User Experience Research Report:

Heuristic Evaluation

SI 622 003 Group 3: Yunqi Hu, Diane Pham, Chieh-Lin Wu, Ruofan Zhang

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Executive Summary

For this report, we conducted heuristic evaluations of Collage.com. Heuristic evaluations allow us to analyze the usability and functionality of the site in a standardized way. We performed individual heuristic evaluations and then met together to discuss and combine our results. The system was evaluated and ranked according to Jakob Nielsen's ten heuristics and severity rating scale of 0-4. After discussing our noted usability issues, we prioritized our findings by severity and developed the following series of findings and recommendations:

Finding 1: There is a lack of a customization tutorial for first-time users
Recommendation: We recommend implementing a tutorial to help first-time users understand the customization process and reduce task complexity and confusion.

Finding 2: Help documentation takes too much effort to find.
Recommendation: We recommend placing a link to the help documentation in the top navigation bar instead of having it hidden in the hamburger menu for improved visibility.

Finding 3: There is no obvious navigation bar for photo editing features.
Recommendation: We recommend improving the visibility of the photo editing features by implementing mouse hovering over images instead of mouse clicking to display the photo editing features to users.

Finding 4: Certain display features are not highlighted when they are selected.
Recommendation: Selected display features are not being shown in a consistent way. We recommend that if a customer toggles certain features, they should all be highlighted in the same color.

Finding 5: There is room for design improvement regarding button size and margins.
Recommendation: We suggest increasing the margins between different site sections and reducing the button size of the customizable features in order to minify distraction and make the site more easily readable.

By addressing usability issues and providing recommendations, we hope we can help Collage.com improve the site's usability.

Introduction

Collage.com is a website that allows users to create customized products using their own photos. Collage.com offers its users with a large variety of product options from blankets to puzzles and photo customization and editing tools.

Our team will be reviewing and analyzing the usability of Collage.com. Because Collage.com was initially intended for creating products with multiple photos, but a significant number of users are using only one photo, our overall research question through the entire assessment is:
- How can the customer's experience of creating products using only one photo as opposed to the site's standard multiple photo option be improved?

For this phase of the assessment, we specifically focused on the product customization and photo editing features of the site as those are the site's main two features and we also focused on creating products with only one photo to align with our client's proposed problem. While conducting heuristic evaluations, we kept the following question in mind:
- What are the major usability issues concerning product customization, photo editing, and single photo use existing in Collage.com's system and how can we improve such issues?

By evaluating the site against standard guidelines and principles, we were able to identify various successes and places of improvement for Collage.com. The more severe heuristic violations are listed in our Findings and Recommendations. With these evaluations, we hope to help Collage.com better understand existing usability issues and provide them with various suggestions on how to improve the site's overall usability.

Methods

Collage.com was evaluated with the heuristics proposed by Jakob Nielsen. Performing heuristic evaluations allow us to better understand our client's system, quickly identify minor and major usability issues, and alert the client to usability issues they may be unaware of. By conducting both individual and group heuristic evaluations, we can ensure that we provide a thorough evaluation of the site. After evaluating the site, we combined and discussed our results and developed a series of findings and recommendations.

Focus of Evaluation

To first start off, we narrowed down what site features we wanted to evaluate. Looking at the site's main functions, we focused on evaluating Collage.com's ability to create products and customize photos. We also considered our client's request by making products with one photo only.

Evaluation Process

Each group member conducted an individual heuristic evaluation of Collage.com according to all ten of Nielsen's heuristics. While performing the evaluations, each member took notes on the site's usability successes and failures and ranked the severity of each noted usability finding (see Appendix). For our severity scale, we adopted Nielsen's proposed severity rating scale:
- 0 = don't agree that this is a usability problem
- 1 = cosmetic problem
- 2 = minor usability problem
- 3 = major usability problem; important to fix
- 4 = usability catastrophe; imperative to fix

