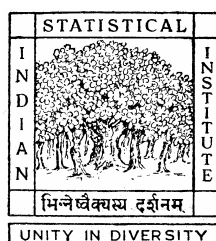


# PLAN BUDGET PROPOSALS

FOR THE YEAR 2011-2012

*Social Sciences Division*



**Indian Statistical Institute  
203, Barrackpore Trunk Road  
Kolkata 700 108**

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# Members of the Technical Advisory Committee

## Social Sciences Division for the year 2008-2010

1. *Professor Sankar K Pal*

Director (Chairman)  
Indian Statistical Institute  
**Kolkata 700 108**

2. *Professor Sugata Marjit,*

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3. *Professor Rajni Palriwala,*

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4. *Professor Surendra Munshi,*

I.I.M., Kolkata

5. *Professor Subrata Lahiri,*

Head, Department of Public Health and Mortality Studies,  
International Institute for Population Sciences (IIPS),  
Govandi Station Road, Deoner,  
**Mumbai 400 088**

6. *Professor Narendra Sharma,*

Dept. of Industrial and Management Engineering, IIT,  
Kanpur, **Pin 208016**

7. *Professor Krishna Bhattacharya,*

Dept. of Linguistics, University of Calcutta,  
College Street Campus  
**Kolkata 7000073**

8. *Professor Abhirup Sarkar,*

Professor-in-Charge (Convener),  
Social Sciences Division,  
Indian Statistical Institute,  
Kolkata 700 108

# *New Projects*

# LRU (North-East, New)

## Project No. 2.1

1. **Title of the project:** Interlexical study of Asamiya in a substantivist framework.
2. **Brief objective and justification (2 or 3 sentences):** The purpose of this project is to develop the empirical base for electronic lexical resources for Asamiya. Electronic lexical resources are an essential presupposition for other sectors in research within the domains of Language Technology (LT) and Natural Language Processing (NLP).
3. **Date of Commencement:** April 2011
4. **Name of the Proposing Scientist or Principal Investigator:** *Probal Dasgupta*, LRU, ISI
5. **Name of other associated Scientists with their affiliation:** Niladri Sekhar Dash and Shubhasree Ganguly (LRU, ISI)
6. **A brief write up on the scope and justification of the project and the proposed work (not more than half a page): Objectives:** The purpose of this project is to develop the empirical base for electronic lexical resources for Asamiya. Electronic lexical resources are an essential presupposition for other sectors in research within the domains of Language Technology (LT) and Natural Language Processing (NLP). This type of resource is of use in machine translation, information extraction, word-sense disambiguation, semantic net, ontology, etc. Also, it has direct academic relevance in electronic dictionary and thesaurus development, language teaching (first and second language), discourse analysis, lexical semantics, and language cognition. The proposed lexical resources will set a precedent for Asamiya, and the enterprise may be extended to other Northeastern Indian languages for which background descriptive material is available on a similar scale. The utility of the project is further enhanced by the fact that it extends the advances in interlexical understanding attained in the context of earlier research on Asamiya, Boro and Bengali.
7. **Item wise break up of the budget proposed (Capital & Revenue) and justification for the same (not more than 1/4 page):**

Items Heads	Amount	Justification
<b>Revenue</b>		
Salary of 1 Project-Linked Personnel (3 x 12 months) @ Rs. 15000/- per month	5,40,000. 00	To assist in the project work
Printing, Xerox and publication	15,000. 00	
Stores and stationery (contingency)	30,000. 00	
Computer consumables	30,000. 00	
Travel and fieldwork	40,000. 00	
Visiting Scientists	40,000. 00	
Miscellaneous	5,000. 00	
<b>Total:</b>	<b>7,00,000. 00</b>	

8. **Brief particulars of Assets, proposed to be acquired from Capital Budget, should be mentioned. In case of replacement, particulars of the asset to be condemned (e.g., Year of Purchase, Cost):** Nil.
9. **List of all ongoing projects undertaken by the Proposing Scientist in the last 5 years and for each, give (i) Status (ii) Money budgeted, (iii) Money spent, (iv) Publications (if any):**

**No. of on-going projects:** 1 (One)

**Project No 1:** (Ongoing general Project)

**Title:** Substantivist lexicological study of Bangla

**Status** : Ongoing

**Money budgeted in 2010-2011** : Rs. 3,11,000/-

**Money budgeted in 2011-2012** : Rs. 2,01,000/-

10. **Expected date of Completion:** March 2014

11. **Quarterly projection of Expenditure during 2011-2012:**

1 <sup>st</sup>			2 <sup>nd</sup>			3 <sup>rd</sup>			4 <sup>th</sup>			Total		
Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total

12. **For Northeast Projects only (New):**

Total Expected budget			Proposed budget for 11-12			Action Plan /Target in terms of percentage (%)			Financial Target in terms of Percentage (%)		
Rev	Cap	Total	Rev	Cap	Total	11-12	12-13	13-14	11-12	12-13	13-14
7,00,000	Nil	7,00,000	2,50,000	Nil	2,50,000	35%	35%	30%	35%	35%	30%

13. **Non Project Plan Proposals (2011-2012)**

# PRU (North-East, New)

## Project No. 4.1

1. **Title of the Project:** Cognitive Processing through PASS model in different groups of students of North- Eastern India.
2. **Brief objective and justification:** The objective of the project is to find out the role of planning, attention, simultaneous and successive (PASS) processes of cognitive functioning in determining the academic performance of different group of students of North-Eastern India. The study will help us to know strengths and weaknesses of students in any particular area of PASS and on that basis intervention programme can be undertaken to improve performance of students.
3. **Date of commencement:** April, 2011
4. **Name of the Proposing Scientist:** *Anjali Ghosh*, PRU, ISI.
5. **Name of other Associated Scientists with their affiliation:** None
6. **A brief write up on the scope and justification of the project and the proposed work (Not more than half a page):** Planning, attention, simultaneous and successive (PASS) processes are the essential elements of human cognitive functioning. According to PASS theory (Das et al., 1994) information first arrives at the senses from external and internal sources, at which point these four cognitive processes activate to analyse its meaning within the context of the individual's knowledge base and thus the same information can be processed in multiple ways (Das, 2002). Through this cognitive assessment system it is possible to know cognitive strengths and weaknesses in each of the four processes. This emphasis on processes rather than abilities makes it useful for differential diagnosis like learning disabilities and attention deficit disorder and thus, to improve performance.

No study is available on cognitive processing through PASS and academic achievement on children of North- Eastern India. Hence, the present study is being undertaken. The study will be conducted on 400 class-VI students selected from two North- Eastern states of India. Multistage stratified random sampling method will be followed in this study. In the first stage two states out of seven North-Eastern states of India will be chosen and then one district from each of the two states will be selected. In the next stage, four schools (2 boys and 2 girls) from the selected districts of the two states will be chosen. Finally, 50 students from each of the schools (100 boys & 100 girls from each of the states) will be selected for the study.

In the second phase of the study a sub-sample of 10 students from each school having low score on PASS will be chosen for examining the effectiveness of intervention programme. Intervention strategies based on Ashman & Conway's (1993) procedure will be discussed and CAS will be administered again to see the improvement.

### **Measures to be used :**

- Cognitive Assessment System (CAS) of Naglieri & Das (1997) will be used which assesses Planning, Attention, Simultaneous and Successive processes through some verbal and non-verbal tests.
- Achievement test for arithmetic and reading comprehension will be prepared based on the syllabus of the board.
- School Performance Record : Annual examination marks obtained by the students will be taken. The study will help us to know how PASS cognitive characteristics are related with academic performance of the students and how intervention programme can improve planning, attention and information process strategies which in turn will be helpful to improve academic achievement. Beneficiaries: Students, parents, teachers, counselors and educational planners.

References:

Ashman, A.F., & Conway, R.N. (1993). Using Cognitive Methods in the classroom. London: Routledge.

Das, J.P. (2002). A better look at intelligence. Current Directions In Psychological Science,11(1), 28-33.

Das, J.P.,Naglieri, J.A., & Kirby, J.R. (1994). Assessment of Cognitive Processes, Boston : Allyn & Bacon.

Naglieri, J.A., & Das, J.P. (1997). Cognitive Assessment System. Riverside Publishing.

**7. Item wise break-up of the budget ( 2011-12) proposed (Capital and Revenue) and justification for the same :**

**Total outlay of the budget for two years: Rs. 5,40,000/-(2011-12 & 2012-13)**

Sr. No	Item	Amount (Rs.)	Justification
1	Salary for one Project Linked Personnel- (10 months) @ Rs.10,000/- per month	1,00,000/-	To assist in the project work
2	Wages to field investigators	5,000/-	To help while collecting data from the field
3	Professional services / workshop	10,000/-	For expert opinion / ideas
4	Travel (airfare to N.E.States)	50,000/-	For data collection from the field
5	Transport (Car hire charges)	10,000/-	
6	Boarding /Lodging / Field Trip	60,000/-	
8	Purchase of Psychological Test /scale	12,000/-	For developing / administering tests/scales
9	Printing, Xerox, Publication	6,000/-	For printing questionnaires / tests / reports / papers etc.
10	Stores & Stationaries	3,000/-	
11	Telephone, postage, courier etc.	2,000/-	To communicate with schools / institutions
12	Miscellaneous	2,000/-	
<b>Total :</b>		<b>2,60,000/-</b>	

**8. Brief particulars of Assets, proposed to be acquired from capital budget, should be mentioned. In case of replacement, particulars of the asset to be condemned : N A**

**9. List of all projects undertaken by the proposing scientist in the last five years :**

Sl. No	Project / research Undertaken	Status	Money budgeted	Money spent	Publications
1	Cognitive-Moral Development of Children in the North-Eastern Region of India. (2005-06) P.I.	Completed	1,13,000/-	1,00,614/-	Report submitted. Two papers published, one in journal and one as a book chapter.
2	Impact Assessment of workers Education (2004) In collaboration with Dr. D. Dutta Roy , Dr. R. Gupta and CBWE	Completed	Without funding		Report submitted.
3	Evaluation of the State Resource Centre – ADRI, Patna. (2005) P.I. With Sociological Research Unit, I.S.I.	Completed (Externally funded)	1,50,000/-	25,000/- (approx.)	Report submitted.
4	Effect of Traffic Noise on the Hearing Ability of School Children in Kolkata. (2004-05), In collaboration with Applied Statistics Unit	Completed	-	-	Report submitted.
5	Improvement upon Management Entrance Test using Item	Completed (Externally	2,00,000/-	1,67,000/-	Report submitted.

	Response Theory (IRT). (2006) P.I. With Prof. A. Chowdhari, Dr. R. Gupta & Mr. S.K. Mitra. Of ASRC	funded)		(approx.)	
6	Ego-identity status during Adolescence and Early adulthood. (2006-08) P.I.	Completed	2,39,000/-	2,03,000/-	Report submitted. One paper published in a journal & one paper selected for publication as a book chapter.
7	Emotional Display Rules & Personality Pattern Across Different Groups of Individuals. (2008-11) P.I.	On-going	3,15,000/-	2,70,000/- (approx.)	Interim Report prepared. One paper presented in an International Conference.

### ***Publications from various projects during 2005 - 2009***

- a) Ghosh, A - Leadership styles and Individualistic-Collectivist orientation of Executives. *Journal of Psychometry*, **2005**, XIX, 2, 1-8.
- b) Ghosh, A. & Karmakar, R. - Distributive Justice and Parent -Child Relationship of School Students. In A. Hussain, S. Hussain & Md. H. R .Khan (Eds.) *Applied Indian Psychology: New Perspectives*, *Global Vision Publishing House*, New Delhi, **2005**, 19-31.
- c) Ghosh, A. - Small Business Women Entrepreneurs of North Eastern India: A Socio-Psychological Study. *Journal of North-East India Council for Social Science Research*, **2006**, 30., 1, 28-36.
- d) Karmakar, R. & Ghosh, A. - Pattern of Allocation Rule Preferences of Children in Different Cultural Settings. *Social Science International*, **2006**, 22,2, 47-55.
- e) Ghosh, A. - Academic Self-Efficacy and Achievement in a Group of siblings of Primary Schools. *Psychological Studies*, **2007**, Vol.52, No.4, 364-371.
- f) Karmakar, R. & Ghosh, A. – Moral Development of Female Students of North-Eastern Region of India. In Gassah, L.S.(Ed.) *Women Empowerment Movement In North-East India*. *Omsons Publications*, New Delhi, **2008**, 228-244.
- g) Basak, R. & Ghosh, A. – Ego-Identity Status and Its relationship with self-esteem in a Group of Late Adolescents, *Journal of The Indian Academy of Applied Psychology*, **2008**, 34, 2, 337-344.
- h) Ghosh,A. – Transactive Memory, Self-Construal and Subjective Well-Being in a Group of Indian Couples,*Interpersona*,**2008** ,2 (2) 173-192.
- i) Karmakar,R.; Ghosh, A. & Dewanji, A.- On Some Determinants For distributive Justice in Children : A Study Based on Three States of India, *Calcutta Statistical Association Bulletin*,**2008**,60 (239-240),255-275.

10. ***Expected date of completion:*** March, 2013

**11. Quarterly projection of Expenditure during 2011-12**

1 <sup>st</sup>			2 <sup>nd</sup>			3 <sup>rd</sup>			4 <sup>th</sup>			Total		
Rev.	Cap	Total	Rev.	Cap	Total	Rev.	Cap	Total	Rev.	Cap	Total	Rev.	Cap	Total
30000		30000	60000		60000	80000		80000	90000		90000	260000		260000

12. For General Projects only (ongoing) : N.A.

13. For General Projects only (New) : N.A.

2. For North- East Projects only (ongoing): N.A.

3. For North- East Projects only ( New ):

Total expected budget (A)			Proposed budget for 2011-2012 (B)			Action Plan/ Target in term of percentage (%)			Financial target in terms of percentage(%)		
Revenue	Capital	Total	Rev.	Cap.	Total	2011-2012	2012-2013	2013-2014	2011-2012	2012-2013	2013-2014
5,30,000/-		5,30,000/-	2,50,000/-		2,50,000/-	50%	50%	-	45%	55%	-

# PRU (General, New)

## Project No. 4.2

1. **Title of the Project:** Workshop on Application of Reliability Statistics in Psychological Research
  - 1.1. **Short term:** Reliability
2. **Brief objective and justification (2 or 3 sentences):** Objective of the conference is to explore different parametric and non-parametric statistical models and tools to assess reliability in psychological research.
3. **Date of Commencement:** April, 2011
4. **Name of the Proposing Scientist or Principal Investigator :** *Debdulal Dutta Roy*, Psychology Research Unit, ISI., Kolkata
5. **Name of other Associated Scientists :**
  - 1) Professor B.K.Sinha, BIRU, ISI., Kolkata
  - 2) Professor Amita Majumder, ERU, ISI., Kolkata
  - 3) Dr Snigdha Chakraborty
  - 4) Dr. Anjali Ghosh, Psychology Research Unit, ISI., Kolkata
  - 5) Dr. Rumki Gupta, Psychology Research Unit, ISI., Kolkata
6. **A brief write up on the scope and justification of the project and the proposed work (not more than half a page):**

One of the major problems in Psychological research is to control the effect of random known and unknown errors so that true component of results can be used for generalization. There are different parametric and non parametric statistical models and tools used in controlling the errors in different branches of psychology namely educational, organizational, clinical, social and developmental. Each branch has unique technique for reliability estimation. For example, in clinical psychology, repeated ANOVA and in organizational research, cronbach's alpha is commonly used. In case of qualitative data analysis, Cohen's Kappa or Fleiss's Kappa models are followed. Again, some reliability statistics are used for classification and some for prediction and some for path analytic modelling. All the researches are in very scattered form. No attempt has been made to organize them still now. This 2-days workshop will explore, organize and disseminate them for future research.

