

Portal For Construction Worker Wel-Fare

Mr. Ranjeet R. Padol¹, Prof. Ashish P. Waghmare²

^{1,2}Dept of Civil Engineering

²Assistant Professor, Dept of Civil Engineering

^{1,2}D. Y. Patil School of Engineering & Technology, Lohegaon, Pune

Abstract- Indian construction industry is highly known for the hazards which are related to site activities and construction project in which large number of innocent construction workers are involved. During the execution of construction work these workers meet-up with fatal accidents, life risks, occupational diseases and health issues. Which may cause serious injuries, permanent disability and illness some time causes death. It is due to casual approach towards health and safety rules, regulations and standards, low priority to safety, insufficient knowledge about PPE, lack of safety training, promotion. Most of the time it has been observed that the safety polices are only on the papers and in the documents and employees are not aware to that.

The emphasized motive of this present work is to develop “CONSTRUCTION WORKER WELFARE PORTAL” to ascertaining the proper health and safety, employment in construction industry to the construction worker, organized the unorganized sector. Portal is the strong tool to generate employment for the Civil engineers over the nation as well as it helps to improve the employee employer relation.

Keywords- Unorganized sector, Labours, Welfare Portal, Unemployment, Health and Safety etc.

I. INTRODUCTION

Definition of safety is that, “Safety is a condition of being safe, free from danger and hazards, a keeping of one self or other safe, especially from danger of accidents or disease”. Therefore, it is very important for any construction site or project to have certain safety rules and regulation with a proper guideline and with an implementation procedure for the zero accidents on the site. It’s a priority of every civil engineer, architect, contractor, supervisor, consultant and everyone who is a part of construction industry to create awareness and establish the need of safety among the worker and achieve the zero-accident site environment.

To determine the labour problem, safety implementation issues, and this paper has reviewed the major approaches that have been implemented to improve occupational safety in the construction industry. After examining major approaches in term of techniques,

technology and management, it was found that all the burden of implementation, management and responsibilities are on the engineers, architects and contractor and other who are directly or indirectly involved in the work, from the start of the work. Architect and engineers play vital role in identifying and mitigating potential hazards to the construction workers.

The new approaches for the prevention of accidents, organized the unorganized sector through proper and appropriate design and techniques using the modern technology has been recommended in this paper as the need of the future in the safety for the worker in construction work. The “CONSTRUCTION WORKER WELFARE PORTAL” is a strong tool to achieve the zero-accident site environment and empower the construction worker.

1.2 Objectives

The prime objective of the research is to organized the unorganized construction sector and develop strong and healthy relation between Employee and Employer by studying and analyzing various principles, rules and data. Develop a “CONSTRUCTION WORKER WELFARE PORTAL” as a strong tool for achieving health and safety of construction workers. With the help of portal we are also able to reduce the unemployment of the Civil engineers in India.

This aim would be achieved through; the following objectives,

- Study of Health and Safety Equipment’s (PPE) and Construction Equipment’s.
- To know causes of accidents.
- To get known the ground reality and the labour psychology.
- To get information about health and safety acts and regulation.
- Establishing the need of Health and safety Equipment’s (PPE).
- To Develop Construction Worker well fair Portal and safety App.

1.3 Scope of the Project

The aim of the project is to build a simple, effective computerised Construction worker well-fair portal. It starts from the process of collecting relevant details and requirement from the construction industry. The super administrator of the software. The super Administrator here is the advocate who deals with the handling of addition, dilation, updating the details. This daily board software is limited to advocates only who manage all the working and allows the client to enrol and handle the data of clients in their respective registered cares and its details.

II. LITERATURE REVIEW

2.1 Analysis of construction accidents in Turkey and responsible parties. Gürcanlı, G. E., & Müngen, U. (2013). *Industrial health*, 51(6), 581-595.

