

Human Information Sources of Clay-based Handicrafts of West Bengal, India: A Quantitative Analysis Towards Identifying the Factors Responsible for the Product Development

Dr. Sibsankar Jana¹

¹ Assistant Professor, Department of Library and Information Science, University of Kalyani, West Bengal, India, E-mail: sibs_jana@yahoo.com

Abstract: Searching down the memory lane, clay-based handicrafts of West Bengal in India was found to be one of the earliest inventions in the field of crafts-by-humans. The clay-based handicrafts include clay dolls, clay models, ceramics, terracotta, clay idols and clay images of some purposively selected clusters of West Bengal, India. In case of clay-based handicrafts, mainly common artisans have been considered as human information sources in the present study. Because most of the artisans get the skill or information traditionally from their parents. Each artisan is basically a trainer or an expert of the art work with respect to their minors. Though there are the provisions of organizing training programmes through the subject experts, but in real life situation it is found that most of the artisans mainly depend on the tacit knowledge of their parents for preparing and developing the products. At present these age-old art works are facing some problems and some factors are responsible for these. The present study is an attempt to find out the factors through surveying of artisans i.e. human information sources, which are responsible or not for the development of the clay-based handicrafts of West Bengal. The factors financial assistance, Market/selling, Training, Raw material, Infrastructure, Information, Packaging & Transportation and Working Space have been selected on the basis of pilot study, literature search and consultation with subject experts. In the present study, some recommendations are given on the basis of findings.

Ceramics, Clay-based Handicraft, Clay dolls, Clay idols, Clay images, Clay models, Terracotta, West Bengal.

0 Introduction

Clay as a medium of human expression has been used most widely throughout the world since earliest times. Primitive man's artistic instinct led him to make images of visible objects. Thus, the first creations of all civilizations were made out of clay. Clay has been regarded as the primeval plastic materials. It is readily available, easily tractable and amenable. In the dawn of human sensibility and history, men perhaps first saw the altered state of burnt clay in a forest fire and thus discovered the possibility of making pots with clay and burning them so that they did not disintegrate in water and then used them both for storing and for cooking. Any desired shape

can be given to it and it can be harden by the fire. One of the important characteristics of this clay-based artwork is that it can be regarded as the spontaneous handiwork of the simple folk.

Terracotta probably the first artifacts created by the human being as evident from the discovery of earthen pots and figures from the Indus valley civilization. The monuments and temples still exists in Bishnupur in Bankura districts speaks about the terracotta architecture in ancient history of Bengal. The clay models of Krishnanagar and clay idols of Kumartuli are still world famous. The wild and simplicity in forms and traditional ornamentation present

a unique blend enlightening the traditional flavour of the areas as well as the state.

1 Backdrop

Though handcrafts are the second largest sector after agriculture in W.B. having the potentiality of employment generation, the sector is crippled due to lack of exposure in National & International market, lack of proper information, poor financial back up etc. Still numerous artisans are engaged in this artwork and have chosen as their occupation. The state Govt. and central Govt. are trying to organize this unorganized sector to enhance the rural economy of these particular cluster areas. In other way, Govt. is also earning huge amount of foreign currencies through exporting of these excellent artifacts. Again it is also ascertained that lions share of the artisans have no such modern formal training, they just got their skills from their parents traditionally. The skills and tacit knowledge of the parent artisans are being transferred to their ancestors in a very informal way. Year after year new artisans are copying this indigenous tacit knowledge from their parents knowingly or unknowingly. Therefore, no such variations in styles and techniques occur in the artifacts. In other side, numerous documentary information sources regarding the different aspects of this artwork are being published in different languages and forms. Various institutions and corporate bodies are being established to provide training and other helps to the artisans for the product development. Keeping conformity with the institutional sources, a good number of human sources are also coming out. The end users' demands are also increased but they need variations in the artwork. Again, Govt. and NGOs are continuously trying to bridge between artisans' artworks and end-users'

need. Keeping all these things in mind, some factors have been chosen, those, which are responsible for the development of the terracotta artifacts of West Bengal. The factors are financial assistance, Market/selling, Training, Raw material, Infrastructure, Information, Packaging & Transportation and Working Space. In the present study, the effort has been taken to identify the factors responsible for the product development.

2 Scope of the Present Study

The present study encompasses the cluster areas of the five categories of clay-based handicrafts of West Bengal. The cluster areas under different categories surveyed are given below.

