

A Review of Recruitment and Selection Process in Educational Institutions by Chi Square Test Analysis

V. Ezhil Kumar^a, and Dr Shanthi Vijaya Keerthy^b

^a

Ph.D Research Scholar (P/T), Dept., of Business Administration
Sri Bharathi Velu Arts and Science College, Sholingur – 631102,

^bAssistant Professor and Research Supervisor, PG & Research Dept., of Business Administration, Sri Bharathi Velu Arts and Science College, Sholingur – 631102,

Article History: Received: 10 January 2021; Revised: 12 February 2021; Accepted: 27 March 2021; Published online: 20 April 2021

Abstract: Past decades, the corporate needs help from educational institute placement cell for employee recruitment. Nowadays, the process is by various sources like direct walk-in, online mode, consultancies, etc. Especially, the engineering educations, the unemployment ratio is equal to the out candidates; However, the domain selection, position, is not fully depends on the candidates profile. Various reviews are studied to analyze the recruitment process of Educational Institutions. Based on the industry reports, the IT and BPO sectors are reviewed for various educational institutes. Nowadays, educational institutions are offering various courses and training for recruitment process. The written test, group discussion and technical interview is analyzed with number of candidates; after, the personal interview session will desired the selected candidates. Few students are selected on learning period; after they continued the studies. The dataset is collected from various sources of placement database like web pages of educational institutes, corporate, consultancies, reviewers etc. This study focusing on the recent trends, and problems and this reviewed to motivate the candidates to improve skills, selecting exact domain and attending fearless interview. This analysis is done by Chi Square Test calculations. Depends on the collected data, the analysis report shows the result, which helps to analyze the various review analysis of placement recruitment process in educational institutions.

Keywords: Recruitment selection; IT and BPO in Engineering Educational Institutes; On-Campus interview; Chi Square test; Educational placement report;

1. Introduction

Human resources in educational institutions are the far reaching aspects. The placement, recruitment and selection process in final year students are trained with various courses. The educational institutions are updating various training to select the placement recruitment process for reputed organization. The point of this paper is to break down all the guidelines, lawful bases and events of the enrollment cycle and the determination of new employees in the training part in the organization. Industry needs to settle on a reasonable choice while enrolling and choosing that there shouldn't be any biasness in the procedure or in the process. Recruitment is the way toward mapping with large pool of qualified candidates on work. This includes making arrangements for human asset to work configuration, work portrayal, work investigation, making mindfulness among others [1]. A portion of the cycles incorporate screening process and resumes, testing and surveying work tests, meeting, checking references and foundation. Organization rules to select the employees improve the probability of recruiting people who have the correct aptitudes and capacities to be effective at their occupations [2]. Choice is additionally the Human Resource the board employments strategies to pick qualified and able representatives from an large campus of candidates [3]. Public Sector associated with state funded colleges need to guaranteed about the student's placement and selection process to convey their commands of instructing, research and other consular administrations [4]. Careless recruiting happens when representatives with criminal records or different issues discover their way into organizations as representatives. That is the reason it is consequently imperative to guarantee the viability of the placement and selection procedures [5]. For successful enrollment utilizing the inward source, the board ought to evaluate and assess workers for an extensive timeframe to distinguish their possibilities and selections whether they are good for the activity [6].

The consultancy charges the organization for a help expense or a commission for the administrations delivered. The organization gives the consultancy with their prerequisites as far as capability, ability, information, experience and perspectives for the empty position [7]. This technique spares time and diminishes the outstanding burden of the executives, so that they can think of other similarly significant parts of overseeing the organization [8]. The human asset division of the organization declares the opportunity in the public area. The advertisement is done in the papers, radio, TV and as of now web. The advert covers zones, for example, the organization, the situation to be filled, the prerequisite for the position, the end date for application, the area of the organization and furthermore the postal location of the organization [9]. This type of enlistment has a bigger inclusion when contrasted with the other types of enlistment simply that it is additionally more exorbitant.

