Note on User Interface for Computer Aided Learning

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Introduction

When it comes to software implementation, user interface design is crucial. By making the system versatile, appealing, interactive, and easy to be using, good UI design may attract a wide spectrum of users. The fact that a user finds the system functional and capable of executing the desired operations is critical. A channel of communication between the user and the designer should be established in order to supply the designer with the necessary parameters to meet the user's needs. This is where the user interface (UI) comes into effect in the design process. User control, freedom, flexibility, efficiency of use, consistency, and standards are not satisfied in the UI design phase without standard heuristic design, such as Nielsen's heuristics, which can lead to user discontent or failure of the project. System status visibility is when navigating through CAL, the user needs to know what's going on by receiving suitable feedback (e.g., in our project, the Next and Previous buttons were clearly marked for the user to navigate).

Match between the system and the real world is an essential that the system employs language that the user understands rather than jargon or terminology that the user is unfamiliar with (e.g., words or codes not used or understood by many people). The animations in CAL is built in such a way that the user may relate to it as though it were real life. There are a few elements that were created with the intention of someone being user-friendly. The criterion of user control and flexibility assists users to avoid faults that they may face in an unfamiliar portion of the system. The CAL tool enables a user surfing the system complete control and independence (e.g., the Close button on the top is displayed in each part of the animation which gives the user full control to close whenever they want, and for flexibility the Next and Previous buttons are clearly marked to navigate). The majority of the CAL system complies to the same set of requirements for actions.

Every CAL tool's error prevention is supposed to be error-free and offer the user with accurate information; nonetheless, we employed this heuristic to enable users the flexibility to navigate the system without concern of becoming lost or making problems. For the user to recognize visible objects, options, and actions shown, recognition rather than recall is critical. Objects that are easily recognized and used frequently in most systems should be used in the system. The main goal of employing UI design is to provide flexibility with the CAL for both novice and expert users. Our CAL is developed with features that are appropriate for both types of users while preserving the device's efficiency and versatility. When the CAL tool was being developed, we made sure the information used was relevant as well as to the point so that it satisfied the users' desired criteria, rather of providing irrelevant or rarely used information. Based on only at animation, a lot of information about budget and its link with other factors was presented, which is a benefit for rookie users, and the alternatives for going ahead or back were clearly expressed with less use of visuals, reducing the load of memorizing the system for expert users. Support users in identifying, diagnosing, and recovering from errors. CAL is built on a static model to ensure that users do not make any mistakes.

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Conflict of Interest Statement

Authors declare they have no conflict of interest with this manuscript.

