

Literacy and Worker Rate of C.D. Block Kaliachak-II in Malda District: Correlation and Regression Analysis

Md. Ziaul Hoque¹ Md Rakiul Hoque²

¹ Assistant Teacher, Abbasganj High Madrasah (H.S.), Mothabari, Kaliachak, Malda, 732207, West Bengal, India

² Assistant Teacher, Mazharul Ulum High Madrasah (H.S.), Alipur, Kaliachak, Malda, 732201, West Bengal, India
Corresponding Author: MD. ZIAUL HOQUE

ABSTRACT: The present paper beautifully presents the issue of relationship between Literacy rate and Worker rate in the Community development Block Kaliachak-II. Following particular criterion based on Household survey eleven villages have taken as sample of the study from the C.D. Block Kaliachak-II. Average literacy and worker rate is 67.60% and 56.22% respectively. About 69.24% and 69.20% male literacy and male worker rate has recorded in the entire block. Female literacy rate is 65.60% and Female worker rate is very low, amounting 43.43%. The paper finds out negative correlation between literacy rate and worker rate.

KEYWORDS: Literacy rate, Worker rate, Negative Correlation,

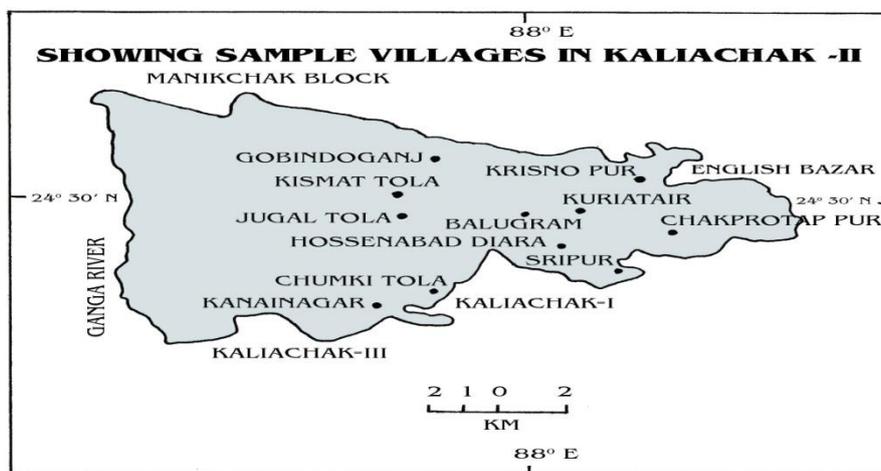
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I. INTRODUCTION:

According to the census of India, a person of seven years old or above who can read, write in any language is treated as Literate. UNESCO defines- Literacy 'as the ability to identify, understands, interpret, create, communicate and compute using printed and written material'. The unemployed people are those who are taking to work or are willing to work but they cannot find it at the going wage. On the other words, an unemployed person is one who is an active member of the labour force and is able to and seeks work, but is unable to find work during a specified reference period (a week or a month or a year). It is maybe say, an unemployed person is one who having potentialities and Willingness to earn, is unable to find a remunerative work. According Census of India a person who has participated in any economically productive activity with or without compensation or profit is called Worker. In this paper, the definitions of literacy and worker have been taken according to the census of India (2011).

STUDY AREA: Kaliachak is located in the southern part of Malda district in West Bengal. Kaliachak consists of three blocks. These are known as Kaliachak-I, Kaliachak-II, Kaliachak-III. Kaliachak Block-II extends between latitudes 24°57'49" N to 24.963° N and longitudes 88°05'22" E to 88.0895° E. It is spreading over on area of 209.17 Km² with 210105 populations (Census 2011). According to the said census the literacy rate of Kaliachak – II is 66.71% and the worker population is 42.63%.



II. Data Collection and Methodology:

This paper follows the descriptive research method. Descriptive research study includes surveys and fact-findings enquiries of different kinds, which will help the researchers to describe the present situation. The present study covers both primary as well as secondary data.

Primary Data Collection: Primary data have been collected by survey of 11 villages across the C.D.Block Kaliachak-II. These villages have been selected on the following criterion- Minimum 20 % household per village has been surveyed for the research. Keeping these considerations in mind, it has been planned to select the villages some of which are nearer to the road while others are far from the road; similarly, some villages are inhabited by single community while the others by multiple communities. Some of the villages are connected by good roads while the others are connected by Katcha road. Similarly, some are developed, semi-developed and others are undeveloped.