The placement recruitment and selection activity is predicted and candidates must satisfy this presentation necessity before they would be chosen [10]. Enrollment and choice is vital to each association of human assets. The placement selections process done with the major categories of various stages like written test, aptitude assessment, group discussion and technical interview; the final process of selection takes personal interview. These proposals are, accordingly, made to help make these rehearses more successful; by concerning the main

discovering, the public sector, private sector on an education institutes is to limit the utilization of external activity students [11]. It ought to likewise utilize graduate enlistment and spontaneous application along with the proposal as its fundamental method of utilizing its workers [12]. Representative referrals are ought to be decreased more facilities on educational institutes. It's like transportation facility, food, accommodation, etc. That offers space to bias and continuous work of people who probably won't contribute genuinely to hierarchical yield. So as to manage the issue of recognizable proof of accessible opening in the colleges, public part advanced education establishments in various countries should utilize advertisement for publicizing its empty positions [13]. This could help draw in best gifts from both all over. To manage the deferral in input after meetings, the HR division of public division should resolve the subtleties of the offer, earlier to directing meetings. With such arrangement, the colleges can limit delays because of authoritative input and political arranging. Whatever the clarification, applicants will create tension and peculiar translations of the recruitment process if the pass among meet and acknowledgment is excessively long [14]. In any case, in the event that you stretch out a proposal to the triumphant applicant in a convenient way, you are probably going to get a positive reaction. In this study, the placement recruitment processes in educational institutions are reviewed with various organizations like BPO, IT and other domains. Most of the institutions are preparing students while studying final year and it utilized the syllabus of reputed organizations. Training and extracurricular activity takes ease of recruitment process. Depends on the student, institute and organization assessment, the data is collected to review various analysis using Chi Square calculations.

This article summarized with following sections. Section 2 reviews various literatures related to this work. Section 3 presented the proposed work related to recruitment and selection process on educational institutions. Section 4 discusses the various calculations related to the work and result analysis. Section 5 finally concludes this work with various possibilities.

2. Literature Survey

Aminchi Daniel, et. al (2014) have presented the recruitment and selection process of HR in adult educational schools. Here the management of adult education borno state Nigeria is reviewed. Placement selection and position of human asset is a significant aspect of company and large resourcing procedures which distinguish and secure individuals required for the employees position to endure and succeed. Better recruitment process technique brings about improved hierarchical results. Considering the basic significance of the faculty in the accomplishment of Adult Literacy Learning Program to talk about the system of enlistment, placement selection has position of grown-up training staff and the suggestions for the administration of grown-up instruction in Nigeria. The paper reasons that it is essential to decide the procedure by enroll, select and place association worker and the unforeseen workforce as far as their aptitudes and specialized capacities, particularly in grown-up instruction association.

Bako Y Adebola, et. al. (2017) has proposed the recruitment and selection process of various effectiveness of employee's performance. Here the hospitality based industry in ogun state is reviewed. This examination analyzes the overall adequacy of placement recruitment strategies on workers' exhibition in the friendliness business. The general goal of the examination was to decide how placement selections influence worker's presentation in the friendliness business in Ogun State, Nigeria. This investigation receives overview research plan. The populace was drawn from driving inns in Ogun State, Nigeria. The example for this examination is the workers of inns in Yewa South Local Government adding up to 115 inns with 1179 representatives. The example size was 100 representatives and survey was utilized to gather information while Cronbach alpha was utilized to test the instrument. The consequence of the examination shows that there is connection amongst enrollment and choice and worker's presentation, were exceptionally critical. There is a connection among enlistment and determination and worker's exhibition in the neighborliness business.

Sudhasetti N, and DNM Raju, (2014) has studied the recruitment and selection process of various industries. Here the cement industry, electronics and sugar industry data are processed on the studied. Effective recruitment process rehearses are key parts at the passage purpose of HR in any association. Efficient placement selection systems bring about improved hierarchical results. The primary target of this paper is to recognize general practices that associations use to enlist and select workers. The examination likewise concentrate to decide how the process practices influence the authoritative results and give a few proposals that can help to various organizations situated in Krishna. The information was gathered through all around organized poll. The wellspring of information was both essential and auxiliary and results have reviewed.

Thiruvengkraj TR and Nirmal Kumar R, (2018) has studied the review of recruitment and placement selection process. Better enrollment and determination methodologies bring about improved authoritative results. Enrollment is the way toward looking for forthcoming workers and invigorating them to go after positions in the association. Determination might be characterized as the process by which the association browses among the candidates, those individuals whom they feel would best meet the activity prerequisite, thinking about current natural condition. In the present competitive business condition, associations need to react to the necessities for individuals. It is significant for an association embrace all around organized enrollment strategy, which can be actualized viably to get the best outcomes. This examination encourages the association to distinguish the region of issue and recommend approach to improve the enlistment and determination measure, this investigation center

around getting enrollment and choice cycle. The instruments that are utilized in this investigation are Percentage examination and Chi square test is utilized.