Heuristics Used

We evaluated Collage.com according to all ten of Nielsen's usability heuristics, which are as follows:
1. Visibility of system status
2. Match between system and the real world
3. User control and freedom
4. Consistency and standards
5. Error prevention
6. Recognition rather than recall
7. Flexibility and efficiency of use
8. Aesthetic and minimalist design
9. Helps users recognize, diagnose, and recover from errors
10. Help and documentation

Combining Results and Assessing Severity

After conducting individual evaluations, we met up as a group to discuss our results. Each member identified the problems they had discovered while evaluating the site and would demonstrate the problem live on the site for the rest of the group. After listing the problems, we came to a consensus on the severity ratings according to the severity rating scale listed above. We combined our results and ratings into another list (see Appendix). After identifying and ranking the severity of our evaluated problems, we focused on problems with the highest severity ratings in order to develop a series of findings and recommendations.

Findings and Recommendations

Finding 1: Lack of a customization tutorial for first-time users
- Violation: Help and documentation
- Severity: 3

Collage.com's core functions are to allow users to customize products with their own photos and edit photos with the functions provided by Collage.com, which means users have to finish relatively complex tasks on Collage.com. From our independent heuristic evaluations, most of us found that the customization process was not as fluid as we expected, in which we experienced moments of hesitation and confusion while using the site. This results from the complexity of the tasks we were trying to perform under the conditions of the lack of proper guidance and a tutorial.

Recommendation 1
To address the problem of a relatively steep learning curve, we suggest that Collage.com build a mandatory system for all first-time users before they begin the actual customization task. In this tutorial, the user will be introduced to principal and important functions of Collage.com. In this tutorial, if the user finds certain parts unnecessary, they can choose to skip them. By doing so, users will have a general understanding of Collage.com's functions, a smoother and easier time customizing products, and improved user experience.

Finding 2: Help documentation takes too much effort to find
- Violation: Help and documentation
- Severity: 3

Help documentation can help with a user's frustration and answer questions that may occur while using the website. This is especially needed for a website like Collage.com where user frustration is prone to happen due to the site's advanced customization interactions. However, when conducting the independent heuristic evaluations, only one of our group members noticed the existence of the help documentation, which is hidden in the hamburger menu located in the top right corner of the screen (Figure 1).
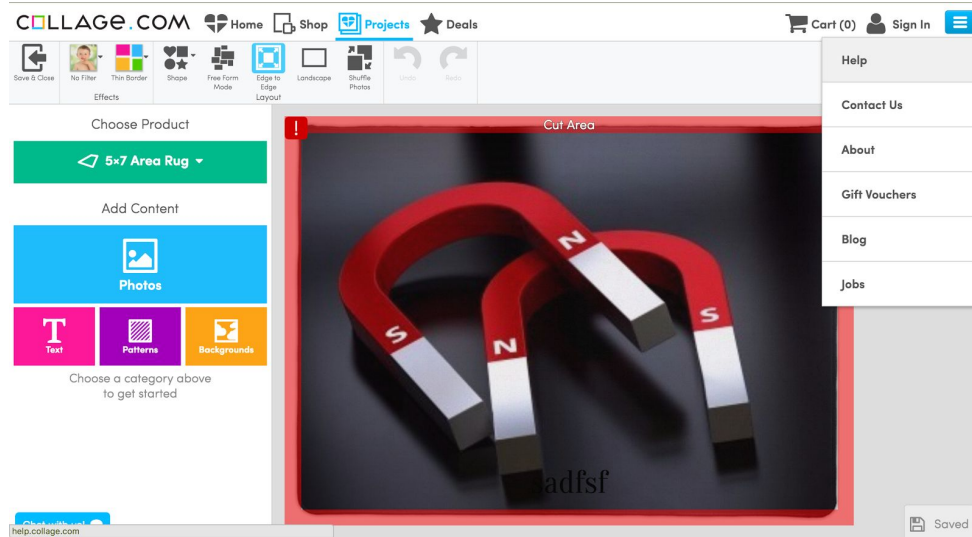
Figure 1

Recommendation 2

We recommend changing the location of "Help" link from the default hidden hamburger menu to the main navigation bar at the top next to "Deals" link. The top navigation bar is normally the place where users would most intuitively look for navigation options. Given that seeking for help documentation is a frequent user action, it would be advisable to make this change so the "Help" link can be easily found on the top navigation bar.