- a) **Bankura Terracotta:** This category includes the terracotta of Bankura district, which has distinct characteristics in comparison to other terracotta. The themes of all artifacts are of folk in nature. The main items are horse, elephant, Santhal family, flower vase, village folk etc. All items reflect folk touch in finishing. This category includes the terracotta of Panchmura, Sendra, Duishahar and Bibarda of Bankura district.
- b) **Other Terracotta except Bankura:** This category includes terracotta of West Bengal other than Bankura terracotta. The nature of the items is very abstract. Though the flower vases of Bankura Terracotta are also found in some area of West Bengal, still these areas are included in this category. This is because, except flower vase, all other artifacts are not so resemblance with the Bankura Terracotta. This category



includes terracotta of Matigara of Darjeeling district, Barupur and Budge Budge of 24 Parganas (S), Duttapukur of 24 Parganas (N), Subhasgunj of Uttar Dinajpur district.

- c) **Clay Dolls and Clay Models:** Clay dolls and clay models in this category are very sharp, beautiful and very realistic. Making clay figures involves a lot of detailing and has been done using hand since ages. All items look like real. This is a hereditary art form. The toys are smooth and shine due to the application of an extract of tamarind seed. It covers the Ghurni of Krishnanagar of Nadia district.
- d) **Ceramics:** It includes the artifacts produced by the combined effort of new ceramic technology and hands. It ranges fine and glazed ceramic products for decoration, dolly, toys, wall hanging, household pottery and industrial application. It items generally are very heat and temperature resistant. No such big clusters are there, it covers greater Kolkata.
- e) **Clay Idols and Clay Images:** This category is very different to other described above as far as their structure are mode of preparation are concerned. The items mainly include images of gods and goddesses. Here clay is applied on straw figures and then dried and finally painted and decorated. This category includes the area Kumartuli and Kalighat of Kolkata.

3 Defining the Research Problem and Formulation of Hypotheses

Before going through the actual study, a pilot study was carried out to the area covered under this study. Based on this pilot study, content analysis of the relevant documents and consultation with the subject experts, the research problems have been identified. My research question is:
How far do different factors responsible for overall product development of the clay-based handicrafts of West Bengal?

To find out the appropriate answers of the research problem stated above several hypotheses have been formulated. These hypotheses have been tested with the help of appropriate statistical methods. The hypotheses are stated below:

- i) There are no significance differences in the opinions regarding importance of rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor "Financial assistance" responsible for Product Development.
- ii) In the opinions regarding importance of rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor "Market/selling" responsible for Product Development, there are no such significance differences.
- iii) No significance differences in the opinions regarding importance of rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor "Training" responsible for Product Development are present.
- iv) There are no significance differences in the opinions regarding importance of

rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor “Raw materials” responsible for Product Development.

- v) No significance differences in the opinions regarding importance of rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor “Infrastructure” responsible for Product Development are there.
- vi) There are no significance differences in the opinions regarding importance of rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor “Information” responsible for Product Development.
- vii) In the opinions regarding importance of rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor “Packaging & Transportation” responsible for Product Development, there are no such significance differences.
- viii) There are no significance differences in the opinions regarding importance of

rating given by the respondents of different categories of clay-based handicrafts of West Bengal on the factor “Working Space” responsible for Product Development.

4 Methodologies and methods

The present study covers different selected cluster areas of W.B. under different categories of clay-based handicrafts. Therefore it is a purposive research work. Again systematic samples (every 20th item) were taken from the list of total artisans of these each clusters, where first one has been taken randomly. Therefore, the present study has followed the methodology “*purposive systematic random sampling*”. Two hundred seventy one artisans have been chosen and surveyed. Therefore the sample size (N) is 271. The different methods have been used for data collection, data presentation and data analysis. The structured schedules were used to collect the data from the human information sources i.e. artisans. These collected data have been presented by the tables and lastly these tabulated data have been analyzed by the Kolmogrove – Smirnov (K.S) test.

Table-1: Data collected from the artisans of Clay-based handicrafts of West Bengal

Clay-based handicrafts of West Bengal(N=271)				
1	Sex	Male	227	83.8%
		Female	44	16.2%
2	Age	<30	45	16.6%
		30-39	63	23.2%
		40-49	78	28.8%
		≥50	85	31.4%
3	Qualification	Academic	<10	75 27.7%
			10	56 20.7%
			12	74 27.3%
			UG	40 14.8%
			PG	5 1.8%
			Ph D	0 0.0%