Sneha M, (2014) have reviewed the recruitment and selection process based on the HR consulting firms. The vital intercessions in enrollment it has achieved ocean changes in the strategy of enlistment. As a prime supporter of the ability procurement, HR counseling firms have meant their significance of this industry. The inspecting procedure utilized for this examination is helpful arbitrary testing with an example size of 105 respondents. For this examination essential information was gathered through meetings and polls. The theory was tried with Chi square trial of autonomy. Through phi and Cramer's V the quality of the relationship was likewise discovered. The placement strategy of an association is dictated by the nature of work and industry in which it works. There are different interior and outside elements that influence the enlistment strategy. Business conditions in the network where the association is found will impact the enrolling endeavors of the association. Work Market Communicates the interest flexibly insights, industry pay norms just as the authorized patterns in the market and so forth.

Kavya S and Bala Koteswari, (2017) has presented the effectiveness of recruitment process in Milltec machines industry. The investigation on "Viability of Recruitment and Selection Process" did at Milltec Machinery Private Ltd Organization. This organization is situated in Bommasandra, Bangalore. The fundamental motivation behind the examination is to chase, how the placement selection process in the association are completed and the different strategies used to enlist candidates. Further the goal of my examination is to discover the procedures utilized by the association in enrollment and determination cycle and its adequacy. Also, the result of my examination is to give important proposals where there is a scope for development so as to make the powerful placement process. This examination is done by social affair important data from different offices. It will likewise assist us with knowing the representatives mentalities are towards the current framework and strategies used to select candidates in all the offices. From the investigation, the discoveries confirm that the association is doing idealness recruitment process and employee arranging is productive. It is moreover discovered that the association utilizes outer source as its fundamental wellspring of enlistment and it is viability.

Alen Azari, (2019) has presented the review analysis of recruitment and selection process of educational sectors like teachers. Here this process mainly focusing HR revealing progress of staff recruitments and studied with various aspect of development process of HR recruitment process in educational institute staff. The analysis examines both theoretical and scientific approaches on HR recruitment. Here the unemployed and employed categories are numbered based on the school principal, commission, department executives, political person's recommendation, and other influence people's recommendation. These statuses are analyzed to obtain various aspects of reviews.

Ayesha Yaseen (2015) has presented the recruitment and selection process of educational sectors. Here the higher education institutions with the placement impact are studied to recommend for economic growth. SPSS software is used for data analysis, which utilized the information about lecturers, other management staff, and internet/online based data reports. This systematical approach sometime influenced with the political parties. Here this various data analysis approach helps to promote the reputed companies and institutions. GC university data is analyzed on the performance state and the organization focuses qualified and dedicated employees. This kind of analysis reduces the influenced people's recommendation and it provides more opportunities to qualified persons.

Isaac Christopher Otoo, et. al. (2018) has discussed the effectiveness in placement recruitment process. Here the higher educational institution in Ghana database is gathering the data from as 128 samples. The internal source of recruitment focusing promotion, transfer, advertisement with internal mode, recall, and second time recruitment; the external source of recruitment utilized the HR consultant, executive recruitment, public advertisement, and recommendation. HR planning helps to find the effective analysis about graduate recruitment process. This approach studied the two challenges on the HR management domain and it is analyzed as public sector selection from higher educational institutions and identification of vacancies based on the interview feedback.

Janes O Samwel, (2017) has presented the influence of recruitment and selection process in manufacturing companies. Assembling and manufacturing Companies need skilled and spurred individuals to endure and to keep up their upper hand. Notwithstanding the money related and financial emergency, the war of looking for ability, capable and best representative is still among these organizations. This investigations wellsprings of enlistment, worldwide viewpoint on representative enrollment and choice, impact of web enrollment on producing organizations, web selection process used in Tanzania, enlistment, determination, maintenance inspiration and representative execution in Africa producing organizations and enrollment, choice, maintenance and inspiration in East Africa it likewise investigated diverse strategy and distinguished the holes for additional examinations. The general discoveries demonstrate that enrollment, determination, maintenance, and inspiration have a noteworthy relationship with assembling organizations' exhibition and viability, consequently organizations should enlist and keep up qualifies, skillful and spurred representative for their prosperity and thriving.

Daniel E Gberevbie, (2008) have presented the study of staff recruitment process in both private and public sectors. Here the data is collected from Nigeria organization. This database is collected based on the

experience and it is a empirical statistic model. How the organization achieving their goal by correct recruit and other process; this structure identifying the role of employees and HR. Approach reviews the job satisfies, reward, labor turnover, placement and recruitment analysis and various norms. This study analysis using Chi square test for various data assessment and determinations; this also reviews the staff retention.

