Designing a New Employee Acceptance Personality Test Application Using Web-based Edward Personal Preference Schedule

Delima Sitanggang1*, Evta Indra1, Jepri Banjarnahor1, Windania Purba1, Mardi Turnip1, Inka Septianingsih Girsang1, Yonata Laia1 Asaziduhu gea2

1Department of Information System, Faculty of Technology and Computer Sciences, Universitas Prima Indonesia, Indonesia
2Department of Information System, Faculty of Technology and Computer Sciences, Universitas Methodist Indonesia, Indonesia
delimasitanggang@unprimdn.ac.id

Abstract: The diversity of personality possessed by humans makes one hesitant to explore the work that interests him. The world of psychology has several test tools that can be used to analyze a person's personality which is the end result of a test that is used to see a person's personality tendency and what type of work is suitable for the interest, where current state and private companies still use manual tests by making questionnaires or a series of questions which will be given to the object which is employee candidate to study. Then the questionnaire is filled in by each object so that the value is collected and recalculated, by using a manual system an employee will wait a very long time to see the results. To solve this problem, a system is designed to facilitate the analysis of the personality of prospective employees and to place them in the positions or professions. The system was designed using the Edward Personal Preference Schedule method is one of the personality test tools that is able to reveal 15 personalities. Based on the results of the processed data there are 3 types of personality, the first type is a personality with the highest score, namely autonomy with a score of 18, the second type is affiliation with a score of 17, and the third type is domination with a score of 17 so it can be concluded that respondents X were advised to work in military sections such as the TNI.

1. Introduction
Personality comes from the word Personal, the word persona refers to a mask commonly used by performers in Roman times. In general personality refers to how individuals appear and create impressions for other individuals. Basically the definition of personality in general is weak because it only assesses behavior that can be observed only and does not ignore the possibility that these characteristics can change depending on the surrounding situation besides this definition is called weak because of its evaluative nature, however basically the personality cannot be judged "good" or "bad" because it is neutral.

Psychology is a discipline that generally aims to understand the behavior of fellow humans. In practice most psychology still uses old methods and methods in the process of understanding and studying the psychological side of an object. The object referred to here is human with all his attitudes and behavior
1. Hermes Place Polonia Medan still uses one of the old methods namely by making questionnaires or a series of questions to be given to the object to be studied, then the questionnaires are filled in by each object, then the questionnaire is collected again and summed its value so that it will get a conclusion of the number of values which the results will be used as a reference for the company to place a position for an employee. Of course this is less efficient and effective because it takes a long time, besides that the feeling of saturation is prone to occur during the process of understanding and studying the psychological side of the questionnaires that have been answered previously. This is based on the diversity of personalities of each individual not to mention this is triggered because of the similarity of traits which will later result in the conclusions produced.

Limitations of space and time when having to consult with an expert (expert) in the field of psychology become a problem for someone in knowing his personality. Seeing this requires the use of technology involved to make applications in the field of psychology, especially in the subfield of personality where the application uses computer knowledge in the field of intelligence especially the expert system branch that can overcome these things and can also be used as a support in the field of psychology and can be used for the needs of society and individuals in general [2-3]. Moreover, the application will be used by Hermes Place Polonia Medan to conduct a selection of prospective employees for their company, without having to come to the location to see the results. An expert system has been developed in the course of the research. An expert system has been developed in the course of the research. The goal of the paper is to demonstrate how to interconnect automatic finding of the position of the substantia nigra using Artificial Neural Network (ANN) with supervised learning and ROI-based image analysis[4]. A fairly simple system of legal experts aimed at solving legal problems most often experienced by persons with disabilities in Poland. The author focuses on the structure of the expert system and the methodology used for its development. The law of Polish succession has been chosen in the paper as an illustrative domain, because succession procedure modeling provides enough material to reveal the most important problems about the legal system project [5].

2. Methodology
In general a psychological test tool is an integral part of examining the psychological condition of an individual. This process is better known as psychological assessment. Psychology assessment is a series of activities that are carried out by many psychologists and psychological service bureaus in the community for various purposes. In the world of industry and organizations, psychological, examinations are generally carried out mostly for the purposes of selection, employee placement, and promotion. Whereas in the educational environment, psychological examinations are mostly carried out as an effort to determine the interests and talents of students, as well as knowing the intellectual capacity of students with various purposes. One goal is to predict the level of success of students in learning. While in the clinical or social sphere, the psychological examination is one of the considerations in determining the type of therapy or intervention that can help individuals to function back to their daily lives. Complete psychological assessment generally involves several methods, including interviews, observation, and giving psychological tests that are appropriate to the problem. The purpose of this psychological examination is to get an examination result or an adequate evaluation.

