Chapter 1

INTRODUCTION

The contemporary educational landscape witnesses a notable trend among millennial students towards the utilization of digital tools for note-taking and studying. Traditional pen-and-paper note-taking is seen as challenging, prompting a shift towards digital tools that offer enhanced convenience, organization, and accessibility of study materials (Smith et al., 2020). The limitations of current digital tools highlight the need for a new approach to learning that integrates classroom experiences with digital and comprehensive platforms that fosters collaboration, organization, and productivity is essential for students to thrive in today's digital learning environment like StudyBuddy.

Note-taking practices in the global context demonstrate significant evolution, influenced by traditional methods and modern digital advancements. For example, the Cornell Note-Taking System, developed to aid comprehension and active recall, has been adapted globally, often integrated with digital tools for improved accessibility and organization (Erin Stapleton-Corcoran, 2023). Additionally, advancements in AI and semantic technologies have facilitated context-

aware note-taking, enhancing collaboration and productivity in educational and professional settings (Dsc001-D, 2021). In a study conducted by Dan Sun and Yan Li from Zhejiang University in China in September 2019, the study investigated the effectiveness of digital note-taking using mobile terminals compared to traditional handwritten notes. 72 first-year high school students from a CS course were divided into two groups. The study found that students who used digital note-taking significantly outperformed those who used traditional note-taking in all three knowledge areas. The study suggests that further research could investigate the long-term impact of digital note-taking on student learning and retention, examine the effectiveness of digital note-taking in various subject areas and educational settings, and investigate how individual factors like learning styles, technology skills, and motivation influence the effectiveness of digital note-taking.

With the advent of online learning platforms, there has been an increased emphasis on self-regulated learning (SRL) in the Philippines, as highlighted in a study by Calamlam (2023). The findings suggest that students who effectively used digital note-taking as an SRL tool significantly outperformed those who did not. The researchers also observed that higher achievers were more likely to benefit from the

digital note-taking approach than lower achievers. The study highlights the potential of digital note-taking as an effective SRL strategy in online learning environments, particularly in the context of Philippine education.

Amidst the transition to digital learning environments, major challenges and gaps have been identified. One such challenge is the disparity between traditional classroom note-taking methods and existing applications. The emergence of StudyBuddy highlights a shift in addressing gaps between classroom note-taking and current applications. This research explores how CHMSU-A students use StudyBuddy, a collaborative app for creating, sharing, and improving study materials. StudyBuddy responds to the modern educational landscape's evolving needs by introducing a user-friendly digital platform designed for collaborative note-taking. By fostering peer collaboration and active engagement, StudyBuddy aims to enhance the effectiveness of study resources and promote knowledge exchange among students.

This research further aims to evaluate the feasibility and effectiveness of StudyBuddy in addressing the major challenges and gaps identified. The goal of the study is to provide insight into the creation of educational materials that promote collaboration as well as sharing information by including StudyBuddy into the learning ecosystem. The

literature review will set the study in the context of digital learning tools by offering insights into collaborative study tools, digital note-taking methods, and student engagement.

Objectives of the Study

This study aims to develop "StudyBuddy: A Collaborative Study and Note-taking App for Students", as a user-friendly web and mobile application that enhances collaboration, organization, and productivity among students in their academic pursuits.

Specifically, this study aims to:

1. Develop and designed a user-friendly interface for StudyBuddy with a technical features such as:
   a) Creating, sharing and collaborating of study materials
   b) Tagging
   c) Categorization
   d) Search functionalities
   e) Task assignment and tracking
   f) Real-time communication channels
   g) Accountability mechanisms
   h) Marketplace
2. Test the functionality of the above aforementioned:

3. Evaluate the usability of the system in terms of PSSUQ parameters;

a. System Usefulness;

b. Information Quality; and

c. Interface Quality.

Significance of the Study

Results of the study would be significant on the following:

Students. StudyBuddy offers students a platform to collaborate effectively, organize study materials, and enhance productivity, ultimately improving their academic performance. It fosters a culture of knowledge sharing and collaboration among peers, promoting deeper understanding and retention of study materials. The app addresses common challenges students face in note-taking and group collaboration, providing practical solutions tailored to their needs.

Educators. Educators benefit from StudyBuddy's ability to facilitate group projects and encourage active learning among students, leading to more engaging and interactive classroom experiences.

Institutions. Institutions can leverage StudyBuddy to enhance digital learning environments, supporting their

efforts to adapt to changing educational landscapes and meet the evolving needs of students.

Future Researchers and Developer. Future researchers can build upon the findings and insights generated by this study to further explore the effectiveness of collaborative study tools and note-taking apps in different educational contexts. StudyBuddy serves as a valuable case study for understanding the impact of technology on student learning outcomes and provides a foundation for future research in educational technology and digital learning tools.

For future developers, this study provides practical insights and a robust framework for designing user-friendly and effective digital platforms. StudyBuddy highlights the importance of integrating features that foster collaboration, engagement, and productivity. The findings can serve as a guide for addressing gaps in existing tools and innovating functionalities to meet the evolving needs of students in the digital age. Developers can also use this research to enhance the adaptability and scalability of educational apps for broader use.