Finding 3: No obvious navigation bar for photo editing features

- Violation: Visibility of system status
- Severity: 2

One of the most important features of Collage.com is the photo editing feature. However, customers cannot see the photo editing features, such as editing or rotating photos, without clicking on the uploaded photo (Figure 2-1,2-2). Though clicking on the photo may be intuitive for most customers, this might be ignored by some of the target users of Collage.com. From our survey results, we discovered Collage.com is used by many females over 50 years old. Based on our personas, we assume that this group of customers might not possess as strong of technological skills when compared to younger demographics. Therefore, this feature could be designed in a more intuitive and visible way.
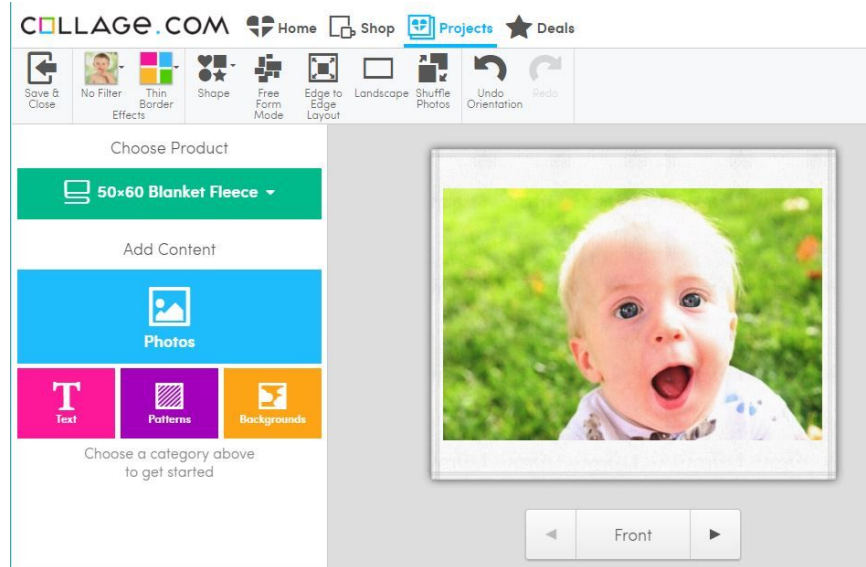
Figure 2-1

Figure 2-2

Recommendation 3

In order to increase the visibility of the photo editing feature, Collage.com could try to implement mouse hovering rather than mouse clicking to remind customers of the photo editing features. For example, when the mouse hovers on the photo, a reminder can show up so that the customers could know the existence of the feature. Another way to alert users about photo editing is to design a small photo editing reminder on the page to increase the visibility of this feature, similar to the comment function on Google Docs (Figure 3).
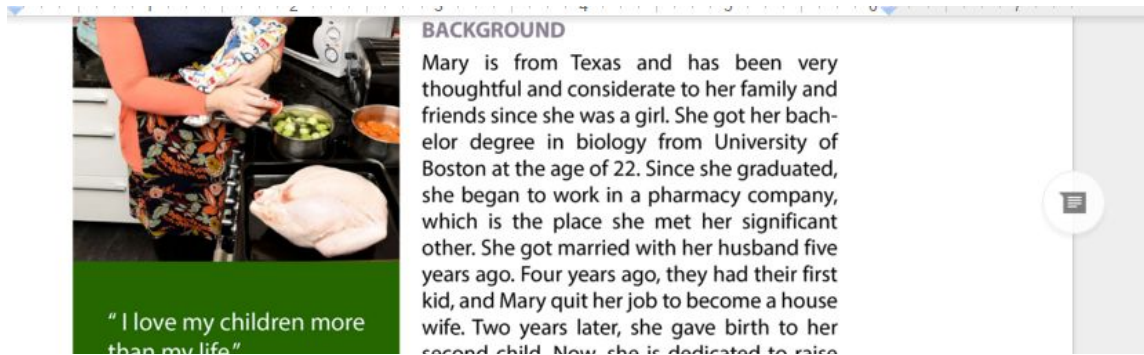
Figure 3