3. Materials And Methods

The placement recruitment process modeled by optimized circuit for finding the major feature for selecting the candidates based on the dataset. Here the cuckoo search optimization with neural network based class prediction is done with the ANOVA. The chi square evaluation is done with the p value selection, which helps to identify the optimal function of given database. This proposed research work utilized the optimization approach with feature selection by feed forward neural network model. From this, the database selection, dominant factor finding, and selecting the optimal value with effective points are the major factors to determine the placement selection process.

A. Dataset

The placement selection process is based on the student profile and the objective parameters are selected by Optimized neural network model. Here the dataset is collected from <https://www.kaggle.com/benroshan/factors-affecting-campus-placement> . In this, the 15 column dataset with marks, salary, experience, extra skills, salary offer, written test performance, etc these are predicting the single class value of output.

B. Placement recruitment process

The placement selection approach using optimized neural network model this picking the most reasonable and qualified applicants, who can meet the prerequisites of the positions inside an association, which is depends on the data availability. For meeting the objectives and targets of the association, it is fundamental to assess the different credits of every up-and-comer, for example, their capabilities, aptitudes, encounters, and by and large disposition. Different competitors, who have not discovered to be reasonable to do the occupation obligations, are wiped out. The association is needed to follow fitting determination measures, the explanation being, in the event that the choice isn't completed in a suitable way, at that point it would force troublesome impacts upon the association and misfortune would be brought about to the business regarding salary, time, and endeavors.

C. Cuckoo search algorithm

In the cuckoo search optimization, the dominant factor is selected based on the minimum error rate using neural network with the class prediction strategy. Here the initialization of cuckoo search algorithm takes the size of host, probability, iterations, upper and lower limits. The counter selection process depends on the initialization value and it generates the population randomly. Here the fitness evaluation process uses neural network model, which uses feed forward functions. The flow chart of recruitment selection using cuckoo search optimization is given in fig1.

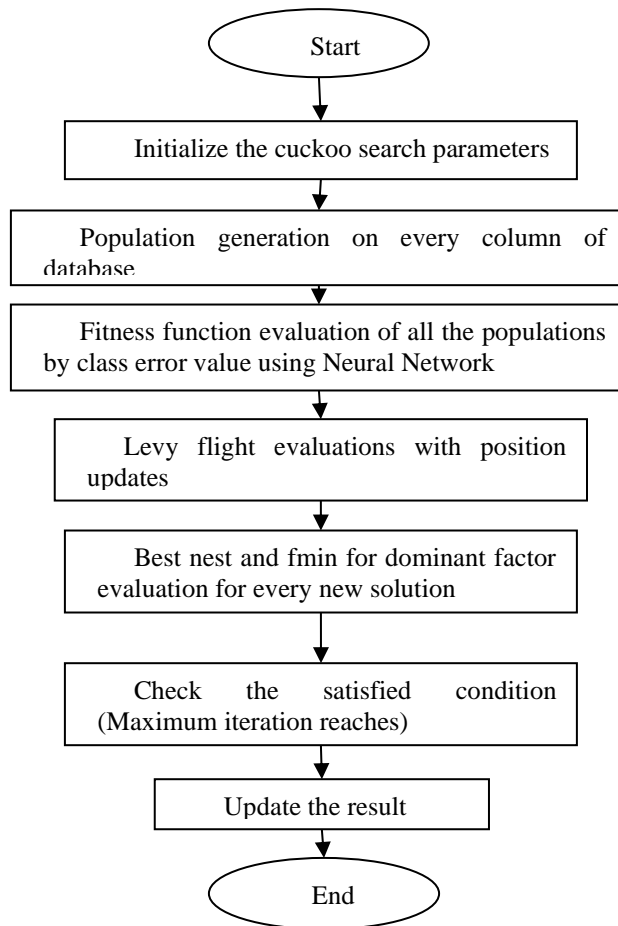


Fig1. Flow diagram of cuckoo search algorithm

The following steps for cuckoo search optimization approaches are analyzed and designed to improve the recruitment selection process. Here with the uses of feed forward neural network on the class prediction strategy, the optimal results obtained with effective performance.

