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1: Strive for consistency

The design has a generally consistent sequence of actions through the screens, with pop-up windows and also for double clicking on posts to view them. However, some inconsistency in terminologies exists.

Firstly, Pages 2 to 7 uses a '< back' button for returning to the previous page, but the Content and Comments (Page 8) shows an 'x' to go back to the previous page, which can mislead users. Instead, there can be a standardized '< back' button for familiarity.

Also, the insert button in Create New Post (Page 2) is shown as a rectangular 'Insert' button, while Content and Comments (Page 8) shows a round '+' button. This can be improved by having the same rectangular 'Insert' buttons for both. Having similar buttons and words are helpful for better consistency with the rest of the design.

There is a rather consistent visual layout, by having rectangular shapes, similar fonts and placement of text. Some exceptions includes the circular profile pictures, bubbled references in Create New Post (Page 2), the use of triangular arrows in the Timeline Search (Page 7), and the insert buttons mentioned in the previous paragraph. This can be improved by standardising them to have sharp-edged shape designs, preferably rectangles or squares.

Times Referenced Search (Page 6), as compared to Timeline Search (Page 7) shows a slight difference in text choice. For example, Page 6 shows "#124 - 180 times", while Page 7 shows "Feb 23rd to 29th 2020 (21 Posts)". Despite the context being different, bracketed text can be used for both situations, as it will show a better distinction between text since both uses similar numerical figures.

2: Cater to universal usability

The rule of universal usability has not been followed closely in this prototype, due to low plasticity. Features, especially for the mind map and timeline modes, will have display constraints when used on a smaller screen like mobile phones or mini tablets. Even in landscape display orientation on phones, it will not be pleasant for users since there are too many components or boxes, causing difficulty in what to focus on. A more minimal and/or mobile-friendly design can be done to improve on this. One possible suggestion is to only allow certain modes like sequential mode for devices with smaller screens.

3: Offer informative feedback

The rule of informative feedback is followed closely in this prototype. Feedbacks are given for user actions, for example scrolling through pages, drop-downs and pop-ups. A suggestion for improvement is to indicate which post the computer mouse is hovered at, with shadows or highlights around the post frame, in the various chosen modes. Example, this can allow the Mind Map Modes (Page 3/4) to tell users which post they are hovered at, for them to select it as the "Main Post".

4: Design dialogs to yield closure

This rule of design dialogs for closure has not been followed closely in this design. For example, after user actions like post, insert, edit or delete, there are no dialogs to notify users if they have completed the action successfully. This can be improved by including statuses or feedbacks in forms of pop-ups or status bars.

In Create New Post (Page 2), there is no indicator of which page users are in. In order to improve this, a page title can be included at the top of the page, possibly beside the iDiscuss logo.

In both situations, it may cause confusion and take users a longer time to realise any changes in content or if their action is completed successfully. By providing users feedback, it will provide them with a greater sense of accomplishment and improve efficiency.

5: Permit easy reversal of actions

The prototype follows this rule well, with the easy reversal of actions. It allows users to return to previous screens with the "< back" button, and return to the main interface witch the "iDiscuss" logo. Confirmation messages appear for certain user actions like exiting the application. Users are also able to cancel references and edit or delete their posts, allowing users to undo their actions, when made unintentionally. This improves the efficiency of use.

6: Support internal locus of control

This design shows clear signs of causality, as users have good control over interface. For example, a popover will only appear when a user click on the "..." button, and a drop-down appears for the various modes.

A suggestion for improvement is to combines some modes, to allow users more control and to avoid forms of duplication in terms of purpose. For example, Times Referenced Mode (Page 6) can be combined with the Sequential Descending Mode, as both modes have minimal differences and involve sorting posts in descending order. Otherwise, a separate drop-down list can be included for users to choose the sorting order, instead of having 2 Sequential Modes - ascending and descending. This can give users better control over the interface.

7: Reduce short term memory

The design does not follow the rule very closely. In the Mind Map Mode (Page 3), users have to be familiar with the specific keyboard commands to perform the intended action, e.g. "Alt + Tab" for post 2 to be the main post. However, it may be difficult for them to remember the commands, as most users are used to visible commands like buttons. This can be improved by adding a help function with documentation, or alternatively removing the feature entirely as it is the same as clicking on a post to be the main post.

Though, the Main Interface features a search function, which displays a drop-list of possible keywords, based on the user's existing input. When adding References (Page 2), it also allows users to view the selected post. These are good as users will not have to remember the content entirely, as they act as aids or hints, guiding users along the way.

8: Prevent errors

This rule of preventing errors has been followed closely in this design, as the chance of users making mistakes in the application has been minimised. For example, the calendar in the Search Results (Page 3) helps to prevent errors by greying out future dates, in case a user selects them unintentionally. By using a calendar, it also reduces mistakes in date formatting e.g. YYYY/MM/DD, as they are set through the system.

9: Additional Comments

In the Main Interface (Page 1), the word "Search" has appeared twice on the screen, which will be confusing for some users. Instead, it can be repositioned beside the search bar, and renamed as "Enter" or a search icon.

In the Mind Map Search (Page 3/4), the headings "Reference who" and "Who reference" text is not very prominent. It can be improved by having the text bolded or use a different colour from the text above to differentiate between them. Otherwise, it can be placed at the bottom of the screen.

More posting information can be included in the posts, such as their name and/or profile picture with the date posted, as it is not included in the prototype. This can help users to get a gauge of who and when the post was from.

As for the comments feature, the option to include references can be given, as they can reply with the content of other posts as well. Also, it is unclear if commenting on someone else's comments are allowed from the prototype drawn, but it can be included for more effective communication.

In conclusion, although there are some improvements that can be made in terms of consistency and more, the platform is simple for new users to navigate around without much assistance. The system is a good match with the real world, which allows better recognition over recall. It also gives users the flexibility to choose from the many modes based on their preferences. A notable part of the design would be the popularity indicator. It allows users to easily know how popular each post is, just through its colours.