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## A Novel Recruitment Model Using Emotional Filter

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**Abstract:** This research paper has designed a novel model for recruitment using emotional filter as separator in eliminating emotional issues which indeed has been trading across sectors: public and private, perhaps preventing the recruitment of qualified-skilled personnel's. The Web Base Recruitment System Using Emotional Filters (WBRSEF) has implemented a predominant component: Emotional Filter in addressing emotional influences in recruitment processes which has been exempted in previous models. Emotional filter was implemented along with Collector, Rule base, knowledgebase, and the applicant components of the novel model. The model functionalities were explored using object oriented design tool; Unified Modeling Language (UML). The proffered benefit of the model was explored on full implemented.

**Keywords:** Model; Recruitment

### I. INTRODUCTION

Successful recruitment begins with proper planning and forecasting [1-9] which usually are based on organization policies and procedures established by managerial personnel within the organization [4]. The implementation of these plans is usually the roles of Human Resources (HR) personnel's within the organization who are entrusted with the prerogative of identifying applicants best suited for organizational roles [3,6]. Overtime, due to computational abilities of electronic devices such computer and associated peripherals, computer web base systems have been develop to complement the role of HR personnel's [8].

An online recruitment system is a web system; designed with the capability of organizing and selecting qualified personnel for a particular position based on a predefined set of conditions established by the recruiters [5]. These systems are comprehensive tools having the propensity to manage and coordinate the entire recruitment processes and procedures established by top management, government regulations and environment contributors. [2,4]. In broader perspectives, these systems are known as Recruitment Management System (RMS) due to their synergy in managing the recruitment processes and effectively managing the return on investment (ROI) [3].

The usefulness of RMS systems is crucial and critical in identifying, acquiring and retaining high-quality talents within an organization which has been necessitated due to: competitiveness with the business environment, inadequate personnel's, favouritism, tribalism, nepotism, government regulation, increasing overhead cost and the continual decline in educational standards [3,7]. It is also pertinent to note that poor recruiting decisions can produce long-term negative effects within the workplace, in addition to incur overhead cost within the organization. It has led to poor social moral, failure in attaining or maintaining high standard of production. Worst yet, the overall goal sponsored by organization could be hampering due to poor recruitment processes [1].

In Nigeria, prior to the year 2000, the conventional recruitment processes explored in most public establishment where probably effective enough in addressing the aforementioned issues which did not hamper the effectiveness in recruitment process. Overtime, the quest for employment security, financial benefits, and family trends has gradually set the public establishment in a bad light as regard employment, with recruitment and selection highly compromised along family, religious, ethnic and even tribal lines [3,6]. It has been observed that family trend and traditional institution has lay support in recruiting indigenes within their locality even with no know qualification. These trends are gradually dominating the private sector with several poor recruitments recorded across the nation [3,7]. These issues are seen as emotional factor which might be addressed using emotional filter. Can emotional filter been implemented in eliminating emotional factor in designed recruitment system? This research paper proposes a novel recruitment management system, with the capability of addressing emotional factors using emotional filters.



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## II. REVIEW OF RECRUITMENT MANAGEMENT SYSTEM

This selection provides a brief review of recruitment management system which has been explored over the years. This system although suitable based on the environment of implementation has forecasted some needed limitations. These limitations provide an avenue in implementing this novel approach based on the aforementioned limitation. Table 1 provide a brief review of related literatures pertaining to recruitment management system.

SN	Author (Year)/Title	Goal	Strength/ Finding	Limitation/ Weakness	Further Research
1.	An Online Recruitment System for Economic Experiments	Online recruitment System for Economic Experiments	Address Economic recruitment	Cannot address non-economic recruitment ii.	Never addressed emotional filters
2.	Recruitment Strategies: Managing/Effecting The Recruitment Process	Strategy applied in recruitment	Strategy recruitment	Solely implemented for strategy recruitment	Never addressed emotional filters
3.	Development Of A Medical Staff Recruitment System For Teaching Hospitals In Nigeria	Development Of A Medical Staff Recruitment System For Teaching Hospitals In Nigeria	i. was broadly categorized  ii. Object design approach was adopted	i. Addresses Recruitment in the Medical field ii. Solely design for medical recruitment	Never addressed emotional filters.
4.	E-recruitment systems: A theoretical model	A simplistic review of recruitment system	Provide a broad view of recruitment	No web based system was designed	Never addressed emotional filters.

