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UIDesignPatterns

UI design patterns are a tool that, when used appropriately, can bring great benefits and time savings, although a poor choice can lead to serious problems. Many design problems have become common and therefore various solutions have emerged. There are many UI design patterns, but we must emphasize those that have been tested, their risks cataloged, and, above all, their impact on usability documented.

Deciding which UI design pattern to use is not a trivial task. Just as when designing, it is very important to be clear about our users and their objectives. Decisions should be based on user research and a theoretical framework of our users' strengths and weaknesses. Once we define the problems our users may encounter and select the usability attributes we wish to achieve, we can begin comparing design patterns. When choosing which design pattern to use, it is important not to lose sight of our users' context, as it is crucial to choose a design pattern that adapts to our context, not the other way around.

Our project, with 6-7 year old children as its primary users, didn't use any design patterns during its development. However, it's very important to consider the time we could have saved by using these components.

The main usability goals we defined were understandability, ease of use, and efficiency. Our intention was to develop a UI suitable for 6-7 year old children. It should be easy to understand for their cognitive abilities, easy to use, and efficient. With these defined goals, we were able to address our users' main issues (poor focus on the task, loss of interest, frustration, etc.), so I began evaluating design patterns such as the following:

- Clear Primary Actions: Make buttons stand out with color so users know what to do (e.g., “Submit”). You may have to decide which actions take priority. [1] Using this pattern allows you to indicate the steps to the child by using prominent buttons that guide them through the order of actions.
- Progressive Disclosure: Show users only features relevant for the task at hand, one per screen. If you break input demands into sections, you’ll reduce cognitive load (e.g., “Show More”). [1] On the other hand, the second pattern might seem more useful by reducing cognitive load by hiding irrelevant functions.

It's important to understand our usability goals to choose the right pattern. In this case, I consider the Clear Primary Actions pattern to be more relevant, as it allows for a more user-friendly UI through color emphasis. Bright colors attract children's attention, and when selected in an orderly manner, it supports ease of use. An example of an app would be to use large buttons, one green with a "+" symbol and another red with a "-" symbol, so that children can identify addition and subtraction.

Not choosing Progressive Disclosure doesn't mean overloading the UI with irrelevant functions. To avoid distractions, you shouldn't add functions that aren't a priority. If you want to include more mathematical concepts in the future, the Progressive Disclosure pattern would be a better fit for your needs, allowing you to introduce concepts step by step rather than all the options from the beginning, avoiding frustration.

Choosing a design pattern requires a defined theoretical framework to support the decision. It is also important to test the effectiveness of the selected design pattern in advance to assess whether it was

a good choice. In any case, keeping our objectives in mind is of great importance to support the decision. Likewise, using usability testing is key to ensuring the desired effect. These elements are a further step toward ensuring an effective design and a meaningful learning experience.

Referencias

[1] Interaction Design Foundation - IxDF. “What are User Interface (UI) Design Patterns?” Interaction Design Foundation - IxDF. https://www.interaction-design.org/literature/topics/ui-design-patterns (accessed Sep. 13, 2025).