Initially, one workshop committee will be formed to explore 10 experts (5 external and 5 internal), to examine research papers and to select the best papers for publication. After necessary formalities and correspondence, they will be invited to present their researches. Participants will be senior faculties, research fellows, project linked persons of different govt and non-govt research institutions across different states of India. Finally, one document will be prepared for circulations to different universities, research institutes and libraries.

**7. Item wise break up of the budget proposed (Capital & Revenue) and justification for the same (not more than 1/4 page) :**

Item	Rs.	Justification
To and fro air fare of 5 external experts @ Rs. 20,000	100000	Presentation of researches
Honorarium for preparation of documents to 10 experts @ Rs.500	5000	To submit document
Food and lodging of 5 external experts in the Guest house for 3 days @ Rs. 1000 per day	15000	To attend the workshop
Train fare and local transport for 5 internal experts @ Rs. 1000	5000	
Train and local transport for 10 outside participants @ Rs.2000	20000	To attend the workshop
Food and lodging of 10 outside participants in the Guest house for 3 days @ Rs. 1000 per day	30000	To attend the workshop
Car hire and local transport cost	10000	To attend the workshop
Working lunch, tea and snacks for 70 participants for 2 days @ Rs. 200	28000	
Workshop bags for 70 persons @ Rs.500	35000	
folders and reading materials for 70 persons @ Rs. 200	14000	
Advertisements, banners etc.	3000	
Typing, printing, photocopying	20000	To prepare document
Miscellaneous	10000	
Total: Two lakhs fifty thousand only.	295000	

**8. Brief particulars of Assets, proposed to be acquired from capital budget, should be mentioned. In case of replacement, particulars of the asset to be condemned: N. A.**

**9. List of all projects undertaken by the proposing scientist in the last five years:**

Sl. No	Project / research undertaken	Status	Money budgeted	Money spent	Publications
1	Self-efficacy of agricultural farmers	Ongoing	1,71,000/-	94,000/-	One paper
2	Self-efficacy of agricultural farmers	Completed	1,17,000/-	-	One paper
3	A Study on preferences to different Reading and Writing motives of tribal children in Primary education of Tripura and Manipur (2004-06)	Completed	2,81,000/-	190754/-	Two papers
4	GHQ-12(2003-04)	Completed	76,000/-	75895/-	Four papers

**10. Expected date of Completion: March, 2012**

**11. Quarterly projection of Expenditure during 2011-2012:**

1st			2nd			3 <sup>rd</sup>			4th			Total		
Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total
25%		25%	25%		25%	25%		25%	25%		25%	100%		100%

**12. For General Projects only (ongoing): N.A.**

**13. For General Projects only (New)**

Total expected budget (A)			Proposed budget for 2011-2012 (B)			Action Plan/Target in terms of percentage (%)				Financial target in terms of percentage (%)			
Rev.	Cap.	Total	Rev.	Cap.	Total	2009-2010	2010-2011	2011-2012	2012-2013	2009-2010	2010-2011	2011-2012	2012-2013
2.95		2.95	2.95		2.95	25%	30%	45%		28%	36%	36%	

**14. For North- East Projects only (ongoing):** N.A

# PRU (General, New)

## Project No. 4.3

4. **Title of the Project:** Personality Profile, Stress and Job Satisfaction of Indian Sea Farers
5. **Brief objective and justification:** Little researches have been carried out on human factors at sea. In the profession of seafarers, both physical and mental load are considered high. The work conditions and content of the work contains many potential stress factors. Maneuvering a ship has many mental stressing phases for both the Deck and Engine Room Officers and crews. Shipping technology is changing continuously putting more stress to the seafarers and possibly resulting in greater number of accidents. Good numbers of Seafarers are choosing shore jobs after a short period at sea.

Seafarers spend more time on board ship with few visits ashore during their duties on board the vessel. The seafarers work in an environment of multiple cultures, multiple languages with demand for higher skills. They are required to be ready for 24 hours either for normal operations or for catering to the requirements of contingencies. Thus, team work, stress tolerance, job satisfaction etc. appear to be relevant to the working life of sea. The study on behavioral profile of seafarers and their effect on accidents are likely to throw light in the common endeavor to minimize accidents, wastages and improve Risk Management Process. Remedial actions may help to reduce such accidents and wastage and may add to the quality of life of sea farers in particular and Indian Maritime Sector in general.

The study aims at empirical investigation of personality profile of sea-farers with emphasis on stress, team work, job satisfaction and related aspects and their roles in shipping. The study also proposes to assess job satisfaction level of Indian Sea-farers and their effects.

6. **Date of commencement:** April, 2011.
7. **Name of the proposing scientist or principal investigator:** *Rumki Gupta*
8. **Name of other associated scientist with their affiliation:** Shri S. N. Chakrabarty, Director (R&D), Indian Maritime University, Kolkata Campus.
9. **A brief write up on the scope and justification of the project and the proposed work:** Understanding human factors underlying major shipping accidents appears to be a topic of key importance for maritime policy and management. Studies show that around 80% of causes of marine accidents are attributable to human errors (Moore, 1993; National Research Council 1976).

Human error has traditionally been viewed as an individual cognitive, behavioural caused by carelessness or ignorance. However, there is a growing recognition of the influence of situational factors in provoking and shaping errors. (Carl, 2009) Situational factors such as inappropriate planning, wrong interpretation, poor communication, team support etc. can provide error traps for people to fall into.

Reason (1997) observed that to understand and manage human error, we need to focus on human condition and also on conditions in which people work

Hill (1972) found that fewer men remain in the Merchant Navy for longer periods and look upon to sea as a short term career. This may be categorized as “wastage” since producing a Nautical Officer or a Marine Engineer cost to the society.

Learning from past accident is challenging. The sequence of events leading to an accident is in fact a case study and often appears to be unique to each such case. To learn from past accidents in a generalized form, drawing systematic, general and widely applicable factors into their causes and mapping casual patterns across several level of analysis was proposed by Carl in 2009.

Wall (1980) found that job-satisfaction and personality of shipmates are linked. He also found that personality profile of Sea-farers differs with the same for people working ashore. Hill (1972) found that quality of relationship on board becomes extremely important both horizontally and vertically between shipmates.

**Sample:** In this project, we want to study Indian Sea-fearers in the Officers Category (both Nautical and Marine Engineers). To facilitate collections of data in a short time period, it is proposed to collect relevant data from the participants to various post-sea courses being conducted by Indian Maritime University, Kolkata Campus. Participants to those Post-sea courses are drawn from sea-farers working in various Shipping Lines (both Indian Flag vessels and Foreign Flag vessels).

A different sample of sea-fearers currently, working ashore will also be explored to identify factors responsible to decisions to quit Merchant Navy and choose different professions on-shore.

**Instruments:** Few scales and inventories to be reviewed to find suitable instruments to measure

- Stress level along with major sources of stress (work related factors, commercial factors, social relations, subjective stress reaction, climatic conditions, noise disturbances etc.)
- Personality (anxiety, pessimistic - optimistic, appreciation, ego strength, extroversion-introversion, leadership etc.)
- Social relations at work place (i.e. Team work) – through suitably designed questionnaire/tests
- Job satisfaction through suitably designed questionnaire / checklist
- Reasons for acceptance of shore jobs – thorough suitably developed questionnaire / interview.
- Biographical questionnaire

If necessary, suitable tests/questionnaires will be developed afresh and use them after pilot studies.

In addition, Investigation reports on marine accidents and casualty analysis to be obtained from Director General of Shipping, Govt. of India and IMO, Lloyd's publications, P & I Club, U.K. etc.

10. **Proposed Analysis:** Appropriate analysis will be undertaken to

- Find parameters of the instruments
- Find relationship among the variables for the entire sample as well as for major groups viz. Nautical, Marine Engineering and even to various levels of the officers included in the sample through correlation analysis and MANOVA.
- Analyse cause and effect relationship among the chosen variables i.e. to see whether personality or few dimensions of personality have links with stress, job-satisfaction levels etc.
- Identification of variables along with their relative importance to stress/satisfaction level through step-wise Regression and Pareto Analysis.
- Identification of major factors to reflect choice of shore career or other professions by Marine Officers after spending a short period of sea.
- Mapping of personality profile of sea-fearers.
- Classification of accidents in terms of types and identification of major causes/events for each type of accidents.

Implication of this study is to probe into relevant issues through empirical data to draw inferences for better understanding of personality profile of sea-fearers, level of stress, job satisfaction, decision to discontinue Merchant Navy etc.

**Beneficiaries:** Indian Sea-fearers, Indian Shipping Industry.

**References:**

- 1) Carl Macrae (2009) *Human Factors at Sea: Common patterns of error in grounding and collisions*, Maritime Policy Management, February, Vol 36, No. 1, p 21 – 38.
- 2) Hill, JMM (1972) *The Seafaring Career*. Tavistock Institute .
- 3) Moore, W.H. and Bea, R.G. (1993) *Management of human-error in operations of marine system*. Department of Naval Architecture and Offshore Engineering Report. HOE – 93 – 1, University of California, Barkley.
- 4) National Research Council 1976, *Human Error in Merchant Marine Safety*, Washington DC, National Academy Press.
- 5) Reason, J.T. (1997) *Managing the Risks of Organisational Accidents* (Aldershot : Ashgate).
- 6) Wall, M R (1980) *Job Satisfaction and Personality of Merchant Navy Officers*. Maritime Policy Management, Vol 7, No.3, p-155-174.

11. **Item wise break-up of the budget proposed (2011-12) and justification for the same:**

**Total outlay for the project: 5.35 lakhs (for two years, 2011-12 & 2012-13)**

Sr. No	Item	Amount (Rs.)	Justification
1	Salary for one Project linked personel for 10 months	1,00,000.00	To perform various types of works of the project, one project Assistant is required
2	Professional Services	30,000.00	For opinion from the specialized person namely Master Mariner (Foreign going)
3	Travel	30,000.00	In and around Kolkata and visit to office of DG Shipping, Mumbai, Office of Mercantile Marine Dept. at Chennai, Delhi etc.
4	Transport	28,000.00	Charges for Car hire, bus, auto, rickshaw etc. in Kolkata and outside Kolkata
5	Boarding / Lodging / Field Trip	20,000.00	For outside Kolkata
6	Procurement of Psychological Tests /Casualty reports	50,000.00	Required for project work.
7	Printing, Xerox, publication	10,000.00	For Printing of schedules, papers , reports etc.
8	Stores and Stationary	2,000.00	For handling and keeping the records.
9	Telephone and postage	5,000.00	For communication with P & I Club, IMO, DGS etc.
10	Miscellaneous	3,000.00	Unforeseen
<b>Total :</b>		<b>2,78,000.00</b>	This amount will be increased due to 20% increment towards price escalation

**12. Brief particulars of Assets, proposed to be acquired from capital budget, should be mentioned.****In case of replacement, particulars of the asset to be condemned: Nil****10. List of all ongoing projects undertaken by the proposing scientist in the last 5 years:**

Sr No	Name of the project	Status	Money budgeted (Rs.)	Money spent (Rs.)	publications
1	Improvement upon Management Entrance Test using Item Response Theory (IRT) Principal Investigator Dr. Anjali Ghosh other team member Prof. Arijit Chowdhury & Rumki Gupta. External Expert Subir Kr. Mitra (2006)	Completed Project report submitted	200000/-	1,67,000/- (approx.)	Project report submitted.
2	Self assessment and its relationship with academic achievement and achievement motivation among Secondary level School Students.	Completed Project report submitted	2,25,000/-	1,73,000/- (approx.)	Project report submitted. One paper accepted for publication. One lecture delivered in Budapest, Hungary
3	Bullying in school and its effect on the behavioural aspects of the school students.	On going	1,26,000/-	70,000/- (approx.)	Interim Report submitted

**List of important Scientific Papers published in Journal over the last Five years : Rumki Gupta (2005-10)**

- (1) Rumki Gupta (2010) - Empowerment and Gender Difference in Education Status. *Delhi Business Review*, 11, 1, 55 - 60.

- (2) Rumki Gupta and Sanghamitra Panja (2008-2009) - Gender and Religion Bias on the Academic Achievement of the students of Class X Level, *Journal of Education and Psychology*, 65, 1- 4, 17 - 29.
- (3) Rumki Gupta (2007) - Deprivation of Food Items on Academic Achievement of Young Girls. *Health Psychology: Psychosocial Perspective*, Sunita Malhotra, Promila Batra and Amrita Yadava (Eds.) Common wealth Publishers. New Delhi, pp. 169 -173.
- (4) Rumki Gupta (2006) - Factors underlying Marks in Madhyamik Examination of West Bengal, *Journal of the Indian Academy of Applied Psychology*, 32, 2 135 -141.
- (5) Rumki Gupta (2005) - Factor Structure of the Items Measuring Prolonged Deprivation, *Psychological Studies*, 4, 336 - 340.
- (6) Rumki Gupta (2005) - Achievement of West Bengal Madhyamik Examinees of Relatively Disadvantaged Section of the Society, *Applied Indian Psychology: New Perspective*. Akbar Hussain, Shamshad Hussain and Md. Habibur Rahman Khan (Eds.), Global Vision Publishing House, New Delhi, 181-195.

13. **Expected date of completion:** March, 2013

14. **Quarterly projection of expenditure during 2011-12:**

1 <sup>st</sup>			2 <sup>nd</sup>			3 <sup>rd</sup>			4 <sup>th</sup>			Total		
Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total	Rev.	Cap.	Total
59,000	-	59,000	80,000	-	80,000	1,000,00	-	1,000,00	39,000	-	39,000	2,78,000	-	2,78,000

15. NA

16. **For General Projects Only (New)**

Total expected budget (in lakhs) (A)			Proposed budget for 2011-2012 (B)			Action Plan / Target in terms of percentage (%)			Financial target in terms of percentage (%)		
Rev.	Cap.	Total	Rev.	Cap.	Total	2011-2012	2012-2013	2013-2014	2011-2012	2012-2013	2013-2014
5.35		5.35	2.78		2.78	50%	50%		45%	55%	

14. & 15. N.A.