		Professional	21	7.7%					
4	Language known	Bengali	271	100.0%					
		English	84	31.0%					
		Others	49	18.1%					
5	Why do you need information?	Awareness	130	48.0%					
		Up-to-date	164	60.5%					
		Day to day need	246	90.8%					
6	What types of information channels do you use?	Formal	Book	94	34.7%				
			Journal	22	8.1%				
			Proceeding	1	0.4%				
			Web	34	12.5%				
			Others	6	2.2%				
		Informal	E-mail	32	11.8%				
			Consulting expert	53	19.6%				
			Face-to-face	217	80.1%				
			Meeting/Seminar/Workshop	62	22.9%				
			Parent	183	67.5%				
		Private correspondence	57	21.0%					
7	Do you use library?	Yes	51	18.8%					
		No	220	81.2%					
8	How do you agree with the factors responsible for the product development (Strongly Agree-SA; Agree-A; No Opinion-NO; Disagree-DA; Strongly Disagree-SDA)			SA	A	NO	DA	SDA	
		Financial assistance		34	47	28	109	53	
		Market/selling		62	103	26	39	41	
		Training		45	55	54	75	42	
		Raw material		32	70	20	110	39	
		Infrastructure		141	73	11	27	18	
		Information		70	76	55	43	27	
		Packaging & Transportation		102	97	9	37	26	
Working Space		31	50	11	144	35			
9	Do you have any other occupation?	Yes	98	36.2%					
		No	173	63.8%					
10	Do you seriously think to change your present profession/job?	Yes	55	20.3%					
		No	189	69.7%					
		Omitted	27	10.0%					
11	How do you get your work order?	Over telephone	119	43.9%					
		Tender	3	1.1%					
		E-mail	62	22.9%					
		Face-to-face	198	73.1%					
		Anticipation	219	80.8%					
12	What is your product price range? (in Rs.)	<50	106	39.1%					
		50-999	156	57.6%					
		1000-9999	114	42.1%					
		10000-49000	34	12.5%					
		≥50000	10	3.7%					
13	Where do you supply/sell your products?	Market	Local	215	79.3%				
			National	66	24.4%				
			International	38	14.0%				
			Govt. Agency	30	11.1%				
			Through vendor	86	31.7%				
		Fair	Local	175	64.6%				
			National	93	34.3%				
			International	0	0.0%				
		Individual tourists from home		94	34.7%				
14	What is your monthly income? (in Rs.)	<5000	114	42.1%					
		5000-9999	89	32.8%					
		10000-24999	50	18.5%					
		25000-49999	13	4.8%					

		≥50000	5	1.8%
15	Mention the places of demonstration of your products	Showroom	135	49.8%
		Fair	165	60.9%
		Exhibition	18	6.6%
		Home	161	59.4%
		Others	16	5.9%
16	Have you received financial assistance?	Yes	52	19.2%
		No	219	80.8%
17	Have you received any award?	Yes	79	29.2%
		No	192	70.8%
18	Have you received any training?	Yes	62	22.9%
		No	209	77.1%
19	Do you think training is useful for product development?	Yes	116	42.8%
		No	117	43.2%
		No comment	38	14.0%
20	What type of packaging system do you follow?	Thermocol box	38	14.0%
		Pitch board box	163	60.1%
		Wooden box	51	18.8%
		With straw	206	76.0%
		Others	90	33.2%
21	How did you learn the work?	Traditionally	158	58.3%
		Own try	54	19.9%
		Training	34	12.5%
		Art college	25	9.2%
22	Do you know any Govt. scheme?	Yes	72	26.6%
		No	199	73.4%
23	Where do you work?	Home/Own workshop	191	70.5%
		Other's workshop	80	29.5%

Source: Primary Data

5 Opinion regarding the factors responsible for product development

Before go through the statistical analysis of data under serial no. 8 in the table-1, to find out the factors responsible for the development of clay-based handicrafts of West Bengal, other data collected in this regard presented in the table-1, need to mention. All data regarding the information seeking behaviour of the artisans of W.B. under different serial nos. except serial no-8 of the table-1, have not discussed in detail. For better understanding of the data, percentages are also given side-by-side. In this regard some factors have been considered on the basis of pilot study, experts' opinion and literature review, which are responsible for the over all product development. These factors are Financial assistance, Market/selling, Training, Raw material, Infrastructure, Information,

Packaging & Transportation and Working Space.

All the opinions regarding all these factors have been considered. The opinions are graded into: Strongly Agreed (SA), Agreed (A), No Opinion (NO), Disagree (DA) and Strongly Disagree (SDA). In order to know how these factors influences product development, the Kolmogrov-Smirnov (K.S) test has been done.

In this Kolmogrov-Smirnov (K.S) test, the Cumulative Observed Proportion (O) has been calculated based on the observed number. In each case, the Observed Proportions have been calculated by dividing the number of response on each opinion with the total responses on this particular case. Since there are five gradations, each gradation (i.e. 0.20) was assigned as

Expected Proportion. The Cumulative Expected Proportion (E) has been calculated on the basis of Expected Proportion. Regarding gradation, the Difference (D) between Cumulative Observed Proportion (O) and

Cumulative Expected Proportion (E) has been calculated. The largest Difference (Dmax) has been taken as calculated value for the test of hypothesis.

