Will the user **perceive** that this step is possible, 3) Will the user **comprehend** that this step is logical, possible, and correct, and 4) Will the user receive **feedback** from the system that the action taken was correct.

3.6 Think Aloud (TA)

The Think Aloud was the most useful in discovering our misconceptions about the usability of our interface. While severity ratings from the HE and CW were subjective to the evaluators, severity of a problem could objectively be observed by the degree of frustration the user expressed. The TA was also very useful to test how easy the system was to 'walk up and use' for a new user.

However, we found that it was quite difficult to combine TA UARs with seemingly similar sub tasks and goals and to deciding the granularity of breakdowns: for example, deciding whether to have two separate UARs for creating a link in the Compose and 'Edit HTML' mode versus one UAR to encompass the entire task of creating a link. It may have been helpful to create an affinity diagram to group similar breakdowns. We did this to group similar UARs on the white board during the HE, and this process visually helped us see what problem areas were noticed. Given a larger scope of analysis in the HE, this did not help us combine the UARs because each member delved into various parts of the Blogger interface so there was not a lot of overlap. However, the specific task flow in the Think Aloud would benefit a lot more from grouping. For our consolidation, we went through each individual's list of UARs; other members in the team with similar UARs would note when a UAR could be grouped. This process seemed to be sufficient for grouping UARs however did not help visualize the problematic tasks which we spent considerable time and confusion discussing.

Defining one criterion in a UAR was also difficult in cases when the observed user switched between unfinished tasks and goals. Usually in these cases, the problem could be defined by numerous criteria. The criteria also did not seem to contribute to how the evaluators rated a UAR problem. The criteria appeared to only help illustrate the UAR evidence and explanation. It would be more helpful if the criteria could also be used for the redesign process to see the distribution of problems within the different criteria.

If evaluators want to find the usability of a very specific task or specific features in an interface, the Think Aloud tasks given to the user should be narrowed down so that users do not skip around between tasks, which may obscure user feedback of features.

3.7 Retrospection Conclusion

Overall, we found that the separate methods complemented each other well in exploring, evaluating and eventually redesigning a system. The methods served different purposes, and were applicable at different phases in the process. Methods such as HE, TA, and KLM offered quantitative data which helped us to prioritize features in our redesign according to severity ratings. Other methods, such as focus setting, contextual inquiry/design, and cognitive walkthrough, offered qualitative explorations of a problem space that we could later visualize through groupings and models. Subjective explorations were sometimes a good way to take a first pass at data to filter out the obvious questions. The objective methods could then be applied to gather real user scenarios that we may not have considered, and also served to validate our subjective assumptions. Although real world deadlines and resource limitations do not always allow the luxury of applying all of these methods, we found that the more methods that can be applied greatly benefits the project since the methods serve such distinct purposes.

Word Count [2928]

4. Appendix

Consolidation

List of all Problems identified from usability methodologies

Redesign Ideation Process

** Notes **

Grey high-lighted text indicate break downs found but were not considered in redesign as the problems were not relevant to this redesign scope.

Yellow high-lighted text indicate rough UARs that have detailed UARs written.

Percentage of break downs covered with the redesign:

	# of BDs covered	Totale # of BDs found	%
Contextual Design	48	142	33.80%
Heuristic Evaluation	9	29	31.03%
Cognitive Walkthrough	1	4	25.00%
Think Aloud	20	26	76.92%
	78	201	38.81%

4.0 Consolidated Table of Usability Problems resolved by Redesign Features

1. **Editing in the context of the blog preview**

Problems with existing system:
-   Try to edit on preview page by dragging picture down page but doesn't work (L291)
-   L291 (Design Idea) To be able to edit/move images and text in preview mode
-   Has to click preview to see changes - wants to see updates in real-time when in HTML mode (L320, 343)
-   Can't see code and preview at same time (L343)
-   L361 (Design Idea) Should show HTML text while previewing instead of empty text box
-   Preview mode is inconsistent with actual blog view. (L363)
-   Image not there on blog post (363)
-   Can't edit in preview mode (367)
-   In compose mode, not edit html mode, different than original, don't know what view originally in if it wasn't composing (370)
-   Compose frame not big enough to move image up to desired position. Scroll up. (370)
-   "Compose" mode wording – what does compose mode mean opposed to edit html mode (HE 10)
-   Preview button in Compose mode does not indicate if you are in preview or non-preview mode (HE 14)
-   "Preview" in comment section inconsistent with Preview post – shows preview within blog rather than showing it in new window or on the editing page itself (like in post editing mode) (HE 15)
-   Save draft brings back to post listings(G1-HE-28)

<G1>TA-	4	1:52 2:00 2:09 21:57	"View blog" link doesn't include preview of current draft; link is misleading.	KA-TA-01 PR-TA-02 NS-TA-05 SS-TA-06
<G1>TA-	5	24:22 24:46 25:04	Meaning of Edit HTML and Compose is unclear	NS-TA-6 SS-TA-7 PR-TA-14
<G1>TA-	9	4:45	Preview Blog mode shows inconsistent text formatting than actual blog mode	NS-TA-13 SS-TA-14
<G1>TA-	10	4:51 13:20 - 14:00	Preview mode does not allow text editing.	KA-TA-10 NS-TA-14 SS-TA-25
<G1>TA-	12	5:36 - 6:52 9:54 13:55 16:17 26:19 9:52 - 11:05	Warning message displayed when navigating away does not direct user to correct action (save post)	KA-TA-03 PR-TA-08 NS-TA-16 SS-TA-17 KA-TA-06 PR-TA-06
<G1>TA-	15	14:32 32:25	Hide Preview option is not prominent to switch back to edit mode.	NS-TA-39 SS-TA-21
<G1>TA-	17	11:42 21:20	Edit HTML' is the default mode and is not understandable for novice users to compose post	NS-TA-11
G1>TA-	16	10:10 - 11:25	Hard to distinguish the difference between saving in the browser and saving in Blogger	KA-TA-07 PR-TA-10 NS-TA-19 SS-TA-23

2. Drag-able/Floating toolbar

Problems with existing system:
- Too many UI buttons in blog (L139)
- L173 (Breakdown) Doesn't remember how to use keyboard shortcut *(our keyboard shortcut is consistent with other s/w)*
- Has to type in link manually in modal dialog boxes (L207)
- Click on layout icon instead of radio button (L277)
- Don't know how to get to post editing mode, Don't know what "Recover Post" means (I: 294) (solved by undo/redo in toolbar)
- Does not understand what all the UI buttons do, e.g. trash buttons (L395-7)
- Inconsistent message for keyboard shortcuts – inconsistent text format for "ctrl" and then the letter to press (HE 2)
- No way to undo – can't use standard keyboard shortcuts to undo and there is no button for undo (HE 4)
- Blockquote – Users may not be familiar with this terminology (HE 5)
- Cluttered date/time dropdowns – the controls are close to each other and hard to read when changing date of a post in Post Editor mode (HE 6)

<G1>TA-	11	5:30 - 8:30 11:55 12:00	"Add Link" button in toolbar is not prominent	KA-TA-08 NS-TA-25
<G1>TA-	18	12:20 - 12:53 19:50	Cannot access blog body text while 'Enter URL' popup window is still open	KA-TA-09 NS-TA-23
<G1>TA-	6	3:35 32:42	"Insert a picture" icon is not clearly visible.	NS-TA-7 SS-TA-9
<G1>TA-	11	5:30 - 8:30 11:55 12:00	"Add Link" button in toolbar is not prominent	KA-TA-08 NS-TA-25

3. Properties window

Problems with existing system:
- Can't insert captions alongside images (L373)
- L373 (Design Idea) Should add feature to make it easy to add captions under photos
- Eraser icon – intended to clear formatting, but icon is unclear what it does (HE 3)

<G1>TA-	1	00:59 1:05 1:20 2:05 - 2:25 32:08	No visible option for changing text formatting in Edit HTML mode	PR-TA-1 NS-TA-2 SS-TA-3
<G1>TA-	21	21:33	Link created in Edit HTML mode does not show up in preview mode because link tag is made but not labeled	KA-TA-11 PR-TA-12 NS-TA-25 SS-TA-30
<G1>TA-	23	29:42 - 30:03 30:38	Cannot add additional words to existing hyperlinks	KA-TA-13 NS-TA-32 SS-TA-34

<G1>TA-	24	30:02 30:08 - 30:37	Unlinking a linked text is not intuitive in blogger	NS-TA-35 SS-TA-34
<G1>TA-	25	31:25	Can only format text color from button, cannot right click to edit text font color	NS-TA-37

4. Title bar

Problems with existing system:
Title bar is missing from post editing page - hard to find setting to add this (HE 11)

<G1>TA-	26	32:10	Not obvious that text color button in Compose window does not apply for blog post title.	SS-TA-37

5. "Click to add text" region (like powerpoint)

Problems with existing system:
- Picture is not where expected, thought inserted at bottom, want it at bottom but don't know how (289-290)
- L291 (Design Idea) To be able to edit/move images and text in preview mode
- L309 (Breakdown) U1 is discouraged from completing her task; blames herself (wants to wrap text around photo)
- Image not at bottom where cursor is placed (L336)
- Image placement – Image is not placed where the cursor is when you press the insert image button. (HE 1)

<G1>TA-	7	3:54	"Browse for image" control in Insert image wizard is not prominent.	SS-TA-10
<G1>TA-	14	8:03 - 8:30 9:37	The entire procedure for creating hyperlink in Blogger is not intuitive (main goal)	KA-TA-05 PR-TA-15 NS-TA-18 SS-TA-19
<G1>TA-	22	25:06 25:35 27:32 29:24	Insert link wizard window does not provide option to insert URL title, only URL tags (sub goal: rename link)	KA-TA-12 NS-TA-18 SS-TA-32 PR-TA-15

6. Drag and drop images

Problems with existing system:
- Don't know where image is going to be put (243)
- Image is not where user expected (L288-289)
- Doesn't know how to move image to where she wants (L290, 292, 293)
- Try to edit on preview page by dragging picture down page but doesn't work (L291)
- L291 (Design Idea) To be able to edit/move images and text in preview mode;
- Have to edit location of image in HTML, but may not have sufficient knowledge (I:297)
- Doesn't know enough HTML to position her image as desired (L306)
- Image not far down enough (L316)
- Doesn't know where to insert image source code (L341)
- Not entirely satisfied with image placement. (I: 347, 354)
- Try to move image in text editor but doesn't move (370)

- Move image to wrong spot, can't move down (370)
- Image moved but not in middle but not at bottom (371)
- Image moved but not in middle but not at bottom (371)
- Hard to add pictures, so is reluctant to post many (L373)

\<G1\>TA-	8	4:34	Inserted image not displayed in Edit HTML mode.	SS-TA-13

7. Image resizing/padding

Problems with existing system:
- Don't know what pixels to put under "Scale Image" (231)
- Doesn't know how to wrap text around photo (L308)
- Text is not wrapped to the left around picture, don't know how, feel like don't know enough HTML, want to give up (L305-309)
- Text wrapped around image but extra white space and not at bottom, "the solution we found": not in same format as "the problem" (L311)
- White space is inconsistent around picture (L326)
- Nothing changed when user tried to move image to change padding around picture (329)
- Image not after word "month" (L329)
- Difficult to modify margins (L354)

8. Auto-highlight HTML text associated with selected item in preview (like Dreamweaver)

Problems with existing system:
- Read through html text, can't find text (L326)
- L361 (Design Idea) Should show HTML text while previewing instead of empty text box
- Image not there on blog post (363)

\<G1\>TA-	21	21:33	Link created in Edit HTML mode does not show up in preview mode because link tag is made but not labeled	KA-TA-11 PR-TA-12 NS-TA-25 SS-TA-30

4.1 Contextual Inquiry

Assignment summary:
In this homework, you will critique a video of a Contextual Inquiry (CI), concentrating on the CI *technique*, not the content. In Part I, you will practice setting the focus for a CI. In Part II, you will focus on the interviewer's behavior and interaction with the participant with respect to the CI guidelines covered in the reading and lecture.

Affinity Diagram Findings:
Not applicable because of the foci we chose to inquire:

1. Understanding how people find information, particularly by using blog search features.
2. Understanding how people interact with the blogging community, especially through participation in feedback discussions

… and not the process of creating a blog post, delivering the information.

4.2 Contextual Design

Assignment summary:
In this homework, you will produce five models of the CI data of managing a blog.
- To practice creating CD models that link back to the raw data
- To practice abstracting issues and design ideas in the process of doing CD models

Findings:
No relevant findings from the Cultural model or the Physical model.