# SRU (General, New)

## Project No. 5.1

1. *Name of the principal investigator:* Dr. Jirthankar Ghosh
2. Title of the Project: **Utilization of developmental inputs by the Scheduled Castes (SCs), Scheduled Tribes (STs) & Other Backward Class / communities (OBCs) and their Social Networks: Experiences in Jharkhand.**
3. *Short title to be used in table:* **Utilization of developmental inputs and social networks.**
4. a) Name (s) of other Scientific: i) Dr. Anil Chaudhury, Giridih, SRU, SSD. Workers of the division involved; ii) Dr. Debasis Bhattacharya, SRU, SSD; iii) Mr. Dipankar Sen, SRU, SSD; iv) Dr. Rabindranath Jana, SRU, SSD; v) Mr. Kamalaksha Das, SRU, SSD. b) Name (s) of other affiliations of: i) Prof. Suraj Bandopadhyaya ( Retired Professor of SRU, Kolkata) Collaborating Scientists ii) Prof. Atis Dasgupta (Visiting Professor, SRU, SSD); iii) Prof. Ratan Dasgupta, STAT-MATH Unit
5. *Status of the project:* New.
6. a) *Date of commencement:* April 2011; b) Date of completion: March 2013.
7. *Brief objectives, scope and justification:* Human development is defined as a process of enlarging people's choices, as well as raising the level of people's well-being (National Human Development Report, 2001). These choices can be, in principle, infinite and vary over time and space. As such, in India, various development programmes have been launched at different time points for the people's well-being. But different studies on human development in Indian context have shown that the people's felt-need at the grass-root level have, by and large, remained neglected in course of planning for the country as a whole. It, therefore, becomes necessary to study the process of development in terms of combining the people's felt-need and the views of programme implementation authorities to minimize the gap between them and not merely studying in terms of giving financial and material benefits. Social scientists have hardly attempted to detect the gap between the administration of programme implementation and ultimate beneficiaries.

The human development discourse was initiated with attention to meet the basic needs like food, shelter, health, education, and employment. Now it has expanded to include other aspects of people's well-being. In a society, households are not isolated units but are tied up to other households by different social relationships in various patterns (Desai et. al, 2010). In recent years, social network analysts have focused on these personal interconnections among households and they have explored how social networks channel information, norms and even diseases across population. So, social networks play an important role in diffusion of knowledge in proper utilization of various developmental inputs. Also it has a direct bearing on individual and collective well-being.

Migration from one area to another in search of improved livelihoods is a key feature of human history. In India, about 200,000,000 persons are not living in their place of birth (UNDP, 2008). In the recent time, industries are concentrated in cities and towns where infra-structural facilities are available and this in turn causes rural to urban migration. Therefore, the interrelationship between migration, socio-economic condition and health status can exemplify the quality of life of a population or household.

It has been undoubtedly established that unutilization or improper utilization of the productive forces especially labour forces creates a wide spread unemployment problem. As a result, incidence of poverty in India is not reduced satisfactorily, especially the rate of reduction in poverty is less in case of the people belonging to SCs, STs, and OBCs of rural India (National

Human Development Report, 2001). In this context, the state Jharkhand (newly formed in 2001) can be mentioned. Though it is one of the rich mineral resource states in the country, it is the poorest state. On the basis of URP method, Jharkhand has 40.30% population below poverty line and 46.30% BPL population in rural Jharkhand (Rao, 2007). It has also been found that many of the male members of the villages of Jharkhand have migrated to various industrial sectors outside the state (such as Surat, Meerut, Kolkata, Rajasthan, Punjab etc.) for maintaining as well as to improve their livelihood (Choudhuri et al., 2006). It can be mentioned that the district of Giridih in Jharkhand is in the lowest rung of developmental indicators as it suffers from high economic deterioration, low literacy level, high infant mortality and lowest health indicators (Choudhuri et al., 2006). So, it is revealed that in Jharkhand, situation is not at all satisfactory i.e., development of the target is marginally achieved.

With this backdrop, the main focus of our study is to identify the different socio-economic, socio-cultural and socio-political factors to utilization of different given developmental inputs by SCs, STs, and OBCs in rural area of the Giridih district of Jharkhand.

***The objective of this study is to:***

- assess the degree of involvement of target people right from getting developmental inputs down to its implementation.
- assess the pattern of utilization of different developmental inputs by the target group. evaluate the scenario of having two-square meals throughout the year.
- assess the formation of any permanent assets by the target groups.
- identify whether different socio-economic and socio-cultural factors persist as a barrier of proper development.
- identify the limitation of the process especially its in capabilities of resource mobilization.
- identify the pattern of Social Networks of the people with its role in getting awareness and access to the utilization of developmental inputs by the target group.
- identify the role of migration and personal entrepreneurship for the development of the rural people.
- identify the level of hindrance at different stages of downward flow of inputs to target population.

***Scope and justification:*** The scope of the present study is not merely to document the facts of impact of rural development programme, rather to explain the facts of utilizing the given resources and the way of thinking, i.e., attitudinal change towards the use of different developmental inputs. Moreover, we have learnt from some findings of empirical studies, carried out by I.S.I., Giridih firstly, during 1960s, when Indian statistical Institute ( ISI ) undertook an in-depth study on social transformation in the villages within 20 mile radial distance around the town of Giridih as the nodal centre, secondly, in the years 1990s, when ISI, gathered another socio-economic and socio-agricultural data by covering 25 villages taken by sampling procedure from all the blocks of Giridih district and later on a study by Choudhuri *et al.* (2006) are relevant to our proposed study in different ways. These studies reveal that development is not at all satisfactory.

From the above study we found that land reforms and related different rural development programmes had not been properly implemented. Though, onwards 1990s, different types of rural development programmes have been carrying out in the rural Jharkhand.

Our study would indicate the ways and means for remedying the disparities among different societal groups and the study can also throw light whether caste differentiation or caste discrimination is a barrier for the proper development of the rural society.

***The justifications of taking up this study are as follows:***

- The methodology evolve in this experience of involving of people in developmental process was not yet systematically documented, which is of national importance.
- The role of Panchayat or such self-government bodies in initiating village development schemes especially for the weaker sections of the rural poor and promoting self-confidence among villagers about their abilities to take care of themselves, needs critical evaluation.
- Knowledge of Social Networks of the people will help the policy makers to implement the development programmes more effectively.

***8. Description of work, in brief, to be carried out in 2011-2012:***

It is found that out of 22 districts in Jharkhand, only four districts including Giridih have below poverty line population based on rural household data (census 2001).

Besides such a backdrop, our study would be exploratory and undertaken in rural communities. Hence the Giridih district is considered for our present study.

The tasks would be as follows:

- a) Detailed review of literature on the thematic area of research to be done.
- b) Collection of source materials from State Planning Board, District Planning Board, Block level secondary data and other literature available.
- c) Field area for our present study is to be selected from the rural area of Giridih district of Jharkhand with the following considerations:

Two blocks of the district will be chosen in such a way that the study blocks will have more SCs, STs and OBCs with more beneficiaries, compared to the other blocks of the district. From each of the two selected blocks, two villages will be selected on the basis of the following features:

- one village will be nearer to Giridih town and another far from the town;
- the villages consisting of more SCs, STs and OBCs with more beneficiaries; and
- each village size will not be so large.

Since the present study has been expanded to include social network data, complete enumeration will be done for collecting all household level data

- d) Preparation of instruments for primary data collection (i.e., preparing of questionnaire schedules, check list, listing of households etc.), indirect observational method will also be applied to verify and supplement the information to be collected otherwise.

It should be mentioned that there will have few items in each questionnaire schedule, which will not be applicable to the non-beneficiary households to be considered as control group.

***9. If the project is planning to go beyond 2011-2012: yes***

- a) A brief plan thereof: 2012-2013:

Main survey of collection of relevant household level information and/or data through field work, group discussion & case studies, analysis of data by applying qualitative and quantitative techniques, and report writing will be done during the period.

**10. Financial requirement: Grand Total Outlay: Rs. 4,40,000.00**

a) Proposed budget for 2011-2012: Total outlay: Rs. 1,90,000.00

Revenue expenditur:

- visit of different informative offices to gather related literature: Rs. 20,000.00
- Travel and visit to different offices to get secondary data at Giridih district: Rs. 100,000.00
- Book, Journals, Reports: Rs. 10,000.00
- Xeroxing or reprography: Rs. 5,000.00
- Contingent expenses: Rs. 15,000.00

**Total: Rs.1,50,000.00**

**Capital expenditure: I) One Laptop P. C.: Rs. 40,000.00**

b) Proposed budget for: 2012-2013: Total outlay: Rs. 2,50,000.00

Revenue expenditure :

- Travel and field work (including transportation and field assistance charges): Rs. 2,00,000.00
- Data entry, analysis and computer consumables: Rs. 25,000.00
- Printing, reprography etc.: Rs. 10,000.00
- Contingent expenses: Rs. 15,000.00

**Total : Rs. 2,50,000.00**

**Capital expenditure: Nil**

**Grand Total: Rs. 4,40,000.00**

- **Revenue expenditure for 2011-2012:** Rs. 1,50,000.00
- **Capital expenditure for 2011-2012:** Rs. 40,000.00
- **Revenue expenditure for 2012-2013:** Rs. 2,50,000.00

**11. Expected date of completion:** March, 2013

**12. Quarterly projection of expenditure during 2011-12**

1 <sup>st</sup>		2 <sup>nd</sup>			3 <sup>rd</sup>		4 <sup>th</sup>		Year		
Rev.	Total	Rev.	Capital	Total	Rev.	Total	Rev.	Total	Rev.	Capital	Total
20,000/-	20,000/-	30,000/-	40,000/-	70,000/-	50,000/-	50,000/-	50,000/-	50,000/-	1,50,000/-	40,000/-	1,90,000/-

**13. For General Projects only (Ongoing):** Does not arise

**14. For General Projects only (New)**

Total expected budget (A)			Proposed budget for 2011-12 (B)			Action Plan/Target in terms of percentage (%)		Financial target in terms of percentage (%)	
Rev.	Capital	Total	Rev.	Capital	Total	2011-2012	2012-2013	2011-2012	2012-2013
1,50,000/-	40,000/-	1,90,000/-	1,50,000/-	40,000/-	1,90,000/-	100.00 %	100.00 %	100.00 %	100.00 %

15. **Other on-going project:** None

16. **Project completed in last five years:** Yes (2005-2006), Report submitted.

17. **Name of two referees in the field:**

- j) Prof. Devi Chatterjee, Dept. Of International Relations, Jadavpur University, Kolkata
- k) Prof. Buddhadev Chaudhuri, 28, Prince Anwar Shah Road, Kolkata – 700 033.

# *Ongoing Projects*

# LRU (General, Ongoing)

## Project No. 2.2

1. **Title of the project:** Substantivist lexicological study of Bangla.
2. **Brief objective and justification (2 or 3 sentences):** The purpose of this project is to develop the empirical base for a corpus-based electronic lexicon for Bangla. A corpus-based electronic lexicon is an indispensable resource for research and application in Language Technology (LT) and Natural Language Processing (NLP).
3. **Date of Commencement:** April 2010
4. **Name of the Proposing Scientist or Principal Investigator:** *Probal Dasgupta*, LRU, ISI
5. **Name of other associated Scientists with their affiliation:** Niladri Sekhar Dash and Shubhasree Ganguly (LRU, ISI).
6. **A brief write up on the scope and justification of the project and the proposed work (not more than half a page): Objectives:** The purpose of this project is to develop the empirical base for a corpus-based electronic lexicon for Bangla. A corpus-based electronic lexicon is an indispensable resource for research and application in Language Technology (LT) and Natural Language Processing (NLP). This type of resource is of use in machine translation, information extraction, word-sense disambiguation, semantic net, ontology, etc. Also, it has direct academic relevance in electronic dictionary and thesaurus development, language teaching (first and second language), discourse analysis, lexical semantics, and language cognition. The proposed Electronic Lexicon will be the first work of its kind for Bengali, and the enterprise may be extended to other Indian languages if corpora are available. The utility of the project is further enhanced by two specific features. First, the proposed Lexicon is of the Differentiated type in the sense of Dasgupta, Misra and Datta (2002). In a Differentiated Lexicon, the asymmetry between peripheral and kernel items drives intra-lexical glossing, and the artificial metalanguage Esperanto serves as the glossing mediator, on cognitive-scientific grounds provided in Dasgupta (2006). Secondly, the proposed Lexicon not only uses frequency within the corpus to determine the kernel-periphery boundary but also provides specific frequency data for each lexeme. This will be the first electronic lexicon for Bengali.
7. **Item wise break up of the budget proposed (Capital & Revenue) and justification for the same (not more than 1/4 page):**

Items Heads	Amount	Justification
<b>Capital</b>		
1 personal computer	50,000.00	To execute the project
1 photocopier	50,000.00	To photocopy documents which need to be supplied to the authorities and others etc.
1 software (antivirus)	10,000.00	
<b>Revenue</b>		
Salary of 1 Project Assistant (3 x 12 months) @ Rs. 12000/- per month	4,32,000. 00	To assist in the project work
Printing, Xerox and publication	15,000. 00	
Stores and stationery	15,000. 00	
Computer consumables	30,000.00	
Travel and fieldwork	60,000.00	
Visiting Scientists	45,000.00	
Miscellaneous	6,000. 00	
<b>Total:</b>	<b>7,13,000. 00</b>	

8. **Brief particulars of Assets, proposed to be acquired from Capital Budget, should be mentioned. In case of replacement, particulars of the asset to be condemned (e.g., Year of Purchase, Cost):**  
1 Personal Computer, 1 Photocopier, and 1 Antivirus software programme.

