# Measuring Soft Skills of Prospective Employees Using Concentrate Analysis

Premathialaka M.A.D.M (Leader) dept. of Information Technology Sri Lanka Institute of Information *Technology* New Kandy RD, Malabe, Sri Lanka dinushamadhushani 1997@gmail.com

Dr.Shanta Rajapaksha Yapa (Supervisor) FACULTY OF BUSINESS | INFORMATION MANAGEMENT Sri Lanka Institute of Information Technology New Kandy RD, Malabe, Sri Lanka shanta.y@sliit.lk H.E. Jayamanna (Member)
dept. of Information Technology
Sri Lanka Institute of Information
Technology
New Kandy RD, Malabe, Sri Lanka)
hirujayamanna728@gmail.com

Prof. Samantha Thelijjagoda (Co-Supervisor) Pro Vice-Chancellor (Research & International) Sri Lanka Institute of Information Technology New Kandy RD, Malabe, Sri Lanka samantha.t@sliit.lk H.E. Jayamanna (Member)
dept. of Information Technology
Sri Lanka Institute of Information
Technology
New Kandy RD, Malabe, Sri Lanka)
hirujayamanna728@gmail.com

Prof. Nishanta Giguruwa
(External Supervisor)
line 2: dept. name of organization
(of Affiliation)
line 3: name of organization
(of Affiliation)
line 4: City, Country
line 5: email address or ORCID

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 nongaming 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 communication, teamwork, adaptability, and problemsolving, 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. METHDOLOGY

The proposed of this project defend on the Component Analysis on Soft Skills of Prospective Employees. In here we categorize and analysis the three soft skills components. They are Concentrate analysis, Comprehensive analysis, Nonverbal communication analysis.

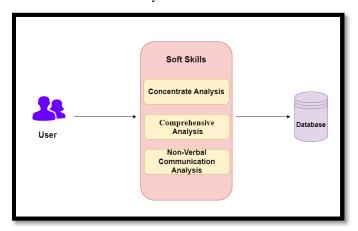


Figure 1.0: System Overview Diagram

Figure 1.0 display the overall functions of the system. Like that way there are analysis three soft skills and generate the highest range in three of all soft skills test positive results candidates. So that way we are analysis the who is the best candidates among other candidates by checking their soft skills.

So, in this research paper mainly consider about the concentrate analysis. Concentrate analysis also a main research problem in ICT industry, business sector etc. In modern world lot of companies are make an effective selection process they are targeting the employee's soft skills measurement tools.

## A. Analysis the concentrare analysis

Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text heads-the template will do that for you.

#### B. Abbreviations and Acronyms

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

#### C. Units

- Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as "3.5-inch disk drive".
- Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation.

- Do not mix complete spellings and abbreviations of units: "Wb/m2" or "webers per square meter", not "webers/m2". Spell out units when they appear in text: "... a few henries", not "... a few H".
- Use a zero before decimal points: "0.25", not ".25". Use "cm3", not "cc". (bullet list)

### D. Equations

The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled.

Number equations consecutively. Equation numbers, within parentheses, are to position flush right, as in (1), using a right tab stop. To make your equations more compact, you may use the solidus ( / ), the exp function, or appropriate exponents. Italicize Roman symbols for quantities and variables, but not Greek symbols. Use a long dash rather than a hyphen for a minus sign. Punctuate equations with commas or periods when they are part of a sentence, as in:

$$a + b = \gamma \tag{1}$$

Note that the equation is centered using a center tab stop. Be sure that the symbols in your equation have been defined before or immediately following the equation. Use "(1)", not "Eq. (1)" or "equation (1)", except at the beginning of a sentence: "Equation (1) is . . ."

## E. Some Common Mistakes

- The word "data" is plural, not singular.
- The subscript for the permeability of vacuum  $\mu_0$ , and other common scientific constants, is zero with subscript formatting, not a lowercase letter "o".
- In American English, commas, semicolons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)
- A graph within a graph is an "inset", not an "insert". The word alternatively is preferred to the word "alternately" (unless you really mean something that alternates).
- Do not use the word "essentially" to mean "approximately" or "effectively".
- In your paper title, if the words "that uses" can accurately replace the word "using", capitalize the "u"; if not, keep using lower-cased.
- Be aware of the different meanings of the homophones "affect" and "effect", "complement" and

- "compliment", "discreet" and "discrete", "principal" and "principle".
- Do not confuse "imply" and "infer".
- The prefix "non" is not a word; it should be joined to the word it modifies, usually without a hyphen.
- There is no period after the "et" in the Latin abbreviation "et al.".
- The abbreviation "i.e." means "that is", and the abbreviation "e.g." means "for example".

An excellent style manual for science writers is [7].