Finding 4: Certain features are not highlighted when they are selected
- Violation: Visibility of system status
- Severity: 2

Selected features are not shown in a consistent way. For example, when selecting "edge to edge layout" on the navigation bar, the system will use a blue color to indicate that the feature is selected (Figure 4). However, when selecting "landscape/portrait" (Figure 5), there is no color to show the action. Moreover, when viewing the back and front of the product (Figure 6-1, 6-2), the system does not tell the user where they are now, which can confuse users. It is crucial for a system to give appropriate feedback for users' actions.
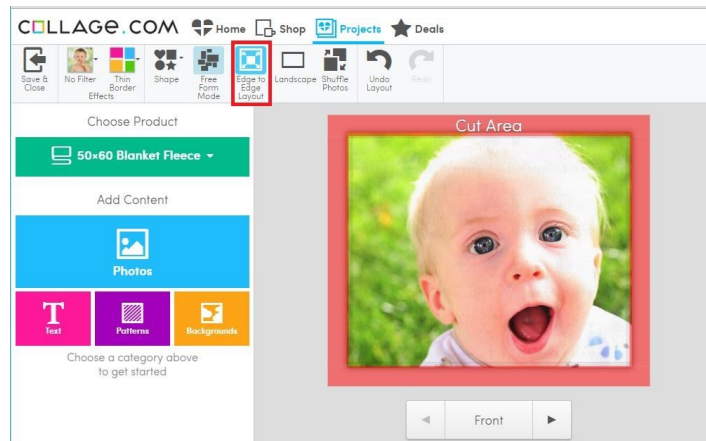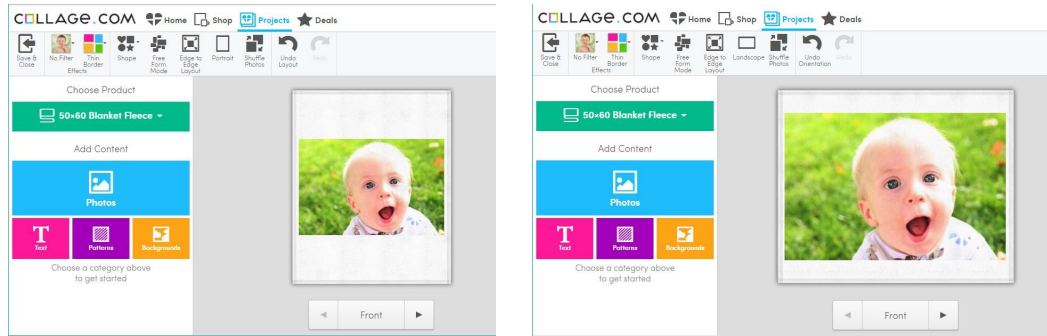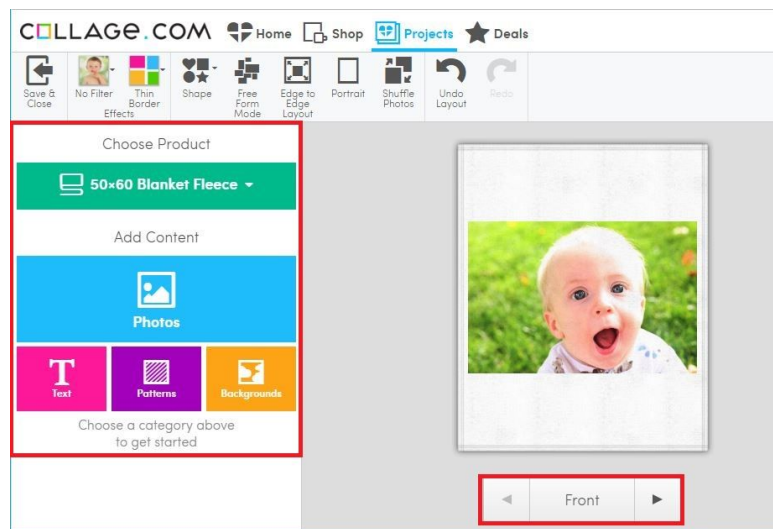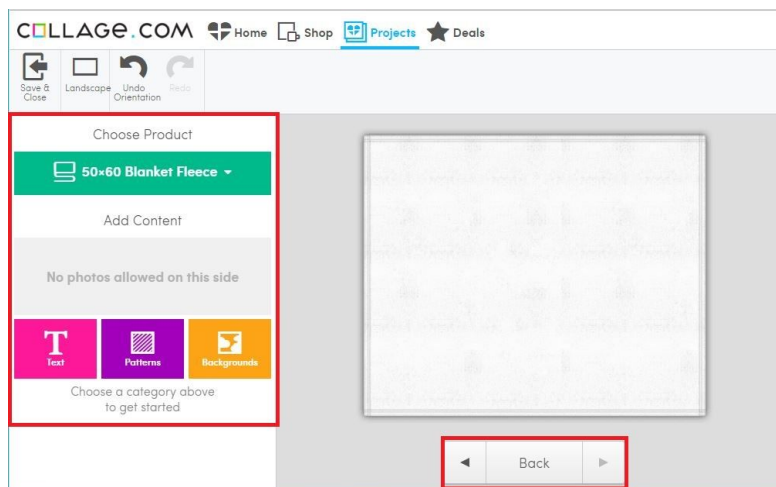