**Table 1: Review of related works on recruitment system.**

Table 1 provides a brief description of previous research works on web recruitment models addressed. The limitation of previous work on web recruitment could be seen from the neglect of emotional filter; factors affecting prompt and efficient recruitment. These issues have never been addressed using the proposed model.

## III. WEB BASE RECRUITMENT SYSTEM USING EMOTIONAL FILTERS (WBRSEF)

The Web Base Recruitment System Using Emotional Filters (WBRSEF) addressing the web recruitment through the vigorous effort in eliminating emotional factors using emotional filters. This model also implements an electronic approach, eliminating subjective tactic in recruitment. The WBRSEF is an objective approach eliminating subjectiveness and emotional influences in recruitment. This model was design taking cognizance system usability. It also caters for security issues through authentication based on less privilege and need to know. In other to identify emotional factor uniformly, a collective approach was used in obtaining this factors. A survey approach was employed in identifying certain emotional factors which was eliminated using the emotional filter. Figure 1 provides a graphical representation depicting the Web Base Recruitment System Using Emotional Filters (WBRSEF).

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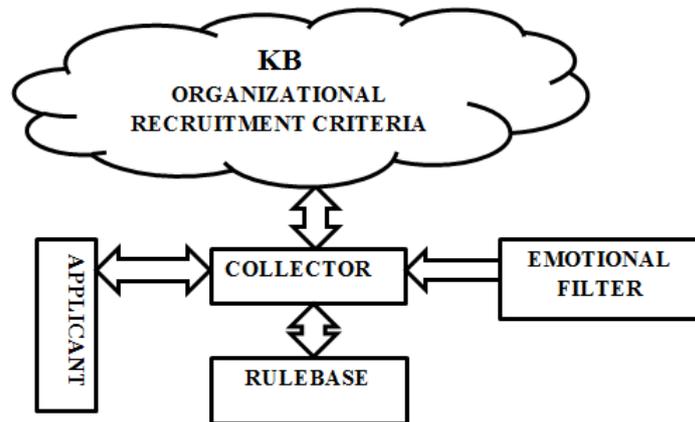


Figure 1: Web base recruitment system using emotional filters (WBRS-EF).

The presented model comprises of certain fundamental components which includes:

- **Knowledgebase KB**

The knowledgebase serves as a central repository for model base information. The relevant credentials accepted and modelled within the organization are kept in the knowledgebase. The knowledgebase is the platforms on which the rule base integrates in forming predefined recruitment rules.

- **Rule-Base**

The rule base utilizes the knowledgebase component in creating recruitment based rules on predefined criteria's housed within the knowledgebase. The rule antecedents correspond to predefined criteria's housed within knowledgebase which subsequently produces a consequent output. Prior to the consequent output, the emotional filter, eliminate emotional filler: family tie or connection, tribal lineage or background which usually emotionally affects the selection process. This emotional factors cut along emotional indicators having the propensity in mitigating or lowering the value of qualified personnel's.

- **Emotional Filter**

The emotional filter is a model based selector which identifies emotional fillers, extracting and separating it from predefined recruitment rules. The emotional filter integrates with the collector in examining both the received applicant criteria and the predefined rules. The emotional filter act irrespective of the response obtains from the applicants.

- **Collector**

The collector is the intermediary between the collector, applicant and the knowledgebase. The collector initially collect input from the each applicant, interact with the rule-base in collecting needed rules. The rules and the collected criteria are analyzed by the model emotional filter with the aim of eliminating any trace of emotional compromise. The output of the collector is finally passed as output to the applicant.

- **Applicant**

The applicant provides the needed information upon which the model initiates, activate and transform applicant information through the interaction between the collector, knowledgebase, rule base and the emotional filters. The applicant input information must align with the organization of interest, upon which a digital credentials are provided electronically for the student. These credentials are also saved for future purposes.