#### IV. USING THE TEMPLATE

After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

#### A. Authors and Affiliations

The template is designed for, but not limited to, six authors. A minimum of one author is required for all conference articles. Author names should be listed starting from left to right and then moving down to the next line. This is the author sequence that will be used in future citations and by indexing services. Names should not be listed in columns nor group by affiliation. Please keep your affiliations as succinct as possible (for example, do not differentiate among departments of the same organization).

- 1) For papers with more than six authors: Add author names horizontally, moving to a third row if needed for more than 8 authors.
- 2) For papers with less than six authors: To change the default, adjust the template as follows.
  - a) Selection: Highlight all author and affiliation lines.
- *b)* Change number of columns: Select the Columns icon from the MS Word Standard toolbar and then select the correct number of columns from the selection palette.
- c) Deletion: Delete the author and affiliation lines for the extra authors.

#### B. Identify the Headings

Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: component heads and text heads.

Component heads identify the different components of your paper and are not topically subordinate to each other. Examples include Acknowledgments and References and, for these, the correct style to use is "Heading 5". Use "figure caption" for your Figure captions, and "table head" for your table title. Run-in heads, such as "Abstract", will require you to apply a style (in this case, italic) in addition to the style provided by the drop down menu to differentiate the head from the text.

Text heads organize the topics on a relational, hierarchical basis. For example, the paper title is the primary text head because all subsequent material relates and elaborates on this one topic. If there are two or more sub-topics, the next level head (uppercase Roman numerals) should be used and, conversely, if there are not at least two sub-topics, then no subheads should be introduced. Styles named "Heading 1", "Heading 2", "Heading 3", and "Heading 4" are prescribed.

#### C. Figures and Tables

a) Positioning Figures and Tables: Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. Figure captions should be below the figures; table heads should appear above the tables. Insert figures and tables after they are cited in the text. Use the abbreviation "Fig. 1", even at the beginning of a sentence.

TABLE I. TABLE TYPE STYLES

Table Head	Table Column Head		
	Table column subhead	Subhead	Subhead
copy	More table copy <sup>a</sup>		

 $^{\rm a.}$  Sample of a Table footnote. (  $Table\ footnote)$ 

Fig. 1. Example of a figure caption. (figure caption)

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity "Magnetization", or "Magnetization, M", not just "M". If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write "Magnetization (A/m)" or "Magnetization  $\{A[m(1)]\}$ ", not just "A/m". Do not label axes with a ratio of quantities and units. For example, write "Temperature (K)", not "Temperature/K".

## ACKNOWLEDGMENT (Heading 5)

The preferred spelling of the word "acknowledgment" in America is without an "e" after the "g". Avoid the stilted expression "one of us (R. B. G.) thanks ...". Instead, try "R. B. G. thanks...". Put sponsor acknowledgments in the unnumbered footnote on the first page.

#### REFERENCES

The template will number citations consecutively within brackets [1]. The sentence punctuation follows the bracket [2].

We suggest that you use a text box to insert a graphic (which is ideally a 300 dpi TIFF or EPS file, with all fonts embedded) because, in an MSW document, this method is somewhat more stable than directly inserting a picture.

To have non-visible rules on your frame, use the MSWord "Format" pull-down menu, select Text Box > Colors and Lines to choose No Fill and No Line.

Refer simply to the reference number, as in [3]—do not use "Ref. [3]" or "reference [3]" except at the beginning of a sentence: "Reference [3] was the first ..."

Number footnotes separately in superscripts. Place the actual footnote at the bottom of the column in which it was cited. Do not put footnotes in the abstract or reference list. Use letters for table footnotes.

Unless there are six authors or more give all authors' names; do not use "et al.". Papers that have not been published, even if they have been submitted for publication, should be cited as "unpublished" [4]. Papers that have been accepted for publication should be cited as "in press" [5]. Capitalize only the first word in a paper title, except for proper nouns and element symbols.

For papers published in translation journals, please give the English citation first, followed by the original foreignlanguage citation [6].

- G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," Phil. Trans. Roy. Soc. London, vol. A247, pp. 529–551, April 1955. (references)
- [2] J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.
- [3] I. S. Jacobs and C. P. Bean, "Fine particles, thin films and exchange anisotropy," in Magnetism, vol. III, G. T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271–350.
- [4] K. Elissa, "Title of paper if known," unpublished.
- [5] R. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.
- [6] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," IEEE Transl. J. Magn. Japan, vol. 2, pp. 740–741, August 1987 [Digests 9th Annual Conf. Magnetics Japan, p. 301, 1982].
- [7] M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989.

IEEE conference templates contain guidance text for composing and formatting conference papers. Please ensure that all template text is removed from your conference paper prior to submission to the conference. Failure to remove template text from your paper may result in your paper not being published.