Step1: Database loaded as csv file format and it reads the data for parameter selection

Step2: Initialize the parameter based on the given data

Step3: Generate the population randomly and find the network model

Step4: Fitness function obtained by FFNN

Step5: Levy for position updates and select the optimality

Step6: Check whether the conditions are satisfied and reach the maximum iteration then terminate the process

Step7: Update the optimal value

Based on the above updates, the selection of placement recruitment process is designed with Chi square value determination with ANOVA and optimal factor/feature selection by Cuckoo search Optimizer, which is done with the MATLAB with the adaptation version of 2018a.

D.Neural network based optimal selection

The optimal value selection on placement recruitment process utilized the neural network model with cuckoo search optimization approach. The input data uses 14 columns of student profile data and it selects the single output feature parameter. Totally 500 iterations are selected to perform the overall feature selection process and it is uses the error rate value with fmin for optimal value evaluation. The neural network model of recruitment selection process is given in figure2.

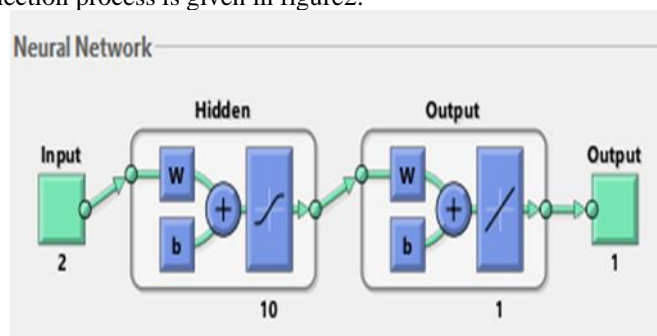


Fig2. Neural Network model

Campus recruitment process analyzed with the academic activity of students profile and employability factor of companies, which influence the placement. Here the neural network model with feed forward layer performs the class label and it selected by minimum error rate of class. Here the data is used on the optimizer approach and determined the recruitment parameters. Here the collected data contains the information about the students and it is selected by determining two parameters of Chi square test in ANOVA. The database includes gender, secondary education and board exam percentage, degree, work experience, initial process recruitment test percentage, PG specialization and percentage, status of placement and salary offers. From this analysis the two major dominant factors are determined by optimized neural network model. Here the cuckoo search optimizer performs the PG specialization and work experience. After examining with optimized neural network model, the placement recruitment process utilized the percentage of both secondary and higher class data. This proposed research work optimized the collected data for determining the placement influence factor.

4. Result and Discussion

Thus the design model of optimized neural network determined the Chi square test value with ANOVA and feed forward neural network with cuckoo search algorithm. The Chi square test evaluation of every database with p value evaluation determination in neural network model is given below. Here the dominant factor evaluation on neural network model and cuckoo search optimizers are given; in this, the neural network layer with feed forward function provides the chi square report of dominant parameters, which is given in figures 3 and 4. The Optimized result of Chi square parameter evaluation is given in the figure 5 and 6.

Analysis of Variance					
Source	Sum Sq.	d.f.	Mean Sq.	F	Prob>F
X1	1.76511e+11	1	1.76511e+11	15.54	0.0001
Error	2.41932e+12	213	1.13583e+10		
Total	2.59583e+12	214			

Fig3. Chi square test report of secondary board

Analysis of Variance					
Source	Sum Sq.	d.f.	Mean Sq.	F	Prob>F
X1	1.48132e+12	99	1.49628e+10	1.54	0.0124
Error	1.11452e+12	115	9.69147e+09		
Total	2.59583e+12	214			

Fig4. Chi square test report of higher secondary percentage

Analysis of Variance					
Source	Sum Sq.	d.f.	Mean Sq.	F	Prob>F
X1	1.5201e+08	1	1.5201e+08	0.01	0.9112
Error	2.59568e+12	213	1.21863e+10		
Total	2.59583e+12	214			

Fig5. Chi square evaluation of PG specialization

Analysis of Variance					
Source	Sum Sq.	d.f.	Mean Sq.	F	Prob>F
X1	1.79668e+12	102	1.76145e+10	2.47	1.95284e-06
Error	7.99155e+11	112	7.13531e+09		
Total	2.59583e+12	214			