Secondary Data: Secondary data have been collected from the Community Development Office, innumerable newspapers, article in journals and Census of India (2011).

Statistical Tools Used For Analysis: All the data have been converted into relative numbers such as percentage, ratio, Product-Moment Correlation by Karl Pearson's to find out the objectives of the study.

Objectives: The objectives of the paper are -

1. To find out the relationship between total literacy rate and total worker rate
2. To find out the relationship between male literacy rate and male worker rate
3. To find out the relationship between female literacy rate and female worker rate

NEED FOR THE STUDY: A man has to perform many roles in his life, the most crucial of which is that of an earning member. It is crucial not because a man spends approximately one-third of his lifetime performing this role but because it determines both his livelihood and status. It also enables an individual to support his family and fulfil social obligations to society. It makes possible for him to achieve power, too (Ahuja, PP-71). Planning is very important for the development of a region. Demographic characteristic is the essential elements to determining the trend and nature of policy. Literacy rate & worker rate are causes of the success or failure of development in a region. Every aspect of development role of male and female should be equal. However, the present scenario is different. This paper tries to find out the relationship between literacy rate and worker rate of socio-economically backward community development Block Kaliachak-II. This paper will help the demographic experts, planners and researchers for the development of socio-economic and cultural phenomenon in the study area.

III. RELATIONSHIP BETWEEN LITERACY RATE AND WORKER RATE:

The present paper is divided into three different sections. The first section deals with the relationship between average literacy rate and average worker rate. The Second section discusses the relationship between male literacy rate and male worker rate. The third section expresses the relationship between female literacy rate and female worker rate.

Table-1 Source: Field Survey 2015 and calculated by Author

Name of the Village	Percentage Of Literacy Rate (X)	Percentage Of Worker Rate (Y)	XY	X ²	Y ²
1.Jugal Tola	70.60	59.05	4168.93	4984.36	3486.90
2.Balugram	62.30	75.45	4700.53	3881.29	5692.70
3.Chakprotap pur	71.30	60.59	4320.06	5083.69	3671.14
4.Hossenabad Diara	65.11	47.80	3112.25	4239.31	2284.84
5.Krisnopur	76.61	59.70	4573.61	5869.09	3564.09
6.Kuriatair	64.59	65.73	4245.50	4171.86	4320.43
7.Sripur	56.70	63.19	3582.87	3214.89	3992.97
8.Kismat pur	70.24	54.81	3849.85	4933.65	3004.13
9.Chumkitola	69.42	38.60	2679.61	4819.13	1489.96
10.Gobindoganj	68.57	50.58	3468.27	4701.84	2558.33
11.Kanainagar	68.14	42.93	2925.25	4643.05	1842.98
Σ	743.58	618.43	41626.73	50542.16	35908.47

Calculation Product-Moment Correlation by Karl Pearson's Formula:

$$r = \frac{n\sum xy - \sum x \cdot \sum y}{\sqrt{\{n\sum x^2 - (\sum x)^2\} \{n\sum y^2 - (\sum y)^2\}}}$$

$$= \frac{11 \times 41626.73 - 743.58 \times 618.43}{\sqrt{\{11 \times 50542.16 - (743.58)^2\} \{11 \times 35908.47 - (618.43)^2\}}}$$

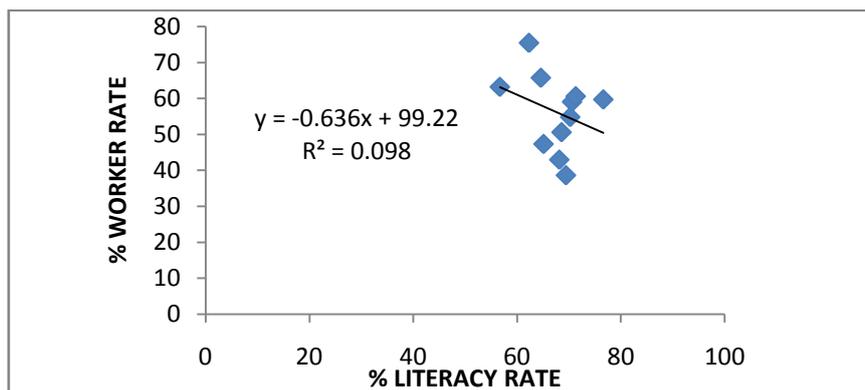
$$= \frac{457894.03 - 459852.18}{\sqrt{\{555963.76 - 552911.22\} \{394993.17 - 382455.66\}}}$$

$$= \frac{-1958.15}{\sqrt{3052.54 \times 12537.50}}$$

$$= \frac{-1958.15}{\sqrt{38271220.25}}$$

$$= \frac{-1958.15}{6186.37}$$

= - 0.32 (Negative Correlation)