4.2.1 FLOW DIAGRAM

1. blog's title caption font setting is too small (L125)
    N/A: our scope is not to allow user to edit entire blog page's CSS
2. Too many UI buttons in blog (L139)
    S: minimize # of icons; implement properties window
3. Has to type in link manually in modal dialog boxes (L207)
4. Image is not where user expected (L288-289)
    S: refer to 4.2.1 #5
5. Doesn't know how to move image to where she wants (L290, 292, 293)
    S: default WYSIWYG mode (what is it called?) which will place image to exactly how post would look like in the blog.
6. Doesn't know enough HTML to edit her post (L306)
    S: WYSIWYG mode will be so easy to use, user, without sufficient HTML knowledge, will not need to go to HTML mode to edit things
7. Doesn't know how to wrap text around photo (L308)
8. Doesn't know where to insert image source code (L341)
9. Difficult to modify margins (L354)
10. Has to click preview to see changes - wants to see updates in real-time when in HTML mode (L320, 343)
11. Can't insert captions alongside images (L373)
12. Hard to add pictures, so is reluctant to post many (L373)
13. Does not understand what all the UI buttons do, e.g. trash buttons (L395-7)
14. Preview mode is inconsistent with actual blog view. (L363)

13 of 79 BDs covered

4.2.2 SEQUENCE DIAGRAM

1. No feedback from crop command (212)
2. Open different picture and opens original picture again while looking for copied image, don't know where copied image is (214)
3. mport photos feedback alert is not understandable (217)
4. Don't know what "Web Page" means and decide it is not meant to change photo to web page settings (228)
5. Don't know what pixels to put under "Scale Image" (231)
6. Don't know where image is going to be put (243)
7. Realize image still not cropped (252)
8. Click on layout icon instead of radio button (L277)
9. Waiting for image to upload takes too long, confirms that image should've been smaller and will take too long for people to see it (282-283)
10. Picture is not where expected, thought inserted at bottom, want it at bottom but don't know how (289-290)
11. Try to edit on preview page by dragging picture down page but doesn't work (L291)
12. Don't know how to get to post editing mode, Don't know what "Recover Post" means (I: 294)
13. Have to edit in HTML, but may not have sufficient knowledge (I:297)
14. Text is not wrapped to the left around picture, don't know how, feel like don't know enough HTML, want to give up (L305-309)
15. Text wrapped around image but extra white space and not at bottom, "the solution we found": not in same format as "the problem" (L311)

16. Image not far down enough (L316)
17. Read through html text, can't find text (L326)
18. White space is inconsistent (L326)
19. Nothing changed [Adding linefeed doesn't add whitespace.] (329)
20. Image not after word "month" (L329)
21. Cut and paste image tag after a word "month" (L333)
22. Image not at bottom (L336)
23. Needs one more line down to be at bottom, memorizes word "neoprene pants" (341)
24. No line space above image (341) Don't remember if put linefeed in. (341)
25. Can't see code and preview at same time (L343)
26. Didn't work. Shouldn't have put linefeed in. [Adding linefeed doesn't create whitespace. Can't tell if linefeed was added.] (343)
27. Didn't work. Frustrated and want give up. [Adding linefeed doesn't create whitespace. Can't tell if linefeed was added.] (347)
28. Not entirely satisfied with image placement. (I: 347, 354)
29. Can't draw in arrows on image (357)
30. Alert box pops up, click "Cancel", don't want to do that (361)
31. Confused by options to "republish index only" or "republish entire blog", don't see "view blog" link initially (363)
32. Image not there on blog post (363)
33. Window resized so image is embedded in text, and linefeeds in wrong spots (365)
34. Too many windows popped up (366)
35. Lost posting window even though notification said "view the blog in new window" (366)
36. Can't tell if there is line feed in text (367)
37. Accidentally pressed return key. Dialogue box pops up to navigate away from page. Click "Cancel" (367)
38. Can't edit in preview mode (367)
39. In compose mode, not edit html mode, different than original, don't know what view originally in if it wasn't composing (370)
40. Try to move image in text editor but doesn't move (370)
41. Compose frame not big enough to move image up to desired position. Scroll up. (370)
42. Move image to wrong spot, can't move down (370)
43. Wait too long for blog to publish (371)
44. Wait, nothing happened and not working ["View Blog" page isn't updated because must publish first] (371)
45. Image moved but not in middle but not at bottom (371)

29 of 45 covered

4.2.3 RECORDER SHEET

	Source	Type	Content
1	123	Insight	Uses bookmark to access blog.
2	127	Insight	Has another bookmark to access her edit blog page.
3	157	Insight	She only edits blogs in the evening, a couple times a month.
4	161	Insight	Blogs as a break from other work.
5	172	Insight	Titles are milestones
6	173	Breakdown	Doesn't remember how to use keyboard shortcut
7	196-200	Insight (Artifact model)	Can reach all her posts by scrolling down.
8	224	Breakdown	Photoshop is too complicated for her to use.
9	230	Design Idea	iPhoto should indicate the photo format.
10	230	Design Idea	When exporting, it should automatically resize to diff. formats (e.g. webpage format)
11	291	Design Idea	To be able to edit/move images and text in preview mode;
12	309	Breakdown	U1 is discouraged from completing her task; blames herself (wants to wrap text around photo)
13	357	Design Idea	U1 wants to draw on image directly in blog editing UI
14	361	Design Idea	Should show HTML text while previewing instead of empty text box
15	373	Design Idea	Should add feature to make it easy to add captions under photos
16	375	Design Idea	Allow readers to view all comments at once (not per post)
17	383	Design Idea	Blog should include advertising filter to avoid spam in comments.
18	146	Breakdown	U1 doesn't seek help when she runs into issues.

6 of 18 covered

4.3 Keystroke-Level Model

Assignment summary:
Students will use CogTool to produce a Keystroke-Level Model of a skilled user making a new post that includes a previous comment. Students will also redesign the blog editor so that this task can be performed more quickly.

Findings:
Ability to use keyboard shortcuts reduces expert's time needed to complete a task:

- Copy
- Paste
- Open new browser window
- Switch between windows
- Tab between text boxes.

4.4 Heuristic Evaluation

Assignment summary:
This homework asks you to do a heuristic evaluation of Blogger (http://www.blogger.com/), with special attention to Blogger's Post Editor and Blogger Comments.

Findings:

	Combined Aspect Statement	Heuristic(s) Violated	Individuals Referenced	Average Severity Rating	Evidence (Tape time(s))	Think-aloud UAR nos. (if any)	Supported / Refuted	
1	**Image placement** – Image is not placed where the cursor is when you press the insert image button.	(5)Error Prevention	ss-HE-14	2.5	4:25	**N/A**	**N/A** because user had not actually inserted any text, so the image could not have been placed elsewhere.	
2	**Inconsistent message for keyboard shortcuts** – inconsistent text format for "ctrl" and then the letter to press	(4) Consistency and standards	pr-HE-05	1.5				
3	**Eraser icon** – intended to clear formatting, but icon is unclear what it does	(2) Match between system and real world	ss-HE-10, pr-HE-04	1.5				
4	**No way to undo** – can't use standard keyboard shortcuts to undo and there is no button for undo	(3) User control and freedom	ss-HE-11, pr-HE-02	3.75	14:28	G1-TA-19	supported	
5	**Blockquote** – Users may not be familiar with this terminology	(2) Match between system and real world	ss-HE-12	1.5				
6	**Cluttered date/time dropdowns** – the controls are close to each other and hard to read when changing date of a post in Post Editor mode	(8) Aesthetic and minimalist design	pr-HE-03	1.5				
7	**Status window in tabbed page** – status window is a tab within the Posting tab listed alongside other tasks (Create, edit, moderate comments)	(4) Consistency and standards	nfs-HE-08	2	1:26	**N/A**	**N/A** because he does not interact with the status window	
8	**Post listings page arrows** – the arrow next to a post does not rotate when you drop down more information	(4) Consistency and standards	nfs-HE-13	1.25	6:56	**N/A**	refuted	
9	**Post listings page links** – when you click on a specific post link it does not take you to the post. Instead drops down the	(4) Consistency and standards	ka-HE-09	2.25	6:53 - 7:25	G1-TA-13	supported	

	details about post.						
10	**"Compose" mode wording** – what does compose mode mean opposed to edit html mode	(2) Match between system and real world, (4) Consistency and standards	Nfs-HE-07, ss-HE-09	2	2:09 21:57 24:22 24:46 25:04	G1-TA-5	supported
11	**Title bar is missing from post editing page** - hard to find setting to add this	(6) Recognition rather than recall	ss-HE-01	3	**N/A**	**N/A**	**N/A** because title bar was not missing for user.
12	**Tabs (navigation) toolbar is inconsistent across pages in blog system**	(4) Consistency and standards	ka-HE-40	3			
13	**Blog preview mode not indicated** – shows blog in new window, does not indicate that it is a preview	(1) Visibility of system status	Nfs-HE-12	2			
14	**Preview button in Compose mode does not indicate if you are in preview or non-preview mode**	(1) Visibility of system status	Pr-HE-06	1.5	32:17	N/A	refuted
15	**"Preview" in comment section inconsistent with Preview post** – shows preview within blog rather than showing it in new window or on the editing page itself (like in post editing mode)	(4) Consistency and standards	Ka-HE-35	3			
16	**Inconsistent CSS mode** – CSS template for blog page is not used for comments page	(4) Consistency and standards	Nfs-HE-06	2.5			
17	**Delete comment message is confusing** – says you're deleting from <blog name>	(5) Error prevention	Pr-HE-01	1.5			
18	**Cannot undelete comments** - once you delete a comment cannot re-add it.	(3) User control and freedom	Nfs-HE-04	3			
19	**Same feedback page for deleting comments and deleting comments forever**	(5) Error prevention	Ka-HE-37	2			
20	**When you initially go to Moderate comments, need to enable setting to allow comment moderation**	(3) User control and freedom, (7) Flexibility and Efficiency of use	Nfs-HE-05, ka-HE-27	3.5			
21	**Viewing comments within blog involves many steps**	(7) Flexibility and efficiency of use	Pr-HE-08	2.75			
22	**Confusing repetition within Moderate Comments UI** – Repeats "publish" and "reject"	(8) Aesthetic and minimalist design	ss-HE-16	1.25			

	buttons						
23	**Comment publishing status is not very visible to indicate that the comment published successfully.**	(1) Visibility of system status	ss-HE-15, pr-HE-09	1.75			
24	**Button says "Login and Publish" – even when user is already logged in**	(5) Error prevention	Ka-HE-32	2.5			
25	**Navigating away from editing a post pops up error message to save unsaved changes even when no unsaved changes**	(1) Visibility of system status	Pr-HE-07	2			
26	**Inconsistent behavior when you click on blog link -** when on profile page, takes you to the published blog, and when on dashboard, takes you to the post editor	(4) Consistency and standards	Nfs-HE-01	2.25			
27	**Don't know if "View blog"/"View" will take you to new window; inconsistent with where it explicitly says "View blog in new window"**	(4) Consistency and standards	Nfs-HE-10, ka-HE-23	2	1:52 33:37	**N/A**	**refuted**
28	**Save draft brings back to post listings**	(4) Consistency and standards, (3) User control and freedom	Ka-HE-21, ss-HE-08	3	6:53 - 7:25	G1-TA-13	supported
29	**Error message unclear and not in plain language –** says "There were errors" and lists technical error. Does not indicate what problem was or suggest solution	(9) Error recovery	Ka-HE-01	4			

9 / 29 HEs considered

Good Aspects
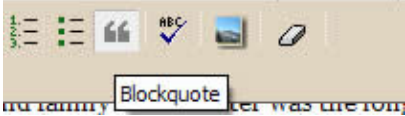
Combined Aspect Statement	Heuristic(s) Followed Successfully	Individuals Referenced
Show/Hide feature: Allows user to collapse comments and show original post on adding comments page	Aesthetic and Minimalist Design	Ka-HE-16, pr-HE-10
Compose mode toolbar follows standard format – uses same icons that are used in other apps for changing text format settings	Consistency and standards	ss-HE-03
Prevents from deleting a comment forever	Error prevention	Nfs-HE-03
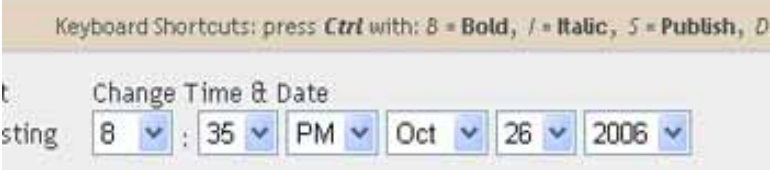
No. *ss-HE-14*	**Problem/Good Aspect: Problem**

Name: Image is not placed where your cursor is

Evidence
Heuristic: **5, Error Prevention**
Interface aspect: Can insert an image using image icon in toolbar

Explanation
Many users will probably assume that the image will be inserted where their cursor is currently when they select the "insert image" button. However, the image is just haphazardly inserted at the top. This will cause confusion for users.

Severity or Benefit
Rating: 3, major
Justification (Frequency, Impact, Persistence)
   Frequency: Common for all users
   Impact: The only workaround for this problem is to deal with the issue after it happens by dragging the image back to where your cursor was, where you initially wanted the image inserted.
   Persistence: Continuous – does not go away after you learn that the insert image icon behaves like this. Once you learn about it, users will expect this behavior at least and know to drag the image accordingly.
   How I weighted the factors:
  I rated this as a major problem because it is common for all users, and it is not easy to overcome the problem by losing the spot of your cursor and having to drag the image to a new location.

Possible solution and/or trade-offs
Insert the image where the user's cursor is when they select to insert an image. The tradeoff may be that this is harder to do on the backend of blogger or perhaps some users expect the image to just be inserted at the beginning or end of the document and therefore do not place their cursor at an appropriate place.

Relationships
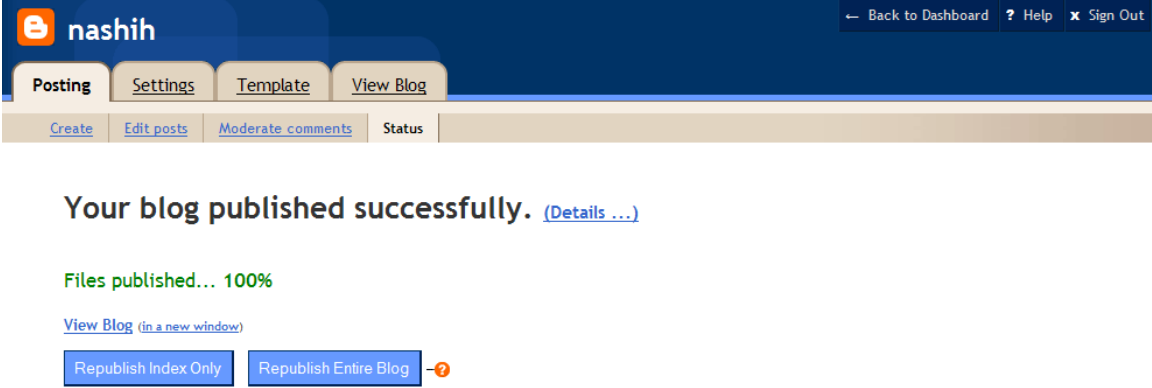
No. **PR-HE-05**	**Problem/Good Aspect:** Problem

Name: Inconsistent message for keyboard shortcuts

Evidence
Heuristic: **HE4 – Consistency and standards**
Interface aspect:
On Edit Post page, at the bottom of the post textbox, there is a message about available keyboard shortcuts that the users can use.