**9. List of all ongoing projects undertaken by the Proposing Scientist in the last 5 years and for each, give (i) Status (ii) Money budgeted, (iii) Money spent, (iv) Publications (if any):**

No. of on-going projects	: 1 (One)
Project No 1	: (Ongoing, General)
Title	: Substantivist lexicological study of Bangla
Status	: On-going
Money budgeted in 2010-2011	: Rs. 3,11,000/-

**Publications:**

- 1) Dasgupta, Probal. "Trafficking in words: languages, missionaries and translators". In Paul St-Pierre, Prafulla C. Kar (eds.) In Translation: Reflections, Refractions, Transformations. Delhi: Pencraft International. 2005. 42-56.
- 2) Dasgupta, Probal. "Relative clauses in syntactic description". CIEFL Bulletin (new series) 2005. 15:1.1-10.
- 3) Dasgupta, Probal. "Some milestones in language and cognition studies". Contemporary Education Dialogue 2005. 3:1.5-27.
- 4) Probal Dasgupta (with Rajendra Singh, Ramakant Agnihotri, Josef Bayer, Peter Edwin Hook).
- 5) "Q-baa and Bangla clause structure". In Tanmoy Bhattacharya (eds.) Yearbook of South Asian Languages and Linguistics 2005. Berlin/ New York: Mouton de Gruyter. 45-81.
- 6) Dasgupta, Probal. "The virtues of demobilization in translation studies". Translation To day. 2005. 2:2.197-215.
- 7) Dasgupta, Probal. "The exercise of an unshared culture: the case of English in India". New Quest 2006. 163:60-69.
- 8) Dasgupta, Probal. "The South and Esperanto in the post-orientalist public space". Indian Journal of Linguistics 2006. 24:11-28.
- 9) Dasgupta, Probal. "Language policies and lesser-known languages in India". Rajendra Singh et al. (eds.) The Yearbook of South Asian Languages and Linguistics 2006. Berlin/ New York: Mouton de Gruyter. 2006. 193-205.
- 10) Dasgupta, Probal. "Unifying relativization and control in Bangla". Manabendu Banerjee et al. (eds.) Nyaya-Vasistha: Felicitation Volume of Professor V.N. Jha. Kolkata: Sanskrit Pustak Bhandar. 2006. 138-170.
- 11) Dasgupta, Probal. "Popular cinema, India, and fantasy". In Vinay Lal, Ashis Nandy (eds.) Fingerprinting Popular Culture: The Mythic and the Iconic in Indian Cinema. New Delhi: Oxford University Press. 2006. 1-23.
- 12) Dasgupta, Probal. "Response to questionnaire on modernity". Journal of Humanities and Social Sciences 2006. 3:16-19.
- 13) Dasgupta, Probal. "On Bangla impersonals, including passives". Bhashacintana 2006. 1:2-17.
- 14) Dasgupta, Probal. "Language and cognition". In Jayashree Ramadas, Sugra Chunawala (eds.) Research Trends in Science, Technology and Mathematics Education: Review Talks Delivered at epiSTEME-1, an international conference to review research on Science, Technology and Mathematics Education. Mumbai: Homi Bhabha Centre for Science Education, Mumbai. 2006. 91-122.
- 15) Dasgupta, Probal. "The ubiquitous complementizer". In: Linguistic Theory and South Asian Languages. Ed. by Josef Bayer, Tanmoy Bhattacharya, M.T. Hany Babu. John Benjamins, Amsterdam. 2007. 163-173.
- 16) Dasgupta, Probal. "Concrete knowledge, the conversational turn, and translation". AI & Society 2007. 21:1-2.7-13.
- 17) Dasgupta, Probal. 'Matribhasha ar chintar bikash'. Parashpathor 1:3. 2007 [de facto 2008]. Pp 9-10.

- 18) Dasgupta, Probal. 'Byakoroner prokoron ar bachokota'. *Bangadarshan* **12**. 2007 [de f 2008]. Pp 65-82.
- 19) Dasgupta, Probal. 'Advances in substantivist grammatical research'. In *Research Trends in Lexicography, Sanskrit and Linguistics: Proceedings of the Professor S.M. Katre Birth Centenary Seminar*. Ed. by K.S. Nagaraja, V.P. Bhatta, Sonal Kulkarni-Joshi, P.M. Pingle. Deccan College Post-Graduate and Research Institute, Pune. 151-181. 2007 [de facto 2008].
- 20) Dasgupta, Probal. 'Anchaler aatmasammaan'. *Baromas* **30**:2. 2008. Pp 71-77.
- 21) Dasgupta, Probal. 'Adhunik bhashatattwo ar Bhartrihari'. *Porikatha* **11**:1. 2008. Pp 1-15.
- 22) Dasgupta, Probal. 'Enkonduko al la estrara raporto'. *Esperanto* **101**:6. 2008. P 130.
- 23) Dasgupta, Probal. 'Bharoter nastik bhashyokar ar mlechchho chhatrobrindo'. *Oikyo* **13**. 2008. Pp 38-42.
- 24) Dasgupta, Probal. 'Sibnarayan Ray ar Bangla bhashar sribridhir rasta'. *Jiggasa* **27**:2-3. 2008. Pp 255-258.
- 25) Dasgupta, Probal. "La kongresoj post la frostavalena epoko". *Almanako Lorenz* **28**. 2008. Pp 29-35.
- 26) Dasgupta, Probal. "Names, writing and perspective". *Journal of Humanities and Social Sciences* **5**. 2008. Pp 126-34.
- 27) Dasgupta, Probal. 'La vivanteco de la gepatraj lingvoj: uzi la tradukadon kiel kultivilon'. In *Al justa lingvopolitiko en Azio/ Towards Equitable Language Policy in Asia*. Ed. by Kimura Goro Christoph, Yoshida Naoko. Europe Institute, Sophia University, with Japana Esperanto-Instituto, Tokyo. 2008. 182-185.
- 28) Dasgupta, Probal. 'Popola kaj malpopola posedo de la lingva richo: la dunormeco sub kogna lupeo'. In: *IKU 61: Internacia Kongresa Universitato 61a Sesio*. Ed. by José Antonio Vergara. Universala Esperanto-Asocio, Rotterdam 2008.. 96-106.
- 29) Dasgupta, Probal. 'Antaŭparolo'. In: *Jarlibro de UEA*. Ed. by Roy McCoy. Universala Esperanto-Asocio, Rotterdam. 2008. 6-7.
- 30) Bhaashaa, shaahitto aar Buddhodeber Ekti Jibon. Amiya Dev et al. [eds] *Shaagoto Shanglaap: Buddhodeb Boshuke Nibedito*. Kolkata Dey's. 2008/9. 204-9.
- 31) Dasgupta, Probal. 'Transparency and arbitrariness in natural language: some empirical issues'. Rajendra Singh (ed.) *ARSALL* 2008. Berlin: Mouton de Gruyter. 3-19.
- 32) Dasgupta, Probal. 'Onubader rakompher'. *Onubad Potrika* **28**. 2009. Pp 25-27.
- 33) Dasgupta, Probal. 'Nirbishesh nijanter unki'. *Bangla Bhasha-Projekti: Nana Katha*. Ed. by Anupam Basu. Bhasha Projekti Gabeshona Porishad, Kolkata. 2009. 20-24.
- 34) Dasgupta, Probal. 'Bangla vector verbs and their selectivities'. *Interdisciplinary Journal of Linguistics* [U. of Kashmir, Srinagar] **2**. 2009. Pp 41-68.
- 35) Dasgupta, Probal. 'Baakkotatto aar Bangla'. *Alochonachakro* **27**. 2009. Pp 28-34.
- 36) Dasgupta, Probal. "Ditiyotaar pothikrit". *Ebong Mushayera* 2009. 15:4.155-60.
- 37) Dasgupta, Probal. 'After temples and templates: history's claims on the translator. Ipshita Chanda, Chandra Mohan, Subha Chakraborty Dasgupta (eds.) *Travelling in Cultures: Comparative Studies, Theory and Practice*. Delhi: Worldview. 2009. 25-36.
- 38) Dasgupta, Probal. "Characterizations in linguistic science". Amiya Dev (ed.) *Science, Literature and Aesthetics (History of Science, Philosophy and Culture in Indian Civilization Volume XV Part 3)*. Delhi: Centre for Studies in Civilization. 2009. 149-65.
- 39) Dasgupta, Probal. (with Madhavi Sardesai). 'Sociolinguistics in South Asia'. Martin J. Ball (ed.) *The Routledge Handbook of Sociolinguistics around the World*. London/ New York: Routledge. 2009 81-8.
- 40) Dasgupta, Probal. 'Apud la vorteroj: la vortila kromvojo'. Ilona Koutny (ed.) *Abunda Fonto: Memorlibro Omaghe al Prof. Istvan Szerdahelyi*. Poznan: ProDruk & Steleto. 2009. 159-65.
- 41) Dasgupta, Probal. 'Grussworte. Margrit Vollertsen'- Diewerge et al. (ed.) *Drei schwarze Schiffe / Tri nigraj sxipoj*. Erlangen: Margrit Vollertsen-Diewerge. 2009. 5-6.

- 42) Dasgupta, Probal. Kondolenca mesagxo de la UEA-prezidanto. Kim Uson, Choe Taesok, Song Ho-young (eds.) Lee Chong-Yeong: gvidanto nia. Seoul: Korea Esperanto-Asocio. 2009. 120-1.
- 43) Dasgupta, Probal. 'Prosnobaakker nibedon-badol aar kriyaapader saakaankho otit cehaaraa'. *Alochonachakro* **28**. 2010. Pp 9-25.
- 44) Dasgupta, Probal. 'Bhaabbaaccer kaache-pitxhe'. *Janapadaprayaas* **25**. 2010. Pp 25-8.
- 45) Dasgupta, Probal. 'La postnacia literatura entrepreno kaj Esperanto'. Detlev Blanke & Ulrich Lins (eds.) La Arto Labori Kune: Festlibro por Humphrey Tonkin. Rotterdam: Universala Esperanto-Asocio. 2010. 695-701.
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- 48) Dash, Niladri Sekhar (2005) "The role of context in sense variation: introducing corpus linguistics in Indian contexts". *Language In India*. Vol. 5. No. 6. Pp. 12-32.
- 49) Dash, Niladri Sekhar (2005) "Corpus based machine translation across Indian languages: from theory to practice". *Language In India*. Vol. 5. No. 7. Pp. 12-35.
- 50) Dash, Niladri Sekhar (2005) "A brief historical survey on the use of handmade language databases in linguistics studies". *Language Forum*. Vol. 31. No. 1. Pp. 17-39.
- 51) Dash, Niladri Sekhar (2005) "Role of context in word sense disambiguation". *Indian Linguistics*. Vol. 66. No. 1-4. Pp. 159-176.
- 52) Dash, Niladri Sekhar (2005) "Methods in madness of Bengali spelling: a corpus-based empirical investigation". *South Asian Language Review*. Vol. 14. No. 2. Pp. 63-92.
- 53) Dash, Niladri Sekhar (2006) "Some limitations of corpus-based language study". *Language In India*. Vol. 6. No.3. Pp. 1-32.
- 54) Dash, Niladri Sekhar (2006) "The morphodynamics of Bengali compounds: decomposing them for lexical processing". *Language in India*. Vol. 6. No. 7. Pp. 1-25.
- 55) Dash, Niladri Sekhar (2006) "Differences between text and speech corpora with regard to content, nature, annotation, and utilisation", *Indian Linguistics*. Vol. 67. No. 1-4. Pp. 65-84.
- 56) Dash, Niladri Sekhar (2007) "Some techniques used for processing Bengali corpus to meet new demands of linguistics and language technology". *SKASE Journal of Theoretical Linguistics*. Vol. 4. No. 2. Pp. 13-33.
- 57) Dash, Niladri Sekhar (2007) "Generating electronic lexical resources from text corpora in Bengali". *Indian Linguistics*. Vol. 68. No. 3-4. Pp. 361-371.
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- 60) Dash, Niladri Sekhar (2008) "Corpus linguistics: an empirical approach for studying a natural language". *Language Forum*. Vol. 34. No. 2 (Jul-Dec 2008). Pp. 5-21.
- 61) Dash, Niladri Sekhar (2008) "Context and contextual word meaning". *SKASE Journal of Theoretical Linguistics*. Vol. 5. No. 2. Pp. 21-31.
- 62) Dash, Niladri Sekhar (2009) "Bengali matrimonial classifieds: some sociolinguistic cues to marital orientation", *Language Forum*. Vol. 35. No. 2. Pp. 34 -52.
- 63) Dash, Niladri Sekhar (2009) "Relevance of electronically developed dialect corpora in dialectology". *Indian Linguistics*. Vol. 70. No, 1-4. Pp. 91-101.
- 64) Dash, Niladri Sekhar (2009) "Corpus linguistics: a time-tested strategy for studying a natural language". *Language Forum*. Vol. 35. No. 2. July-Dec. Pp. 5-18.
- 65) Dash, Niladri Sekhar, Payel Dutta Chowdhury and Abhisek Sarkar (2009) "Naturalization of English words in modern Bengali: a corpus-based empirical study". *Language Forum*. Vol. 35. No. 2. July-Dec., Pp. 127-142.



# PSU (General, On-going)

## Project No. 3.1

1. Title of the Project: Multiple Decrement Tables in Population Health Insurance Policies: Deterministic Approaches (continuation for 1 more year).
2. Brief objective and justification: We wish to continue the project for one more year in order to achieve the theoretical goal of obtaining a multiple decrement life tables and fitting live data.
3. Date of Commencement: 1 April 2011.
4. Name of the Proposing Scientist: *Arni S.R. Srinivasa Rao.*

or Principal Investigator

5. Name of the other Associated Scientists with their affiliation: None
6. A brief write up on the scope and justification of the project and the proposed work:

In the first year of the project (i.e. during 2010-2011), we will try to develop theoretical set-up of multiple decrement tables and then propose to do the applied part and modeling during second year i.e. during 2011-2012.

Please see methodological aspect in the DCSW project proposal accepted for 2010-2011.

### ***Main objectives:***

- (1) Modeling of insurance methods and its practical utility by calculating DALY is our focus during second year.
- (2) We also investigate life expectancies of non-insured persons.

### ***Scope of the Study:***

During the past decade, there has been a gain of 4-5 years in the life expectancy in India. The present study aims to assess the impact of health insurance policies in the overall health gain among the individuals who have opted for at least one of the leading policies. We propose to study optimum insurance benefits and develop theoretical framework(s). Such kind of studies are not conducted in ISI and hence students/projects linked personnel who will be working in the project will be able to gain theoretical and practical exposure in actuarial science research at individual level and at company level.

### ***Two fundamental assumptions in MDT are***

- (i) Several cause of health hazards are independent.
- (ii) After the implementation of various rates of decrements there are no entrants and reentrants in MDT.

**The general, the theory of MDT focuses following aspects:**

- (i) Obtaining a SDT for cause  $m$  ( $m = 1, 2, \dots$ ) if a MDT for  $m$  causes is given. Here forces of decrement for each cause is assumed to be independent of the effect of the other cause.

Suppose  $l_x^{1(k)}, l_0^{1(k)}$  are individuals at age  $x, 0$  of an associated SDT in a given MDT, then we can obtain

$$l_x^{1(k)} = l_0^{1(k)} e^{-\int_0^x \mu_y^{(k)} dy}$$

$$q_x^{(k)} = 1 - e^{-\int_0^x \mu_t^{(k)} dt}$$

where  $\mu_y^{(k)}$  is forces of decrement at age  $y$  due to cause  $k$ . We can proceed further to obtain other columns of SDT.

(Further details can be seen at 2010-2011 proposal by the same PI)

7. Item wise write break up of the budget proposed (Capital & Revenue) and justification for the same (not more than ¼ page)

Sr. No.	Item/Description	Year 2011-2012 (Rs.)
1.	Project linked personnel salary (Rs.) 16000 x 12 months	1,92,000
2.	Travel grant for project leader and members for data Collection and conferences	60,000
3.	Personal computer	
4.	Contingency	20,000
		Rs. 2,72,000

Note: Any unused/excess funds will be duly returned to the Institute.

8. **Brief particulars of Assets, proposed to be acquired from Capital Budget, should be mentioned. In case of replacement, particulars of the asset to be condemned (e.g., Year of Purchase, Cost):** Not applicable.