Figure 4

Figure 5

Figure 6-1

Figure 6-2

Recommendation 4

The system should consistently change the color of the label after the feature is selected. Otherwise, users will be confused whether their action is successful or not. In addition, the

system could be improved if Collage.com redesigned the "back/front" feature. We suggest to first make the button more apparent for users to increase the visibility of the feature. We then recommend to distinguish the "back/front" feature by different colors or layout and not just change the left panel (Figure 6-2).

Finding 5: Improvement space for design - button size and margin
- Violation: Aesthetic and minimalist design
- Severity: 2

In general, Collage.com is a clear and well-organized website. Nevertheless, we still find some design issues with respect to aesthetics. There are two most obvious issues: button size and margins between icons and some text. On the top navigation bar, the margin between two sections is too small, which goes against the rule of leaving safe area for content in the graphic design theory (Figure 7).
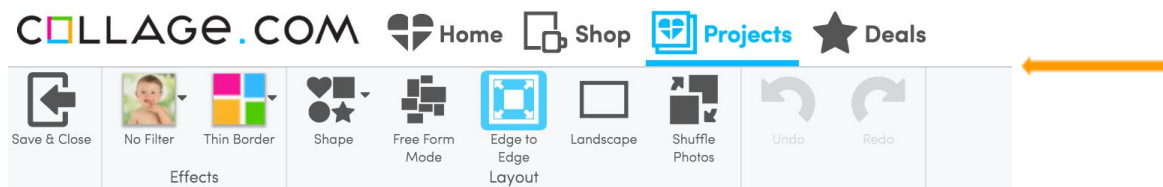

Figure 7

Aside from that, the buttons on the left function panel are too big for the whole screen (Figure 8). The right area for displaying the customized product is the area that users pay most attention to. In that case, the large buttons on the left panel can be distracting and are lacking in aesthetic value.

Figure 8

Recommendation 5
To achieve the goal of a more appealing and user-friendly website, we suggest to increase

the margin between the section on the top navigation bar. By doing so, each section will be more visually independent and readable with less distraction from the section next to them. The button size of different functions on the left function panel can also be reduced to minify distraction when users are paying most attention to the product display while they are customizing.