Table 2: Opinion regarding the factors responsible for product development clay-based handicrafts of West Bengal

Sl. No.		Strongly Agreed (SA)	Agreed (A)	No Opinion (NO)	(Disagree) DA	(Strongly Disagree) SDA
1	Financial assistance	34	47	28	109	53
2	Market/selling	62	103	26	39	41
3	Training	45	55	54	75	42
4	Raw material	32	70	20	110	39
5	Infrastructure	141	73	11	27	18
6	Information	70	76	55	43	27
7	Packaging & Transportation	102	97	9	37	26
8	Working Space	31	50	11	144	35

Source: Primary Data

5.1 Opinion about the factor FINANCIAL ASSISTANCE responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Financial assistance”.

Table-3: Factor (Financial assistance) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E
1	Strongly Agree (SA)	34	0.125461255	0.125461255	0.2	0.2	0.07454
2	Agree (A)	47	0.173431734	0.298892989	0.2	0.4	0.10111
3	No Opinion (NO)	28	0.103321033	0.402214022	0.2	0.6	0.19779
4	Disagree (DA)	109	0.402214022	0.804428044	0.2	0.8	0.004428
5	Strongly Disagree (SDA)	53	0.195571956	1	0.2	1	0

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Financial assistance”. Table-3 enumerates the opinion of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Financial assistance” responsible for product development.

The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.19779$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence, there is a significance difference in the importance of ratings given by the artisans of Clay-based Handicrafts of West Bengal on “Financial Assistance”.

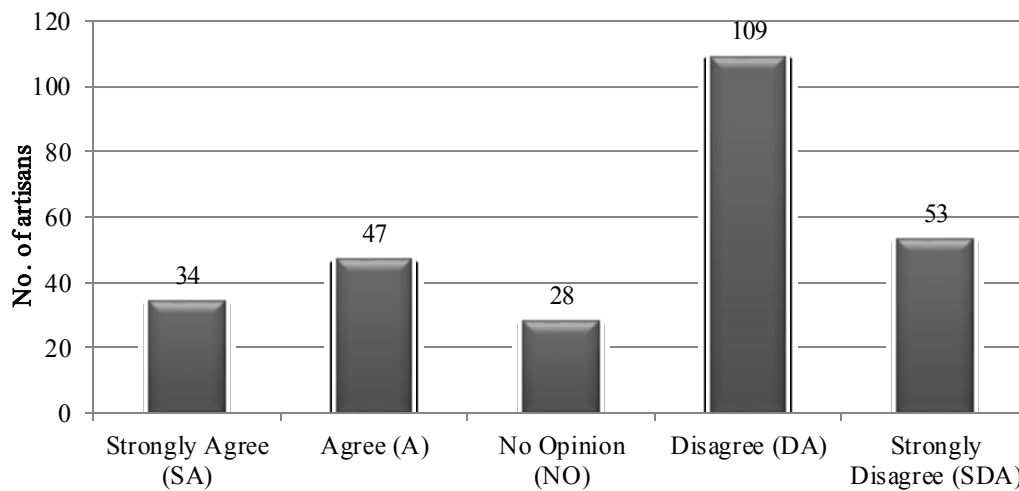


Figure-1: Distribution of opinions of the artisans regarding the factor (Financial assistance) responsible for product development of Clay-based Handicrafts of West Bengal

Again, from the modal value in the Figure-1 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards disagreeing “Financial Assistance” as the factor responsible for product development.

5.2 Opinion about the factor MARKET/SELLING responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Market/selling”.

Table-4: Factor (Market/selling) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E

1	Strongly Agree (SA)	63	0.231617647	0.231617647	0.2	0.2	0.031618
2	Agree (A)	103	0.378676471	0.610294118	0.2	0.4	0.210294
3	No Opinion (NO)	26	0.095588235	0.705882353	0.2	0.6	0.105882
4	Disagree (DA)	39	0.143382353	0.849264706	0.2	0.8	0.049265
5	Strongly Disagree (SDA)	41	0.150735294	1	0.2	1	0

