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Data Article

Q1 Dataset on Investigating the role of onsite learning in the optimisation of craft gang's productivity in the construction industry

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ABSTRACT

The data presented in this article is an original data on “Investigating the role of onsite learning in the optimisation of craft gang's productivity in the construction industry”. This article describes the constraints influencing craft gang's productivity and the influence of onsite learning on the blockwork craft gang's productivity. It also presented the method of data collection, using a semi-structured interview and an observation method to collect data from construction organisations. We provided statistics on the top most important constraints affecting the craft gang's productivity using 3-D Bar charts. In addition, we computed the correlation coefficients and the regression model on the influence of onsite learning on craft gang's productivity using the man-hour as the dependent variable. The relationship between blockwork inputs and cycle numbers was determined at 5% significance level. Finally, we presented data information on the application of the learning curve theory using the unit straight-line model equations and computed the learning rate of the observed craft gang's blockwork repetitive work.

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Specifications Table

Subject area	<i>Economics, Construction Management, Project management, Management, Quantity surveying and Civil Engineering.</i>
More specific subject area	<i>Construction Project Management</i>
Type of data	<i>Table, Figures.</i>
How data was acquired	<i>Data was acquired by conducting a Semi-structure Interview and observation of the craft gang's in the observed project site.</i>
Data format	<i>Raw, filtered, analyzed.</i>
Experimental factors	<i>We make use of interview and observational data. Our sample was through purposeful.</i>
Experimental features	<i>Data on interview transcript, observed craft gang's man-hour labour productivity.</i>
Data source location	<i>Nigeria.</i>
Data accessibility	<i>The data are available with this article.</i>
Related research article	<i>The data is not related to a companion paper to any research article.</i>

Value of the data

- The presented data in Figs. 1–3 on the project-specific constraints influencing blockwork craft gang's productivity could inform further research on constraints influencing craft gang's productivity.
- Craft gangs learning rate productivity determine in Table 3 and Fig. 4 can stimulate further research on craft gang's productivity using U-block, solid walls and curve walls.
- The data on Fig. 4 and Table 3 are further evidence on the application of the learning curve theory to blockwork craft gang's.
- The data in this article could be useful to optimise further onsite craft gang's productivity within a project specific environment.

1. Data

In this article, first we presented three 3-D bar charts representing the top constraints influencing onsite craft gang's productivity (Figs. 1–3). The correlation coefficient table and the overall regression model between the productive input and its associated cycle number in Tables 1 and 2 was computed using simple linear regression technique. Table 3 present the learning rate of the observed repetitive work activity in the project.

Secondly, the data set presented in Tables 1–3 and Fig. 4 was derived from the observation study. A standard observation sheet and a stopwatch was used in recording the observed time for the craft gang's block laying operation in a working day. The data were collected daily to determine the variation in output for a total number of Twenty-six (26) observations from 7:00 a.m. to 6:00 p.m. daily.

2. Experimental design, materials and methods

The experimental data collection strategies used in this study is standard observation method and semi-structure Interviews.

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