In pursuance of survey recorded, the average literacy of C.D. Block Kaliachak-II is 67.60%. The distribution of Literacy rate is not equal in the study area. The highest literacy rate recorded in the village of Krisnopur amounting 76.61%, which is the higher in comparison among country, state & District. The lowest literacy rate is in the village of Sripur amounting 56.70%, which is the lower in comparison of country's lowest state of Bihar, also state, and District. Other villages & Literacy rate are Chakprotap pur(71.30%),Jugal Tola(70.60%),Chumkitola(69.42%),Kismatpur(70.24%),Gobindoganj(68.57%),Kanainagar(68.14),Hossenabad Diara(65.11%),Kuriatair(64.59%) and Balugram(62.30%).

Based on survey nearly 56.22% of people engaged in the economic activities. The survey shows the very much inequality in the distribution of worker. The maximum percentage of worker late presented in the village of Balugram (75.45%),followed by Kuriatair(59.05),Sripur(63.19%), Chakprotap pur(60.59%), Krisnopur(59.70%), Jugal Tola (59.05%), Kismat pur (54.81%),Gobindoganj(50.58%), Hossenabad Diara(47.80%), Kanainagar(42.93%) and Chumkitola (38.60%).

It is clear from the table-1 that the worker rate of Balugram, Kuriatair, and Sripur is more than the literacy rate. Another picture is that the rate worker of Jugoltala, Chakprotap pur, Hossenabad Diara, Krisnopur, Kismat pur, Chumkitola, Gobindoganj and Kanainagar are less than the literacy rate. The result of low negative correlation is found between average literacy and average worker rate in the entire block.

Table-2 Source: Field Survey 2015 and calculated by Author

Name of the Village	Percentage Of Male Literacy Rate (X)	Percentage Of Male Worker Rate (Y)	XY	X ²	Y ²
1.Jugal Tola	71.43	74.12	5294.39	5102.24	5493.77
2.Balugram	70.20	94.27	6617.75	4928.04	8886.83
3.Chakprotap pur	69.84	82.52	5763.19	4877.62	6809.55
4.Hossenabad Diara	65.48	69.18	4529.90	4287.63	4785.87
5.Krisnopur	80.77	66.43	5365.55	6523.79	4412.94
6.Kuriatair	63.43	96.57	6125.43	4023.36	9325.76
7.Sripur	60.46	66.50	4020.59	3655.41	4422.25
8.Kismat pur	68.60	59.76	4099.53	4705.56	3571.25
9.Chumkitola	73.91	35.27	2606	5462.68	1243.97
10.Gobindoganj	72.56	59.78	4337.63	5264.95	3573.64
11.Kanainagar	65.06	56.84	3698.01	4232.80	3230.78
Σ	761.74	761.24	52458.77	53064.08	55756.61

Calculation Product-Moment Correlation by Karl Pearson's Formula:

$$r = \frac{n\sum xy - \sum x \cdot \sum y}{\sqrt{\{n\sum x^2 - (\sum x)^2\}\{n\sum y^2 - (\sum y)^2\}}}$$

$$= \frac{11 \times 52458.77 - 761.74 \times 761.24}{\sqrt{\{11 \times 53064.08 - (761.74)^2\}\{11 \times 55756.61 - (761.24)^2\}}}$$