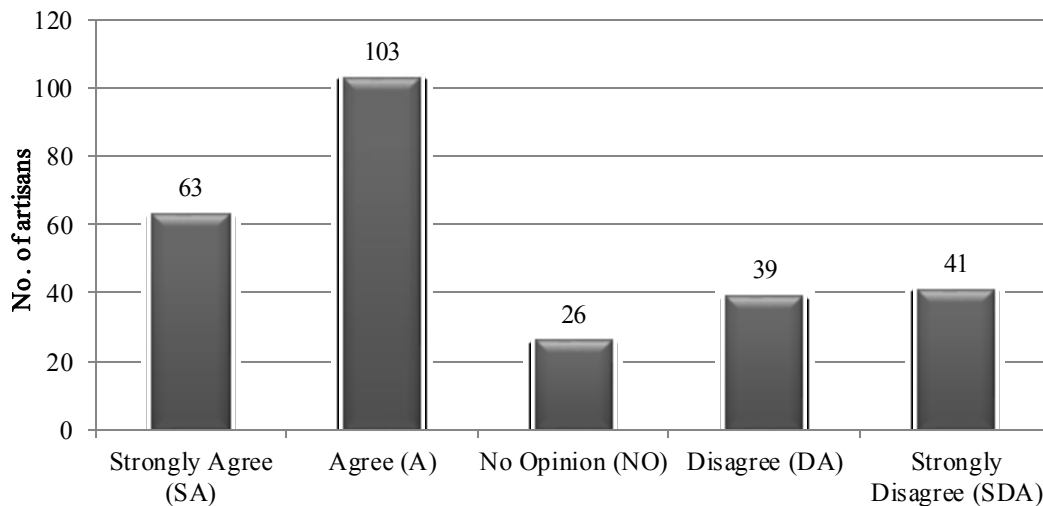


Figure-2: Distribution of opinions of the artisans regarding the factor (Market/selling) responsible for product development of Clay-based Handicrafts of West Bengal

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Market/selling”. Table-4 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Market/selling” responsible for product development.

The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.210294$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence there is a significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Market/selling”.

Again, from the modal value in the Figure-2 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing, “Market/selling” as the factor responsible for product development.

5.3 Opinion about the factor TRAINING responsible for Product Development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Training”.

Table-5: Factor (Training) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E
1	Strongly Agree (SA)	45	0.166051661	0.166051661	0.2	0.2	0.0339483
2	Agree (A)	55	0.20295203	0.36900369	0.2	0.4	0.0309963
3	No Opinion (NO)	54	0.199261993	0.568265683	0.2	0.6	0.0317343
4	Disagree (DA)	75	0.276752768	0.84501845	0.2	0.8	0.0450185
5	Strongly Disagree (SDA)	42	0.15498155	1	0.2	1	0

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Training”. Table-5 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Training” responsible for product development.

The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.0450185$) is less than the table value (0.082614), the null hypothesis is accepted. Hence, there is no significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Training”.

5.4 Opinion about the factor RAW MATERIALS responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Raw materials”.

Table-6: Factor (Raw materials) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E
1	Strongly Agree (SA)	32	0.118081181	0.118081181	0.2	0.2	0.0819188

2	Agree (A)	70	0.258302583	0.376383764	0.2	0.4	0.0236162
3	No Opinion (NO)	20	0.073800738	0.450184502	0.2	0.6	0.1498155
4	Disagree (DA)	110	0.405904059	0.856088561	0.2	0.8	0.0560886
5	Strongly Disagree (SDA)	39	0.143911439	1	0.2	1	0

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Raw materials”. Table-6 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Raw materials” responsible for product development. The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.1498155$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence there is a significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Raw materials”.

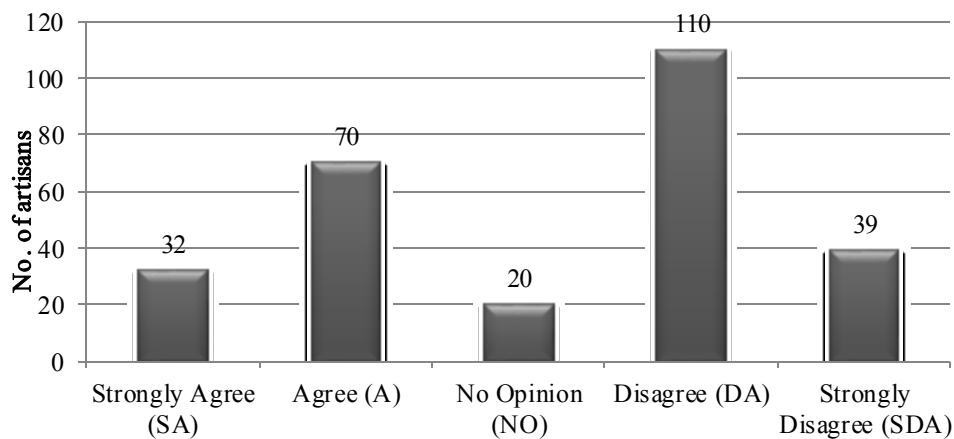


Figure-3: Distribution of opinions of the artisans regarding the factor (Raw materials) responsible for product development of Clay-based Handicrafts of West Bengal

Again from the modal value in the Figure-3 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards disagreeing “Raw materials” as the factor responsible for product development.

5.5 Opinion about the factor INFRASTRUCTURE responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Infrastructure”. The null hypothesis is that there is no significant difference in the importance of ratings given by the respondents on “Infrastructure”.