Fig6. Chi square test evaluation of work experience

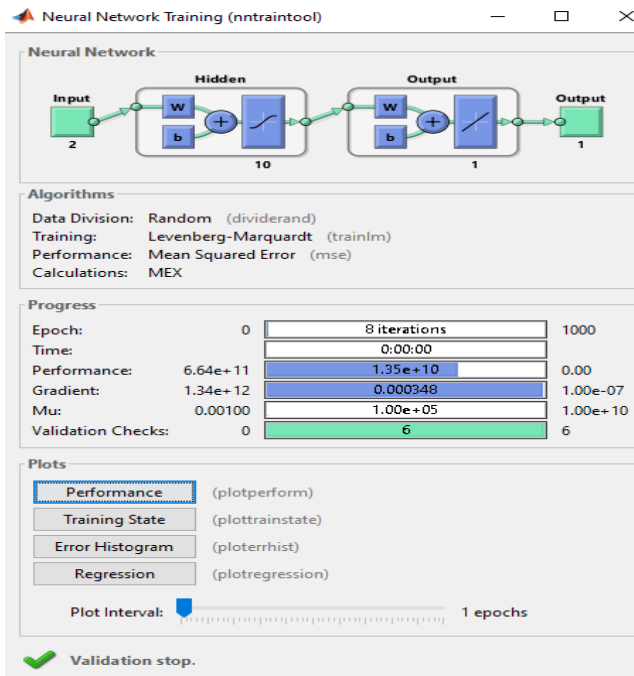


Fig7. Overall performance of Optimized neural network

Here the placement influence factor determination is selected and optimized with error rate of FFNN and it optimized with the cuckoo search algorithm. The P value of Chi square report is done with ANOVA tool from MATLAB software with the adoption version of 2018a. Here the dominant factor determination uses the network regression, training state, histogram evaluation and overall performance determination, which is given in figure 7.

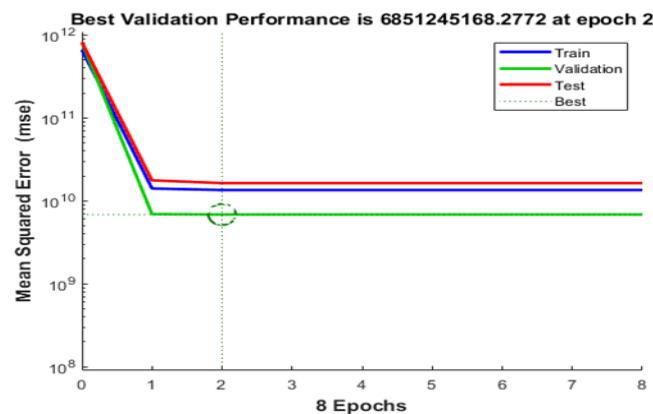


Fig8. Performance evaluation of Mean Square Error

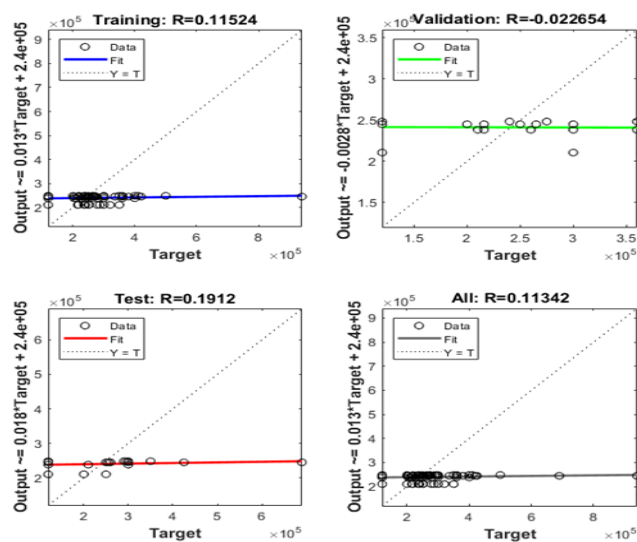


Fig9. Simulated result of optimized neural network regression

The result shows the performance of optimized neural network model for selecting the influence parameter of placement recruitment. The mean square error rate of FFN with training, testing, best value and validation results are given in the figure 8. The regression results shows the training validation with 0.115 regression and validation with 0.022 regression, testing with 0.1912 regression and overall regression with 0.11342 valued. The simulated result shows the regression performance in figure 9.