9. **List of all on-going projects undertaken by the Proposing Scientist in the last 5 years**

**(Projects in reverse order of the year of sanctioning)**

**Projects (To be Started, Ongoing and Completed)**

Project 1:

**Role:** Co-Investigator

**Project Title:** Anticoccidial vaccine development: the importance of genetic diversity and delivery strategy.

**Funding Agency: BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL, UK**

Year Awarded : 2009

- (i) **Status:** Yet to be commenced in July/August, 2010

Project 2:**Role:** Principal Investigator**Project Title:** Mathematical Models for Impact of Targeted Interventions by NACO.**Funding Agency:** National AIDS Control Organization, Government of India, New Delhi

Year Awarded: 2009

- (ii) **Status:** Yet to be commenced in August, 2009
- (iii) **Money Budgeted:** Rs.6.13 lakhs (Rupees Six lakhs and thirteen thousand only)

Project 3:**Role:** Principal Investigator**Project Title:** Diffusion Models for the spread of HIV in districts of India.**Funding Agency:** University of Oxford

Year Awarded: 2008

- (iv) **Status:** Completed in July 2009
- (v) **Money Budgeted:** Rs.2.6 lakhs (Rupees Two lakhs and sixty thousand only)

Project 4 :**Role:** Principal Investigator**Project Title:** Multiple Decrement Tables in Insurance Policies.**Funding Agency:** DCSW, ISI

Year Started: 2009 ((Project Awarded)

- (vi) **Status:** Yet to be commenced in 2010

Project 5 :**Role:** Principal Investigator**Project Title:** Estimation of Probability of Sparse events and Construction of Confidence Intevals.**Funding Agency:** CSIR, (Mathematical Sciences), New Delhi

Year Started: 2009 ((Project Awarded)

- (vii) **Status:** Yet to be commenced in 2009
- (viii) **Money Budgeted:** Rs.5.6 lakhs (Rupees Five lakhs and sixty thousand only)

Project 6**Role:** Principal Investigator**Project Title :** Post-enumeration survey for the Indian Census : A Methodological perspective.**Funding Agency :** DCSW, ISI

Year Started : 2008

- (i) **Status :** Completed in March 2009.
- (ii) **Money Budgeted :** Rs.2,00,000 (Rs. Two lakhs)

Project 7 :**Role:** Investigator**Project Title:** Molecular Epidemiology and development of Reagents for Diagnostics and Vaccines.**Funding Agency:** DBT, New Delhi

Year Started: 2007

- (i) **Status :** On-going
- (ii) **Money Budgeted :** Rs.499 lakhs (Rupees Four hundred ninety nine lakhs)

Project 8 :**Role:** Consultant**Project Title:** Mathematical Models and analysis for Third Phase National AIDS Control Policy.**Funding Agency:** INDIACLEN**Year Started:** 2006**(iii) Status :** Completed in 2007**(iv) Money Budgeted :** 2.5 lakhs (Rupees Two lakhs and fifty thousand)***Publications (only in peer reviewed Journals) (2004-2008)***

Publications (2004-2010) in peer reviewed and Indexed only in MathSciNet or Thompsons ISI Knowledge

1. Juluru, N and **Rao, Arni S.R. Srinivasa Rao** (2010). Mahlburg's work on Crank Functions. Ramanujan's partitions Revisited. *Resonance*, 15, 3, 232-243. (Academy and Springer).

**Rao, Arni S.R. Srinivasa**, K. Thomas, K. Sudhakar and P.K. Maini (2009). HIV / AIDS epidemic in India and predicting the impact of the National Response: Mathematical Modeling and Analysis. *Mathematical Biosciences and Engineering (AIMS, USA)*, 6, 4, 779-813.

1.**Rao, Arni S. R. Srinivasa (2008)**. Location of the epicenter of avian bird flu might determine the rapidity of Spread in India. *Current Science*, 95, 3, 314-315.

2. **Rao, Arni S. R. Srinivasa. (2008)**. Modeling the Rapid Spread of Avian Influenza (H5N1) in India. *Mathematical Biosciences and Engineering, (AIMS, USA)*, 5, 3, 523-537.

3. **Rao, Arni S. R. Srinivasa** and C.T. Bauch (2008). Classical Galton-Watson Branching Process and Vaccination. *International Journal of Pure and Applied Mathematics*, 44, 4:595-607.

4. Bauch CT, **Rao, Arni S. R. Srinivasa**, Pham BZ, et al. (2007) A dynamic model for assessing universal Hepatitis A vaccination in Canada. *Vaccine* (Elsevier) Volume: 25 Issue: 10 Pages: 1719-1726

5. **Rao, Arni S. R. Srinivasa**, Chen MH, Pham BZ, et al. (2006). Cohort effects in dynamic models and their impact on vaccination programmes: an example from Hepatitis A. *BMC Infectious Diseases* Volume: 6 Article Number: 174

6. **Rao, Arni S. R. Srinivasa (2006)**. Ramanujan and Religion. *Notices of the American Mathematical Society*, (AMS) 53, 9: 1007-8.

7. **Rao, Arni S. R. Srinivasa (2006)**. A note on derivation of the generating function for the right truncated Rayleigh distribution *Applied Mathematics Letters*,(Elsevier)19,8:789-94.

8. **Rao, Arni S. R. Srinivasa (2006)**. Probabilities of therapeutic extinction of HIV *Applied Mathematics Letters*,(Elsevier),19, 1:80-86.

9. **Rao, Arni S. R. Srinivasa**, Basu S, Basu A, and Ghosh, JK. (2005). Parametric models for incubation distribution in presence of left and right censoring *Indian Journal of Pure and Applied Mathematics*, 7, 371-384.

**10. Rao, Arni S. R. Srinivasa (2005).** On joint Weibull probability density functions *Applied Mathematics Letters*, (Elsevier), 18,11:1224-7.

**11. Rao, Arni S. R. Srinivasa and M Kakehashi (2005).** Incubation-Time Distribution in Back-Calculation Applied to HIV/AIDS Data in India *Mathematical Biosciences and Engineering*, (AIMS, USA), 2, 2: 263-77.

**12. Lahiri, S. Rao, Arni S. R. Srinivasa and S. Srinivasan (2005).** Role of Age-Specific Growth rates on Population Ageing in Some developed and developing Countries – A Comparative Study. *Demography India*, (IASP) Vol 34, No. 1, 63-83.

**13. Rao, Arni S. R. Srinivasa (2004).** Limiting theorems on 'case' reporting. *Applied Mathematics Letters*, (Elsevier), Volume: 17 Issue: 7 Pages: 855-859.

**14. Rao, Arni SR Srinivasa and Kakehashi, Masayuki (2004)** A combination of differential equations and convolution in understanding the spread of an epidemic. *Sadhana* (IAS) 29(3):pp. 305-313.

**15. Rao, Arni S. R. Srinivasa (2004).** U Type Functions. *Bulletin of Informatics and Cybernetics*, 35, 1-2: 35-39.

10. Expected date of Completion : 31 March 2012.

11. Quarterly projection of Expenditure during 2011-12 :

Ist			2 <sup>nd</sup>			3 <sup>rd</sup>			4 <sup>th</sup>		
R	Cap	Total	Rev	Cap	Total	Rev	Cap	Total	Rev	Cap	Total
48	50	98	68	0	68	80	0	80	66	0	0

12. For General Projects only (On-going) : Not Applicable.

Total expected Budget 0 (A)			Proposed budget for 2010-2011 (B)			Action Plan/Target in terms of percentage (0/0)			Financial target in terms of centage (0/0)		
Rev.	Cap.	Total	Rev.	Cap.	Total	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
272	0	272	272	0	272	100			100		

13. For General Projects only (New): Not Applicable

14. For North-East Projects only (On-going) : Not Applicable

15. For North-East Projects only (New) : Not Applicable.

16. Rank (to be given by the Division)

**Additional Material:** Mathematical details are enclosed.

- (i) Proposing Scientist has been teaching Actuarial Science for M.Stat. II year
- (ii) Supervised two M.Sc. projects related insurance policies.

# PRU (General, On-going)

## Project No. 4.4

1. **Title of the Project:** Self-efficacy of agricultural farmers
  - 1.1 **Short term:** SEAF
2. **Brief objective and justification (2 or 3 sentences):** Objective of the study is to examine self-efficacy of agricultural farmers or farmers engaged in agricultural activities. Findings will help to develop new knowledge about psychological counselling to agricultural farmers in distress with interface of agriculture. Currently, Indian farmers expressed low self-efficacy and are deprived of psychological counselling system due to lack of systematic knowledge in this area.
3. **Date of Commencement:** April, 2009
4. **Name of the Proposing Scientist or Principal Investigator:** *Debdulal Dutta Roy*, Psychology Research Unit, ISI., Kolkata
5. **Name of other associated Scientists with & their affiliation:**
  1. Dr. Shubhendu Chatterjee, Ex-Director, Department of Agriculture, Govt. of West Bengal;
  2. Dr. Sumit Ghosh, Addl. Director of Agriculture, Agri Evaluation office
  3. Dr. Pabitra Banik, Agricultural and Ecological Research Unit, Kolkata
  4. Dr. Bhola Nath Ghosh, Sociology Research Unit, ISI, Kolkata
  5. Dr. Dr. F.H. Rahaman, Krishi Vigyan Kendra, Budbud, Burdwan
6. **A brief write up on the scope and justification of the project and the proposed work (not more than half a page):** Self-efficacy refers to the confidence in one's ability to behave in such a way as to produce a desirable outcome (Bandura, 1977). Farmer's judgements of his capabilities to organize and execute courses of action required to attain designated types of agricultural performance is called farmer self efficacy. Low self-efficacy is positively related to anxiety and depression. Sometimes, it leads to committing suicide. Currently, many farmers are committing suicide (Gyanmudra, 2007) suggesting development of low self-efficacy within them. High self-efficacy allows one to deal better with uncertainty, distress and conflict and to set more challenging task objectives. In distress, those with high self-efficacy recover more quickly and maintain commitment to their goals (Schwarzer, 1992). It is assumed that farmers with high self-efficacy will improvise or innovate or adopt new technology in farming. Recent study has noted that farmers with high self-efficacy motivate towards cultivation of multiple crops (Dutta Roy, 2008). Self-efficacy is developed through cognitive and social learning processes (Bandura, 1986, 1993). Social learning is a higher form of learning occurring in a social context for the purpose of personal and social adaptation (Goldstein, 1984). In agriculture field, social learning is facilitated through social persuasion by training, enactive mastery experience and vicarious experience. High self-efficacious farmers often use the above process in different ways. The exact pattern of self-efficacy and the social learning process of agriculture farmers in the current changing scenario is not known due to lack of any systematic study in this area. Proposed project will reveal new knowledge about pattern of self-efficacy and its social learning process. This can be used for training, psychological counselling and guidance to farmers with agriculture interface.

**Methodology (2011-12)**

2011-12: In this session, district and block wise sampling will be made. And respective local investigators will be selected. Data will be collected from 480 farmers (20 farmers X 3 districts X 2 blocks (high and low producing), X 2 crops (paddy and non-paddy) X 2 adoption groups (more amount of high yielding and less amount of high yielding technology) through questionnaires and interview schedules.

Statistical Analysis: Relevant multivariate statistics will be used to (a) determine main and interaction effect of districts, blocks, technology adoption, crop pattern on self-efficacy pattern of farmers and mental health; and (b) to explore correlates of farmers self-efficacy.

**Research plan**

- a. **2009-10:** Construction of questionnaires to assess self efficacy of agricultural farmers and interview schedule to assess (a) socio-economic status, (b) land conditions (land holding, land utilization, irrigated, land salinity, fertility), (c) adoption of technology (amount of high yielding technology adoption), (d) specific difficulties in technology adoption and (e) availability of physical and social infrastructure support system during crisis.
- b. **2010-11:** Determining difference in farmer self-efficacy between high (n=150) and low adopters (n=150) of high yielding technology.
- c. **2011-12:** In this session, district and block wise sampling will be made. And respective local investigators will be selected. Data will be collected from 480 farmers (20 farmers X 3 districts X 2 blocks (high and low producing), X 2 crops (paddy and non-paddy) X 2 adoption groups (more amount of high yielding and less amount of high yielding technology) through training programs organized by NGOs, School teachers, Gram panchayets, Govt. officers etc. depending upon availability . Final report will be submitted.

**Project Beneficiaries:**

- Department of Agriculture, Govt. of West Bengal;
- Researchers concerned with psychology in Agriculture;

**References:**

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behaviour change. *Psychol. Rev.*, 84, 191-215.
- Bandura, A. (1986). *Social foundation of thought and action: A Social cognitive theory*, Englewood cliffs, N.J. : Prentice Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28, 117-148.
- Dutta Roy, D. (2008). Self-efficacy of agricultural farmers; Proceedings of the 12th International and 43rd National conference of Indian Academy of Applied Psychology (IAAP), p.323-328
- Goldstein, H. (1922). *Social learning and change*. NY: Tavistock Publications.
- Gyanmudra, (2007). *Farmers suicide in India*. New Delhi: Deep & Deep publications Pvt. Ltd.
- Schwarzer, R. (2001). Social-cognitive factors in changing Health-related behaviours. *Current directions in Psychological Science*. 10,2, 47-51.