Table-7: Factor (Infrastructure) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E
1	Strongly Agree (SA)	141	0.520295203	0.520295203	0.2	0.2	0.3202952
2	Agree (A)	73	0.269372694	0.789667897	0.2	0.4	0.3896679
3	No Opinion (NO)	12	0.044280443	0.833948339	0.2	0.6	0.2339483
4	Disagree (DA)	27	0.099630996	0.933579336	0.2	0.8	0.1335793
5	Strongly Disagree (SDA)	18	0.066420664	1	0.2	1	0

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Infrastructure”. Table-7 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Infrastructure” responsible for product development.

The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271}= 0.082614$. As the calculated value ($D_{max} = 0.3896679$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence there is a significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Infrastructure”.

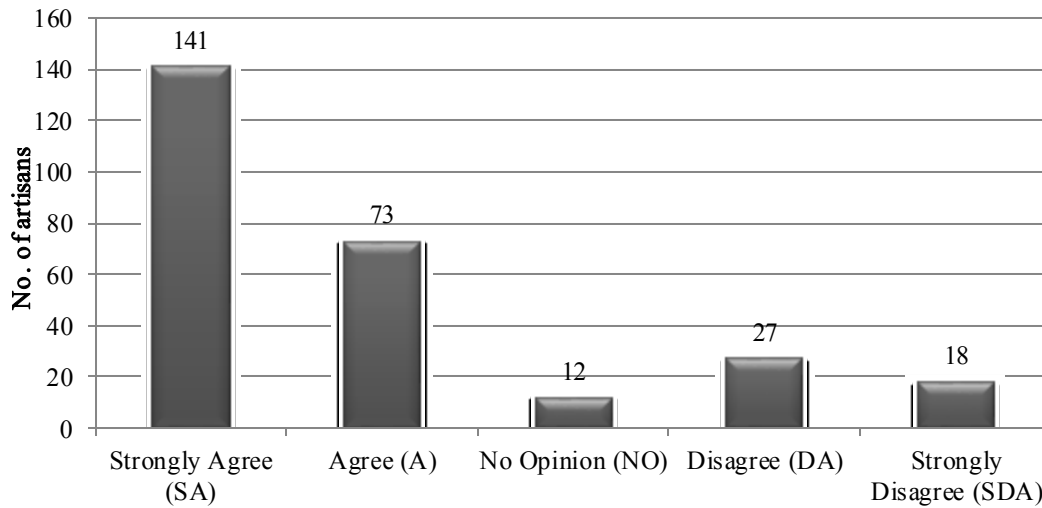


Figure-4: Distribution of opinions of the artisans regarding the factor (Infrastructure) responsible for product development of Clay-based Handicrafts of West Bengal

Again, from the modal value in the Figure-4 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing “Infrastructure” as the factor responsible for product development.

5.6 Opinion about the factor INFORMATION responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Information”. The null hypothesis is that there is no significant difference in the importance of ratings given by the respondents on “Information”.

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Information”. Table-8 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Information” responsible for product development. The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.1416974$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence there is a significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Information”.

Table-8: Factor (Information) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E

1	Strongly Agree (SA)	70	0.258302583	0.258302583	0.2	0.2	0.0583026
2	Agree (A)	76	0.280442804	0.538745387	0.2	0.4	0.1387454
3	No Opinion (NO)	55	0.20295203	0.741697417	0.2	0.6	0.1416974
4	Disagree (DA)	43	0.158671587	0.900369004	0.2	0.8	0.100369
5	Strongly Disagree (SDA)	27	0.099630996	1	0.2	1	0

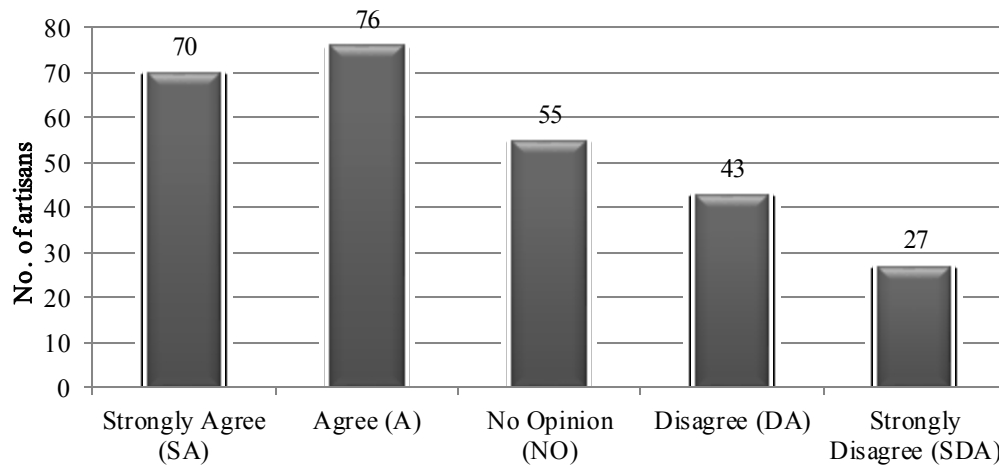


Figure-5: Distribution of opinions of the artisans regarding the factor (Information) responsible for product development of Clay-based Handicrafts of West Bengal

Again from the modal value in the Figure-5 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing “Information” as the factor responsible for product development.