Keyboard Shortcuts: press **Ctrl** with: B = **Bold**, I = **Italic**, S = **Publish**, D = **Draft**   *more »*

Explanation
The message says "press **Ctrl** with: B = **Bold**". While **Ctrl** which is one key for the users to press is in bold, other keys to press such as **B**, **I**, **S**, and **D** are not bolded the same way as **Ctrl**. However, they bold the words such as **Bold**, **Italic**, **Publish** and **Draft**, which are the results of pressing Ctrl and another key. The way they bold text is inconsistent and the users might get confused and have to reread the message several times. It is possible that a user might think that he needs to press Ctrl and Bold keys at the same time instead of Ctrl and B key as the first key is in bold so the second key should also be in bold.

Severity or Benefit
Rating: 2
Justification (Frequency, Impact, Persistence)
   Frequency:
   Impact:
   Persistence:
   How I weighted the factors:

Possible solution and/or trade-offs
Bold all the keys to be pressed the same way as Ctrl. But this could have a trade-off that it becomes harder for the users to see what the result for pressing each key is. Maybe coloring the result words could also help with this trade-off.

Relationships
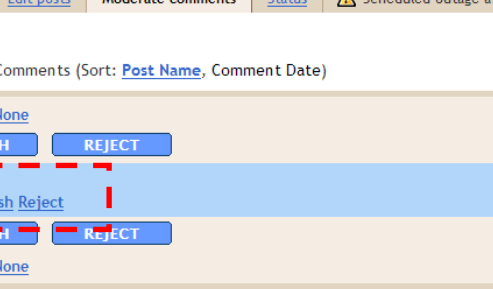
No. **ss-HE-10**	**Problem/Good Aspect: Problem**

Name: Eraser icon means to clear formatting

Evidence

Heuristic: **2, Match between system and the real world**
Interface aspect: Eraser means to erase something in the real world, which is semi-true in this case, but in most apps an eraser means to undo something you've done (erasing an action).

Explanation
The eraser icon is not a standard icon so it is hard to tell what this does until you hover over it.

Severity or Benefit

Rating: 1, cosmetic

Justification (Frequency, Impact, Persistence)

   Frequency: Common for novice users

   Impact: Easy to overcome – users can hover over the button to see a tooltip that explains what the button does

   Persistence: One-time, easy to overcome once you figure out what the button does by reading the tooltip.

   How I weighted the factors:

   I rated this low severity because although it is a common problem for novice users, it is only a one-time occurrence since once you read the tooltip that explains that it clears the formatting, you won't have this problem again.

Possible solution and/or trade-offs
Since there is no existing icon, perhaps it would be easier to understand if "Clear formatting" was written on a button. The obvious tradeoff for this is that it takes up more real estate on the screen and doesn't conform to the other buttons in the toolbar.

Relationships

No. *ss-HE-11*	Problem/Good Aspect: Problem
Name: No way to undo	

Evidence

Heuristic: **3, User control and freedom**

Interface aspect: Many word processing toolbars contain an undo button that allows the user to undo whatever they just did. Users are not able to do this in thisUI.

Explanation

Many word processing toolbars contain an undo button allowing the user to undo their previous actions. The blogger UI does not provide this needed functionality, which goes against the heuristic for user control and freedom.

Severity or Benefit

Rating: 3, major

Justification (Frequency, Impact, Persistence)

   Frequency: Common for all users

   Impact: Not easy to overcome. Need to delete whatever you just typed or delete the image you just added, etc.

   Persistence: Continuous (not one-time) because there is no good way to overcome this problem.

   How I weighted the factors:

  I rated this as a major problem because it is a common problem for all types of users, and the problem does not go away after you become aware of it.

Possible solution and/or trade-offs

Add an undo button to the toolbar. The tradeoff is that it may clutter up the toolbar further, and they would probably also have to add a redo button as well.

Relationships
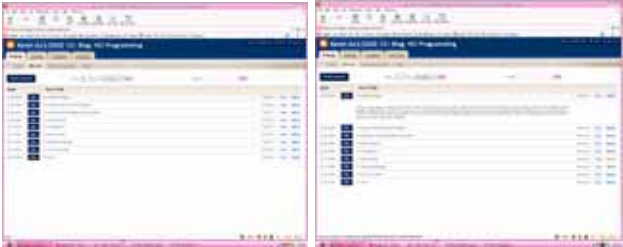
No. **ss-HE-12**	**Problem/Good Aspect: Problem**

Name: Blockquote

Evidence

Heuristic: **2, Match between system and the real world**

Interface aspect: Says blockquote in the tooltip for the quote icon.

Explanation

Most users will not know what blockquote does, and may think this actually adds quotation marks. Particularly should not show this tooltip if users are in compose mode rather than edit html mode since blockquote is an html phrase that people will not be familiar with unless they know html.

Severity or Benefit

Rating: 1, cosmetic

Justification (Frequency, Impact, Persistence)

   Frequency: Common for novice users

   Impact: Easy to overcome. Users can try out the quote to see what it does. Can also look up on the internet what blockquote actually does.

   Persistence: One-time because once users find out what blockquote means they will no longer have the problem of figuring out what blockquote could mean.

   How I weighted the factors:

   I rated this as a cosmetic problem because although it is common for all novice users, the problem goes away after users become aware of it, and it is not too hard to workaround it by trying out the button to see what it actually does.

Possible solution and/or trade-offs

Change the tooltip to say "Indent block of text". The tradeoff is that this text is longer and if people are familiar with blockquote (html editing) than this rewording is not necessary for them.

Relationships

No. **PR-HE-03**	**Problem/Good Aspect:** Problem

Name: Cluttered Date and Time Boxes

Evidence
Heuristic: **HE8 - Aesthetic and Minimalist Design**
Interface aspect:
On Edit Post page, if we click on "Post and Comment Options", it displays a hidden box that we can change the date and time of the blog

Keyboard Shortcuts: press **Ctrl** with: 8 = **Bold**, / = **Italic**, 5 = **Publish**, D

Change Time & Date

8 ⌄ : 35 ⌄ PM ⌄ Oct ⌄ 26 ⌄ 2006 ⌄

There are six dropdown lists that a user can use to change the date and time of the blog.
Normally the date and time is set to the first time the blog is created

Explanation
All of the six boxes are very close to one another and look cluttered. If a user wants to change only time but not date, he/she will have to look very closely to find the dropdown lists for time, which will take some time since the cluttering will make it hard for people's visual search.
Also, there is no sign or anything to split time dropdown lists and date dropdown lists apart.

Severity or Benefit
Rating: 2
Justification (Frequency, Impact, Persistence)
   Frequency: Quite rare – Typically people are likely to not modify their posting time and date as modification will totally change the order of their blog posts and can confuse visitors (and themselves too)
   Impact: Easy to overcome – This problem makes it hard for a user to change their time/date, but they can overcome the problem by paying more attention to the dropdown lists.
   Persistence: One-time – It is possible that when a user has used these dropdown lists, they will be able to remember the order of the dropdown lists.
   How I weighted the factors:
This function

Possible solution and/or trade-offs
One possible solution is to try to group time dropdown lists together as one group and date dropdown lists as another group. Then separate these two groups by putting a noticeable white space in between. Also, labels saying one group is time and another group is date would also be helpful.
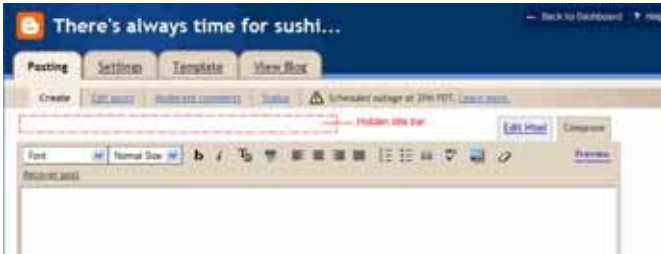
Relationships

*nfs-**HE-08***	**Problem Aspect:**

Name: Status window is in as a tabbed page.

Evidence

Heuristic: **Match Between System and the Real World**

Interface aspect:

The status report of publishing a post/page seems distant from the post/blog just edited/created. A status report should be an overall status bar of updates that occurred on the blog instead of another sub function equal to Create/Edit Posts, Moderate Comments & Status. One would usually imagine a status report to be an overview of the entire blog.

Explanation

Blogger may not want annoying pop ups constantly distracting the user; if the status report is on the side, it may be ignored and not understood that the status changes or need be changed when updates are made; the main window is that white space and the status update wants to be important and central yet not be a separate pop up entity.

Severity or Benefit

Rating: 3

Justification (Frequency, Impact, Persistence)

   Frequency: Novice user to intermediate user may be confused and feel the disconnect and therefore discomfort of there being something just not quite right.

   Impact: Imperfection of the whole system – since this status methodology is used throughout the system, can add to user's distrust and lack of comfort for the system.

   Persistence: Will keep bugging user since it is not completely a logical way to implement status update of blog.

   How I weighted the factors: Since it is an illogical disconnect to the user's world system and no way to reconcile that, this issue is pretty detrimental, however since it can be lived with it is not the most severe issue; blogging can still go on.

Possible solution and/or trade-offs

One would usually imagine a status report to be an overview of the entire blog – this may go along the same line as how the republish index buttons work; perhaps they should be prompted by a pop up window – yet still not annoy users.
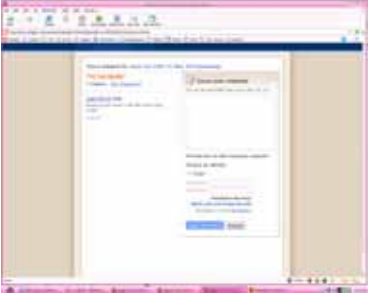
Relationships

Nfs-HE-10, nfs-HE11.

*nfs-**HE-13***	**Problem Aspect:**
Name: Arrow not pointing down to indicate more information revealed.	

Evidence
Heuristic: **Match Between System & the Real World**
Interface aspect:

Arro w doesn't change direction to show that more information have revealed.

Explanation
This is probably just a minor bug that was overlooked in Blogger.

Severity or Benefit
Rating: 1
Justification (Frequency, Impact, Persistence)
   Frequency:
   Impact:
   Persistence:
   How I weighted the factors:

Possible solution and/or trade-offs

Relationships
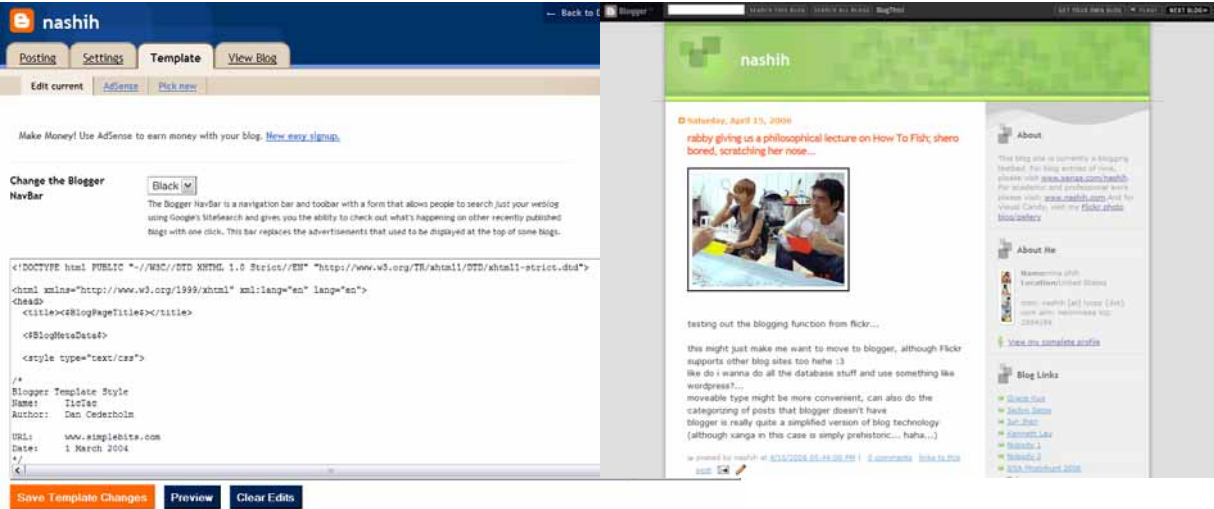
No.	*ka-HE-9*	Problem/Good Aspect: Problem
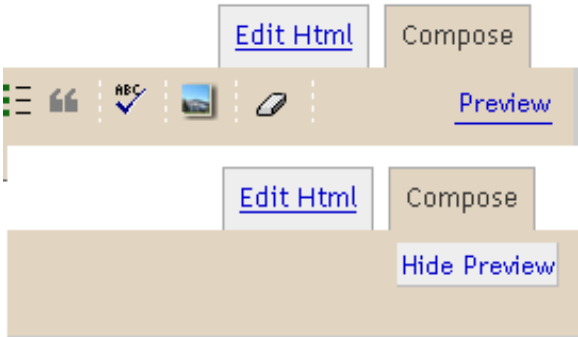
Name: Edit Posts Main Page

Evidence
Heuristic: **Error 5**

Interface aspect:
Click on post title to Show/Hide entire post contents, not to edit post
Show (10) posts per page option

Explanation
User might click on post title to edit the post, but get show hide post contents

Severity or Benefit
Rating: Severity 3
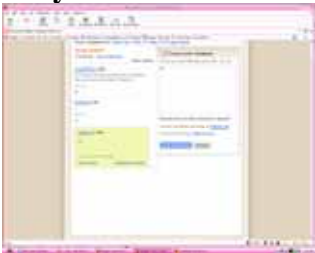
No. *ss-HE-09*	Problem/Good Aspect: Problem

Name: Calling the WYSIWYG mode "Compose" instead of clearly saying what that means.

