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## Volume-8 Issue-3, September 2018, ISSN: 2231-2307 (Online)

**Authors:** Naveed Shahzad, Usman Khalid, Atif Iqbal, Meezan-Ur-Rahman

**Paper Title:** eFresh – A Device to Detect Food Freshness

**Abstract:** The food we consume provides nourishment and gives energy to our body, it gives us the ability to do daily activities and help improves our health in direct as well as indirect ways. A healthy and fresh diet is the most important way to keep ourselves fit. The food items kept at room temperature undergo rapid bacterial growth and chemical changes in food. Taking unhealthy food leads to bad health, and can cause different food borne diseases. The purpose to use biosensor and electrical sensors is to determine the freshness of food. A smart system which can detect the freshness of household food like dairy items, meat, and fruits. The identification and selection of pH sensor, Moisture sensor, and Gas sensor to develop a smart food freshness detector ensures the freshness of food and tells whether to eat it or bin it. An android application is developed to select the type of food to be checked.

**Keywords:** Food Freshness; pH Sensor; Moisture Sensor; Gas Sensor; Arduino Uno.

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**Authors:** Dennis Mumo Ndolo, Diang’a Stephen, Gwaya Abednego

**Paper Title:** A More Effective Labour Management Model for Construction Projects to Increase Productivity and Enhance Profitability

**Abstract:** Construction industry is labour intensive compared to other sectors with a range of 25-30 %. According to Wibowo (2002), the industry comprises of three major inputs namely labour, equipment and materials. Labour is therefore unpredictable in nature compared to other inputs (materials and equipment) which are affected and determined by the current market rates. Therefore, proper labour management is required all through the construction process; this can be achieved by introduction of effective management models for use in the construction industry. The research sought to develop an affective labour management model which can be used to increase productivity. The research used questionnaires and interviews to seek information from the practicing construction personnel who expressed their views and gave their opinions concerning labour management. The study found out that most practitioners are aware of the labour management models and their contribution in increasing productivity and some admitted that they have not used the models due to their complexity. The study used inferential statistics to generate correlation, which aimed to examine and describe the association and relationship between individual factors and their relationship to labour productivity. All factors affecting productivity were grouped in to five thematic coefficients which were used to create a model. The five coefficients are Labour planning (plan), Training of workforce (train), Motivation of labour (motivate), Mechanization of labour (mech) and availability of raw materials (raw). The model developed is:

\[
\text{Productivity} = \beta_{plan} + \beta_{train} + \beta_{motivate} + \beta_{mech} + \beta_{raw} + \beta_{plan} \cdot \beta_{mech} + \beta_{0} + \epsilon_i
\]

Logistic odds were assigned to each individual coefficient in order to give the model a simpler meaning; the odds generated were as shown below.

\[
\text{Productivity} = 3.29\beta_{plan} + 1.31\beta_{train} + 0.85\beta_{motivate} + 2.7\beta_{mech} + 0.93\beta_{raw} + (3.29\beta_{plan} \cdot 2.7\beta_{mech}) + \text{constant (intercept)}
\]

**Keywords:** Labour, Labour Management Model, Labour Productivity, Production Efficiency.

**References:**
Abstract: The continuous demand for improved and efficient health and safety management have put pressure to construction project managers, thereby creating a lot of management challenges that require an integrated process to be tackled. Hence, this research sought to assess the impact of health and safety management on construction projects success in Nairobi County. A survey to investigate health and safety management factors was delimited to 45 on-going commercial/ mixed urban development projects each worth more than Kshs100 million in Westlands constituency, Nairobi County. Owing to the fact that the population was reasonably small, a census was deemed suitable for this study. The survey achieved 80% rate of return of questionnaires from the construction project managers and data analysis was carried out using both descriptive and inferential (through correlation analysis) statistical methods. Results from the study were presented in form of tables and figures in a comprehensive manner. The findings indicated that, there is no well-defined site management system in the Kenyan construction industry and most sites are run through intuition and processes that involves a lot of paperwork (checklists). This study therefore, recommends use of Oracle prime projects Cloud service, radio frequency identification device (RFID) technology, drones and Autodesk Navisworks software in construction health and safety management.

Keywords: Construction Health and Safety Management, Project Success.

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