5.7 Opinion about the factor PACKAGING & TRANSPORTATION responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Packaging & Transportation”. The null hypothesis is that there is no significant difference in the importance of ratings given by the respondents on “Packaging & Transportation”.

Table-9: Factor (Packaging & Transportation) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed	Expected Proportion	Cumulative Expected	D= O-E
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				Proportion (O)		Proportion (E)	
1	Strongly Agree (SA)	102	0.376383764	0.376383764	0.2	0.2	0.1763838
2	Agree (A)	97	0.357933579	0.734317343	0.2	0.4	0.3343173
3	No Opinion (NO)	9	0.033210332	0.767527675	0.2	0.6	0.1675277
4	Disagree (DA)	37	0.136531365	0.904059041	0.2	0.8	0.104059
5	Strongly Disagree (SDA)	26	0.095940959	1	0.2	1	0

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Packaging & Transportation”. Table-9 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Packaging & Transportation” responsible for product development.

The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.3343173$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence there is a significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Packaging & Transportation”.

Again from the modal value in the Figure-6 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing “Packaging & Transportation” as the factor responsible for product development.

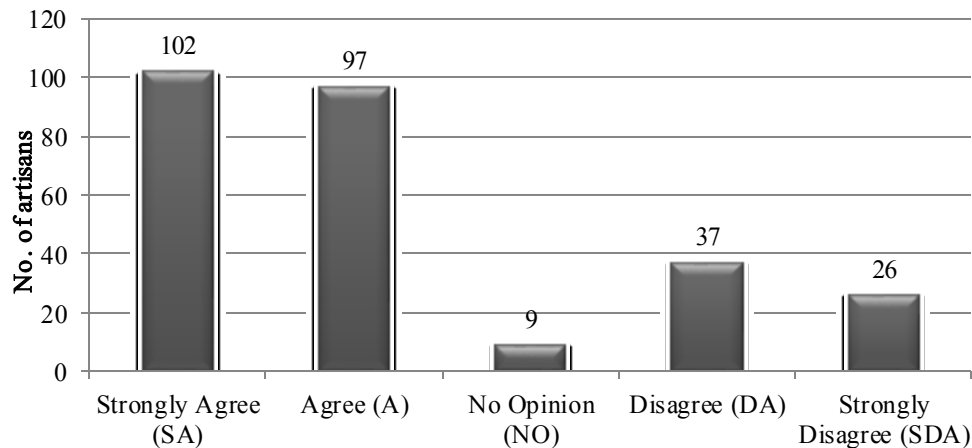


Figure-6: Distribution of opinions of the artisans regarding the factor (Packaging & Transportation) responsible for product development of Clay-based Handicrafts of West Bengal

5.8 Opinion about the factor WORKING SPACE responsible for product development

The Kolmogrov-Smirnov (K.S) test has been done taking only the factor “Working Space”. The null hypothesis is that there is no significant difference in the importance of ratings given by the respondents on “Working Space”.

Table-10: Factor (Working Space) responsible for product development of Clay-based Handicrafts of West Bengal

Sl. No.	Opinion	Observed Number	Observed Proportion	Cumulative Observed Proportion (O)	Expected Proportion	Cumulative Expected Proportion (E)	D= O-E
1	Strongly Agree (SA)	31	0.114391144	0.114391144	0.2	0.2	0.0856089
2	Agree (A)	50	0.184501845	0.298892989	0.2	0.4	0.101107
3	No Opinion (NO)	11	0.040590406	0.339483395	0.2	0.6	0.2605166
4	Disagree (DA)	144	0.531365314	0.870848708	0.2	0.8	0.0708487
5	Strongly Disagree (SDA)	35	0.129151292	1	0.2	1	0

The null hypothesis is that there is no significance difference in the importance of rating given by the respondents of ‘Clay-based Handicrafts of West Bengal’ on the factor “Working Space”. Table-10 elucidates the opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ responded regarding the factor “Working Space” responsible for product development.

The table value at 95 per cent confidence level is equals to $1.36/\sqrt{271} = 0.082614$. As the calculated value ($D_{max} = 0.2605166$) is greater than the table value (0.082614), the null hypothesis is rejected. Hence there is a significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Working Space”.