Evidence

Heuristic: **2, Match between system and the real world**
Interface aspect: "Compose" mode does not match the terminology in the real world or any terminology that people are used to for creating a post in the WYSIWYG mode. Compose mode is also confusing since the HTML editing mode also helps people to compose.

Explanation

"Compose" mode does not match the terminology in the real world or any terminology that people are used to for creating a post in the WYSIWYG mode. Compose mode is also confusing since the HTML editing mode also helps people to compose.

Severity or Benefit

Rating: 2, minor

Justification (Frequency, Impact, Persistence)

   Frequency: Common for novice users

   Impact: Fairly easy to overcome – the UI is fairly simple, so there is not too much to explore before finding this mode. The concern is whether users would assume that edit html mode is all there is.

   Persistence: One-time, easy to overcome once you figure out what to do.

   How I weighted the factors:

   I rated this at average severity because although it is a common problem, it is only a one-time occurrence since once you find "compose" mode you won't have this problem again. I think it's at least average severity though because I believe that most users will want compose mode initially, so this hinders a common desire for most users.

Possible solution and/or trade-offs

Instead of "Compose" mode, call it "Standard" mode or something more descriptive. The tradeoff is that perhaps this will not actually make things more clear.

Relationships

No. *ss-HE-01*	Problem/Good Aspect: Problem

Name: Title bar is missing from post editing page and do not know how to add it.

Evidence

Heuristic: **6, Recognition rather than recall**

Interface aspect: *I noticed the title bar that was present during Bonnie's blog editing was not there in mine. I never set a preference to hide the title editing so I'm not sure why it was hidden. Eventually found it in the settings – option to hide title bar.*

Explanation

When the user sets up a blog it seems that sometimes the default is to hide the title bar. When composing a new post, the user may not even know that a title bar is supposed to exist. And if they do want to show the title bar, they are unlikely to know where the setting is to re-add this.

Severity or Benefit

Rating: 3, major

Justification (Frequency, Impact, Persistence)

   Frequency: Somewhat common for new users. Probably an initial setting that the user goes through when they first set up the blog. However, they haven't created a post yet, so they do not know what this means yet, and the settings page does not have a description.

   Impact: High – this is difficult to overcome because even when you realize that the title bar is missing there is not easy access to figure out where the setting is that controls this, or even that this is controlled by a setting.

   Persistence: Very low,

    How I weighted the factors:

This is a somewhat major problem because although the user can create titles for their posts in other ways, it is really hard to find the solution to the problem. Once it is found, it does not reoccur. Many users may often initially set the incorrect setting to show the title bar in a post, so this could happen to several new users. The user usually goes through all these settings when they are not familiar with the post editing so they do not know what several of the settings do. There is no explanation on the settings page for this. When they initially create/edit a post, there is no indication on the page that they are hiding a title bar or any indication on how to show the titlebar.

Possible solution and/or trade-offs

They could indicate that a title menu is missing on the post page by having an arrow on the side that tells the user that they are currently hiding the title menu. The user could click the arrow and the title bar would drop down – similar to the plus/minus structure in folder systems on Windows. The tradeoff for this idea is that the title bar is not actually really hidden, so if users are actually sure that they don't want this feature, then they still see some remnants of it.

Relationships

No. *ka-HE-40*	Problem/Good Aspect: Problem
Name: Comments edit	

Evidence
Heuristic: **Consistency 4**
Interface aspect:
Toolbar disappears

Explanation
User may be confused by this, cannot go back to blog normal way

Severity or Benefit
Rating: Severity 3
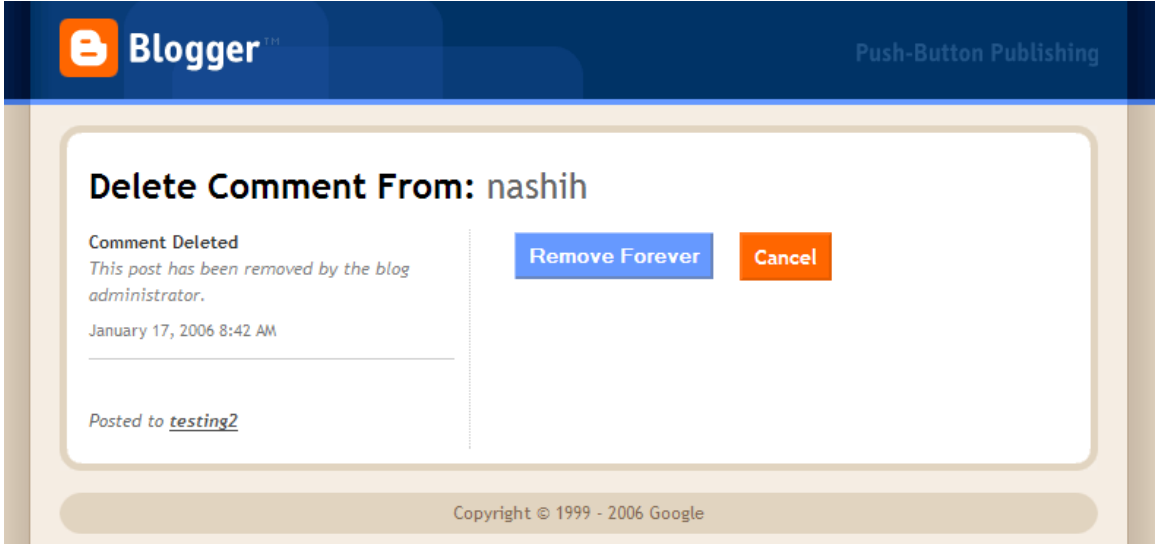
*nfs-**HE-12***	Problem Aspect:

Name: Am I in preview mode or did I make the changes to the template?

Evidence
Heuristic: **Visibility of System Status**
Interface aspect:

When one edits the html/css of the blog template, one can click the button and preview the changes. However the changes are opened in a new window which may bring insecurity to the user to think that the change may have been processed to the blog; the new window does not give feedback to the user that the blog changes is still in preview mode.

Explanation
Blogger may not want to add an additional menu bar or item in the preview mode of the blog page so to give user the full view of the blog if the template changed. One can only tell blog is in preview mode when one checks the url -- http://www.blogger.com/blog-preview.g. Blogger may think that users that edit code in the template are expert enough users to check the URL for feedback.

Severity or Benefit
Rating: 2
Justification (Frequency, Impact, Persistence)
   Frequency: Blogger never shows that blog page is simply a preview.
   Impact: Insecurity to user whether changes were made to the blog template.
   Persistence: User may know changes were not made to the template but since there is no obvious feedback especially for a novice user, user may still want to verify and view blog from view blog links/refresh blog page or make sure can recover changes made to the template and hopes to recover before the preview.
   How I weighted the factors: Since user does not technically lose data or committed to the changes, any flustering is due to user's insecurity and the lack of system status feedback to the user. This is not a 1 rated problem since insecurity can still be persistent to users whenever they change the code of the, unless they remember to check the URL – which as an infrequent Blogger updater, I cannot recall this feature.

Possible solution and/or trade-offs
In CSS one may use absolute coordinates, top and bottom, left to right which may conflict with Blogger's menu bar which may explicitly indicate Blog currently in preview mode only.

Relationships
nfs-HE-10. Preview blog page opens blog page to new window which in this case it may make sense as we do not want the user to navigate away from the editing mode; yet the editing mode and preview could potentially be in the same window. Opening the blog in a new window is consistent to some of the view blog pages when changes are made; however this consistency may be undesirable since only a preview was made and not an actual template change.
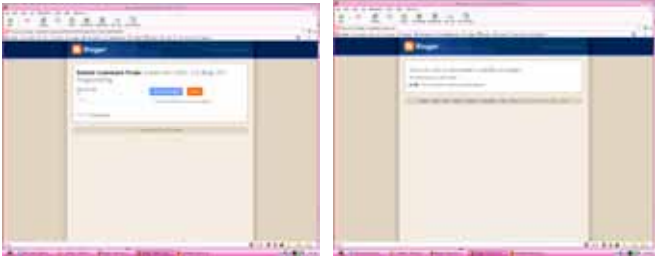
No. **PR-HE-06**	**Problem/Good Aspect:** Problem
Name: Preview state not display explicitly	

Evidence

Heuristic: **HE1 – Visibility of system status**

Interface aspect:

On Edit Post page, the top right hand corner of the post textbox has a Preview button:

When a user clicks on this button, it switches to Preview mode, and the text changes to "Hide Preview". If a user clicks on it again it will switch back to non-preview mode.

Explanation

The system does not provide the current status whether the user is in preview or non-preview mode. The text "Preview" of the button could means that now the user is in preview mode, or click here to change to the preview mode and now you are in non-preview mode.

Severity or Benefit

Rating: 1

Justification (Frequency, Impact, Persistence)

   Frequency:

   Impact:

   Persistence:

   How I weighted the factors:

Possible solution and/or trade-offs

Relationships

No. *ka-HE-35*	**Problem/Good Aspect: Problem**
Name: Comments edit	

Evidence

Heuristic: **Consistency 4**

Interface aspect:

Preview comment

Explanation

Preview does not mean the same thing on editors and reader's sides. Here the preview is embedded in actual page, whereas preview on editor's side is separate from blog.

Severity or Benefit

Rating: Severity 3

*nfs-**HE-6***	**Problem Aspect:**

Name: Comments page does not use the same CSS/template as the blog page template the author set.

Evidence
Heuristic: **Consistency & Standards**
Interface aspect:

One would think they are outside the blog author's blog page.

Explanation
Blogger may have decided to not use the same template as the blog author's blog template as the commenting page may seem a page where there the ownership is not clearly the blog author's or the commenter's. Blog authors may however want a consistent interface throughout for a more smoother user experience. Comment page seems too distant from the actual post itself; one isn't directly linked to the post's own page where comments are shown right below the post in the same page.

Severity or Benefit
Rating: 3
Justification (Frequency, Impact, Persistence)
   Frequency: Everyone, expert or novice would be annoyed that the page's formatting & template cannot be changed so will remain as is.
   Impact: Disrupts visual experience of blogger's page for users.
   Persistence: Occurs in the most frequently clicked page to view comments.
   How I weighted the factors: Since user may feel that Blogger system has more control over the blog than the blog author, this fallback may add additional factors that deter a user to choose Blogger system over another blogging system.

Possible solution and/or trade-offs
Blogger allow user to change the template css for the comments page.

Relationships
No relationships apparent at this time.

No. **PR-HE-01**	**Problem/Good Aspect:** Problem

Name: Delete Comment Message is confusing

Evidence
Heuristic: **HE5 – Error Prevention**
Interface aspect: *The message displaying to the user before deleting a comment is:*

The message can be interpreted as either "delete comment from a person's name", or "delete comment from a part of the blog".

Explanation

By saying "Comment From: …", a user would probably misunderstand that "…" is the name of the comment poster, but actually "…" is the name of the blog this comment is posted to. Because normally when we say "a comment from…", it is mostly understood that what following is the person who made the comment.

Severity or Benefit
Rating: 2 : although the user might misunderstand, it would not cost much if the user makes a wrong decision.
Justification (Frequency, Impact, Persistence)
   Frequency: Rare, typically bloggers do not delete people's comment very often because if a blog is allowed to have comments, it means that the blogger wants to get feedback from visitors. So, it is likely that he/she wants to keep all feedbacks (except that a feedback is not a good or appropriate one).
   Impact: Easy to overcome, only make the user reluctant to continue at the first time
   Persistence: one-time, as it could be confusing to the user at the first time, but the user will learn and know it after the first time. However, it is possible that the user will forget and be confused with the message again.
   How I weighted the factors:

Possible solution and/or trade-offs
Change the message to "Delete Comment From Blog: <Blog Name>"

Relationships

*nfs-**HE-4***	**Problem Aspect:**
Name: Cannot un-delete a comment.	

Evidence

Heuristic: **User Control & Freedom**

Interface aspect:

Coming from a post in the blog page and clicking into the comments section, there is no obvious way to undelete comment in this interface.

Explanation

I still don't know where undelete comment is. Cancel just takes one out to blog page again; in the Dashboard area, there isn't a 'moderate comments' section where one can undelete a blog; moderate comments refers to just the new incoming comments and not involving the complete moderation of comments.

Severity or Benefit

Rating: 4

Justification (Frequency, Impact, Persistence)

   Frequency: Everyone. Since according to the help page, there is currently no way to undelete a comment.

   Impact: I have to look at the Help documentation to find the solution of a simple problem? How can undelete a comment not be implemented in an interface? Is it possible to overlook over a free resource provider?

   Persistence: Persistent until look up in help documentation.

   How I weighted the factors: Unbelievable that Blogger appears to provide such a feature but actually does not support it. I will not choose to switch to Blogger.

Possible solution and/or trade-offs

Include an undelete button on interface; trade off is the minimalist buttons there are on the page; the undelete button could at least be somewhere in the 'moderate comment' section – in other words, make the 'moderate comment' page more useful.

Relationships

Nfs-HE-05, Nfs-HE-02, Nfs-HE-03

No. *ka-HE-37*	Problem/Good Aspect: Problem
Name: Comments edit	

Evidence
Heuristic: **Error 5**

Interface aspect:
"Delete comment. Cancel. Remove forever? (It can't be undone.)"
Original comment being deleted shown.

Explanation
User may be confused by what the difference between just deleting comment and deleting comment forever. Resulting feedback page is the same result.
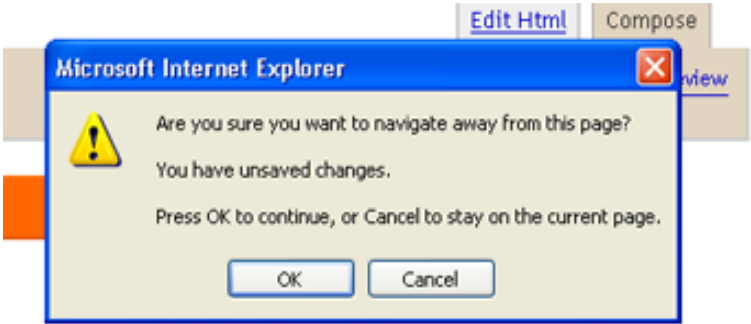
Severity or Benefit
Rating: Severity 3

nfs- **HE-05**	**Problem Aspect:**

Name: Where to view all comments ever given to blog page?