7. **Item wise break up of the budget proposed (Capital & Revenue) and justification for the same (not more than 1/4 page) :**

Item	Rs.	Justification
1. Remuneration to Project linked personnel @ Rs. 12000 X 12 months	144000	Assisting in overall activities;
2. Car hiring charges and other local transport cost	30000	Visiting different rural blocks for training investigators
3. Local accommodation charges for data collection	20000	Farmers are working in the field so local stay is important
4. Working meal charges of Rs.50/- per farmer and associated supporting staffs during collection of data	40000	Data collection becomes more easy through face to face interaction
4. Data scrutiny and entry	20000	It will be entered through computer.
6. Computer consumables, Stationary, Xerox, printing, postal charge, telephone charge etc.	20000	To print questionnaire and communication
7. Project report typing, binding	10000	
8. Miscellaneous	10000	Emergency condition in field work
Total: Two lakhs ninety-four thousand only.	294000	

8. **Brief particulars of Assets, proposed to be acquired from Capital Budget, should be mentioned. In case of replacement, particulars of the asset to be condemned (e.g., Year of Purchase, Cost):** N.A.
9. **List of all ongoing projects undertaken by the Proposing Scientist in the last 5 years and for each, give (i) Status (ii) Money budgeted, (iii) Money spent, (iv) Publications (if any):**

Title	Status	Money budgeted	Money spent	Publications
Self-efficacy of agricultural farmers	Ongoing	1,71,000	94000	1
Attitude towards school infrastructure in rural areas (2007-08)	Completed	1,17,000		1
A Study on preferences to different Reading And Writing motives of tribal children in Primary education of Tripura And Manipur.(2004-06)	Completed	2,81,000	190754	2
GHQ-12 (2003-04)	Completed	76000	75895	4

10. **Expected date of Completion:** March, 2012



# PU (General, On-going)

## Project No. 6.1

1. *Title of the Project:* “Annual Conference on Economic Growth and Development”
2. *Brief objective and justification (2 or 3 sentences):* The conference will provide a forum for dissemination of modern research in economic growth and development economics using both theoretical and empirical approaches. It will also seek to examine the development implications of emerging fields in economics and to re-examine old questions in the light of new problems and new evidence.
3. *Date of Commencement:* December 2010
4. *Name of the Proposing Scientist or Principal Investigator:* *Iridip Ray* (Chairperson of the Organizing Committee), Planning Unit, ISI
5. *Name of other associated Scientists with their affiliation:* Members of the Planning Unit.
6. *A brief write up on the scope and justification of the project and the proposed work (not more than half a page):* *Annual Conference (project):* The annual conference of the Planning Unit on Growth and Development has become one of the well-known international conferences in the field of economic development and attracts a number of distinguished researchers from all over the world. The most recent 4<sup>th</sup> annual conference held in December 2008 had 45 accepted papers and 2 plenary speakers with a total of 72 participants from 14 countries.
7. *Item wise break up of the budget proposed (Capital & Revenue) and justification for the same (not more than 1/4 page):* Rs. 2 Lakhs

# PU (North-East, On-going)

## Project No. 6.2

1. **Title of the Project:** Understanding Deforestation in North-East India
2. **Brief objective and justification (2 or 3 sentences):** The project will examine the extent to which factors such as the type of management (tribal or government), population growth, road-building, and topography have contributed to deforestation in North-East India over the last 30 years. This understanding can play a role in improving policies to prevent deforestation in the future.
3. **Date of Commencement:** 2010
4. **Name of the Proposing Scientist or Principal Investigator:** *E. Somanathan*, Planning Unit, ISI
5. **Name of other associated Scientists with their affiliation:** Tridip Ray (Planning Unit faculty), Ashokankur Datta (Planning Unit SRF)
6. **A brief write up on the scope and justification of the project and the proposed work (not more than half a page):** The north-east is unique in India in having large areas of tribe or clan-managed forests (so-called Unclassified forests) in addition to those managed by State Forest departments. Maps of areas administered by these different authorities (Unclassified forest, Reserved Forest, Wildlife Sanctuary etc.) will be put together with Census data on population and infrastructure, and satellite images. Images will be interpreted by consulting scientists for measuring forest cover. Regression analysis on the thirty-year panel of data thus constructed will be used to examine the impacts of changes in forest management system, population, and infrastructure, on deforestation. By getting quantitative estimates of which factors are most important for deforestation, insights will be obtained about the appropriate policies that will help prevent deforestation.
7. **Item wise break up of the budget proposed (Capital & Revenue) and justification for the same (not more than 1/4 page):**

	Rs	2009-10	2010-11	2011-12	3-year total
		Rs lakh	Rs lakh	Rs lakh	Rs lakh
<b>Capital budget</b>					
Laptops plus software	4 @70000	2.8			2.8
Satellite images, maps and Census data		3	2		5
<b>Capital budget subtotal</b>		<b>5.8</b>	<b>2</b>		<b>7.8</b>
<b>Revenue budget</b>					
	2 @ 7800 (6500 +20% cost of living adjustment)				
Research Assistants		1.872	1.872	1.872	5.616
Travel to and in north-east from Delhi		1	1	1	3
Consultants fees for data collection, satellite image interpretation and GIS preparation		1	1	1	3
<b>Revenue budget subtotal</b>		<b>3.872</b>	<b>3.872</b>	<b>3.872</b>	<b>11.616</b>
<b>Capital + revenue total</b>		<b>9.672</b>	<b>5.872</b>	<b>3.872</b>	<b>19.416</b>

**8. Brief particulars of Assets, proposed to be acquired from Capital Budget, should be mentioned. In case of replacement, particulars of the asset to be condemned (e.g., Year of Purchase, Cost):**  
Laptops, software, data.

**9. List of all ongoing projects undertaken by the Proposing Scientist in the last 5 years and for each, give (i) Status (ii) Money budgeted, (iii) Money spent, (iv) Publications (if any):** None.

**10. Expected date of Completion:** 31/3/2012

**11. Quarterly projection of Expenditure during 2010-2011:**

Capital: Rs 1.45 lakh in each quarter  
Revenue: Rs 0.968 lakh in each quarter  
Total: Rs 2.418 lakh in each quarter

**12-13. For general projects:** NA

**14. For North-East projects (On-going):** Rs. 3.872.00

# *Non Project Plan Proposals*

# *Economic Research Unit*

## **Economic Research Unit Revised Budget Proposals for the Year 2010 – 11**

<u>Items</u>	<u>Amount (in lakh)</u>
1. Visiting Scientists:	6.00
2. Seminar:	0 .50
3. Computer Consumables:	2.00
4. Maintenance:	1.50
5. Office Expenditures:	0 .40
6. Capital Equipment:	4.50*
<b>TOTAL</b>	<b>14.80</b>
* Need, Explanation and Break-up:	
a). Fifteen chairs for the new meeting room, which is used for faculty meeting, meeting external experts associated with different externally funded projects, confidential meetings and interviews etc.,	Rs. 0.75 lakh
b). Ten Printers (For use in computer lab and by faculty)	Rs. 1.00 lakh
c). Five computer tables and ten chairs for computer laboratory: (The computer tables and chairs in the laboratory are not in usable condition now.)	Rs. 1.00 lakh
d). Twenty chairs for seminar rooms: (Many chairs in the seminar rooms, which are frequently used, are in very bad condition.)	Rs. 1.00 lakh
e). One glass almirah for computer laboratory in order to keep manuals, CDs etc.:	Rs. 0.2 lakh
f). One small wooden cabinet for Head's room	Rs. 0.3 lakh
g). One revolving chair for Head's room (The present chair is quite old and needs replacement.)	Rs. 0.25 lakh

# *Linguistic Research Unit*

## UNIT BUDGET PROPOSALS (LRU) 2011-12

Items Heads	Amount	Remark
1. Visiting Scientists	60,000.00	
2. Seminars (departmental, on regular basis)	20,000.00	
3. Internal Travel	50,000.00	
4. Computer Consumables	50,000.00	
5. Maintenance	20,000.00	
6. Office Expenditures	50,000.00	
7. Capital (Computer, Software, Scanner, Printer, Furniture, etc.)	3,00,000.00	
<b>Total</b>	<b>5,50,000.00</b>	

### Justification of the Unit Budget Proposals 2010 -2011

- (a) **Visiting Scientists:** During last two-three years at least two to three scientists from home and foreign universities and institutes have stated visiting our department. Some of them come for short-term period while some others come for long term period. For providing honorarium and local hospitality (e.g., food and accommodation, etc.) to the visiting scientists LRU requires an amount of Rs. 60,000/-.
- (b) **Seminar/workshop:** LRU has started organizing academic seminars on regular basis. During last 2 years approximately, 4 to 5 non-ISI scientific persons have presented their research works at LRU seminars. This gives us an important opportunity to have academic interaction among different kind of researchers. We propose to pay an amount of Rs. 1000/- to each non-ISI presenter as taxi fare and token honorarium. Also, we sometimes invite well-known scientists from different parts of the country to give special lectures on specified topics. To meet taxi fare, travel costs and guest house accommodation and the expenditures of food etc., we propose an amount of Rs. 20,000/-.
- (c) **Internal Travel:** The scientists of LRU often present papers in different conferences / seminars organized by reputed universities and institutes within India. Also interactions become necessary with the experts some times outside the city (within India) for research works. This provides some scope of better interaction without much involvement of time. To meet TA and DA (according to the rules of ISI) for attending and presenting papers in conferences and seminars by the scientific workers of the unit, we propose an amount of Rs. 50,000/-.
- (d) **Computer Consumables:** Over the years our dependence on computers and related devices has tremendously increased. This has resulted in more utilization of computer consumables like Cartridges, Toners, Floppies, CDs, computer papers, transparency sheets, etc. To meet such need we require at least an amount of Rs. 50,000/- for the Unit.
- (e) **Maintenance:** Fund is also required for maintaining computers, UPS, aqua guards, anti-virus software, etc. Maintenance also includes internal repair and patch works, internal painting of doors and windows, etc. We require an amount of Rs. 20,000/- for this purpose.
- (f) **Office Expenditures:** Quite often the ISI Central Store fails to meet the requirement of office stationery goods and items urgently needed by the Unit. Therefore, we need to have provision for procuring items like pad, note sheets, pencils, ribbon, gems clips, envelopes, staplers, gum, cups, cover files, flat files, pens, etc. Also we need to have provision for some electrical equipments. We propose an amount of Rs. 50,000/- to meet such needs.
- (g) **Capital Items:** With regard to capital goods and resources LRU is very poorly furnished. It suffers from the lack of a laboratory furnished with advanced systems and tools necessary for successful execution of research and development works in the area of language and speech technology, applied

linguistics and cognitive linguistics. The unit needs some good computers, printers, and copiers to carry out academic and research activities. Also, due to lack of computer facilities, visitors and summer trainees who come to work at LRU face severe problems. It is imperative that we should provide the basic infrastructural facilities to the scholars of the unit as well as to the scholars who visit LRU. At present, there is just 1 (one) computer in LRU assigned to a faculty. There are 3 (three) Scientific Workers (2 Scientific Assistant-B and 1 Scientific Assistant-C) who urgently require 3 (three) computers for carrying out their research works. Also, 2 (two) computers are needed for the project assistants of two different projects, 1 (one) computer for visiting scientists, 1 (one) computer for summer trainees and Ph.D. scholars (if any), and 1 (one) computer for LRU office. We also need printers, scanners, and photo copiers, chairs, tables, computer tables, cupboards, etc. for proper functioning and seamless execution of research and administrative works of the unit. Therefore, we propose an amount of Rs. 300,000/- to meet such expenses.

# *Population Studies Unit*

## **Budget Proposal for 2011-2012**

1) Visiting Scientists	: Rs. 1.56
2) Research Fellows, PLP, Statistical Trainees etc.	: Rs. 4.60 (1 JRF + 1 SRF)
3) Computer Consumables	: Rs. 0.60
4) Seminars by invited External Experts	: Rs. 0.55
5) Office Expenses	: Rs. 0.40
6) Repair, Maintenance etc.	: Rs. 0.55
7) Capital	: Rs. 2.44

### **Justifications**

1. We are interested in inviting three Scientists.
2. Currently we have one JRF and one SRF, who will continue to be students of PSU during 2011-12.
3. Regular purchase of Computer consumables.
4. We have on-going Seminar series.
5. Regular Office Expenses – Stationeries, patty repairing, refreshment, conveyance etc.
6. Regular departmental maintenance.
7. To purchase Computer, Printers, Scanner & Computer Softwards.

# Psychology Research Unit

## Non-Project Expenditure Statement 2011-12

Sl. No.	Name of the Project	Rs. in lakhs Revenue	Rs. in lakhs Capital	Rs. in lakhs Total
1	Computer Consumables	0.80	-	0.80
2	Research Fellow	2.50	-	2.50
3	Maintenance for Computer & Equipment	0.85	-	0.85
4	Seminar / Workshop / Training programme	0.85	-	0.85
5	Software	2.00	-	2.00
6	Office Expenditure	0.75	-	0.75
7	Visiting Scientist / Research Collaborator	0.80	-	0.80
8	Capital Expenditure (Psychological Instrument, PC, Laptop, Printer cum Xerox, Scanner, Air – conditioner for computer room , Furniture- Book shelves, computer table etc.	-	4.50	4.50
9	Internal Travel	0.35	-	0.35
10	Submission fee for publication in journal	0.15	-	0.15

### The details of the Non- Project Budget Proposals for the year 2011- 12 .

- Computer Consumables:** This expenditure has increased tremendously . As a result, the use of consumables like Cartridge, Toner, Floppy, CD-R & W, DVD, Papers, Transparency Sheets etc., are increasing day by day. This requires at least an amount of **Rs. 0.80 lakh**.
- Research Fellow: Rs.2.50 lakh.** (Self-explanatory)
- Maintenance:** It will be required for maintaining the PCs, UPS, Aqua guard, Anti- Virus software, Printers, Scanners, Furniture etc. . Maintenance also include internal repair, patch works, internal painting of doors and windows, renovation of Seminar Room etc. So we propose an estimate of **Rs. 0.85 lakh**
- Seminar/ Workshop/ Training Programme:** The unit is organizing different academic seminars, workshops and training programmes to disseminate research output from time to time. Several inside and outside speakers are also invited to disseminate the ideas related to specific theme. This enables unit to make several academic exchange with the speakers as well as the participants. The research scholars of the unit are benefited through this programme. This requires a total amount of **Rs. 0.85 lakh .**
- Software:** Different statistical software are regularly used in analysis of different multivariate research data. In considering the regular up-date of software, we need to purchase most up-date software. This requires a total amount of **Rs.2.00 lakhs**.
- Office Expenditure:** Office stationary items are not available in time from the Central Stores. These include writing pads, note sheets, pencils, pens, ribbon, gem clips, envelops, staplers, gum, etc. and some other equipment. We propose an estimate of **Rs.0.75 lakh**.
- Visiting Scientist:** Unit is involved in different collaborative researches with Indian and Foreign Universities and Research Organizations. In this connection, an estimate of honorarium, hospitality (food and accommodation), train/air fares and local transport will be required. This requires a total amount of **Rs.0.80 lakh**.
- Capital Expenditure:**

**Psychological instrument:** Different psychological instruments are part and parcel of our research. Currently, scientists and research fellows are in difficulty to collect them. It is planned that we will keep them in one Psychology lab where in our research fellows and scientists can do experimental research. Currently, the unit has no Psychology lab. So we want psychological instruments / scales for our psychology lab.

**PC, Printer, LCD Projector, Scanner, Printer cum Xerox machine:** Currently, we have 2 old Pcs (Pentium 2). Spare parts are not available. They are useless to analyze vast data structure. Current configuration is inadequate to handle them. Therefore, we want to buy at least 1 PC with most upto date configuration. Our printer has similar problem. Current printers are not adequate to satisfy work load. Therefore, we want one printer. Unit is organizing seminar/workshop and training programs regularly. For this reason, one LCD Projector will be required. There is no Xerox machine in our unit. It will be required for Xeroxing official documents and project related materials.

**Furniture:** Few computer tables and chairs in the computer lab. are broken and unrepairable. Some new computer tables and chairs, Book shelves etc. are also required for the Lab.

**Air- conditioner:** There is one air conditioning machine in the computer lab which is ten years old. The machine is not functioning properly and it needs repairing very frequently. Therefore, we need one air conditioner for our computer lab.

An estimate of **Rs. 4.50 lakh** will be required to purchase all the above mentioned Capital items.

9. **Submission fee for publication in journal:** Many Indian and foreign journals require submission fee for reviewing the paper from the authors. Expert comment is important for upgrading research. An estimate of **Rs.0.15 lakh**.will be required for this purpose.

10. **Internal travel:** To attend local seminar/conference/workshop or to visit experts for paper presentation or for upgrading knowledge. An estimate of **Rs. 0.35 lakh** will be required.