Construction is one of the world's biggest industry that includes jobs as diverse as building, civil engineering, demolition, renovation, repair and maintenance. Construction workers are exposed to a wide variety of hazards. This study analyzes 1,117 expert witness reports which were submitted to criminal and labor courts. These reports are from all regions of the country and cover the period 1972–2008. Accidents were classified by the consequence of the incident, time and main causes of the accident, construction type, occupation of the victim, activity at time of the accident and party responsible for the accident. Falls (54.1%), struck by thrown/falling object (12.9%), structural collapses (9.9%) and electrocutions (7.5%) rank first four places. The accidents were most likely between the hours 15:00 and 17:00 (22.6%), 10:00–12:00 (18.7%) and just after the lunchtime (9.9%). Additionally, the most common accidents were further divided into sub-types. Expert-witness assessments were used to identify the parties at fault and what acts of negligence typically lead to accidents. Nearly two thirds of the faulty and negligent acts are carried out by the employers and employees are responsible for almost one third of all cases.

Following are the major findings:

- The accident, falls (54.1%), struck by thrown/falling object (12.9%), structural collapses (9.9%) and electrocutions (7.5%)
- The accidents were most likely between the hours 15:00 and 17:00 (22.6%), 10:00–12:00 (18.7%) and just after the lunchtime (9.9%).

2.2 Safety in construction line: Important issue for risk identification and prevention. Joshi, P., Sharma, P., Thakur, T. C., & Khatter, A. (2012). *International Journal of Advanced Engineering Research and Science*, 1(3), 30-34.

Being as unorganized sector, the fatal injury rate for the construction industry is higher than the national average in this category for all industries. A variety of hazards exist in the construction sites. Construction is an industry that requires working at ever-changing locations and work environments. Nearly 6.5 million people work at approximately 2, 52,000 construction sites across the nation on any given day (The Hindu, Sept. 9, 2006). Construction is one of the important economic activities in India. It offers employment opportunities to all categories of people right from highly skilled to totally unskilled labourer. In urban sector increasing numbers of workers have taken up construction work as a means of immediate employment, which provides cash earnings at the end of the day. The rural masses also migrate towards urban areas in search of job and being involved in this 2nd largest occupation. In metropolitan cities, the construction work is predominantly a male dominated economic activity due to the arduous nature of work to be performed by the workers.

Following are the major findings:

- The best way to protect workers against hazards is to control problems at the source.
- Construction safety (the intermediate phase between a finished design and a completed building) is largely the responsibility of the contractors and other site professionals.

2.3 Assessment of Human Environment Interactions on Health and Safety Behaviour of Construction Workers. Okoye, P. U., & Okolie, K. C. (2017). *International Journal of Neuroscience and Behavioural Science*, 5(2), 27-43.

Construction worksite health and safety in Nigeria has remained a source of concern despite several efforts to addressing the issues. This study therefore examined the perceived level of influence of components of human environment on the construction workers' health and safety behaviour, based on social ecological and social cognitive theories. Data collected through questionnaires and distributed to the construction workers were statistically analysed. The Mean Score Index and standard deviation, and ANOVA of the weighted responses were computed to ascertain the level and significance of influence of components of human environment on the health and safety behaviour of construction workers. On the average, it was found that the perceived level of influence of components of human environment on the health and safety behaviour of construction workers was very high and significant. Individually, Organisational norms (4.8652), National, state and local laws (4.8539), Ethos (4.7266), Work environment (4.6742) and Culture characteristics (4.6067) were found to be

the five most influential human environment variables that affect health and safety behaviours of construction workers, while public policy components (4.4095) exert the greatest influence on health and safety behaviours of construction workers when the variables are grouped. This implies that work environment as part of organisation psychology is indispensable in shaping the behavioural pattern of construction workers. Thus, to improve construction workplace health and safety, workers' human environment and personal attributes need to be assessed before engagement. Following are the major findings:

- Earlier study had suggested that improving the health and safety performance of construction workplace requires a multi-level approach.
- The study believed that with the combination of components of human environment, which connect individual and environment, construction work environment would be safe and devoid of serious dangers.
- Behaviour change towards safety on construction site would be achieved through the interplay between the physical and human environments.

2.4 Site safety and planning for building construction
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The construction industry is considered as one of the most hazardous industrial sectors wherein the construction workers are more prone to accidents. Despite recent efforts to improve site safety, construction still accounts for a disproportionate number of occupational-related fatalities. In developed countries there is strict legal enforcement of safety in the construction industry and in the implementation of safety management systems which are designed to minimize or eliminate accidents at work places. However, occupational safety in construction industry is very poor in developing countries because lack of safety regulations and standards, low priority of safety, lack of data on safety at construction sites, lack of safety training, lack of safety promotion, and lack of documented and organized safety management systems.