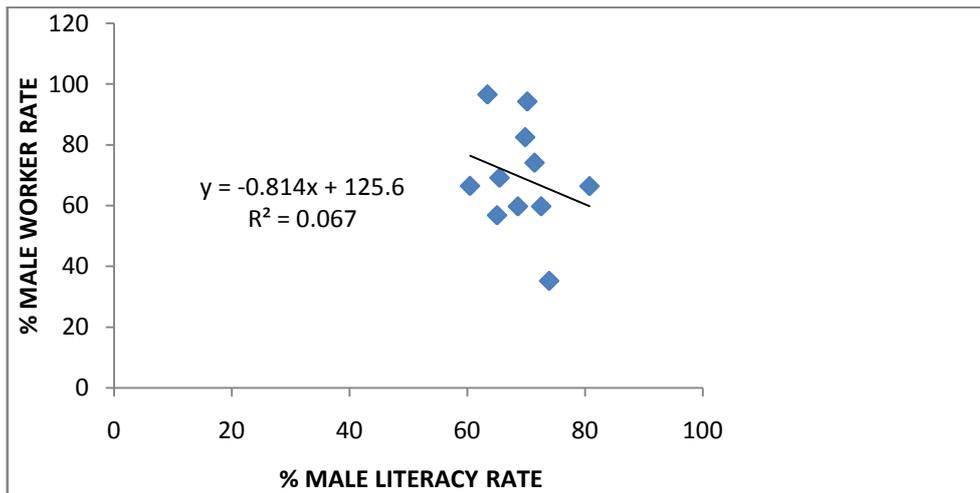
$$= \frac{577046.47 - 579866.95}{\sqrt{\{583704.88 - 580247.82\}\{613322.71 - 579486.33\}}}$$

$$= \frac{-2820.49}{\sqrt{3457.05 \times 33836.37}}$$

$$= \frac{-2820.49}{\sqrt{116974022.90}}$$

$$= \frac{-2820.49}{10815.45}$$

= - 0.26 (Negative Correlation)



It has been observed from the table-2 that male literacy rate of Kaliachak-II is 69.24%. The maximum literacy rate is recorded in the village of Krisnopur, amounting 80.77%, followed by Chumkitola (73.91), Gobindoganj (72.56%), Jugoltala (71.43%) Balugram (70.20%), Chakprotap pur (69.84%), Kismat pur (68.60), Hossenabad Diara (65.48%), Kanainagar (65.00%), Kuriatair (63.43), Sripur (60.46%).

It has been observed from the table-2 that male worker rate of Kaliachak-II is 69.20%. The maximum worker rate is recorded in the village of Kuriatair, amounting 96.57%, followed by Balugram (94.27%), Chakprotap pur(82.52%), Jugoltala(74.12%), Hossenabad Diara(71.78%), Sripur(66.50%),Krisnopur(66.43%), Gobindoganj (59.78%), Kismat pur(59.76%), Kanainagar(56.84%), Chumkitola(35.27%).

It is clear from the table-2 that the male worker rate of Jugoltala, Balugram, Chakprotap pur, Hossenabad Diara, Kuriatair, and Sripur is more than the literacy rate. There are so many causes behind this situation. Many people of this area go to the outside of West Bengal for the work of road constructions, building constructions and factories. Others people engaged in the agricultural sectors like Silk, Sugar, Mango and Rice related activities in study area. Another picture is that the rate of male worker of Krisnopur, Kismat pur, Chumkitola, Gobindoganj, Kanainagar are less than the female literacy rate, due to seasonal work, the landholdings are so small than even the family members of the working age groups are not absorbed by the land. Many graduates and postgraduate are jobless. Now days the people of these groups deny the works of road, constructions, factories, bricks field. In these sectors, their earnings are so low that they cannot fulfill their minimum requirements. Now a day large number of boys and girls are seeking work in office, courts, hospital, education institution etc. However, those types of working facilities are very scanty in the study area. The result of low Negative correlation is found between male literacy rate and male worker in the entire block.

Table-3Source: Field Survey 2015 and calculated by Author

Name of the Village	Percentage Of Female Literacy Rate (X)	Percentage Of Female Worker Rate (Y)	XY	X ²	Y ²
1.Jugal Tola	69.63	41.38	2881.28	4848.33	1712.30
2.Balugram	52.25	50.83	2655.86	2730.06	2583.68
3.Chakprotap pur	66.94	35.71	2390.42	4480.96	1275.20
4.Hossenabad Diara	64.77	28.22	1827.80	4195.15	796.36
5.Krisnopur	72.03	52.00	3745.56	5188.32	2704.00
6.Kuriatair	65.85	33.57	2210.58	4336.22	1126.96

7.Sripur	51.90	59.55	3090.64	2693.61	3546.20
8.Kismat pur	78.05	48.56	2790.10	6091.80	2358.07
9.Chumkitola	63.85	42.57	2718.09	4076.82	1812.20
10.Gobindoganj	64.24	40.58	2606.85	4126.77	1646.73
11.Kanainagar	72.09	44.74	3225.30	5196.96	2001.66
Σ	721.6	477.71	31142.48	47965	21563.34

