

# Measuring Soft Skills of Prospective Employees Using Concentrate Analysis

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**Abstract**— The success of prospective employees in the fast-moving workplace of today is significantly determined by their soft skills. To evaluate and quantify concentration analysis, this study utilizes a gamified approach that focuses on the component analysis as one of the soft skills, with a particular emphasis on concentration. To target different areas of concentration, four distinct games—Color Plate Game, Sudoku, a quiz app, and a memory game—will be integrated into an application that will be developed as part of the study. Participants play these games and provide data on their degrees of focus through a methodical approach. The purpose of the study is to investigate the potential employees' one of the general soft skill called concentration scores on the gamified evaluation.

The outcomes should yield insightful information about how concentration influences soft skills, with consequences for hiring practices and employee development. This paper presents the methodology, game design, and anticipated results, adding to the continuing conversation about cutting-edge approaches to assessing and improving soft skills in the workplace.

**Keywords**— Soft skills, Concentration analysis, Gamified approach, Prospective employees, Sudoku, Color Plate Game, Quiz app, Memory Game, Employee development.

## I. INTRODUCTION

The importance of soft skills has grown more and more clear in the quickly changing modern professional environment. [1] [2] [3] Employers look for people who can collaborate, communicate effectively, and change with the times in addition to those who are technically proficient. [4] The often-overlooked quality of focus, a cognitive function essential for sustained attention and task execution, is central to these soft skills. [5] Acknowledging the critical role that focus plays in forming soft skill sets as a whole, this study aims to perform a component analysis by exploring the subtleties of concentration using a gamified approach. [6] [7] A break from conventional assessment techniques has been necessitated by the complexity of evaluating and quantifying soft skills. [7] The addition of aspects from games into non-gaming environments, or "gamification," shows promise as a way to increase participant engagement and collect quantitative data on cognitive processes. [7] In this study, four unique games—Color Plate Game [8], Sudoku [9] [10] [11], a quiz app [5], and a memory game [6]—that are purposefully

created to target different aspects of focus are presented in an innovative application. We want to obtain a thorough grasp of how concentration affects and contributes to the wider range of soft skills through these gamified evaluations. [1] [2] [3] [5] By investigating the relationship between the concentration scores obtained from the gamified evaluation and the general soft skills demonstrated by potential employees, the study seeks to close the current gap in the literature. [1] [2] [3] [5] This study aims to improve the identification and development of soft skills necessary for success in the modern professional environment, with practical consequences for hiring practices and employee training initiatives. [1] [2] [3] [5]

We go into further detail about the concentration analysis methods used in the next sections, as well as the goals and design of each game and the expected results. [8] [11] This study adds significant insights to the continuing conversation on cutting-edge and practical techniques for assessing and improving workforce abilities by illuminating the complex interplay between concentration and soft skills. [12]

This color plate is introduced by the famous psychologist John Ridley Stroop in 1930. Actual name of this game is Stroop. [8] Despite the using same name, I refer to it as the Color Plate game here because the reasoning, technique, and analysis are the same. Adding originality was a crucial part of creating this game. The Color Plate game puts time above speed, in contrast to traditional games which emphasize time as a consideration. Our version of Stroop assesses time, while the standard game concentrates on speed. This game differs from others Stroop game in that speed is determined by the player's ability to focus. Furthermore, in keeping with the current study on concentration analysis, which frequently revolves around Sudoku, I have created a Sudoku game [8]. Studies that use quantitative tests to evaluate concentration have resulted to the addition of an app called Quiz to assess employees' concentrate skills. [13] The last component is the Memory Game, a properly named activity that evaluates concentration based on movements and timing for every participant candidate. [6]

## II. LITERATURE REVIEW

### A. Importance of Softskills in Modern Industry

Soft skills are in high demand in today's work environment since they are essential qualities that enhance technical proficiency. [1] [2] [4] [12] In order to successfully navigate the intricacies of the modern workplace, a well-rounded professional must possess the following skills: communication, teamwork, adaptability, and problem-solving, concentrate analysis. [2] [4] The evaluation and improvement of soft skills have taken center stage in talent acquisition and employee development initiatives as businesses place a greater emphasis on innovation and teamwork. [14] As example 3CS, HireVue, PwC, Talent Q company they are analyze the employer's soft skills when they are hiring employees for their companies. As well as there are some tools for analyze the soft skills. Mainly four tools are described. They are "TestGorilla, HighMatch, HireSuccess, iMocha". [14]

### B. Concentrate analysis as a Soft skill

Concentration is a crucial cognitive skill that affects a person's capacity to maintain focus and perform well on a variety of tasks. [12] [14] The ability to stay focused in the face of distractions is a sign of concentration and is crucial for efficient problem-solving, decision-making, and communication in the workplace. Innovative approaches are required to discover the complex role of focus, as it is frequently overlooked in the context of soft skills assessment, despite its significance. [13] [15]