# *Sociological Research Unit*

Sociological Research Unit  
Budget Proposals for the Year 2011-2012

<u>Items</u>	<u>Amount (in lakh)</u>
1. Visiting Scientists:	1.20
2. Seminar:	0.85
3. Internal travel:	0.70
4. Research Fellows (2)	3.25
5. Computer Consumables:	0.85
6. Maintenance/Office expenditure	0.85
7. Software	1.50
8. Capital Equipment: Upgrading furniture/computers A/C and other equipment	4.50
TOTAL REVENUE	9.2
TOTAL CAPITAL:	4.5
GRAND TOTAL	13.76

**Capital Items :** SRU finds the following items (capital goods) necessary to carry out its all academic programs : Computers We are always short of computers for our research scholars; our scanner is outdated and does not work well, we need new computer tables, chairs for several rooms including the PC room and we need at least two air conditioners (one for PC room and another for the Head's office).

# Planning Unit (PU), Delhi Centre

## Budget Proposals for the Year 2011-12

PU Budget Proposals 2011-12 at a Glance (Item-wise details on following pages.)

### 1. Plan Revenue (non-project): Rs. 20.0 lakhs

Project No.	Name of the Project	Revenue Rs. In lakhs
1.1	Visiting Scientists	14.0
1.2	Travel of Scientists	1.0
1.3	Seminars	1.0
1.4	PC, Xerox, Stationery, Consumables	1.5
1.5	Misc. including communications & fax:	0.75
1.6	Journal Submission & professional memberships	1.0
1.7	Maintenance	0.75

### Plan Revenue (projects): Rs. 5.872 lakhs

Project No.	Name of the Project	Revenue Rs. In lakhs
1.8	Northeast project (Ongoing) "Understanding deforestation in Northeast India"	3.872
1.9	Annual Conference	2.0

### 2. Plan Capital (non-projects): Rs. 6.0 lakhs

Project No.	Name of the Project	Capital Rs. In lakhs
2.1	Upgrading Computers, manuals, software, Furniture, fittings, equipment	6.0

**TOTAL (Revenue non-project + projects + Capital non-projects + projects) : Rs. 31.872 lakhs.**

The details of the Budget Proposals 2011-12

- 1.1 *Visiting Scientists:* We have on an average twenty visitors (from home and foreign universities/institutes) every year visiting our department. Out of them 5-6 are usually long-term visitors (some of whom stay for 6 months or more), who not only contribute through collaborative research with our faculty, but *also take part in teaching in the MSQE program*. At the current time, the revised rate for honorarium for these visitors is not known. However, if we suppose that junior, middle-level, and senior visitors are paid Rs 40,000, 50,000 and 60,000 per month respectively, then the average requirement for three visiting scientists for 9 months each (or equivalent of more visitors for shorter durations) would be  $3 \times 9 \times 0.5 = 13.5$  lakh rupees. 50,000 is needed in addition to cover local hospitality (food and accommodation) for short-duration visitors.
- 1.2 *Travel of scientists:* The scientists of the unit often present papers in conferences / seminars organized by reputed universities, institutes within India, and even Delhi. Further, they travel within India for discussions with colleagues interested in similar research issues. This provides scope for better interaction without much involvement of time. If travel, and conference registration fee is provided for the said activity, it would encourage scientific activity of the unit. We propose an estimate of Rs. 1,00,000/-.
- 1.3 *Seminar:* Planning Unit (PU) organizes academic seminars on a weekly basis. Approximately, 50 non-ISI scientific persons present their research works in a year at PU. We propose to spend an amount of Rs. 1000/- on each non-ISI seminar, that is to be spent on honorarium to the speaker, as

well as refreshments. Moreover, we sometimes invite well-known scientists from different parts of the country to deliver special lectures, as well as organize one-day workshops on important topics. For all these items we propose an estimate of Rs. 1,00,000/-.

- 1.4 *PC, Xerox, Stationery, Consumables*: Over the years our dependence on computers/photocopiers has tremendously increased. This has resulted in an increase of the use of computer consumables like Cartridge, Toner, Floppy CD, papers, transparency sheets etc. This is in addition to usual stationery items like pens, pads, white-board pens and dusters, staplers, gum, clips, envelopes, chalks, etc. This requires at least an amount of Rs. 1.5 lakh.
- 1.5 *Miscellaneous including communications and fax*: In this globalized world quick communication is of the essence. Even with e-mails, we often need to fax documents, or send original documents through reliable couriers. STD/ISD phone-calls are also required. The amount marked for these items are: Rs. 0.75 lakhs.
- 1.6 *Submission fee for publication in journal and professional memberships*: In a number of top-ranked international journals authors have to pay rather high submission fees. If a fee of maximum \$100 per paper is provided to the author(s) (subject to peer review of the paper before submission), good quality papers may get chance to be published in top-ranked journals. Some journals waive the admission fee for members of the respective societies, so society memberships serve the same purpose. We propose an estimate of Rs. 1,00,000/- for this purpose.
- 1.7 *Maintenance*: This amount is meant for repairing work on some older cup-boards, as well as painting and repairing of doors etc: Rs. 0.75 lakhs.
- 1.8 *Northeast project (ongoing)*: This is the second year of the ongoing Northeast project "Understanding deforestation in Northeast India", with Dr E. Somanathan as Principal Investigator, as approved in 2008 following the DCSW meeting.
- 1.9 *Annual Conference (project)*: The annual conference of the Planning Unit on Growth and Development has become one of the well-known international conferences in the field of economic development and attracts a number of distinguished researchers from all over the world. The most recent 4<sup>th</sup> annual conference held in December 2008 had 45 accepted papers and 2 plenary speakers with a total of 72 participants from 14 countries.

**2.1** Planning Unit finds the following items (capital goods) necessary to carry out its academic programs.

- 1) *Computers and Laptop*: We need to replace a number of computers because they have become very old and slow. The proposed budget on this head is: Rs. 2.0 lakhs.
- 2) *Chairs, Tables, Almirah*: Many of the existing chairs, tables (including computer tables), Almirahs have become very old and some of them have been damaged, repairing of which are not economical and sometimes are not possible. These are needed to be replaced. The estimated budget for these is Rs. 1.0 lakh.
- 3) *Electronic Software, pen-drives, printers, etc.*: For research work we urgently need the use of newly developed multi-use electronic statistical software, word processing, and reference software. We also budget for a possible replacement of a PU printer, if required. The estimated budget for these is Rs. 3.0 lakh.

Therefore, total estimated cost on Project 2.1 is Rs. 6.0 lakh.

# *Economic Analysis Unit, Bangalore Centre*

**Economic Analysis Unit  
Indian Statistical Institute, Bangalore Centre  
Non Project Proposals for the year 2011-12 (Rs. in Lakhs)**

<b>Sl.No.</b>	<b>Items</b>	<b>Revenue</b>	<b>Capital</b>	<b>Total</b>
<b>01.</b>	<b>Visiting Scientists / New Appointments</b>	<b>6.00</b>		<b>6.00</b>
<b>02.</b>	<b>Computer Consumables</b>	<b>0.75</b>		<b>0.75</b>
<b>03.</b>	<b>Furnishings</b>		<b>0.50</b>	<b>0.50</b>
<b>04.</b>	<b>Computer / Econometric Software</b>		<b>1.00</b>	<b>1.00</b>
<b>05.</b>	<b>Computer related capital expenditure (Laser printer, PC updating etc.)</b>		<b>1.00</b>	<b>1.00</b>
<b>06.</b>	<b>Repair, Maintenance &amp; Facelift</b>	<b>0.75</b>		<b>0.75</b>
	<b>Total</b>	<b>7.5</b>	<b>2.50</b>	<b>10.00</b>

# *Social Sciences Division Office*

Non-project Plan proposal for the year 2010-11

		Revenue (Rs. in lakh)	Capital (Rs. in lakh)	Total (Rs. in lakh)
1	Visiting Scientists	3.00		3.00
2	Computer Consumables	0.50		0.50
3	Office Expenditure	0.50		0.50
4	Travel for Academic Purpose	2.00		2.00
5	Maintenance	1.00		1.00
6	Capital Expenditure		5.00	5.00
	<b>Total:</b>	<b>7.00</b>	<b>5.00</b>	<b>12.00</b>

# SELF-EFFICACY OF AGRICULTURAL FARMERS

## INTERIM REPORT

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### CHAPTER -I SELF-EFFICACY OF AGRICULTURAL FARMERS

India is agriculture based country. 70% of total population is living in the villages and their main occupation is agriculture. Agriculture in India is the means of livelihood of almost two thirds of the people. It has always been most important economic sector in India. India's dramatic success in green revolution during 60's makes clear that rural transformation can not be achieved without development of farmer's capability and resource mobilization for agriculture. But this becomes difficult if we can not prevent farmers from committing suicides. Edwin Shneidman has defined suicide as “the conscious act of self-induced annihilation” It is a way out of a problem or crisis that is invariably causing intense suffering. Assuming suicide is a solution for insoluble problem and termination of distressing thoughts and feelings, farmers committed suicide. World Health Organization (WHO) in 2008 reported very high incidence of suicide among the people in agricultural communities in low, middle income countries such as China, India and Shri Lanka. Among the victims, pesticide poisoning rate is very high. It is estimated that there are 250,000 deaths from pesticide poisoning every year, most of which are intentional and which account about one-third of all deaths from suicide world wide. Self-efficacy is the antidote of suicide. Suicidal ideation is inversely correlated with self – efficacy. Self-efficacy makes individual more proactive.

#### **Self-efficacy**

Bandura (1986) coined the term self-efficacy. He assumed that each individual possesses a self-system that enables to exercise a measure of control over thoughts, feelings, motivation, and actions. This self-system provides reference mechanisms and a set of sub-functions for perceiving, regulating, and evaluating behavior, which results from the interplay between the system and environmental sources of influence. As such, it serves a self-regulatory function by providing individuals with the capability to influence their own cognitive processes and actions and thus alter their environments. Self-efficacy refers to the confidence in one's ability to behave in such a way as to produce a desirable outcome (Bandura, 1977). Farmer's judgments of his capabilities to organize and execute courses of action required to attain designated types of agricultural performance is called farmer self efficacy. Self-efficacy is multidimensional in nature. It has been defined in terms of five traits namely (i) environment monitoring, (ii) self-regulation, (iii) enactive mastery experience, (iv) vicarious experience, (v) physiological and affective states. Five domains of farmer's self-efficacy were examined in the session 2009-10. This was studied across different phases.

#### **OBJECTIVES (2009-10)**

1. To construct questionnaire for assessing self efficacy of agricultural farmers;
2. To construct interview schedule for assessing
  - a. socio-economic status,
  - b. land conditions (land holding, land utilization, irrigated, land salinity, fertility),

- c. adoption of technology (amount of high yielding technology adoption),
  - d. specific difficulties in technology adoption and
  - e. availability of physical and social infrastructure support system during crisis.
3. To relate farmer self-efficacy to individual characteristics (age, education and experience), general well being, socio-economic status and agricultural conditions.

## CHAPTER - II

### CONSTRUCTION OF SELF-EFFICACY QUESTIONNAIRE

To construct questionnaire for assessing five facets of self-efficacy, few focused group discussion were conducted by the support of different NGOs and Krishi Vigyan Kendras of the Government of India in Dumajuli of south 24 pgs, Chakdah of Nadia, Budbud of Burdwan, Baduria of North 24 paraganas. Besides discussion, farming processes and farms of agricultural farmers were observed carefully. A job profile of farmers was developed. Photographs and verbatim were recorded to construct questionnaire. Finally, specific capabilities of farmers with five different facets of self-efficacy were explored and indicating behavior for each dimension was conceptualized (Table 1). The indicators were used for construction of items in Bengali, the local language of the farmers. Finally one 45-items questionnaire was developed following standard rules (no ambiguity, single trait approach, simple and short) of questionnaire development.



Table 1  
Description and indicators to assess five dimensions of self-efficacy

Variables	Indicators
<p><b>Monitoring environmental uncertainty:</b> Belief in ones' capability to monitor changes in the task agent of the agricultural environment.</p>	<ol style="list-style-type: none"> <li>1. Able to prove wrong information as incorrect (item 1).</li> <li>2. Can find out agricultural training center.(item 6).</li> <li>3. Able to reach at training centers how far it is (item 11).</li> <li>4. Can inspect plant condition every day in spite of other commitments (item 16).</li> <li>5. Able to collect new agricultural information (item 21).</li> <li>6. Able to be successful in agricultural experiment. (item 26).</li> <li>7. Able to monitor regularly the effect on plant after application of fertilizer (item 31).</li> <li>8. Can examine raw materials during purchase(item 36).</li> <li>9. Can do experiment on new technology in small plot of land. (Item 41)</li> </ol>
<p><b>Enactive mastery experience:</b> Capable to play roles and responsibility of agricultural farmer.</p>	<ol style="list-style-type: none"> <li>1. Able to engage in agricultural activities most of the time (item2).</li> <li>2. Able to be successful in new agricultural techniques.(item 7).</li> <li>3. Despite of physical and mental weakness, can do agricultural work (item12).</li> <li>4. When needed , able to acquire agricultural skills and abilities (item17).</li> <li>5. Able to ignore words against agriculture (item 22).</li> </ol>

	<ol style="list-style-type: none"> <li>6. Able to be successful in following high yielding technology (item27).</li> <li>7. Able to solve agricultural problems alone (item 32).</li> <li>8. If needed, can collect raw materials from other sources (item 37).</li> <li>9. Able to create new customer for farm products (item 42).</li> </ol>
<p><b>Self regulation:</b> Belief in ones capability to regulate self for goal setting and its achievement.</p>	<ol style="list-style-type: none"> <li>1. Regulating self despite of agricultural anxiety (item3).</li> <li>2. Able to maintain production goal in spite of difficulties (Item 8).</li> <li>3. Able to pay much attention to specific plans with poor growth (item 13).</li> <li>4. Able to determine correct amount of fertilizers and insecticides (item 18).</li> <li>5. Able to regulate balance between profit and loss (item23).</li> <li>6. Can control excess application of fertilizers and insecticides (item 28).</li> <li>7. Able to control not to take much loan though there is a scope (item 33).</li> <li>8. Able to determine specific agricultural training (item38).</li> <li>9. Able to control unreasonable amount of expenditures in agriculture (item 43).</li> </ol>
<p><b>Vicarious experience:</b> Belief in capability to imitate successful farmers and to follow the agriculture related information of mass-media.</p>	<ol style="list-style-type: none"> <li>1. Able to imitate successful farmers (item 4).</li> <li>2. Able to apply experience of successful farmers (item 9).</li> <li>3. Able to ask other’s advice during problem (item 14).</li> <li>4. Able to participate into any agriculture related discussion (item 19).</li> <li>5. Can listen to experienced farmers’ words (item 24).</li> <li>6. Can adopt skills of experienced farmers (item 29).</li> <li>7. Can apply knowledge through training (item 34).</li> <li>8. Can apply mass-media based information in own farming practices (item 39).</li> <li>9. Can apply experience of senior farmers after judging (item 44).</li> </ol>
<p><b>Controlling physiological and emotional states:</b> Belief in one’s capability to control self-anxiety and physical illness</p>	<ol style="list-style-type: none"> <li>1. Can overcome agriculture related anxiety (item 5).</li> <li>2. Able to keep mentality strong in loss (item 10).</li> <li>3. Can keep self in resting phase during worry (item 15).</li> <li>4. Not to be depressed for repeated loss (item 20).</li> <li>5. Able to apply experience of loss in future (item 25).</li> <li>6. Can take the loss at ease (item 30).</li> <li>7. Not to make responsible for non production of crop as anticipated (item 35).</li> <li>8. Helping other farmer to overcome anxiety (item 40).</li> <li>9. Can keep self at ease during agriculture related problems (item 45).</li> </ol>



It was administered to 29 farmers of Baduria block, North 24 paraganas. Results revealed many non-response data. Each non-response was carefully scrutinized and noted some difficulties of farmers to respond due to low literacy, high age, non-possession of agricultural land etc. Next, the questionnaire was administered to 53 agricultural farmers of Hingleganj block, North 24pgs in consultation with local NGOs. Here, set of inclusion and exclusion criteria were strictly followed.