Discussion

While conducting heuristic evaluations, the task scope and self-bias may have influenced or limited our analysis and assessment.

Limitation 1: Task Scope

Our heuristic evaluations focused on customizing a product with a single photo, from creating a new project to finalizing editing. We are not working on the whole website since our primary mission is to figure out the usability issue related to the single photo customization. Before starting the evaluations, we clarified the starting and ending points of the tasks outlined in our scope. However, as we synthesized our evaluations, our individual evaluation results differed due to the various products we chose at the first step. Because of different product types have different involved functions, our interpretations of the usability findings differed. For example, one of us evaluated navigation with a severe usability issue of 4 while creating a blanket product since the tags indicating front and back are not clear for users while another individual who created a different product evaluated navigation as a 0 because the latter chosen product didn't enable the functionality to edit both front and back. In order to avoid this situation, we should have agreed on what products types we would use before beginning the evaluation process in order to standardize our findings.

Limitation 2: Self Bias

Even though the scope of evaluation is narrowed and clarified, individual evaluation results may differ due to the diverse criteria and standards we hold. It is hard to reach a consensus to what extent can a problem to be considered as "minor", "major", or "severe". Additionally, our synthesized evaluation is based on our shared technology levels, knowledge levels on the Internet as graduate students, which may vary from target users of Collage.com, who are middle-aged females, a demographic that does not apply to our group. We are trying to view the task through lens of our target users, but role playing is far from reality. Previous experience and abundant access to diverse types of websites help build our skills to figure out certain design pattern on how a function would be displayed, thus concealing the usability issue faced by less frequent Internet users. Taking the metaphor evaluation as an example, for those who frequently use photo editing software

and applications, it takes no effort to translate to cropping or a magic wand icon to adding effects, but people who have scarce experience with such systems or applications may not be able to fully understand those icons at their first sight. Moreover, when conducting individual evaluation, we are already familiar with Collage.com. Therefore, pre-built mental models on how to interact with the website could unconsciously influence our evaluations. When users are exposed to the website for the first time, the problems they encounter could be ignored in our evaluation.

Conclusion

By conducting heuristic evaluations, we were able to analyze the site's usability, functionality, and design in a standardized structure. Overall, we did not find any major or critical issues of the site but did identify a few areas where Collage.com could improve in to maximize their user experience and usability. These areas lie in the heuristics of help documentation, visibility of system status, and aesthetic design. We provided recommendations of implementing a tutorial for first-time users, improving the visibility of the site's photo editing features, highlighting selected features to show users what they have selected, making help documentation easier to find, and improving the site's design to minimize distraction.

For our next part of the assessment, we will conduct usability testing in order to observe user interaction with the system and to discover any usability issues we missed in the heuristic evaluations or if any of the same issues found in our heuristic evaluations reappear in the usability testing. We then hope to create a set of well-informed recommendations for our client.

Appendices

Appendix A: Individual Evaluation

Yunqi Hu:

Ten Heuristics	Description	Severity rating
1.Feedback		0
2.Metaphor	There are many metaphors used in icon, such as the magnifier, the cart icon and so on.	0
3.Navigation	The navigation is very straightforward and simple	0
4.Consistency	The different page and function panel for customization are of the same style	0
5.Prevention	There are reminders from the system such as the image size is too small and user can use more photos to collage	0
6.Memory	The system will automatically store the previous unfinished project of the user	0
7.Efficiency	The interaction process is simple and smooth	0
8.Design	The button size, margin, color palette and the layout of the function panel can be further improved	2
9.Recovery	There is an undo button.	1
10.Help	- The overall interaction with the customization is easy. - However, there is no specific part for users to find interaction instructions. - But there are some instructions when user hovers certain button and area.	1

Diane Pham:

Ten Heuristics	Description	Severity rating
1.Feedback	1. Certain features that are enabled will be highlighted such as layout, but landscape or portrait are not.	1. 3