### C. Assessing Soft Skills using Gamification

Interviews and self-report questionnaires, two common ways of assessing soft skills, [13] are not very good at capturing the dynamic and multidimensional nature of these abilities. Gamification, which is the introduction of aspects from games into non-gaming environments, has gained popularity as a potential method for engrossing participants and gathering insightful information on cognitive abilities and functions. Gamified tests offer a dynamic means of assessing soft skills, presenting a more accurate picture of a person's capabilities in practical contexts. [6] [8] [11]

### D. Past Research on Gamified Soft Skills Evaluation

Notably, one of the most well-known games for assessing concentrate analysis is Sudoku. [9] [10] [11] It provides different types and techniques; all targeted to measure concentration levels and reveal information about people's cognitive capacities. Furthermore, the flexibility of Sudoku goes beyond concentration analysis; it may be used as an IQ test. [10] Many more researchers investigating Sudoku's utility in studying concentration analysis have given it a great deal of focus over time. [11] Similarly, to assess people's ability to concentrate, psychologist John Ridley Stroop developed the Stroop game in the 1930s. [8] The Stroop game has experienced constant modification and improvement since its launch. Notably, games like the Stroop game and Sudoku are more than just amusement; they are useful tools for assessing a wide range of soft skills in people. As well as memory game also efficient game for the measure the concentrate analysis of the candidate. [6]

## III. METHODOLOGY

The proposed of this research defend on the Component Analysis on Soft Skills of Prospective Employees. [2] [3] In here we categorize and analysis the three soft skills components. They are Concentrate analysis, Comprehensive analysis, Non-verbal communication analysis.

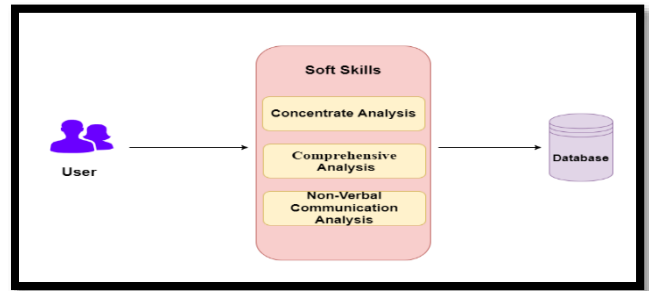


Figure 1.0: System Overview Diagram

Figure 1.0 display the overall functions of the system. Here, we perform a thorough examination of three essential soft skills with the goal of pinpointing applicants who routinely demonstrate the greatest level of competence in each of these areas. [1] We try to identify the best prospects from the pool by looking at the individuals who scored well on the soft skills exams. With the help of this method, we can evaluate and identify people who possess exceptional soft skills, which helps us choose the candidates who are most appropriate for our requirements.

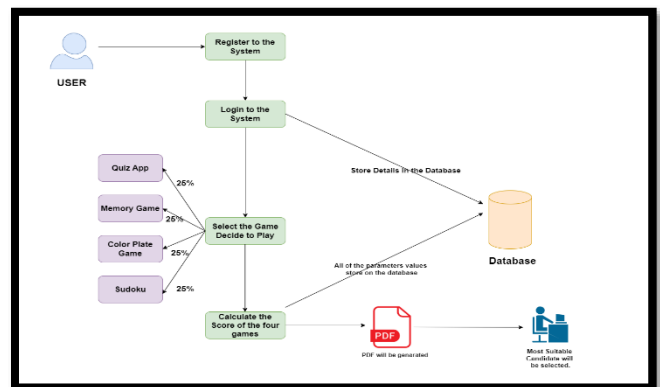


Figure 2.0: Concentrate Analysis overview diagram.

So, in this research paper mainly consider about the concentrate analysis. [12] Figure 2.0 displays the overview structure of the concentrate analysis. In a variety of areas, including business and ICT, concentrated analysis is becoming a major area of research interest. [2] Companies today are placing a higher priority on streamlining their selection procedures to assess candidates' soft skills more accurately. The significance of using thorough measurement tools to evaluate the varied skills of possible hires is emphasized by this strategic focus.

### A. Research Problem

key soft skills and cognitive abilities that contribute to employees' enhanced concentration, attention span, and focus on the workplace, and how can HR management effectively assess and measure these soft skills during the hiring process to select candidates who demonstrate strong abilities in maintaining focus and attention to detail? Abbreviations and Acronyms.

## B. Solution for the problem

- Using gamified applications and measure the recruiter's concentrate analysis.
- Used by quantify assessments and get the concentrate analysis outcome result as a measure.

## C. Application of Concentration Analysis

The infrastructure for delivering the gamified tests and gathering information on participants' levels of concentration is the concentration analysis application. The application, which was created with the use of contemporary programming languages and frameworks, has an intuitive user interface that works with a variety of gadgets, including desktops, tablets, and smartphones. The ability to store data, track performance, and choose games are among the key features. Some Common Mistakes.

