**Chapter I. Introduction**

**Background of the study**

This design should be proposed because it directly addresses the common challenges faced by students, such as isolation, lack of motivation, and difficulty in comprehending complex subjects. By fostering a collaborative learning environment, StudyBuddy enhances student engagement and provides a support system through shared resources and real-time communication. Additionally, incorporating user feedback and continuous improvement ensures that the app remains relevant and effective. Its focus on usability, accessibility, and tangible learning outcomes aligns with the principles of user-centered system design, ensuring that it meets the actual needs and preferences of its target audience.

**Statement of the problem**

Many students experience feelings of isolation, struggling to find peers with whom they can study effectively. This isolation can lead to a lack of motivation and engagement, resulting in suboptimal study habits and poor academic outcomes. Additionally, students often encounter difficulties in understanding complex subjects and concepts, and they lack access to immediate and reliable academic support. Traditional study methods and resources may not cater to their individual learning styles or schedules, further compounding these challenges.

**Assumption of the study**

The app will feature real-time communication tools, a virtual whiteboard for collaborative problem-solving, and a scheduling tool for organizing study sessions. Additionally, it will provide access to flashcards, quizzes, and tutoring services to support diverse learning needs.

**Significance of the study**

The significance of StudyBuddy lies in its potential to benefit students across various educational levels, from high school to college. The beneficiaries include:

* **Students**: They gain access to a supportive learning community where they can collaborate with peers, share resources, and receive academic support, leading to improved comprehension and academic performance
* **Educators**: They can leverage StudyBuddy to encourage collaborative learning among students, monitor group activities, and potentially provide additional support or resources.
* **Parents**: They benefit by seeing their children engage more actively in their studies and potentially improve their academic outcomes through enhanced study habits and peer support.
* **Institutions**: Schools and universities can use StudyBuddy to foster a more interactive and engaged student body, potentially reducing dropout rates and improving overall educational outcomes.

**Chapter II. Research Design**

*User – Centered System Design Process*

1. **Task Analysis**
2. User Registration and Profile Setup
   1. Create account
   2. Set up profile (name, school, subjects of interest)
3. Finding and Joining Study Groups
   1. Search for study groups by subject or course
   2. Join existing study groups or create new ones
4. Managing Study Groups
   1. Invite members to study groups
   2. Share notes, documents, and resources within groups
   3. Schedule and manage study sessions
5. Using Collaboration Tools
   1. Utilize virtual whiteboard for problem-solving sessions
   2. Participate in real-time chat for discussions
6. Accessing Learning Resources
   1. Browse and use flashcards and quizzes for self-assessment
   2. Access tutoring services for additional help
7. Reviewing Performance and Progress
   1. Track participation and contributions within study groups
   2. Review personal study session history and notes
8. **Requirements Gathering**

To gather the necessary data for the StudyBuddy proposal, several methods can be employed:

* 1. **User Surveys and Interviews**: Conduct surveys and interviews with students, educators, and potentially parents to understand their current study habits, challenges faced, and what features they would find most beneficial in a collaborative learning app.
  2. **Focus Groups**: Organize focus groups with students to discuss their preferences for study group dynamics, communication tools, and the types of resources they would like to access.

1. **Storyboarding and Prototyping**

A storyboard or flow of the entire picture of the interactive system will be shown here.

The prototype of the interactive system -System input and output forms should be presented here and will be described on how it will function when the user will utilize it **(this part will be presented as a user’s manual including the description and functions of the parts of the hardware/technology)**

Evaluation Criteria (Based on the 10 heuristics of design evaluation)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Area of Evaluation** | **5** | **4** | **3** | **2** | **1** |
| 1. **Visibility of System Status**  * - The system design provides appropriate feedback like message prompts in response to user actions. * The message prompts are clear, visible and understandable. | x |  |  |  |  |
|  | x |  |  |  |
| 1. **Match between the system and the real world**   - Used words, phrases and concepts according to users’ language rather than system oriented words and computer jargons. |  | x |  |  |  |
| 1. **User control and freedom**   - The system design provides ways of allowing users to easily “get in” and “get out” if they find themselves in unfamiliar parts of the system. |  | x |  |  |  |
| 1. **Consistency and Standards**  * - The colors, text, labels, buttons and other elements in the design are uniform from start to finish**.**   - Text and icons are not too small or too big.  **-** Menus and other features of the system are arranged and positioned in a consistent way. (For ex. If your website has navigation buttons on the top under the page title on one page, the users will automatically look there for the same features on other pages. |  |  | x |  |  |
|  |  | x |  |  |
|  |  | x |  |  |
| 1. **Error Prevention**   - The system design provides an automatic detection of errors and preventing them to occur in the first place.  - Idiot proofing mechanisms are applied |  |  |  | x |  |
|  | x |  |  |  |
| **F. Help users recognize, diagnose and recover from errors**  **-** Error messages and the terms used are recognizable, familiar and understandable for the users. |  | x |  |  |  |
| **G. Recognition rather than recall**  **-** Objects, icons, actions and options are visible for the user.  - Objects are labeled well with text and icons that can immediately be spotted by the user and matched with what they want to do. |  |  | x |  |  |
| **H. Flexibility and efficiency of use**  - The system design provides easy to navigate menus.  - the system does not make wasteful time of system resources. |  |  | x |  |  |
| 1. **Aesthetic and minimalist design**   **-**Graphics and animations used are not difficult to look at and does not clutter (mess) up the screen.  - Information provided is relevant and needed for the system design. | x |  |  |  |  |
| 1. **Help and Documentation**   **-**the system design provides information that can be easily searched and provides help in a set of concrete steps that can easily be followed. |  |  | x |  |  |

**Chapter III. Conclusion and Recommendation**

The development of StudyBuddy addresses a critical need in the academic community by providing a comprehensive platform for collaborative learning. By enabling students to form study groups, share resources, and communicate in real-time, StudyBuddy fosters a supportive environment that enhances academic performance and engagement. The app's features, such as user-friendly interface, real-time communication tools, and progress tracking, are designed to meet the needs of high school and college students, offering a seamless and interactive study experience. Through this initiative, StudyBuddy aims to improve study habits, encourage peer-to-peer learning, and ultimately contribute to better educational outcomes.