

# Smart System which Gives Personalized Suggestions to Improve Lifestyle by Decreasing Device Addiction, Improving Work Environment and Maintain Better Body Posture

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**Abstract:** *The patronage can guide you to learning about how productivity is related to workload burnout, its relation to taking breaks. It also further dwells into how the project can help to increase overall productivity and better lifestyle among its users.*

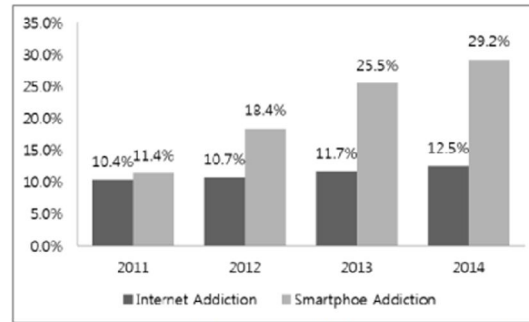
**Keywords:** Personalized Suggestions

## I. INTRODUCTION

Devices have become a major part of the day-to-day life of a human, this can be said to be particularly the case during the current time. Without regard of who the person is, be it a child or an adult, usage of various types of devices can be seen in everyone. However, as with every boon comes some kind of bane, there are some major problems with usage of such devices. Prominently of such issues, whilst using such devices, younger age groups do not tend to sit in regard to their posture, rather usually ignore it, this can be a major problem which can lead to the development of back problems since a very young age. The device addiction in itself can be the source of a multitude of problems such as Acoustic Neuromas, which correlates to the benign tissue growths. Adults too, in regards to the current scenario have to work from home and spend a humongous amount of time in front of these devices, non-stop. This can lead to eventually suffering from Workload Burnout, which can decrease the productivity of the person and the efficiency of the user. The project that is proposed is the suggested means in order to counter such problems, so as to improve the lifestyle of the people and for them to lead a healthier life.

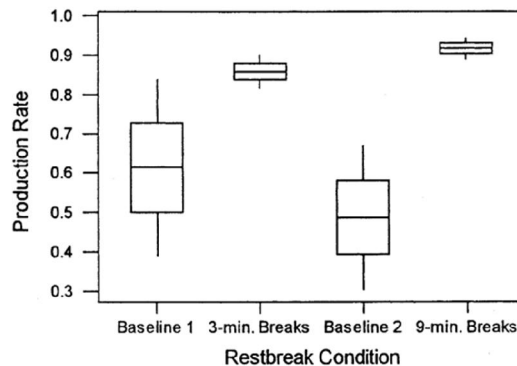
## II. PROBLEM DESCRIPTION

The problems to be discussed are some that have existed since long, however, in the light of the recent pandemic these problems have been highlighted constantly and have been increasingly notable. In the current world scenario, most of the population have had an increasing addiction to Smartphones, Laptops and more of the sort. One of the primary reasons for this addiction to electronic devices is the Mere Exposure Effect(MEE). MEE suggests that pleasant sensations may emerge spontaneously as a result of repeated stimulus exposure. That is, stimuli that are easy to spot and occur frequently are more likely to elicit favourable feelings. One plausible explanation is that humans desire to digest information with as little cognitive load as possible. People process familiar material more easily and fluently. When the topic of concentration comes into picture, it has been proved that prolonged times of concentration could lead to decrease in concentration in the long run. This is also one of the primary reasons why most schools conduct lectures for 40 minutes followed by a short break. Research conducted by the National Institute for Occupational Safety & Health (NIOSH) states that over 40% of employees feel that their jobs are very / extremely stressful. The primary reason for the former is Professional Burnout. The following Fig 1 shows how internet and smartphone addiction increased over the years within teenage individuals.



### III. SOLUTION

The problems while being very prominent have a simple way to negate. This is by simply taking breaks that let an individual rest. So what qualifies as a break? Anything that consists of the absence of work-related demands and allows for the process of recovery from work to occur. These types of breaks can range from short breaks to vacations or even sabbaticals. Taking frequent and regular breaks helps to increase the productivity rate of an individual. Fig 2 shows how breaks help to increase the productivity of an individual.



As a matter of fact, different types of breaks and activities can have different effects on an individual. Nutritional Intake activities where a person has high intake of glucose has more energy and in turn displays less negative emotions and more helping behaviors. Recovery is also assisted through social interaction wherein employees interact with others and gain support whilst leaving work related thoughts behind. In addition, whilst taking a break an individual usually moves around and walks, this leads to the prevention of back-related problems in the long run which are caused due to poor postures.