## D. Gamified Evaluation

Four different games, each intended to concentrate on different aspects of concentration, are included into the concentration analysis application:

## E. Color Plate Game

In the Color Plate game, players are given color words printed in incongruent ink colors. Their task is to determine which ink color the word is written in, ignoring the word itself. The Color Plate game assesses cognitive flexibility and selective attention. Accuracy and Time will be measure.

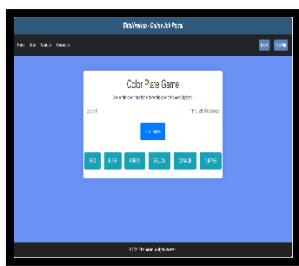


Figure 3.0: Start Page of Color Plate Game



Figure 4.0: Color Plate Game

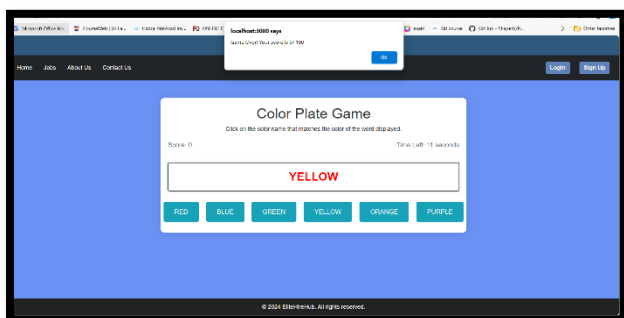


Figure 5.0: End Color Plate Game

## F. Sudoku

Solving Sudoku problems calls for players to arrange numbers within a grid while maintaining focus and using logic. Accuracy and completion time are markers of focus and capacity to solve problems. Accuracy and the time will be measure here.



Figure 6.0: Sudoku Game

## G. Quiz App

The quiz app asks timed mcq questions on a variety of concentrate related questions from participants. Correct responses and quick responses demonstrate participants' capacity to focus and digest information under pressure. Accuracy and the Time will be measure here. Minus marks will be added to the Hint taken and if the player chooses to click on solve button he will be disqualified from the game.

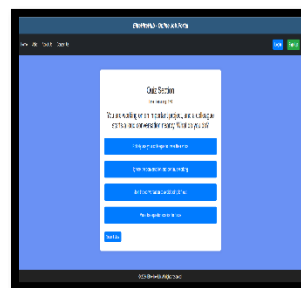


Figure 7.0: Quiz App

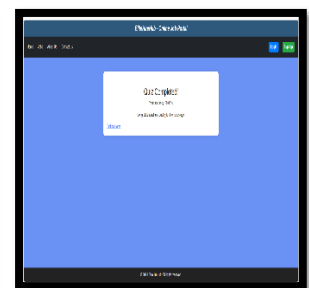


Figure 8.0: Qualified User

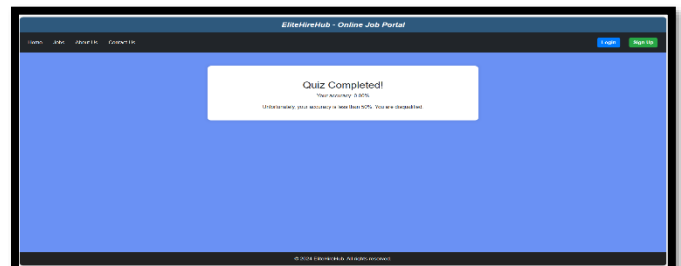


Figure 9.0: Disqualified User

## H. Memory Game

In the memory game, players must memorize and recollect sets of pictures that are arranged in a grid. Participants' short-term memory and attention to detail are evaluated through the memory game. In here measured the time and the moves user has taken. Less moves and less time taken player comes the leader boards.

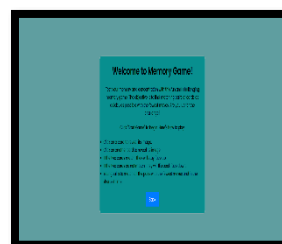


Figure 10.0: Start Memory Game

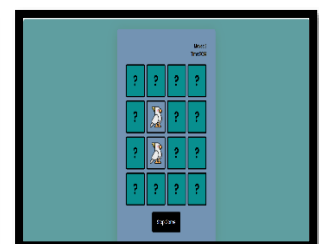


Figure 11.0: Play Memory Game

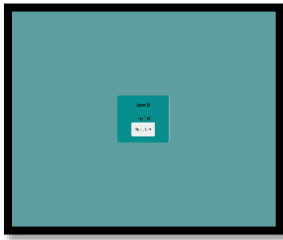


Figure 12.0: Win Memory Game



Figure 13.0: lost Memory Game

### I. Equations

Solving Sudoku problems calls for players to arrange numbers within a grid while maintaining focus and using logic. Accuracy and completion time are markers of focus and capacity to solve problems. Accuracy and the time will be measure here.

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