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## IV. MODEL DESIGN

The design of the Web Base Recruitment System Using Emotional Filters (WBRS-EF). was handled using a standard object oriented design tools: Unified Modeling Language (UML). UML is a standard modeling language used for modeling software models or systems. It provides a number of graphical tools that can be used to visualize a model from different viewpoints. This research paper focuses mainly on the behavioral view showing the chain of exchange. Figure 2 provide the sequence diagram view depicting the facet of the Web Base Recruitment System Using Emotional Filters (WBRS-EF). It shows clearly the dynamic or behavioral view of the WBRS-EF using components objects: Applicants, Collector, Emotional Filter, Rule-base and Knowledgebase. These objects interact in a synchronous manner, with the applicant as an object providing the first details in the form of applicant credentials. These details are accepted by the collector, serving as the intermediary housing these credentials which is sent to the knowledgebase. The collector interacts with the knowledgebase in comparing credentials and in returning which subsequently moderated by the emotional filter, ensuring the elimination of emotional filler and influences in hampering the application process. The rule-base provides the needed rules in ascertaining applicant as accepted or rejected.

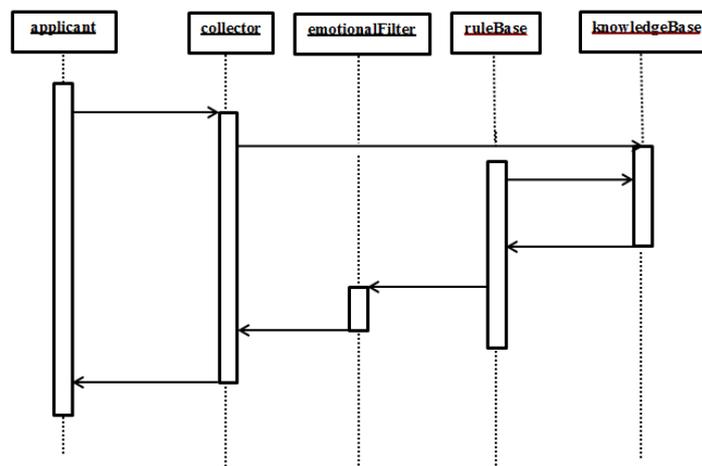


Figure 2: Web base recruitment system using emotional filters (WBRS-EF).

## V. DISCUSSION

The Web Base Recruitment System Using Emotional Filters (WBRS-EF) provide a distinction between previous designed models on recruitment with the implementation of emotional filters, eliminating emotional influences. The model on full implementation will obtains the following benefits:

- a) Eliminate the slightest delay in recruitment process.
- b) Non-biased recruitment.
- c) Recruitment highly skilled qualified personnel's.
- d) Efficient management of resources.
- e) Forecasting efficiently with available resources.

The futuristic benefits were indeed the hunt on which the design of this model was proposed and inspired.

## VI. CONCLUSION

Candidate recruitment has indeed been marred with inconsistencies sponsored perhaps by emotional factors. This trends are domiciled largely within the public sector which invariably is finding it footing within the private sector contributing tremendously to poor services offered, reduce in internally generated revenue and lack of continuity in organizational polices. These issues have been addressed using a Web Base Recruitment System Using Emotional Filters (WBRS-EF) having the capability in eliminating emotional factors in recruitment.



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## VII. REFERENCES

1. N Aloisa, E-Recruitment Systems: A Theoretical Model. Contemporary PNG Studies: DWU Research Journal 2014; 23: 25- 36.
2. G Ben, An Online Recruitment System for Economic Experiments. Department of Economics 2000.
3. RB Biobele, Problems of recruitment in civil service: case of the Nigerian civil service. African Journal of Business Management 2007; 1: 142-153.
4. K Hüseyin, Promethee sıralama yöntemi ile personel seçimi ve bir işletmede uygulanması. Department of Industrial Engineering, Gazi University, Ankara, Turkey, 2007.
5. AR Margaret, Recruitment Strategies Managing Affecting the Recruitment Process. 2014.
6. S Mayson, R Barrett, The 'science' and 'practice' of HRM in small firms. Science Direct Human Resource Management Review 2006; 16: 447-455.
7. O Bernard, IO Bernadette, (2014), Staff Recruitment and Selection Process in the Nigerian Public Service 2014; 4.
8. P Slavica, T Dragiša, et al. Multi-criteria decision in the choice of advertising tools. Facta University Mechanical Engineering Series 2008; 6: 91-100.
9. T Wei-Shen, H Chung-Chian, A realistic personnel selection tool based on fuzzy data mining method. Proceedings of the 9th Joint Conference on Information Sciences JCIS 2006.