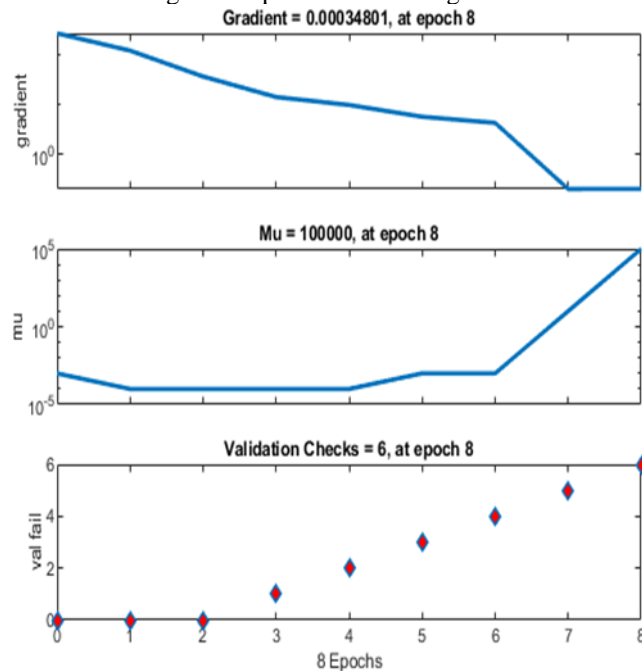


Fig10. Performance on optimizer states

In cuckoo search optimization, the performance done with 8th and 11th iteration; here the validation checks of 500 iterations are done, however, it executed the result with 8th iterations. The performance of mu selection, training, and validation checks are given in the figure 10. The error histogram report is given in the figure 11; based on the instance selection the error histogram obtained the results.

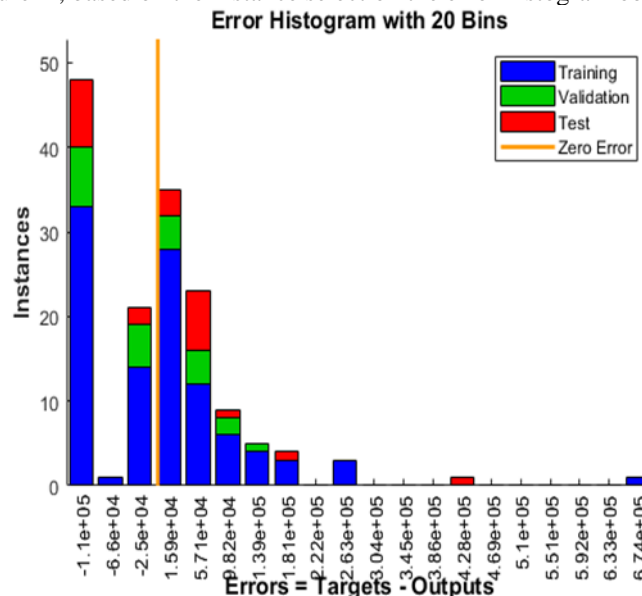


Fig11. Result of Error Histogram

The placement selection process with influence factor determination simulated with chi square evaluation by ANOVA, optimized neural network with significance value selection are determined to obtain the better results.

Table1: Comparison result

Existing work			
Parameter	Chi-square statistic	p-value	significant at p
H10	494.2949.	< 0.00001	p < .10

H20	226.4665	< 0.00001	p < .01
H30	20.5428	< 0.00001	p < .01
Proposed work			
Parameter	Chi-square statistic	p-value	significant at p
H10	3.3372	<0.0001	P<.01
H20	3.7111	<0.0001	P<0.01
H30	10.5127	<0.0001	P<0.11
H40	8.6854	<0.0001	P<0.001

The comparison result shows the better performance of p value selection on Chi square test evaluation, which is given in the table1. The results obtain the better comparison of proposed work and this determines the influence factor of placement recruitment process.

5.Conclusion and Future Scope

Thus the analysis of placement recruitment process and student profile analysis for finding dominant factor of placement selection process in educational Institutions. Here the cuckoo search optimizer with feed forward neural network model incorporate to determine the optimal parameter for selection process, which is selected by the error rate of class prediction in Neural Network model. The proposed method designed to achieve the better result of selecting the placement influence factor. Here the Cuckoo search optimization algorithm selects the fitness value by feed forward neural network model and it determines the significance value. The database selects the 15 column of student profile for placement selection process by selecting 2 to 14 column for input data. The educational institution database is processed with Chi square evaluation, ANOVA and optimized neural network model. The significance value determination with influence factor determination obtains the better result as compared with the other literatures. In future, the work may extended by analyzing each data with significance value selection and determining most significant for effective incorporation between recruiter and employees.