### IV. IMPLEMENTATION

There will be two sets of functionalities of the application, one for people trying to reduce their device addiction and the other for people who want to reduce their workload burnout and want to increase their work productivity. During the device addiction mode, the device will monitor the screen time of the user and also keep track of the amount of time the user is actively making use of the device. It will keep sending some useful suggestions to the user between carefully calculated intervals. The suggestions themselves will also be given a rating based on its effect at a certain time duration which will change the frequency of the appearance of the suggestion at the particular time period. At the start, the duration for the suggestion will be long, however, it will be gradually reduced to the point of making the user independent of their device addiction and gradually improving the lifestyle the user leads. During the work oriented mode, the application will keep track of both the on-screen time of the user and keep track of the activity rate of the user during this time frame, the user will then receive suggestions in order to take breaks to improve the productivity of the user. The suggestion that the user receives at a particular time frame, will be rated and in accordance to the activity rate of the user, which will decide the rating of the suggestion for which the recommendation rate for the particular time frame will be decided. The data for the activity of the user will then be available for the user to view in different formats by which, the user can make improvements



in their work schedules. The types of suggestion are provided by various Optometrists, Psychiatrics, and other Doctors who are at the top of their field. The initial time for recommendation will be of 20 minutes and adjustments will be made to that time frame. Taking such breaks will also help the user move their body more, improving their lifestyle, and when they sit, it will further improve their posture, reducing back related problems for the many people.

V. DESIGN MODELS

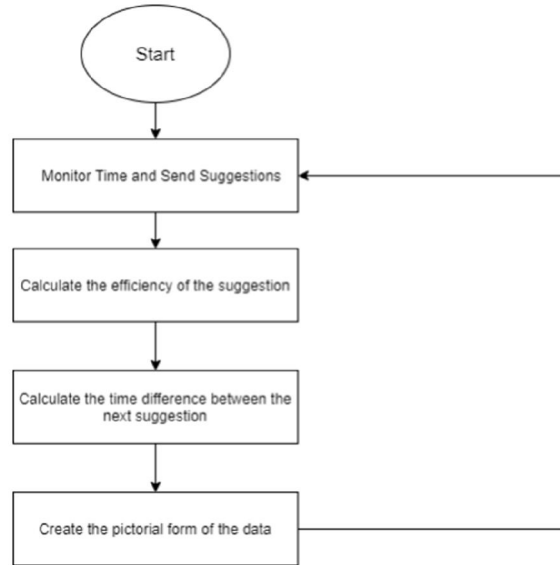


Figure: Flowchart Diagram

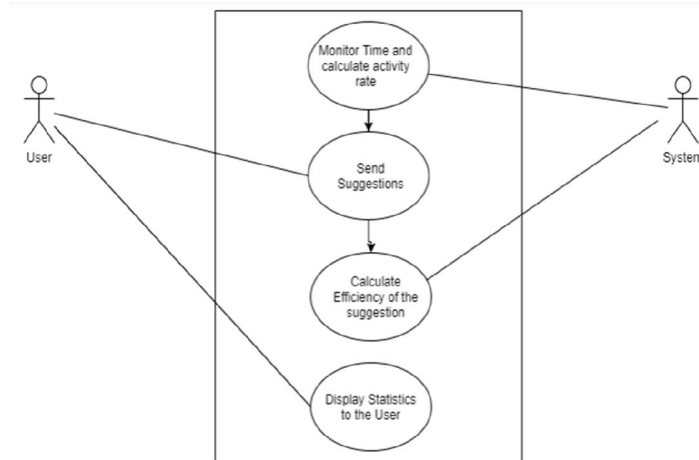
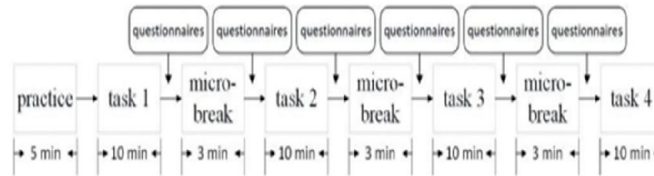


Figure: Use Case Diagram

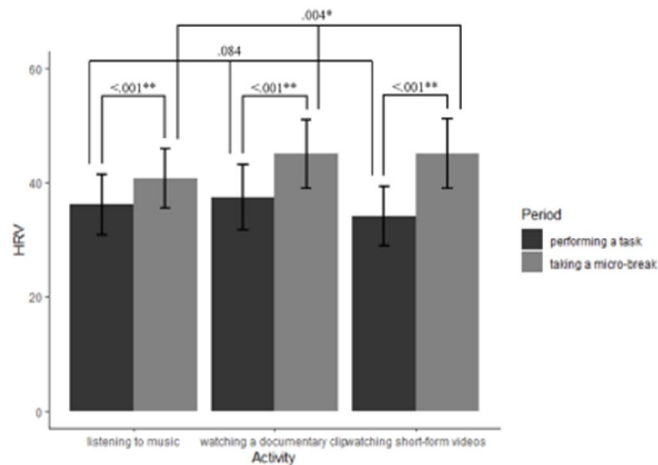
VI. CONCLUSION

An in-depth experiment held in China displayed how the introduction of Micro-breaks helped in the productivity of workers. The way the experiment followed was that the subjects practiced at the start which was then followed up by performing a task for a span of ten minutes. A questionnaire regarding the task and their involvement was then recorded. After which a micro-break of three minutes was added wherein the subjects would either listen to music, watch a documentary clip or watch short form videos. After the micro-break, the subjects performed a task for another ten minutes and followed it up with another questionnaire. The experiment procedure was displayed pictorially as:



**Figure:** Experiment Procedure

The results of the experiment were as follows



The chart clearly indicates an increase in the activity after a break is taken.

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