Evidence

Heuristic: ~~Match between system & the Real World~~ **|| User Control & Freedom**

Interface aspect:

Cannot find mechanism to view all comments ever given to the blog page. Need to view posts individually to see 'all' comments. One could think the moderate comments will allow one to moderate all comments.

Explanation

However moderate comments is just to moderate new incoming comments and not moderate 'other' comments.

Severity or Benefit

Rating: 4

Justification (Frequency, Impact, Persistence)

    Frequency: Every time and everyone one wants to check for new or overall comments ever given on the blog since currently there is no way to.

    Impact: One of the top deterring factor for me in why I would not move my blog page to Blogger.

    Persistence: All the time since there does not appear to be a moderate comments.

    How I weighted the factors: Since this factor along with how I cannot subscribe to other people's blog – a different mental model system – decided for me to not use Blogger, this is a severe downfall of Blogger.

Possible solution and/or trade-offs

Simply provide a tab under posting to moderate comments – however this may require the tab Posting to change terminology as it is not technically the blog authoer posting the comments but simply wanting to check for how much the blog was viewed, any recent feedbacks…

Relationships
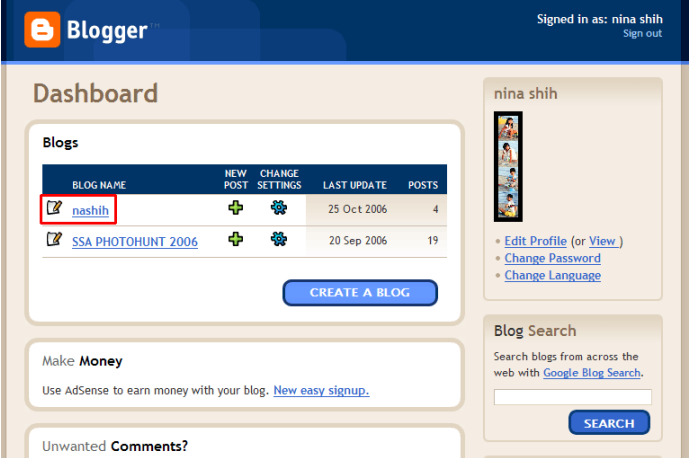
Nfs-HE-04, Nfs-HE-03, Nfs-HE-02

No. **PR-HE-08**	**Problem/Good Aspect:** Problem
Name: Comment screen involves too many screens	

Evidence
Heuristic: **HE07- Flexibility and efficiency of use**
Interface aspect:

Explanation
According to a study on blog system, people mostly want to know the feedbacks toward their blogs. However, in order to read comments, this system does not provide a shorter way to get to the comment page but going through the original blog post page first. Also, the link to comment page is quite small at the bottom of original post pages.

Severity or Benefit
Rating: 2
Justification (Frequency, Impact, Persistence)
   Frequency:
   Impact:
   Persistence:
   How I weighted the factors:

Possible solution and/or trade-offs
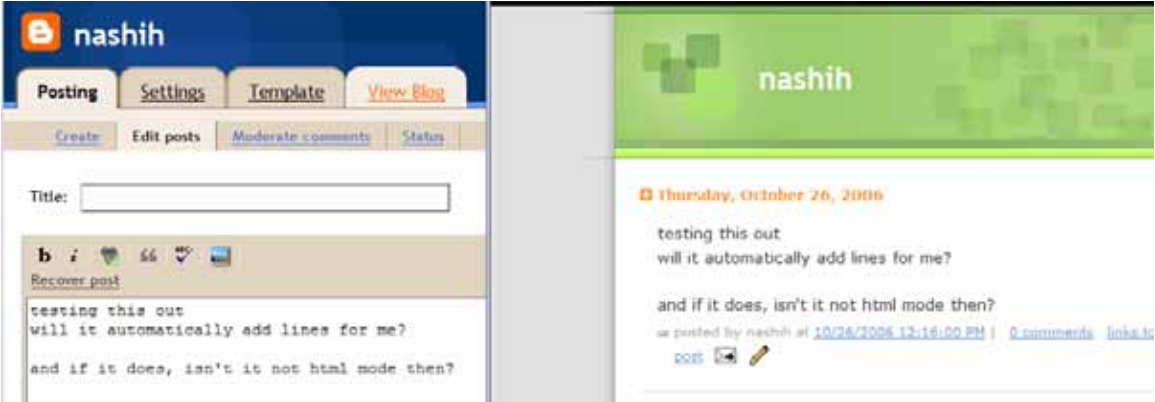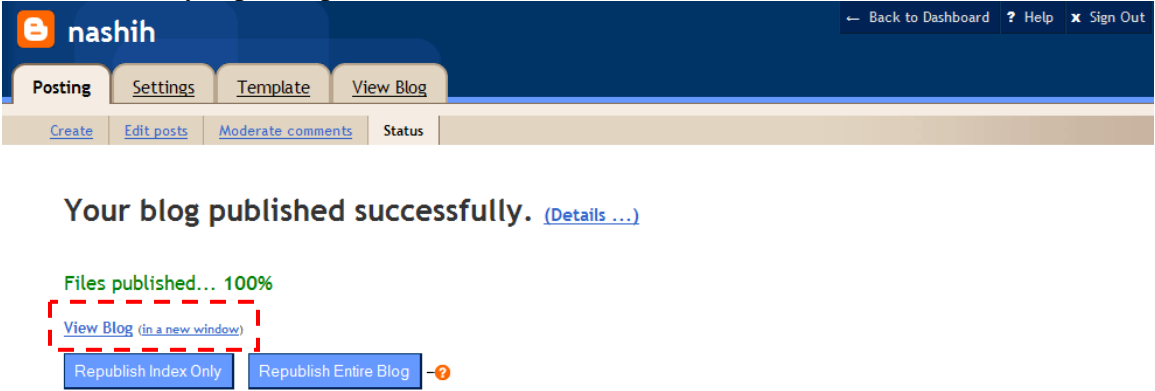
Relationships

No. ***ss-HE-16***	**Problem/Good Aspect: Problem**

Name: Confusing repetition in the UI for moderating comments

Evidence
Heuristic: **8, Aesthetic and minimalist design**
Interface aspect: Has two buttons each to "Publish" and "Reject" and also a repetition of "Select All None"

Unreviewed Comments (Sort: Post Name, Comment Date)

Select: All None

PUBLISH   REJECT

☐ ▶ Great recommendations!

PUBLISH   REJECT

Select: All None

Explanation
This UI is confusing because you don't know whether you need to select the comment first and which publish are you supposed to select? Seems to be designed for a page with many comments so that the repeated components would be more separated by comments in between.

Severity or Benefit
Rating: 1, cosmetic
Justification (Frequency, Impact, Persistence)
   Frequency: Common for novice users
   Impact: The workaround for this problem is to go ahead and select and then press either of the publish buttons to ensure that it works.
   Persistence: One- (or two-) time problem because once the user tries out the different publish/reject or select all/none buttons, they should understand the shared functionality.
      How I weighted the factors:
  I rated this as only a cosmetic problem because although it is common to all novice users, it does not really hurt them to try out either of the repeated buttons. It may be confusing to them which to select, but both make sense and could apply to their desired task.

Possible solution and/or trade-offs
Even if there are few comments, should space it out on the page (leaving room for other comments) so that the repeated components are not so close together vertically.

Relationships

No.	*ss-HE-15*	Problem/Good Aspect: Problem

Name: When comment is being published, it is hard to see what happened.

Evidence
Heuristic: **1, Visibility of system status**
Interface aspect:

Explanation
Barely notice the status message that the publishing of the comment completed. Instead notice the "No unmoderated comments found" which looks somewhat like an error.

Severity or Benefit
Rating: 1, cosmetic
Justification (Frequency, Impact, Persistence)
   Frequency: Common for novice users
   Impact: Once the user realizes that the comment has been published, he/she will not be confused by this UI.
   Persistence: One-time problem because once the user notices the green text that says that their comment has been published, they will not find this to be a problem.
   How I weighted the factors:
  I rated this as only a cosmetic problem because although it is common to all novice users, it fairly easy to figure out that the comment has been published, and they will not see this problem after they figure it out initially.

Possible solution and/or trade-offs
Make the status "Comment has been published" more prominent in the screen – perhaps with a dialog box so that the user has to read and click OK. Then can return to the Moderate comments home where it can say there are no unmoderated comments.

Relationships

No.	*ka-HE-32*	Problem/Good Aspect: Problem

Name: Comments edit

Evidence
Heuristic: **Error 5**

Interface aspect:
Login and publish button, you are posting as..

Explanation
Uses login and publish but user is already logged in. User might try be confused, although login and publish should be publish

Severity or Benefit
Rating: Severity 4

No. *PR-HE-07*	**Problem/Good Aspect:** Problem

Name: Navigate Away warning message always pops up when leaving Edit Post page even there has been no change made

Evidence
Heuristic: **HE1 - Visibility of system status**
Interface aspect:
On Edit Post page, if a user tries to navigate away from this page, there is a warning message as follows:

However, even if there has been no change made to the post content, this warning message always displays.

Explanation
The message always says "You have unsaved changes" even if there is no change made to the page at all. This not only frustrates the users to think that he has forgotten to save his new change, but also does not give any status whether the current edition in the post textbox is already saved or not. Also, it is likely that this message will discourage the user to do other things on other pages as he has to worry and check if he really saves his edit or not himself.

Severity or Benefit
Rating: 2
Justification (Frequency, Impact, Persistence)
   Frequency:
   Impact:
   Persistence:
   How I weighted the factors:

Possible solution and/or trade-offs

Relationships

*nfs -***HE-1**	**Problem Aspect:**

Name: Ambiguous blog link -- going to blog site or to edit blog page.

Evidence

Heuristic: **Consistency & Standards**

Interface aspect:

At the complete blogger's profile information page, the link took one to the actual blog page. In blogger.com/home -- the dashboard -- the clicking on a similar looking link would take one to the blogger's Post Editor page.

Explanation

The aspect was designed to link one back to the blog page instead of the Post Editor page probably because one clicks the blogger's profile coming from the actual blog page so expects to go back to the blog page. However, the table looks alike the table one encounters when at Dashboard to get into and access the edit blog pages.

Perhaps Blogger was trying to achieve visual consistency throughout the site by formatting tables a similar manner despite that the links though similar looking took one to different destinations.

Severity or Benefit

Rating: 3

Justification (Frequency, Impact, Persistence)

   Frequency: Everyone will likely be confused.

   Impact: Adds to the appearance that Blogger interface was not worked out well.

   Persistence: Even for an experience user, due to the similarity of the site, one can easily forget which page took one didn't take one to the administrator's edit blog pages.

   How I weighted the factors: Blogger trying to be too efficient and reusing code that it overlooked such a basic problem of confusion.

Possible solution and/or trade-offs

View profile page of user can use the CSS template of the blog.

Relationships

No relationships apparent at this time. (may be reoccurring; ambiguous links throughout Blogger?

*nfs-**HE-10***	**Problem Aspect:**

Name: I don't want to view blog in new window.

Evidence

Heuristic: **User Control & Freedom**

Interface aspect:

User may want to have the choice to decide whether to open a blog in new window, in new tab, or in current window. Most web browsers does not allow one to open blog in current window and only in new window or tab and thus open in current window is not an option available for the user.

Explanation

Blogger may not want to have the users navigate outside the current page and so considers the new task a very separate process and thus deserves a new window.

Severity or Benefit

Rating: 2

Justification (Frequency, Impact, Persistence)

   Frequency: For all users since objective tools – the web browsers – don't let expert browsers flexibility to choose to open in current page.

   Impact: Just annoying.

   Persistence: Is inconsistent between different points in Blogger; sometimes the option to open in new window is available, sometimes it is not. There isn't an option for the user to change default View Blog in current window.

   How I weighted the factors: A small number of annoyance build up with other features that user may be unhappy with and deter user from using this system.

Possible solution and/or trade-offs

Since most browsers do not allow users to open in current window Blogger should allow the default to be to open in current window or a more challenging position is to allow user to choose whether to open in current blog or in new window.

Relationships

nfs-HE-08, nfs-HE-12

No. **ss-HE-08**	Problem/Good Aspect: Problem

Name: Saving draft brings users back to list of posts page

Evidence

Heuristic: **4, Consistency and standards**

Interface aspect:

Explanation

Clicking on save draft brings you back to the post listings page instead of staying in the post.

Severity or Benefit

Rating: 3, major

Justification (Frequency, Impact, Persistence)

Frequency: Common, Users will often want to save their drafts because they will be afraid of losing them.

Impact: Difficult to overcome – There's not really any good workaround for this problem.

Persistence: Will occur repeatedly. Since there is no workaround for the problem, users will face this whenever they try to save. The save takes awhile loading the post listings and then takes time again to go back to the post.

How I weighted the factors:

This is a task that all users will want to do frequently. The impact is also pretty high, so since the frequency, impact, and persistence are high, the overall rating is quite severe.

Possible solution and/or trade-offs

They could allow users to press Ctrl-S to save without going back to the main listing of posts. They could optionally just make the "Save as Draft" button just save and not go back to the post listings. They could have a different button to return to the post listings, but the tradeoff to this is that there would be additional buttons on the page that users have to navigate.