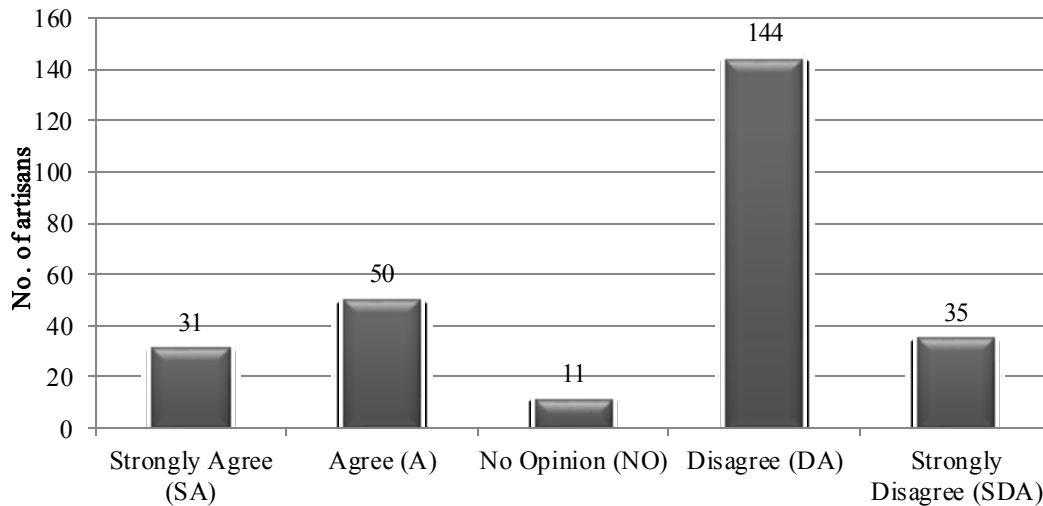


Figure-7: Distribution of opinions of the artisans regarding the factor (Working Space) responsible for product development of Clay-based Handicrafts of West Bengal

Again from the modal value in the Figure-7 it may be established that, the more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards disagreeing “Working Space” as the factor responsible for product development.

6 Findings

- a) Majority of the artisans are male (83.8%).
- b) Majority of the artisans are in the age group of 40-50 years and above 50 years.
- c) Most of the respondents have educational standard below 12 or below 12 standard.
- d) Majority of the artisans are Bengali speaking.
- e) Majority of the artisans get information from their parent and face-to-face dialogs with others.
- f) There is no significant trend about the need of training for product development.
- g) Library users among the artisans are very less.
- h) Few artisans have their professional degrees.
- i) Most of the artisans have no other occupation along with these art works.
- j) Majority of the artisans do not want change their job.
- k) The products’ price range is below Rs. 1000.00 for majority of the artisans.
- l) Majority of the artisans sell their artifacts in local fairs and markets.
- m) The monthly income of the majority of the artisans is less than Rs. 10000.00.
- n) Majority of the artisans have not get financial assistance.
- o) Majority of the artisans have not received formal training.



- p) Majority of the artisans use pitch board box and straw for packaging purpose.
- q) Most of the artisans have learnt the art works traditionally from their parents.
- r) The more artisans opine that “Financial Assistance” has no effect on the over all product development.
- s) The more opinions of the artisans of clay-based handicrafts of W.B. are towards agreeing “Market/selling” as the factor responsible for product development.
- t) There is no significance difference in the importance of ratings given by the artisans of ‘Clay-based Handicrafts of West Bengal’ on “Training”.
- u) The more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards disagreeing “Raw materials” as the factor responsible for product development
- v) The more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing “Infrastructure” as the factor responsible for product development
- w) The more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing “Information” as the factor responsible for product development.
- x) The more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards agreeing “Packaging & Transportation” as the factor responsible for product development.
- y) The more opinions of the artisans of ‘Clay-based Handicrafts of West Bengal’ are towards disagreeing

“Working Space” as the factor responsible for product development.

7 Recommendations

1. The proper drive should be planned to instigate female to come with this art work.
2. Short professional course should be arranged for the artisans.
3. Necessary steps should be taken to enhance marketing/selling of the terracotta artifacts
4. Infrastructural development should be required in the cluster areas
5. Arrangement should be made to get the right information as and when required for the product development
6. Special looks should be given towards proper packaging and transportation of the crafts

8 Conclusion

Handicrafts constitute an important segment of the decentralized/unorganized sector of our economy. Originally, started as a part time activity in rural areas, it has now gradually transformed in flourishing economic activity due to significant demand over the year. It not only provides general employment to a vast segment of craft persons in West Bengal but also generates substantial foreign exchange for the country. Therefore it is needed to develop this industry. If we implement the recommendations come out from the present study, the clay-based handicraft industry of West Bengal would be developed in all respect.

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