At-a-Glance Productivity Planner

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Abstract - *The workplace is ever-growing, while the struggle to maintain a balanced work-life balance is still lagging. At the heart of this issue, technology exists as a mixed blessing. It helps to carry out tasks easily and efficiently, while making the line between work and life more obscure than ever.*

According to TeamLease World of Work Report, an average of 2.35 hours is spent accessing social media at work every day and 13 percent of the total productivity is consequently lost. Daily tasks are also taking longer. A recent study shows that over the last five years, the time taken to accomplish tasks has skyrocketed. This paper aims to resolve this problem by creating a productivity planner that would help prioritize important tasks, and complete these assignments, and consequently, increase productivity in everyday life.

Key Words: **Productivity, Mobile Applications, Mobile Computing, Task Management**

1. INTRODUCTION

Various factors can be ascribed to the decline in productivity in both the workplace, as well as in everyday life. Although paradoxical, the cause for this plummet is related to the rise of technology.

During the inception of technology, it was exclusive to the erudite pioneers of science. As the research developed, it eventually made its way into the market, thereby giving access to the population. The benefits it provided were highly praised, which paved the way for more development. Today, technology is used in every aspect in day-to-day life. It has made execution easier, making even the hardest task simpler to implement. Nonetheless, it also led to the surge in the reliance on smartphones, which acted as a double-edged sword, as it also meant a declination in productivity.

The usage of the Internet and smartphones is ubiquitous today. In consequence, this brought about the indulgence in social media, and other diversions. Time effectively used towards productive tasks has plummeted.

The aim of this paper is to elaborate on a minimalistic approach. Many psychological studies have revealed the myriad benefits of minimalism. This would help declutter the tasks, and focus simply on completing tasks, and keeping track of the schedule.

The remainder of the paper is organized as follows: Section 2 reviews relevant works on task management and productivity. Section 3 elucidates the application design and the features and advantages. Section 4 gives the precis of the paper with concluding remarks and the future scope of the research.

2. RELATED WORK

Gamification has been integrated into various fields to attract more active participation towards tasks that are otherwise humdrum and approached perfunctorily. It is the process of using game mechanics in context that are non-game related. Studies have suggested that it is possible for gamification to improve learning, education and development. Enterprises that has implemented gamification in their assignments have exhibited increased productivity and dynamic involvement by the employees.

Task management applications using gamification [1] presented that addition of extrinsic motivation in the form of points and badges would help increase productivity of its users. The responses were ambivalent. Some users indicated that although the point system was a benefit, it would not immerse them into producing better efficiency. Other users preferred conventional applications for increased speed and efficiency. A similar study [4] used gamification to boost student motivation during tasks such as coursework, exam preparation.

The usage of intelligent agents to automate tasks in a to-do application was the objective of another research [2]. Automation was implemented by matching the to-do entries to the corresponding features made available by agents, using a paraphrasing approach. The analysis exhibited that around 14% of user to-do tasks could be matched with the capabilities available, thereby having an accuracy of 88%. The to-do application also integrated a social network, which allowed the users to discuss their tasks with others.

Another study [5] focused on improving user's productivity by relating the task process with the deadline. The system was designed to correct the task process behavior exhibited by the user and help improve their time management skills. By analyzing lifelogged data, the system provided information about future success or failure rate in accomplishing tasks. The results suggested that the user progress can be predicted using inputs such as cumulative work time, and subjective progress rate.

To improve self-motivation to complete tasks, an application that implemented "pseudo social reminders" [3] was designed and studied. This was done by using social reminder alerts, set by the users to promote intended behavior. Due to the effect of social influence, most users responded positively that the reminders help them complete their tasks.

The usage of a tabletop system as a digital tool was discussed in another study [6]. This system is ideal for discussions

among project members. The availability of computer-mediated systems as well as the social benefits were the main advantages.

3. PROPOSED SYSTEM

From the research on the relevant studies, it is evident that existing applications on task management and productivity have received mixed responses to their design. On examining these applications, the following observations are made based on its impact on the application design :

- Gamification is heavily incorporated in various existing applications. However, the level of user involvement and productivity is noticed to decrease in subsequent period.
- Tracking the user's "track record", that is, their history of completing the assigned tasks, can be used as a source for motivation. Yet, the detail on this history could not be linked with any noticeable increase in user efficiency.
- Motivation is used as the predominant catalyst for increasing user productivity. To accommodate this, various applications have incorporated a wide variety of features to aid user ambition. Nonetheless, the overwhelming diversity of themes made available has contributed to the inevitable decrease in user participation.