The objective of present work is to study the various site safety measures at building construction sites and to compare the site safety measures with relevant safety codes. The study pertains to find out the provisions as laid down in the BIS codes for various aspects of safety measures at construction sites. The study included, physically visiting different construction sites, collecting the data regarding safety provisions adopted and feedback from site engineers by using

questionnaire will help in implementing the safety measures at building sites more efficiently. So that that the present study will help in ascertaining the proper safety planning in building construction.

Following are the major findings:

- Employee perceptions, safety behaviours, and environmental or situational features could be accessed through safety climate surveys.
- Work pressure has no significant direct relationship with the safety climate.
- Managers can influence and enhance the sense of safety and the quality of the work environment.

III. METHODOLOGY

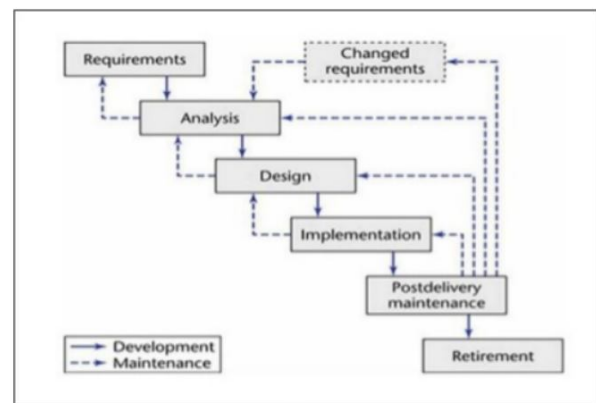


Fig. 1 Methodology

3.1 Reason to choose Water fall model:

- Water fall model, was being chosen because all requirements were known beforehand and the objective of our software development is the computerization/automation of an already existing manual working system.
- Water fall model is simple to implement and the amount of resource required for it are minimal.
- When the requirements are very well known, clear and fixed.
- Product definition is fixed.
- Technology is understood.
- There is no ambiguous requirement.
- Ample resources with required expertise are available freely.

3.2 Advantages of Water fall model:

- Simple and easy to understand.

- Easy to manage.
- Phases are processed and completed one at a time.
- Phases do not overlap.

IV. RESULT

4.1 Introduction:

Construction Worker Well-Fair Portal is a web application/portal to provide well-fair facility to the construction worker, manage all the data of the labour also to provide healthy environment to worker. There are mainly five modules in the portal. User, Super admin, admin, labour, Construction Company.

4.2 Project Summary:

Construction Worker Well-Fair Portal provide information in quick time according to the requirement that are to be fulfilled. This portal help to organise construction worker, simplification in labour provider system with health and safety to the worker. Portal help to reduce civil Engineer unemployment.

4.3 Functionality

Super Admin:

- Create Admin
- Assign Roles to admin
- Assign roles to member
- Supervision over whole process and admin.

Admin:

- Create member
- Operate the portal
- Supervision over member
- Member:
- Follow the roles assigned by super admin
- Create labour registration

Member:

- Follow the roles assigned by super admin
- Create labour registration

Purpose:

- Organise the unorganised Construction worker.
- Provide health and safety.

- Reduce Civil Engineer unemployment.
- To gain simplification in labour provider system.
- To solve labour problem easily and quickly.

V. CONCLUSION

All we know that construction industry is the fastest growing industry in the world as well as in India. Construction industry plays vital role in economic development of India. Number of innocent skilled, semiskilled, unskilled, literate, and illiterate, aged under aged, overaged etc. workers are involved in this industry. Health and safety is the always prime issue for them. In above point I have been discuss the problems of the worker and the solution over it.

So, the emphasized motive of developing “*CONSTRUCTION WORKER WELFARE PORTAL*” to ascertaining the proper Health and Safety, assurance of employment in construction industry to the construction workers, organized the unorganized sector. Portal is the strong tool to generate employment for the Civil Engineers over the nation as well as it helps to improve the employee employer relation.

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- [11]Data from RTI (Right to Information Act, 2005), A report of NDTV (24 cities and 17 states) (Data collection from NGO, Police record, other resource) over a period 2013-2016
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