Relationships

4.5 – Cognitive Walkthrough

Assignment summary:
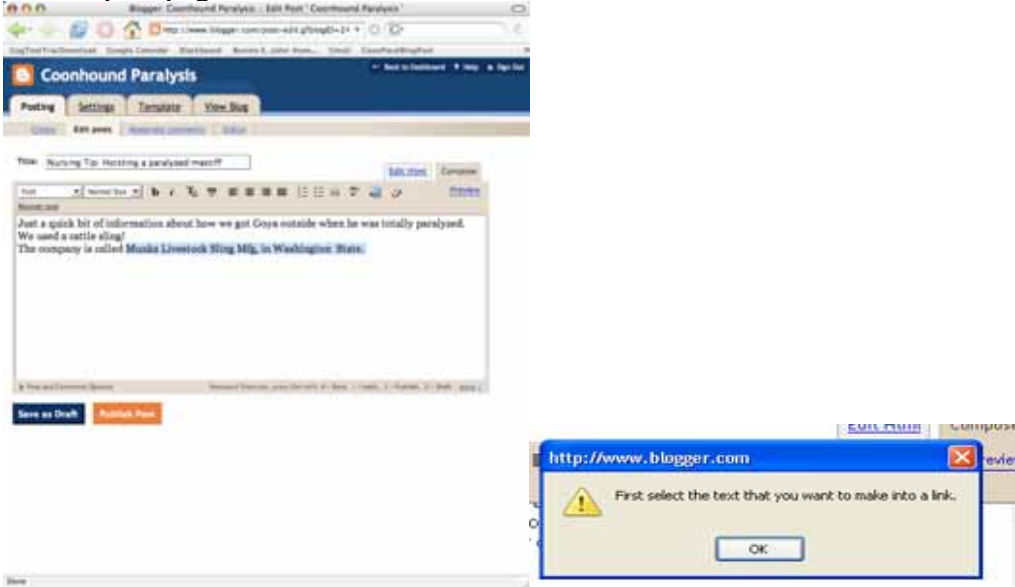This homework asks you to do a cognitive walkthrough of a user making a blog post.

Findings:

Analysis Predicted (UAR nos.)	Aspect Report Name	Evidence (Tape time(s))	Think-aloud UAR nos. (if any)	Supported / Refuted
G01-CW-1	Step 1 Q2 - Create new post link icon Is not visible	0:15	NS-TA-1 SS-TA-1	refuted
G01-CW-2	Step 1 Q3 - create new post link icon is not intuitive	0:15	KA-TA-13 NS-TA-18 PR-TA-13 SS-TA-19	refuted
G01-CW-3	Step 3 Q1 - steps required to create a link is not obvious nor visible	12:16	KA-TA-9 NS-TA-25 PR-TA-11 SS-TA-28	supported
G01-CW-4	Sept 8 Q4 - no feedback given after copying URL	19:50		supported

** G01-CW-4: could potentially solve this with copy/paste clipboard feature; similar to Microsoft Word; enlarges the scope?

1 of 4 CWs considered

G01-CW-3

No. *CW Step 3 Q1*	*Problem/Good aspect: Problem*

Name: Steps required to create a link is not obvious nor visible.

Evidence

Heuristic: **HE5 – Error Prevention**

Interface aspect:

On create a new post page

In order to create a link for some part of the text in text area, that text has to be highlighted first before clicking on Link button at the toolbar. However, if no text has been highlighted before clicking on Link button, an error message pops up saying "First select text that you want to make into link.

Create a hyperlink button is a small button on the format text tool bar.

Explanation

The group's consensus for step 3, question 1 was "no". For explanation, refer to Cognitive Walkthrough Analysis document step 3, question 1.

Severity or Benefit

Rating: 2 Minor

Justification (Frequency, Impact, Persistence)

   Frequency: Common for novice users since experienced users will have learned how to create the link and thus will not be as likely to encounter the same problem.

   Impact: Easy to overcome – There is an popup error message telling the user to highlight the text before clicking the button and users should be able to overcome this problem after that. However, it can also waste a lot of time if users do not know that they are supposed to click on Link button to create a Link (possibly as the button also looks very blurry and does not quite represent link creating), they will never know how to create a link and to highlight the text first.

   Persistence: One time – If users have found how to create the link, they will not be as likely to encounter the same problem.

   How I weighted the factors:

We would rate this as a minor problem, because only novice users can be affected and because it is a one time problem that is easy to overcome. We rated this problem as minor rather than cosmetic because it is possible that users waste a lot of time trying to figure out that they need to highlight the text first in order to create a link.

Possible solution and/or trade-offs

Grey out the Link button if users have not highlighted any text rather than letting them clicking the button and then telling them later. The trade off is that the user will never learn how to create a link unless they happen to have inputted and highlighted the text.

Make the system flexible so that users can either highlight and then create a link, or click the link icon and then insert the text to create a link. Trade-off would be that users don't know that both methods exist.

Relationships

No relationships apparent at this time.

4.6 – Think Aloud

Assignment summary:

This homework asks you to detect critical incidents in a think-aloud that we have provided and report them. The think-aloud tasked a person to post to a blog.

Findings:

P#		Tape Time	Problem Name	UAR #s	KA-S#	PR-S#	NS-S#	SS-S#	Severity Average
\<G1\>TA	1	00:59 1:05 1:20 2:05 - 2:25 32:08	No visible option for changing text formatting in Edit HTML mode	PR-TA-1 NS-TA-2 SS-TA-3	2	2	2	2	2.0
\<G1\>TA	2	1:35	Changing settings/template when writing post will lose unsaved changes.	SS-TA-05	2	1	2	2	1.8
\<G1\>TA	3	1:47	Template terminology in menu bar is not intuitive for novice users	NS-TA-3	1	1	2	1	1.3
\<G1\>TA	4	1:52 2:00	"View blog" link doesn't include preview of current draft; link is misleading.	KA-TA-01 PR-TA-02 NS-TA-05 SS-TA-06	2	2	2	2	2.0
\<G1\>TA	5	2:09 21:57 24:22 24:46 25:04	Meaning of Edit HTML and Compose is unclear	NS-TA-6 SS-TA-7 PR-TA-14	4	3	4	3	3.5
\<G1\>TA	6	3:35 32:42	"Insert a picture" icon is not clearly visible.	NS-TA-7 SS-TA-9	2	2	2	2	2.0
\<G1\>TA	7	3:54	"Browse for image" control in Insert image wizard is not prominent.	SS-TA-10	1	1	2	2	1.5
\<G1\>TA	8	4:34	Inserted image not displayed in Edit HTML mode.	SS-TA-13	3	1	3	3	2.5
\<G1\>TA	9	4:45	Preview Blog mode shows inconsistent text formatting than actual blog mode	NS-TA-13 SS-TA-14	3	2	2	2	2.3
\<G1\>TA	10	4:51 13:20 - 14:00	Preview mode does not allow text editing.	KA-TA-10 NS-TA-14 SS-TA-25	2	2	3	3	2.5
\<G1\>TA	11	5:30 - 8:30 11:55 12:00	"Add Link" button in toolbar is not prominent	KA-TA-08 NS-TA-25	3	2	4	3	3.0

	#	Time	Description	Codes					Avg
<G1>TA	12	5:36 - 6:52 9:54 13:55 16:17 26:19	Warning message displayed when navigating away does not direct user to correct action (save post)	KA-TA-03 PR-TA-08 NS-TA-16 SS-TA-17	2	2	3	3	2.5
<G1>TA	13	6:53 - 7:25	"Edit Posts" page is hard to navigate to a specific post editing page.	KA-TA-04 PR-TA-04 NS-TA-17 SS-TA-18	2	3	2	2	2.3
<G1>TA	14	8:03 - 8:30 9:37	The entire procedure for creating hyperlink in Blogger is not intuitive (main goal)	KA-TA-05 PR-TA-15 NS-TA-18 SS-TA-19	3	2	3	3	2.8
<G1>TA	15	9:52 - 11:05 14:32 32:25	Hide Preview option is not prominent to switch back to edit mode.	KA-TA-06 PR-TA-06 NS-TA-39 SS-TA-21	3	2	2	3	2.5
<G1>TA	16	10:10 - 11:25	Hard to distinguish the difference between saving in the browser and saving in Blogger	KA-TA-07 PR-TA-10 NS-TA-19 SS-TA-23	4	4	4	3	3.8
<G1>TA	17	11:42 21:20	Edit HTML' is the default mode and is not understandable for novice users to compose post	NS-TA-11	3	4	4	4	3.8
<G1>TA	18	12:20 - 12:53 19:50	Cannot access blog body text while 'Enter URL' popup window is still open	KA-TA-09 NS-TA-23	2	2	4	2	2.5
<G1>TA	19	14:28	Changes are irreversibly lost when navigating away from post	PR-TA-9 NS-TA-19 SS-TA-27	4	4	4	4	4.0
<G1>TA	20	15:07	Program requires user to use user manual since system is not intuitive -- trying to insert a link	NS-TA-24	3	3	3	3	3.0
<G1>TA	21	21:33	Link created in Edit HTML mode does not show up in preview mode because link tag is made but not labeled	KA-TA-11 PR-TA-12 NS-TA-25 SS-TA-30	3	3	4	4	3.5
<G1>TA	22	25:06 25:35 27:32 29:24	Insert link wizard window does not provide option to insert URL title, only URL tags (sub goal: rename link)	KA-TA-12 NS-TA-18 SS-TA-32 PR-TA-15	4	3	3	4	3.5
<G1>TA	23	29:42 - 30:03 30:38	Cannot add additional words to existing hyperlinks	KA-TA-13 NS-TA-32 SS-TA-34	2	3	3	2	2.5
<G1>TA	24	30:02 30:08 - 30:37	Unlinking a linked text is not intuitive in blogger	NS-TA-35 SS-TA-34	2	2	3	2	2.3
<G1>TA	25	31:25	Can only format text color from button, cannot right click to edit text font color	NS-TA-37	1	3	3	2	2.3

<G1>TA	26	32:10	Not obvious that text color button in Compose window does not apply for blog post title.	SS-TA-37	1	1	2	3	1.8

21 of 26 TAs considered

<G1>TA-1	**Problem/Good Aspect: Problem**

Name:
No visible option for title text formatting on Edit HTML page

Evidence:
1:05 – "I really have absolutely at this point no idea how to get those in there." User mouses over each of the links in the toolbar to see if any of them can help. and also tries to click on Template, and then cancels instead of navigating away. Also clicks on Settings, and cancels from this too. Then tries to view blog to see title.
1:47 – "This sorta makes me…discourages me from actually doing this."
User tries several methods such as using color button in Compose window and previewing a few times.
33:00 – interviewer helps user along by suggesting to publish post to see what title text actually is.

Criterion: 7, negative affect or says something is a problem;
2, giving up
1, goal within 3 minutes

Explanation:

Severity or Benefit:
Rating: 2

<G1>TA-4	**Problem/Good Aspect: Problem**

Name:
"View Blog" tab link does not include preview of the current draft post edits

Evidence:
1:55 – "Ok, that's interesting, because I don't yet my "nurs-", I don't yet see my title in this blog…so that's surprising"

Criterion: 6, hesitation or surprise

Explanation:

Severity or Benefit:
Rating: 2

<G1>TA-5	**Problem/Good Aspect: Problem**

Name:
Meaning of "edit html" and Compose not obvious to user.

Evidence:
1:20 – mousse over Edit HTML link and says "I really don't know how to do that."
2:09 – "Huh, this Compose thing." And then ignores it because he doesn't know what it means.

Criterion: 6, hesitation or surprise
7 negative affect or says something is a problem

Explanation:

Severity or Benefit:
Rating: 3

<G1>TA-6	**Problem/Good Aspect: Problem**

Name: Not immediately visible how to add an image with the "add image" icon in blog editing toolbar.

Evidence: 3:40 - User looks for some option to insert an image, compares to powerpoint model of insert image. Scans through options on page – Settings, Template, Compose mode, and then scrolls through menu bar to find an "insert". Finally finds add image icon in blog editing toolbar.

Criterion: 3, three or more things to find the solution

Explanation:

Severity or Benefit:
Rating: 2

<G1>TA-7	**Problem/Good Aspect: Problem**

Name: "Add an image from your computer" freeform textbox with browse button control not obvious as first step on Insert Image page.

Evidence:
3:54 – User selects layout of picture and then clicks upload image and gets error that he has not selected an image yet. Does not seem to have noticed the "add an image" control beforehand.

Criterion: 4, suboptimal way

Explanation:

Severity or Benefit:
Rating: 2

<G1>TA-8	**Problem/Good Aspect: Problem**

Name:
After uploading image, newly inserted image not visible because blog post starts in Edit HTML mode.

Evidence:
4:34 – User finishes uploading image, and returns to blog post entry, and is in Edit HTML mode still. Sees HTML code, and figures he has to preview in order to see the image.