References

1. Aminchi Daniel, Amina Abba Sanda, and Andrew Salau Midala, "Recruitment, selection and placement of human resource in adult education organisation: Implications for the management of adult education Borno State Nigeria," *Journal of Education and Practice*, 5(31): 64-68, 2014.
2. Isaac Christopher Otoo, "Effectiveness of recruitment and selection practices in public sector higher education institutions: Evidence from Ghana," *European Sci. Journal*, 14(13): 199-214, May 2018.
3. Thiruvengatraj TR, and Nirmal Kumar R, "A Study on Recruitment and selection process," *IJSDR*, 3(4): 121-126, April 2018.
4. Bako Yusuf A, Aladelusi K Banjo, "Recruitment and selection procedure and their relative effectiveness on employees performance in the hospitality industry in ogun state," *Inter. Jour. of the guild of contemporary academic researchers*, 2(2): 55-62, March 2017.
5. Sophia D-R, Sitalakshmi V, and Adil Abbas, "Challenges in recruitment and selection process: An Empirical study," *Challenges*, 10(2), 35, August 2019. <https://doi.org/10.3390/challe10020035>
6. Sneha Mankikar, "A Critical study on recruitment and selection with reference to HR consulting firms," *Management*, 3(3): March 2014.
7. Kavya S, and Bala Koteswari, "Effectiveness of Recruitment and selection process at milltec machinery PVT Ltd," *Inter. Jou. of Human Resource and Indus. research*, 4(4): 47-51, June 2017.
8. Ayesha Yaseen, "Recruitment and selection process of higher education sector and its impact on organizational outcomes," *Inter. Jour. of Human Resource Studies*, 5(4): 2015. <https://doi.org/10.5296/ijhrs.v5i4.8822>
9. Ashish Gupta and Sujeet Kumar, "A Study on recruitment and selection process with reference," Nov. 2014. <https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.13140%2F2.1.2424.0320>
10. Sudhamsetti Naveen and DNM Raju, "A Study on recruitment and selection process with reference to three industries, cement industry, electronics industry sugar industry in Krishna Dt Ap, India," *IOSR Jour. of Business and mgt.*, 15(5): 60-67, Jan 2014.
11. Alen Azari, (2019) "Recruiting and selecting employees in Education sector in the municipality of prizen," *International Journal of Education - Teacher*, 9(17): 48-54. <https://doi.org/10.20544/teacher.17.05>
12. Harpreet Singh and Roop Kamal, "Recruitment practices in IT sector: A study of Employees perspective," *Pramana research Journal*, 9(1): 318-323, 2019.
13. Asif K, Jawad Dawood, Saad Bin Hilal, and A Kamran, "Analysis of the recruitment and selection process," *Proceedings of the 9th inter. conf. on management science and engineering management, advances in Intelligent system and computing*, 362, pp. 1357-1375, May 2015. DOI 10.1007/978-3-662-47241-5_114

14. Marjorie Armstrong-Stassen, and Seung Hwan (Mark) Lee, "The effect of relational age on older canadian employees perceptions of human resurce practices and sense of worth to their organization," *The international journal of human resource management*, 20(8): 1753-1769, Aug. 2009. DOI: 10.1080/09585190903087156.
15. Aaltio I, Salminen H and Koponen S, "Ageing employees and human resource mangement-evidence of gender-sensitivity," *Equality, diversity and Inclusion:An International Journal*, 33(2): 160-176, 2014.
16. Richard N Landers, and Gordon S, "Social Media in Employee Selection and Recruitment:An Overview," In bookof *Social media in employees selection and recruitment*, 3-11, May 2016.
17. Lavina S, Asha Nagendra, "Relooking Recruitment strategies: Use of social media," *International Journal of Engineering Technology Science and Research*, 4(8): pp. 106-111, Aug. 2017.
18. Hsu, Yu-Ru, "Recruitment and selection and human resource management in the Taiwanese cultural context," *Research Thesese-University of Plumouth PEARL*, March 1999.
19. Daniel Esemé G, "Strategy for employee recruitment, retention and performance: Dimension of the federal civil service of Nigeria," *African Journal of Business Management*, 4(8): 1447-1456, July 2010.
20. Nandakumar, S Praveen Kumar, "A Research on Recruitment and selection," *International Journal of Engineering and Advanced Technology*, 8(3S): 676-678, Feb. 2019.
21. G Karthiga, R Karthi and P Balaishwarya, "Recruitment and selection process," *International Journal of scientific and research publications*, 5(4): April 2015.
22. Daniel E G, "Staff recruitment, Retention strategies and performance of selected public and private organizations in Nigeria," *PhD Thesis*, Feb 2008. DOI: 10.13140/RG.2.2.35353.42083
23. Janes O Samwel, "Influence of recruitment, selection, retention and motivation on performance of manufacturing companies- A Critical Review of the Literature," *International Journal of Science and Research*, 6(11): 436-445, Nov. 2017.