Calculation Product-Moment Correlation by Karl Pearson Formula:

$$r = \frac{n\sum xy - \sum x \cdot \sum y}{\sqrt{\{n\sum x^2 - (\sum x)^2\}\{n\sum y^2 - (\sum y)^2\}}}$$

$$= \frac{11 \times 31142.48 - 721.6 \times 477.71}{\sqrt{\{11 \times 47965 - (721.6)^2\}\{11 \times 21563 - (477.71)^2\}}}$$

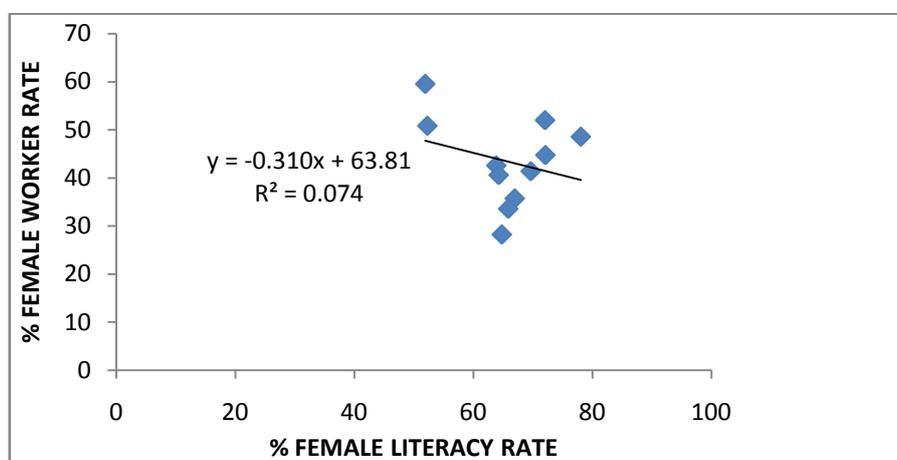
$$= \frac{342567.28 - 344715.54}{\sqrt{\{527615 - 520706.56\}\{237196.74 - 228206.84\}}}$$

$$= \frac{-2148.26}{\sqrt{6908.44 \times 8989.89}}$$

$$= \frac{-2148.26}{\sqrt{62106115.67}}$$

$$= \frac{-2148.26}{7888.74}$$

$$= -0.27 \text{ (Negative Correlation)}$$



It has been observed from the table-3 that female literacy rate of Kaliachak-II is 65.60%. The maximum female literacy rate is recorded in the village of Kismat pur, amounting 78.05%, followed by Kanainagar (72.09%), Krisnopur(72.03%), Jugal Tola(69.63%), Chakprotap pur (66.94%), Kuriatair(65.85%),Hossenabad Diara(64.77%), Gobindoganj(64.24%), Chumkitola(63.85%), Balugram(52.25%), Sripur(51.90%).

It has been observed from the table-3 that female worker rate of Kaliachak-II is 43.42%. The maximum female worker rate is recorded in the village of Sripur, amounting 59.55%, followed by Krisno pur (52.00%), Balugram(50.83%), Kismatpur(48.56%),Kanainagar(44.74%),Chumkitola(42.57%),Jugaltola(41.38%), Gobindoganj(40.58%),Chakprotap pur(35.71%), Kuriatair(33.57%),Hossenabad Diara(28.22%).

All the villages show the lower female worker rate than the female literacy rate. Only the village Sripur shows the female worker rate than the female literacy rate due to the availability of Bidi making, household based economic activities and sericulture. The rate of female worker is very low because male dominating work engaged in every sectors, lack of small industry, lack of self-employment group, lack of female vocational training etc. As a result, low Negative correlation is found between female literacy rate and female worker rate in the entire block.

IV. CONCLUSION AND SUGGESTION:

The overall analysis of the present study expresses that the relationship between literacy rate and rate of worker is negative in the study area. The distribution of male literacy and rate of worker approximately equal but village wise data shows very unequal. The female literacy rate and rate of worker is not equal and very much inequality in the block as well as village. Work opportunities and security for female, self-employment groups, household food production, creation of alternative employment opportunities, vocational courses, workshop, discussion, and seminar need for overcome the problem.

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