Scope and Limitation of the Study

This study focused on the creation and evaluation of StudyBuddy, a collaborative study and note-taking app designed for undergraduate students. The research was conducted at Carlos Hilado Memorial State University - Alijis Campus, with participants being undergraduate students enrolled at CHMSU-A. The study utilized a mixed-methods approach, encompassing user interface design, collaborative note-taking functionalities, communication tools, usability assessment, and evaluation of the app's effectiveness in facilitating collaboration and enhancing the student learning experience.

The study's timeframe limited the assessment of long-term impact and the exploration of all potential features. Additionally, the sample size, while representative of CHMSU-A undergraduate students, may not have reflected the diversity of all students at the university or at other institutions, limiting the generalizability of the findings. The study's scope was also restricted by not including perspectives from students at other institutions or educational levels and by not fully addressing evolving technology trends, academic policies, or shifts in student demographics. Furthermore, certain functionalities, such as

advanced machine learning algorithms for personalized learning or integration with other educational platforms, were not feasible due to technical constraints and resource availability.

Definition of Terms

This section defines the key concepts discussed in the study, offering a clearer understanding of the subject matter. Each concept is explained in both contextual and technical terms.

Academic Success: It is a phrase deeply embedded in educational institutions across the globe, refers to the fulfilment of educational goals set within an academic environment (EuroSchool,2024).

As used in the study, it refers to the improvements in academic performance, learning outcomes, and student satisfaction, facilitated by the use of StudyBuddy and its impact on students' study habits and practices.

Collaborative Study: It is the educational approach of using groups to enhance learning through working together. Groups of two or more learners work together to solve problems, complete tasks, or learn new concepts (Groh,2024).

As used in the study, it refers to facilitate collaboration among students by allowing to share and

collaborate in study materials such as notes, documents, research and study guides in real-time.

Communication Channels: a system or method that is used for communicating with other people (Campbridge Dictionary, 2024).

As used in the study, it refers to tools and functionalities within StudyBuddy that enable real-time communication and interaction among users, such as messaging and notifications supporting collaboration and knowledge exchange.

Digital Learning Environment: It is the hub of online teaching and learning. It encompasses the technologies, tools, and skills that instructors and students use to connect in the virtual classroom. The digital learning environment may include content, communication, curriculum, engagement, and more (Teach Online Miami University, 2022).

As used in the study, it refers to the virtual space created by StudyBuddy where students engage in collaborative learning activities, access study materials, and interact with peers supporting digital learning experiences beyond traditional classroom settings.

Effectiveness: It refers to the the degree to which something is effective (Campbridge Dictionary, 2024).

As used in the study, it refers to the degree to which StudyBuddy achieves its intended goals and objectives in facilitating collaboration, organization, and productivity among students, as measured by improvements in study habits, academic performance, and user satisfaction.

Note-taking App: A note-taking app is a software application that allows you to capture, organize, and store various types of information in a digital format (Lenovo Philippines, 2023).

As used in the study, it refers to a mobile application designed to facilitate creating, and editing study materials among students such as notes, documents, and study guides in real-time.

Organizational Tools: It refers to an app or software created to optimize your daily task performance. There are several different types of tools you could encounter, including project management software, note-taking programs, journals, and day planners (Nimble Blog, 2024).

As used in the study, it refers to the features of StudyBuddy that help users organize and categorize study materials, such as tagging, categorization, and search functionalities, facilitating easy access and retrieval of information.

StudyBuddy: It is A study buddy is someone with whom you can organize into a group and cover challenging study subjects and tasks together (IvyPanda, 2024).

In this study, it refers to the online learning platform that provides various features to support student learning.

Task Assignment: It is the process of assigning specific tasks and responsibilities to individuals or teams within an organization. It involves breaking down larger projects or goals into smaller, manageable tasks that can be allocated to different individuals based on their skills, expertise, and availability (Nguyen, 2024).

As used in the study, it refers to the feature within StudyBuddy that enable users to assign tasks and set deadline.

Tracking: It is a term that refers to all those actions with which indices used to quantify the behavior of certain variables at different points in time are followed and measured (Abad, 2024).

As used in the study, it refers to the feature within StudyBuddy that users to track the progress of tasks, facilitating effective task management and accountability among users.

Usability: It is a measure of how well a specific user in a specific context can use a product/design to achieve a

defined goal effectively, efficiently and satisfactorily (The Ultimate Guide, 2024).

As used in the study, it refers to the ease with which users can navigate and interact with StudyBuddy to accomplish their tasks efficiently and effectively, encompassing factors such as ease of learning, efficiency of use, and user satisfaction.

User Experience (UX): It refers to the feeling users experience when using a product, application, system, or service (Product Plan, 2024).

As used in the study, it refers to the overall experience of using StudyBuddy, including users' perceptions, emotions, and satisfaction levels, influenced by factors such as ease of use, usefulness, and aesthetic appeal of the app.

User Interface (UI): It is the point of human-computer interaction and communication in a device (Hashemi-Pour & Churchville, 2024).

As used in the study, it refers to the graphical layout and interactive elements of StudyBuddy that enable users to interact with the app, including features such as navigation menus, buttons, input fields, and visual design elements.