Criterion: 4, 6

Explanation:

Severity or Benefit:
Rating: 3

<G1>TA-9	**Problem/Good Aspect: Problem**

Name:
Preview does not display title formatting that user is expecting based on post editing page

Evidence:
4:50 – "And it does kinda look like what I need to do, except the title is in bold…"

Criterion: 6, hesitation or surprise

Explanation:

Severity or Benefit:
Rating: 2

<G1>TA-10	**Problem/Good Aspect: Problem**
Name:	
Not obvious that preview screen is not editable.	
Evidence:	
13:50 – "trying to put my cursor there to get some traction" tries to click around the link in preview pane.	
Criterion: 2, giving up	
Explanation:	
Severity or Benefit:	
Rating: 3	

<G1>TA-11	**Problem/Good Aspect: problem**
Name:	
Blogger user manual is not readily accessible.	
Evidence:	
15:07 -- indicates should read user's manuals but user says he doesn't read them anyway	
Criterion:	
7. user expresses some negative affect or says something is a problem.	
Severity or Benefit:	
Rating: 3 - major	

<G1>TA-12	**Problem/Good Aspect: Problem**
Name:	
User discouraged from leaving page because of Blogger warning message	
Evidence:	
6:46 – User selects a bookmark he wants to view, and gets a warning asking "Are you sure you want to navigate away from this page? You have unsaved changes." So he chooses cancel because does not want to lose changes. Wants to save first.	
Criterion: 5, difference between the task and the solution	
Explanation:	
Severity or Benefit:	
Rating: 3	

<G1>TA-14	**Problem/Good Aspect: Problem**
Name:	
Not obvious how to change the name of a link.	
Evidence:	
8:12 – user pastes in link, and does not know how to change text displayed for that link. 8:22 - "I think I can…I guess I can overwrite this. I have to change the title of this URL somehow. I was hoping to get a line here so I could write the name. But I'm going to just go on for a minute, because I don't know how to do that." 23:40 – "well, I feel a little bit stumped." 24:20 – interviewer steps in and points them towards Compose mode to make it easier 25:10 – "My problem is I still have to rename it. So how do you rename a link once you…maybe you can overwrite a link. Can I overwrite it?" 27:40 – Interviewer steps in and suggests typing what he wants to have in the blog first and then create a link. Still confused, but then figures out what the interviewer is saying.	
Criterion: 5, difference between the task and the solution, 1, 7	
Explanation:	
Severity or Benefit:	
Rating: 4	

<G1>TA-15	**Problem/Good Aspect: Problem**
Name:	
Not easy to navigate back from preview page to post editing page because "Hide preview" option is not clearly visible.	
Evidence:	
9:55 – User presses back when he's in preview mode. Window pops up saying "Are you sure you want to navigate away from this page? You have unsaved changes." 9:58 –"Boy this software really doesn't like me to leave the page." 10:15 – "I don't know what it means to save this view. Because it's just a preview view." 14:00 User hits back to get back to editing screen several times. User finally hits OK and is taken back to post listings page and mutters "oh god"	
Criterion: 2, giving up	
Explanation:	
Severity or Benefit:	
Rating: 2	

<G1>TA-16	**Problem/Good Aspect: Problem**
Name:	
Not obvious how to save a post when in editing mode because button is not clearly visible.	
Evidence:	
11:25 – User tries to use file -> save as to save his blog entry so far.	
Criterion: 2	
Explanation:	
Severity or Benefit:	
Rating: 3	

<G1>TA-17	**Problem/Good Aspect: Problem**
Name:	
Edit HTML mode is default mode – difficult for HTML novice users to use.	
Evidence:	
4:33 11:42 - if I know html, clearly in this view, I could make a html code to make it orange insert copied url text, press ok, and see new html code that user does not understand and cannot tell if right effect was achieved 21:20 -- user enters url in dialog box, html appears, hesitate what url is	
Criterion:	
6. User expresses hesitation or surprise 7. user expresses some negative affect or says something is a problem.	
Severity or Benefit:	
Rating: 4 - catastrophic	

<G1>TA-18	**Problem/Good Aspect: problem**
Name:	
tries to cut and paste from blog body text while pop up enter url dialog box still open	
Evidence: 12:26 – tries several times, "hah … " 19:50 "I guess … I guess I should write it down"	
Criterion:	
6. User expresses hesitation or surprise 7. user expresses some negative affect or says something is a problem.	
Severity or Benefit:	
Rating: 4 - catastrophic	

<G1>TA-20	Problem/Good Aspect: problem
Name:	
Blogger user manual is not readily accessible.	
Evidence:	
15:07 -- indicates should read user's manuals but user says he doesn't read them anyway	
Criterion:	
7. user expresses some negative affect or says something is a problem.	
Severity or Benefit:	
Rating: 3 - major	

<G1>TA-21	Problem/Good Aspect: Problem
Name:	
Preview does not show user's inserted hyperlink with blank text, and does not indicate that display text is empty.	
Evidence:	
21:35 – User just inserted link into Edit HTML mode of post entry. Then hits preview, and the link is not there. "huh, why didn't it show up? It did not show up. Hm."	
Criterion: 6, 7	
Explanation:	
Severity or Benefit:	
Rating: 4	

<G1>TA-22	Problem/Good Aspect: Problem
Name: Hard to specify text for a link in Compose mode	
Evidence:	
25:10 – "My problem is I still have to rename it. So how do you rename a link once you…maybe you can overwrite a link. Can I overwrite it?" 27:40 – Interviewer steps in and suggests typing what he wants to have in the blog first and then create a link. Still confused, but then figures out what the interviewer is saying.	
Criterion: 7, 1	
Explanation:	
Severity or Benefit:	
Rating: 4	

<G1>TA-23	Problem/Good Aspect: Problem
Name:	
Hard to reassign hyperlink to different specified text.	
Evidence:	
30 – User discovers he left a word out the first time when he created the link. Tries to highlight entire section and add link again, but it does not work. Now wants to unlink first and then relink.	
Criterion: 4	
Explanation:	
Severity or Benefit:	
Rating: 2	

<G1>TA-24	**Problem/Good Aspect: problem**
Name: Remove format link is not explicit in able to remove linked text.	
Evidence: tries to unlink link; redoes create link, highlighting un linked text with already linked text, but blogger does not make link the selected text 30:02 – a that's interesting 30:08 – 30:37 – "maybe I have to unlink it now to … is there a way to just unlink"	
Criterion: 6. User expresses hesitation or surprise 8. user makes design suggestion	
Severity or Benefit: *Rating:* 3 - major	

<G1>TA-26	**Problem/Good Aspect: Problem**
Name: Not obvious that text color button in Compose window does not apply for blog post title.	
Evidence: 32:10 – User tries to highlight text in title bar and then change color in compose window toolbar.	
Criterion: 2	
Explanation:	
Severity or Benefit: *Rating:* 3	

4.7 – Redesign Ideation Process

Initial Ideas:

- Keep history of changes (wiki)
- Autosave (gmail) "last auto save at 5:30"
- Warning prompts users to save, cancel, navigate away
- Intuitive keyboard shortcut to save
- Consistent with other apps
  - Ctrl+p = publish, cos it sounds more like print (but now it's ctrl+s which does not make sense)
  - Ctrl+s = save (now it's ctrl+d for save as draft)
- Design property box to show properties for each elements in design view (click on any element and show all properties such as img width, height, link url, etc.)
- Integrate Preview into the Compose mode

Design Ideas:

- One window for both HTML and "Compose" mode -> shows editable preview
- Base on Powerpoint model - users can add textboxes and images to the blog.
- Will preview blog with colors, fonts, and styles that are actually within the template so user can see what it will actually look like.
- When users click on an object, this brings up a floating menu on top of the browser window.
- Users can decide between non-HTML and HTML mode.
- HTML mode - highlights relevant code, but shows full HTML so they can still manipulate the whole thing.
- Non-HTML mode - shows table with user friendly tags and values.
- We want to show expandable view so that people can still edit in HTML easily -> need to figure out UI.
- Changes are live -> indicate to users when changes are ready to show in preview -> maybe red light changes to green light when user finishes editing a value and clicks out to the next value box.
  - in HTML mode, can have an apply button. when clicked on, updates in preview
- Also indicate when users have entered an invalid value -> red exclamation point?
- Copy/paste -> drag the textbox or image that is selected. (like in Powerpoint). automatically wrap text, and if people wnat to change the text wrapping options, can change this in properties window.
- Allow for undo.
- Make save more visible, and when user hits save, shouldn't take them back to Post Listings page.

4.8 Variations of Redesign

Different methods of implementing 'Edit HTML' mode.

Property windows hovering over the Edit Preview Mode.

Figure 4.8.1. Variations of the new 'Compose' mode.
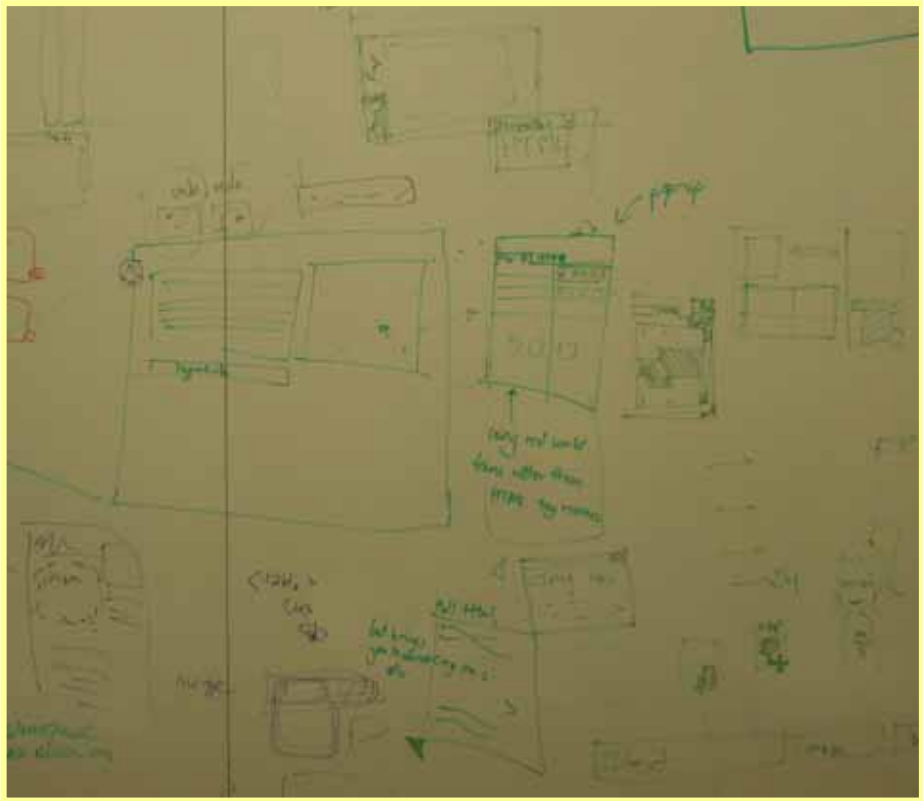
Figure 4.8.2. The 'Compose/Preview' mode and variations of the properties window.
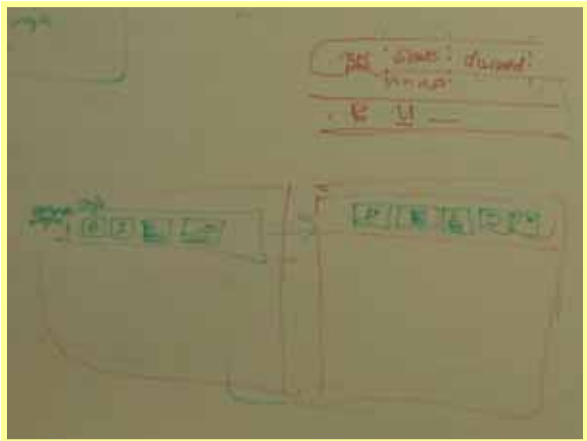
Figure 4.8.3. Minimizing icon tools needed as will be replaced by the property window.
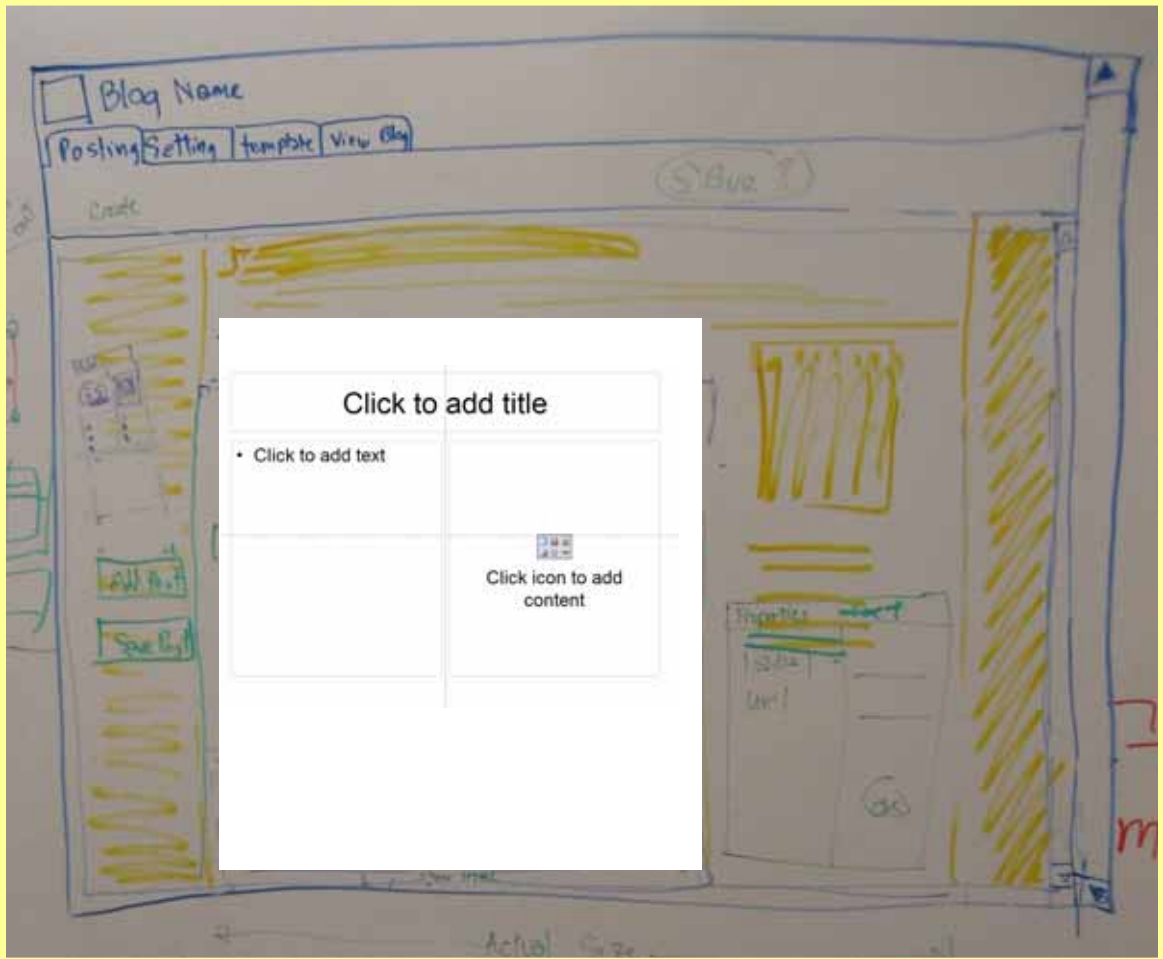
Figure 4.8.4. If 'Edit Compose Mode' was based on the power point model, all text and image objects could be moveable. 'Click to add …' helps indicate to user to add content into a post page.
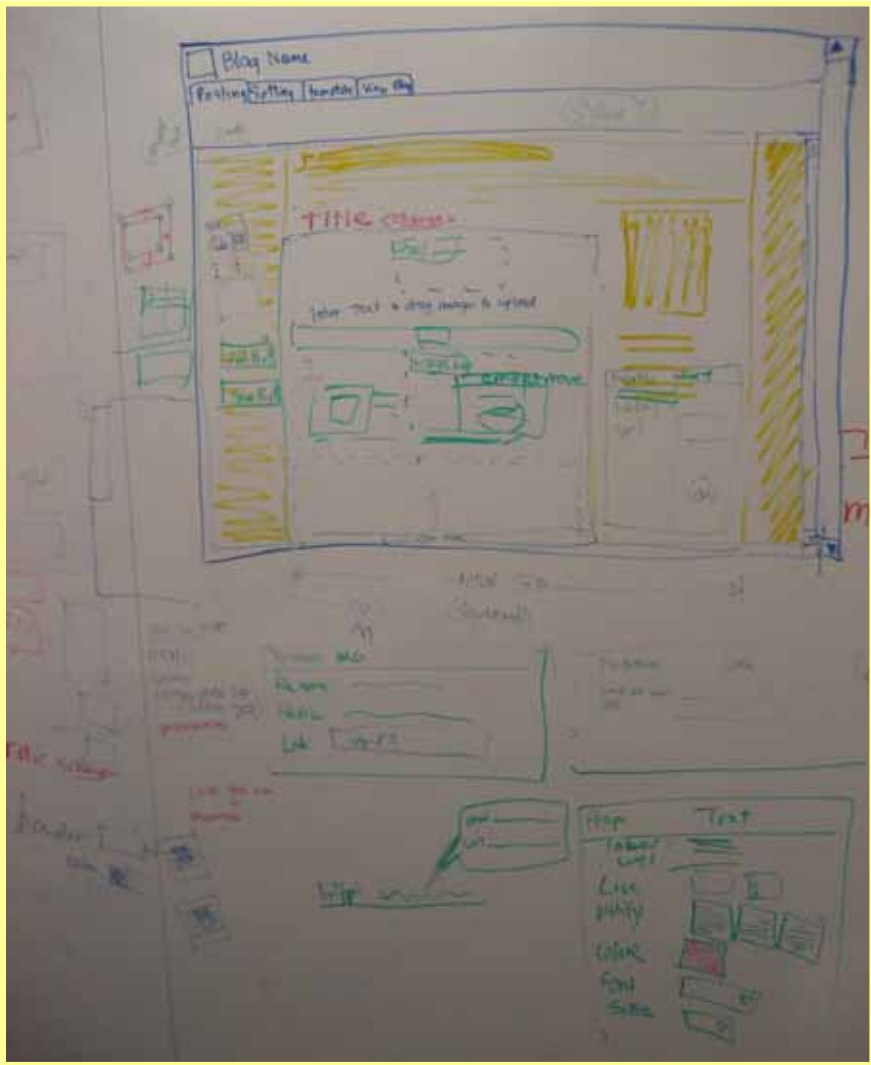
Figure 4.8.5. Preview mode includes the look of the actual blog and the post embedded within.