This paper presents an application design aimed at taking the minimalistic approach. The design is implemented using React Native and Redux.
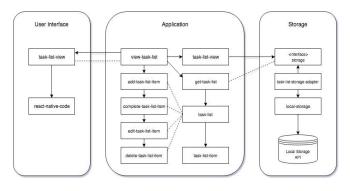
3.1 System Architecture

Fig -1: Proposed System Architecture

Fig. 1 depicts the system architecture of the application that is presented. The app acts as an user interface to collect the task assignments. These are then stored in the local phone storage.

3.2 Modules

1) User Interface : It is responsible to be the middle ground between the user and phone storage. It is designed using React Native.

2) Application : This would list the features available in the application such as : view, add, complete, edit and delete. The list of tasks is displayed.

3) Storage : The current repository for this application is the local phone storage. At the time of task creation, the details are stored in the phone storage
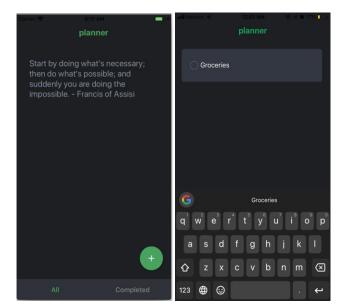
3.3 Application Design

Fig. 2 depicts the implementation of the proposed productivity application, *Deki,* derived from the Japanese word できる (romaji : dekiru), meaning "to be able to do / to be up to task".

The application works as follows :

- Under the "All" navigation bar, every task that has been assigned by the user is displayed here.
- Under the "Completed" navigation bar, the tasks that are finished are recorded here.
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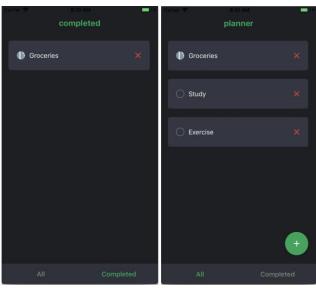The application was implemented using React Native and Redux.
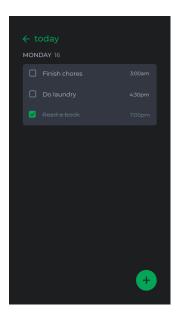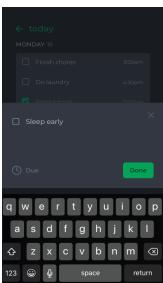

Fig -2: Implementation of *Deki* application

- React Native is a JavaScript framework that allows to render mobile applications for iOS, Android.
- Redux is a state container for JavaScript apps, that can predict states that behave consistently. In this application, Redux is used to store the tasks.
- NativeBase is a reusable UI component library, which helps to create a React Native UI component rapidly with ease.
- React-Navigation is a component that is used for seamless navigation

Fig. 3 shows the high-fidelity model for the application. The working of the model is as such :

ig -3: Future Design of *Deki* application

- Planner : This navigation screen would serve as the "at-a-glance" view of the user's complete schedule.
- Today : The second and last navigation screen would focus on the day's tasks to be fulfilled.

The dark theme interface was chosen to be compatible for night-view as well. The application is intended to change the normal "to-do" application to a versatile environment, that is on-par with the current demands of simplicity, speed and efficiency.

The main objective of this work was to propose an innovative model of a productivity planner. This would highlight the most important features of productivity and is intended to serve its purpose completely. By integrating the designs of a bullet journal, planner, and a to-do list, this work coalesces these features to bring out the critical factors through the proposed application.

4. CONCLUSION AND FUTURE WORK

This paper elaborated on the design of a productivity planner that is aimed at making planning and completion of tasks easier. The main feature of the application is the "at-a-glance" view of the user's schedule. As such, this property can help the user organize their time, and plan accordingly. The objective of this design was to prioritize efficiency, which is highlighted by the quality of the application's conciseness. To lower the user's phone usage, the app is built to be simple and straightforward with its minimalistic theme.

The limited time constraint was solely responsible for restricted functionalities of the application. However, future work will look into making the complete application available for both iOS and Android phones. The local phone storage can be replaced with a cloud storage, such as Google Firebase. The design can be extended as a website and desktop application

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