2.Metaphor		
3.Navigation	1. Left navigation bar lets user know where they are 2. Users can save projects and come back to them later 3. Users can't filter through online photos	1. 0 2. 0 3. 2
4.Consistency	1. All icons are associated with captions.	1. 0
5.Prevention	1. Warnings will pop up but users can still proceed to create a product with blurry photo, etc.	1. 4
6.Memory	1. System remembers your photo search.	
7.Efficiency		
8.Design		
9.Recovery	1. There is an undo button with an explicit action label 2. Warnings will pop up to suggest adding more photos or resizing your photo, but it is sometimes hard to notice	1. 0 2. 4
10.Help		

Chieh-Lin Wu:

Ten Heuristics	Description	Severity rating
1.Feedback		0
2.Metaphor		0
3.Navigation	● Not work very well, the system will crush sometimes after redo something. ● Back and front page is not clear to let users know where they are	4
4.Consistency	Each page is easy to differentiate	0
5.Prevention	● The system will alert users when choosing a color that may be hard to see. ● If the image is too small, the system will alert.	0
6.Memory	The system will remember the previous project which user did before	1

7.Efficiency	1. Favorite: While choosing products, the system place the most popular item at top. It is easy for user to choose from the most popular items. 2. No shortcut, ex.delete cannot be used	2
8.Design		2
9.Recovery	The system is not stable	
10.Help	No help in customized product page. Only have "suppot information" in check out page.	4

Ruofan Zhang:

Ten Heuristics	Description	Severity rating
1.Feedback	● There is no obvious navigation of a series of functions (editing the photo, rotating the photo, and zooming in, and removing the photo), which is a primary feature of product customization. Users have to click on the uploaded photo to figure out what can be done.	3
2.Metaphor	● It is generally easy to understand the icons on Collage.com. ● Some icons in the photo editor are hard to figure out their meaning at the first time, such as "whiten" and "blemish". ● Loading gif might be a little too big, which may not the perfectly appealing to users.	1
3.Navigation		0
4.Consistency		0
5.Prevention	● There is no notification when users are not able to use a certain editing function. ●	3
6.Memory		0
7.Efficiency	● Too many functions show up at a time, taking users a rather long time to learn how to interact with the system.	2
8.Design		1
9.Recovery		0

Ten Heuristics	Description	Severity rating
10.Help	● There is less instruction for the first-time users on how to use the website. Users may be confused by such many functions jumped out at a time.	3

Appendix B: Synthesized Evaluation

Ten Heuristics	Description	Severity rating
1.Feedback	● Certain features that are enabled will be highlighted such as layout, but landscape or portrait are not. ● There is no obvious navigation of a series of functions (editing the photo, rotating the photo, and zooming in, and removing the photo), which is a primary feature of product customization. Users have to click on the uploaded photo to figure out what can be done.	2
2.Metaphor	● It is generally easy to understand the icons on Collage.com. ● Some icons in the photo editor are hard to figure out their meaning at the first time, such as "whiten" and "blemish".	0
3.Navigation	● Left navigation bar lets user know where they are ● Users can save projects and come back to them later ● Back and front page (only blanket has back and front) is not clear to let users know where they are	3
4.Consistency	● All icons are associated with captions.	0
5.Prevention	● Warnings will pop up but users can still proceed to create a product with blurry photo, etc. ● The system will alert users when choosing a color that may be hard to see.---0 ● If the image is too small, the system will alert.---0	0
6.Memory	● System remembers your photo search.	0
7.Efficiency	● Favorite: While choosing products, the system place the most popular item at top. It is easy for	2

	- user to choose from the most popular items. - No keyboard shortcut, ex.delete cannot be used - The function panel could be displayed in a more organized way	
8.Design (Aesthetic and minimalist design)	- Loading gif might be a little too big, which may not the perfectly appealing to users. - The button size, margin, color palette and the layout of the function panel can be further improved	1
9.Recovery	There is an undo button with an explicit action label	0
10. Help	- There is less instruction for the first-time users on how to use the website. - It takes users a lot of effort to find the help page.	3