One example is a psychological test in the intelligence measurement area, the Wechsler test to date, the Wechsler Adult Intelligence Scale arrived in the fourth version in 2008. The 2014 Wechsler Intelligence Scale for Children arrived in the fifth edition. One of the psychological tests that determine a person's personality is the Minnesota Multiphasic Personality Inventory (MMPI-2-RF), which was last revised in 2008. Unfortunately, the latest version of these psychological test tools is not or is not yet available in Indonesia. [6] The previous study used for this study was Nana Setyowati's thesis entitled "Decision Support Systems Determining Jobs Based on Web-Based Personality Tests" [7], Wahyu Nurhidayanti in her thesis entitled "Computerization of 16 PF Personality Tests (Sixteen Personality Factor Questionnaire)" [8], in this thesis the personality test is carried out using the 16PF (Sixteen Personality Factor Questionnaire) method and Tri Wahyu Supriyanto in his thesis entitled "Application of Personality Test Using Web-Based Edwards Personal Preference Schedule (EPPS)" [9]. The third thesis
uses personality tests for the interests of the workforce. Expert systems in [10-12], expert systems are computer programs designed to simulate solving human behavior problems that are experts in narrow domains or disciplines. Expert systems usually consist of knowledge bases (information, logistics, etc.), machine conclusions (basic knowledge analysis), and the end user interface (receiving input, generating output) [13-14]. In this study will use 15 personality tests where each personality test will include test questions as much as 225 questions, in each question has A and B choices. Edward's Personal Preference Schedule (EPPS) is a verbal personality test and uses the forced choice method, which is to choose between two statements on each item. This test was developed by Allen Edward (1954) who referred to the theory of Henry A. Murray (1938). Alwisol (2007) writes that in Murray's view of humanity it is very holistic. Humans must be understood as whole personal entities. Every part of human behavior must be understood in relation to other functions, namely environment, past experience, unconsciousness and awareness, and brain function. All of them must be captured as a whole in order to understand the meaning of a person's personality process. For Murray (in Alwisol, 2007:218) need is a construct about the strength in the part of the brain that organizes various processes such as perception, thinking and doing to change existing and unsatisfactory conditions [15-16].

Through long research activities, referring to Murray's theory of human needs, Allen L. Edwards developed one diagnostic tool to describe one's personality. Of the 20 human needs stated by Murray, 15 needs were chosen as a basic human need. EPPS results not only describe the structure of one's needs but also contain the dynamic meaning of the structure of these needs so that a psychodiagnostic will be able to understand the subject's behavior and make predictions of his behavior.

Research begins by determining data requirements by looking for what types of personality can be declared, then data is collected and prepared research materials, data collection, looking for various sources, then conducting interviews, building software and making analysis, and at the last stage testing.

Personality classifications based on the Edward personal preferences schedule can be seen in Table 1 below:

| Code | Type of Personality          |
|------|-----------------------------|
| K1   | Achievement (ach)           |
| K2   | Deferece (def)              |
| K3   | Order (ord)                 |
| K4   | Exhiition (exh)             |
| K5   | Autonomy (aut)              |
| K6   | Affiliation (aff)           |
| K7   | Intracpection (int)         |
| K8   | Succorance (suc)            |
| K9   | Dominance (dom)             |
| K10  | Abasement (aba)             |
| K11  | Nurturance (nur)            |
| K12  | Change (chg)                |
| K13  | Endurance (end)             |
| K14  | Heterosexual (het)          |
| K15  | Aggression (agg)            |

3. Results and Discussion
The system implementation phase is a process that is carried out after the system design phase has been completed. On the Form Stage, the main menu is the initial menu used by the admin and participants. Participants click on the list to start the test, and the admin clicks on the login to check the participant test
results can be seen in Figure 3, the user registration form is a form where participants fill their personal data in accordance with the requested column can be seen in Figure 2, this form lists the statements to be chosen by participants to determine the final test results in Figure 4, the participant list of this form displays a list of participants in the personality test. This form contains the participant's ID, participant's name, age, gender, education, address and date of the participant who conducted the test can be seen in Figure 5, the data from the statement will be chosen by the participants. On this form, the admin has the task to enter an A or B statement which will then be stored in the database. As well as the answer sheet display form can be seen in Figure 6, 7 to see the results of the test answers from each participant who can only see the admin or the management part in charge of checking the answers from the participants in Figure 8.
4. Conclusion
From the results of Edward Personal Preference Schedule Personality Test Expert System design and analysis, it can be concluded that testing makes it easy for company management, the government in
analyzing the personality of prospective employees who want to work. At least 3 of the 15 personality types that have the highest value can be used as a reference for companies to draw conclusions about the placement of prospective employees and in accordance with the required criteria. Edward Personal Preference Schedule is an accurate personality test tool. This can be proven from the statement answered by Respondent X and based on the results of data that has been processed there are three types of personality with the highest score, the first type is a personality with the highest score, namely autonomy with a score of 18, the second type is affiliation with a score of 17, and the third type is domination with a score of 17 so it can be concluded that respondents X were advised to work in military sections such as the TNI.

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