4.9 Heuristic Evaluation on the Redesign

The problems found in the HE were considerably low rated – 1 Cosmetic or 2 minor – and thus were not considered a priority to change. Additional usability evaluations would need to be conducted to further support or refute whether the minor problems are truly problems.
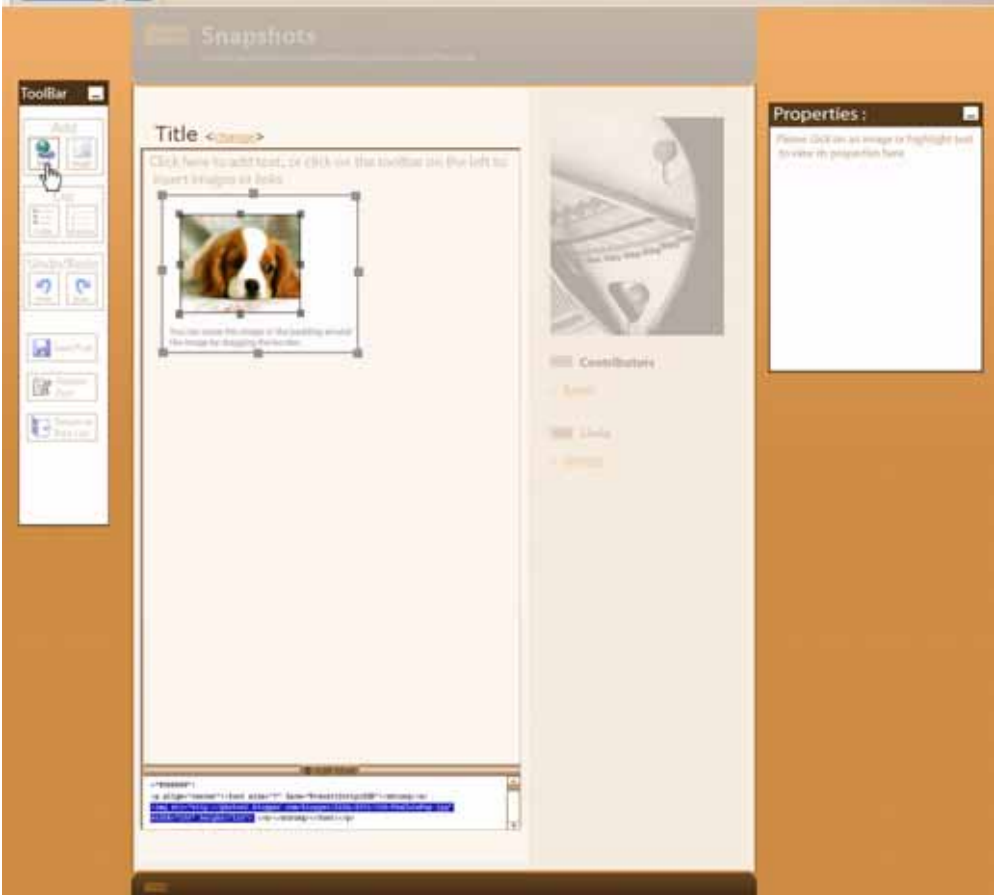
No. **HE-1**	**Problem/Good Aspect: problem**
Name: greyed out blog title bar does not represent how blog would actually look	
Evidence *Heuristic:* **4. Consistency & Standard** *Interface aspect:*	
Explanation System greys out blog title bar so the area does not appear to be editable; perhaps could be achieved through a different method?	
Severity or Benefit *Rating:* 1-cosmetic	

No. **HE-2**	**Problem/Good Aspect: problem**
Name: post title bar does not appear to be editable other than the not too nicely implemented text indication <change>	
Evidence *Heuristic:* **visibility of system status** *Interface aspect:*	
Explanation	
Severity or Benefit *Rating:* 2 - minor	

No. **HE-3**	**Problem/Good Aspect: problem**
Name: 'click here to add text, or click on the tool bar…' msg in editable region is small	
Evidence *Heuristic:* **visiblity of system status** *Interface aspect:*	
Explanation	
Severity or Benefit *Rating:* 1-cosmetic	

No.	**HE-4**	**Problem/Good Aspect: problem**
Name: may not always see 'you can resize this img at the padding by clicking …' if margins are too small		
Evidence *Heuristic:* **recognition & recall / help & documentation** *Interface aspect:*		
Explanation		
Severity or Benefit *Rating:* 1-cosmetic		
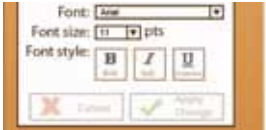
No.	**HE-5**	**Problem/Good Aspect: problem**
Name: user will not know that system will prompt user to save when clicking on exit post		
Evidence *Heuristic:* **recognition & recall** *Interface aspect:*		
Explanation		
Severity or Benefit *Rating:* 1-cosmetic		

No. **HE-6**	Problem/Good Aspect: good
Name: only the editable region appears to be editable	

Evidence	
Heuristic: **visibility of system status** *Interface aspect:*	

Explanation

System wants to prevent user from being confused on what can be edited on the page so makes effort to make editable region more prominent.
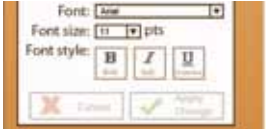
Severity or Benefit

Rating: 0

No. **HE-7**	Problem/Good Aspect: good
Name: html tag is highlighted for respective img and text	

Evidence

Heuristic:

Recognition rather than recall

Interface aspect:

Explanation

System is emulating dreamweaver where html users can easily locate the html tags for objects in the WYSIWYG mode.

Severity or Benefit

Rating: 0

No. *HE-8*	Problem/Good Aspect: good
Name: toolbar icons are grouped to related tasks	

Evidence
Heuristic:
Interface aspect:

Explanation

Users were having difficulty understanding the functionalities of toolbar icons; by grouping toolbar icons, user can more quickly find related functionalities. (undo & redo is grouped together; ordered and unordered lists are grouped together;…)

Severity or Benefit
Rating: 0

No. *HE-9*	Problem/Good Aspect: good
Name: toolbar icons are labeled	

Evidence
Heuristic: **recognition rather than recall**
Interface aspect:

Explanation

One would think adding labels to icons would crowd the UI design however the interface actually still looks minimal and aesthetically pleasing.

Severity or Benefit
Rating: 0

No. *HE-10*	Problem/Good Aspect: good
Name: cancel allows user to change their minds and not complete the task	

Evidence
Heuristic: **user control & freedom**
Interface aspect:

Explanation

User can press cancel if no text needs to be edited or images need to be added; users are not forced down a path of action and do not need to complete the action.

Severity or Benefit
Rating: 0

No. **HE-11**	Problem/Good Aspect: good

Name: toolbar icons highlights when hovered over

Evidence
Heuristic: visibility of system status
Interface aspect:

Explanation
User can tell that which icon would be activated if they clicked on the icon. System is giving user feedback that user is hovering over which icon.
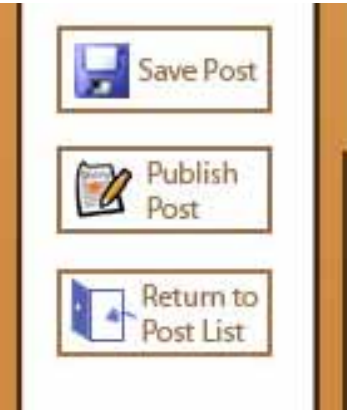
Severity or Benefit
Rating: 0

No. **HE-12**	Problem/Good Aspect: good

Name: if nothing has changed, the cancel button is not activated

Evidence
Heuristic: **visibility of system status**
Interface aspect:

Explanation
In the HE we have found that Blogger will prompt the warning dialog box – if you leave this page, changes in this post will not be saved – even if nothing in the post was changed.

Severity or Benefit
Rating: 0

No. **HE-13**	Problem/Good Aspect: good

Name: can enter title to link when creating a link and entering the url

Evidence
Heuristic: **flexibility and efficiency of use**
Interface aspect:

Explanation
In our studies we have found that users were having a difficulty time renaming the title of a url so we included the feature in the add link dialog box.

Severity or Benefit
Rating: 0

No. *HE-14*	Problem/Good Aspect: good
Name: instead of formatting image using left/right/center, users drag padding to format layout of image	
Evidence *Heuristic:* **user control and freedom** *Interface aspect:*	
Explanation the redesign implemented a new technology since the traditional methodology of editing layout of an image on the text proves to be troublesome.	
Severity or Benefit *Rating:* 0	

No. *HE-15*	Problem/Good Aspect: good
Name: image property box indicates which image is currently being edited by indicating file name	
Evidence *Heuristic:* **visibility of system status** *Interface aspect:*	
Explanation	
Severity or Benefit *Rating:* 0	

No. *HE-16*	Problem/Good Aspect: good
Name: image property box allows users to add a link to the image	
Evidence *Heuristic:* **flexibility and efficiency of use** *Interface aspect:*	
Explanation	
Severity or Benefit *Rating:* 0	

No. **HE-17**	**Problem/Good Aspect: good**
Name: save post, publish post, and return to post list icons are renamed to mean exactly what user should expect the system would react	

Evidence
Heuristic: **match between system and the real world**
Interface aspect:

Explanation
We added an extra icon – return to post list – which is what the current system currently does when one saves drafts. The current system's save as draft icon does two things – saves the current drafts and takes the user to the post list page; the button is doing too many things at once. In the TA the user wanted to just save the draft and continue editing the post; the user did not want to leave the page.

Severity or Benefit
Rating: 0

No. **HE-18**	**Problem/Good Aspect: good**
Name: save post, publish post, and return to post list icons are relocated in drag-able toolbar so they are always visible to the user	

Evidence
Heuristic: **recognition rather than recall**
Interface aspect:

Explanation
In the TA, the save as draft button was often not visible in the screen due to the length of the post for which requires user to scroll down to find.

Severity or Benefit
Rating: 0

No. **HE-19**	Problem/Good Aspect: good
Name: save post icon does not direct user to post list as occurs in the current Blogger system; leaves user in the same page – the editing post page	

Evidence *Heuristic:* **consistency and standards** *Interface aspect:*	

Explanation

When user saves in Microsoft Word or in other applications, the program does not close the file for the user; similarly in our system, saving the post saves the draft of the post and leaves the user on the same page.

Severity or Benefit

Rating: 0