*Exclusion criteria:* They were suffering from (a) psychiatric disorder or (b) major physical illness, (c) very senior in age, (d) marginal labour.

*Inclusion criteria:* (a) primary occupation is agriculture, (b) possession of own agricultural land, (c) minimum educational qualification should be grade VIII, (d) age should not be more than 55 years.

Sample : Farmers were middle aged (mean=41.00, SD=10.46 years), experienced in farming (mean=16.00, SD=8.65 years) and educated (27 farmers completed school board examination). They were Hindus (n=48), married (n=37) and in general (n=34) category. Their main cultivations were rice (n=49), vegetables (n=34), potato (n=26), jute (n=20) and pulses (n=20).

## RESULTS & DISCUSSION

This has three sections – section 1 includes major psychometric properties (reliability, validity) of the questionnaire. Section 2 includes describing self-efficacy and general well being profiles. Section 3 contains correlations of farmer self-efficacy with individual characteristics, and socio economic status of the farmers.

### SECTION 1:

*Item – total correlations:* Table 2 shows that all the items of respective subtests are significantly and positively correlated with corresponding total scores. This suggests good content validity of all subtests.

Table 2  
Item statistics and item-total correlation coefficients

Monitoring					
Item nos.	Mean	Std. Deviation	N	Correlation coefficient	p-value
s1	3.68	1.052	53	0.57	0.000
s6	4.25	1.357	53	0.50	0.000
s11	4.64	.682	53	0.44	0.001
s16	4.53	.823	53	0.68	0.000
s21	4.40	.768	53	0.33	0.01
s26	4.08	1.053	53	0.48	0.000
s31	4.40	1.080	53	0.62	0.000
s36	3.57	1.323	53	0.60	0.000
s41	4.45	.992	53	0.39	0.004
Total			53		
Enactive mastery experience					
s2	3.66	1.255	53	0.48	0.000
s7	4.15	.988	53	0.60	0.000
s12	4.04	1.126	53	0.58	0.000
s17	4.08	.978	53	0.54	0.000

s22	4.42	.969	53	0.61	0.000
s27	3.79	1.261	53	0.39	0.000
s32	3.87	1.075	53	0.63	0.000
s37	4.28	1.045	53	0.43	0.001
s42	3.60	1.276	53	0.56	0.000
Total	35.8868	5.30479	53		
Self-regulation					
s3	3.94	1.183	53	0.56	0.000
s8	3.94	1.322	53	0.58	0.000
s13	3.43	1.394	53	0.56	0.000
s18	4.00	1.074	53	.061	0.000
s23	3.92	.978	53	0.53	0.000
s28	4.28	1.063	53	0.35	0.01
s33	3.96	1.593	53	0.47	0.000
s38	4.15	.841	53	0.47	0.000
s43	3.92	1.053	53	0.55	0.000
Total	35.5660	5.50003	53		
Vicarious					
Item nos.	Mean	Std. Deviation	N	Correlation coefficient	p-value
s4	4.40	1.115	53	0.54	0.000
s9	4.60	.793	53	0.50	0.000
s14	4.32	1.015	53	0.52	0.000
s19	4.72	.568	53	0.55	0.000
s24	4.58	.989	53	0.33	0.01
s29	4.45	1.170	53	0.61	0.000
s34	4.70	.540	53	0.39	0.000
s39	3.89	1.601	53	0.72	0.000
s44	4.60	.599	53	0.51	0.000
Vicarious	40.2642	4.56218	53		
Physiological and emotional responses					
s5	3.74	1.273	53	0.40	0.003
s10	4.08	1.313	53	0.79	0.000
s15	3.85	1.045	53	0.65	0.000
s20	3.70	1.324	53	0.71	0.000
s25	4.45	.774	53	0.46	0.001
s30	3.70	1.249	53	0.40	0.003
s35	4.11	1.463	53	0.52	0.000
s40	4.09	.946	53	0.45	0.001
s45	4.04	.831	53	0.68	0.000
phy_emo	35.7547	5.77430	53		

*Inter correlations* : As all the subtests are significantly and positively correlated with each other (Table 3), whole questionnaire can be considered as valid device to assess self-efficacy of agricultural farmers.

Predictive validity : When five facets of farmer self-efficacy are used to correlate with three facets of GHQ, it is noted that monitoring and enactive mastery are correlated with self-esteem facets of GHQ-12 (Table 3). This suggests that self-efficacy belief of farmers can predict changes in the self esteem level. It is generally assumed that self efficacious people have the initiative, a high level of confidence, considerable amount of self esteem, think analytically, and are action oriented and persistent.

Table 3  
Correlation matrix of demographic variables, self-efficacy and 3 facets of mental health assessed by GHQ-12 (N=53, Hingalganj data)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. AGE	1.00												
2. S-E-S	0.15	1.00											
3. EDU	-0.05	0.23	1.00										
4. EXP	0.62**	0.41**	0.16	1.00									
5. MONI	0.36**	0.10	0.03	0.25	1.00								
6. ENAC	0.27*	0.24	0.00	0.25	0.73**	1.00							
7. SR	0.13	0.13	0.07	0.15	0.76**	0.74**	1.00						
8. VIC	0.44**	0.34*	0.24	0.32*	0.45**	0.54**	0.44**	1.00					
9. PHY_EMO	0.30*	0.14	0.25	0.14	0.61**	0.70**	0.66**	0.37**	1.00				
10. SOC_FUNC	0.03	0.16	0.04	0.10	0.24	0.22	0.24	0.22	0.27*	1.00			
11. PSY_DIST	-0.13	-0.11	0.12	-0.24	0.01	0.07	-0.02	0.03	0.07	0.12	1.00		
12. SELF_EST	0.05	0.16	0.03	0.03	0.36**	0.30*	0.29	0.16	0.20	0.62**	0.42**	1.00	
13. TOT_SE	0.35	0.22	0.01	0.26	0.86**	0.90**	0.88**	0.65**	0.83**	0.29	0.04	0.32*	1.00

**Reliability:**

Test-retest reliability: Determining test-retest reliability in the unorganized sector specially from the farmers during the season of cultivation is very difficult. This was conducted in the Hingleganj block. It was initially fixed that data will be collected from some blocks close to Baduria. But due to sudden strike, I have decided to change the route from Baduria to Hingleganj. There, I get 5 farmers who responded before. Based on their data, I have tried to determine test retest reliability within 3 months interval of the questionnaire. Table 4 shows good test-retest reliability.

Table 4  
Test-retest reliability

Sample	Mean difference between periods	SD difference	Standard error of mean differences	t(49) value(paired t-test)and p-value	Corr	p-value
Shyamal	0.12	1.09	0.15	0.77 (0.44)	0.56	0.000
Nitish	0.36	0.78	0.11	3.28 (0.002)	0.41	0.002
Debdas	0.24	1.10	0.15	1.54 (0.13)	0.46	0.001
Raghunath	0.28	1.19	0.17	1.66 (0.10)	0.47	0.001
Sukanta	0.22	1.20	0.17	1.30 (0.20)	0.54	0.000

Internal consistency: Cronbach’s alpha was used to estimate reliability of each subtest in terms of internal consistency among items. It is noted that all the subtests have good internal consistencies (Table 5). Irrespective of subtest wise differences, the alpha value among all the items is 0.92.

Table 5  
Alpha, of subtests (N=53, Hingalganj data)

1. Monitoring	2. Enactive mastery	3. Self regulation	4. Vicarious	5. Physiological and emotional responses
0.64	0.68	0.65	0.65	0.71

**SECTION 2:**

Self-efficacy and general health profile of the farmers have been examined through descriptive statistics.

Self-efficacy: Figure 1 shows that farmers had strong belief in capability to monitor the agricultural environment and to imitate skills of other successful farmers. On the other hand, they had relatively poor belief in controlling physical and emotional stress, in enactive mastery experience and in self-regulation.

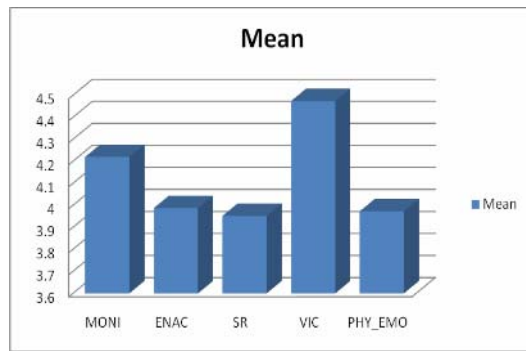


Figure 1 Distribution of five facets of self-efficacy

General well-being: There are three facets of general well-being assessed by the Goldberg’s general health questionnaire-12. They are (a) social functioning (b) psychological distress and (c) self-esteem (Dutta Roy, ). High score indicates positive general well-being in all the facets. Figure 2 shows that farmers experienced average social functioning and self-esteem. They had relatively high psychological distress.

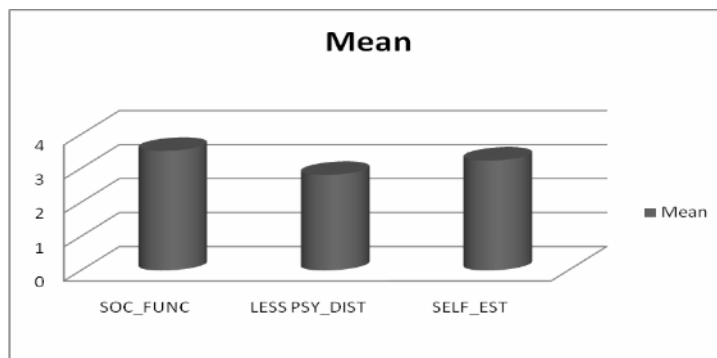


Figure 2 Distribution of three facets of mental health

**SECTION 3**

After testing the reliability and validity of all the facets of self-efficacy questionnaire, facet scores were correlated with individual characteristics and socio-economic conditions.

Age: The mean age of the farmer was 40.87 with SD 10.45 years. With age, farmers tend to monitor the environment and learn through imitating other farmers and information provided by different IEC messages. Senior farmers could control physical and psychological distress (Table 7).

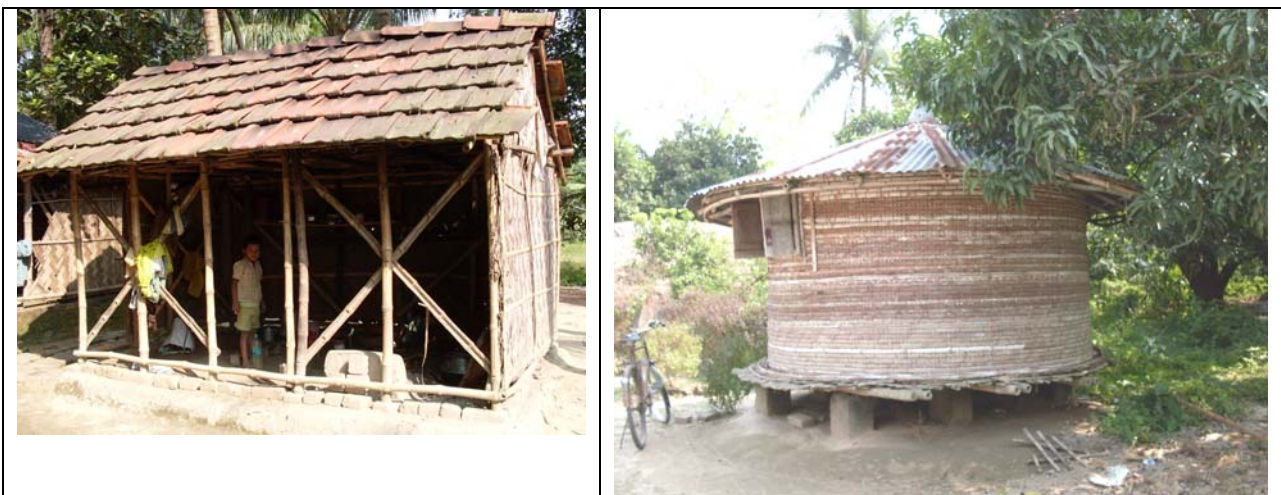
**Socio-economic status:** It is noted that experienced farmers had high socio-economic condition and the farmers with high SES group possessed high belief in vicarious experience than their counterparts.

**Education:** Most of the farmers completed school board examination. Results revealed that education is not related to any facet of self-efficacy and of general well-being.

**Experience:** Experienced farmers had belief in capability to imitate successful farmers more than their counterparts.

### Chapter – 3 CONSTRUCTION OF INTERVIEW SCHEDULE

To construct interview schedule to assess socio-economic status, land conditions (land holding, land utilization, irrigated, land salinity, fertility), adoption of technology (amount of high yielding technology adoption), specific difficulties in technology adoption and availability of physical and social infrastructure support system during crisis, initially, several focused group discussions with farmers, NGO's, gram panchayets were conducted. Photographs of houses and their surroundings were taken to construct the schedule.



It is noted that farmers are divided into three groups – organic, non-organic and mixed in terms of their uses of fertilizers and insecticides. With respect to this, socio-economic condition varies. Another issue is exposure of infrastructures. Farmers living far away from the main road with difficulties in communication get little exposure of infrastructures resulting in difficulty to change socio-economic conditions. Third one is mentoring factor. Private dealers, local shops and NGO's are their mentors. These mentors play critical roles in changing not-only socio-economic condition but also adoption of agricultural technology. Therefore, questionnaire covers mixed conditions. Below is description of interview schedules. Validation of statements in interview schedule follows few criteria – (a) ability to elicit response without much difficulty so that non-response data could be minimized (b) individual differences in response and (c) relation with associated response. Data were collected from different rural villages of North 24 pgs, Hooghly and Burdwan districts. Data analysis for Hooghly and Burdwan districts is in process. Therefore, results of North 24 pgs are discussed here.

**Socio-economic status:** This is measured by 20 statements covering education, religion, caste, family structure, structure of house, no. of running fans, light, telephone, radio, television sets, types of illumination, types of kitchen, toilet, sources of drinking water etc.

**Sample:** Data were collected at Vaduria block of North 24 pgs. 8 female and 21 male farmers participated into this study. Male farmers were senior in age (Mean 41.00, SD=12.38) and in experience

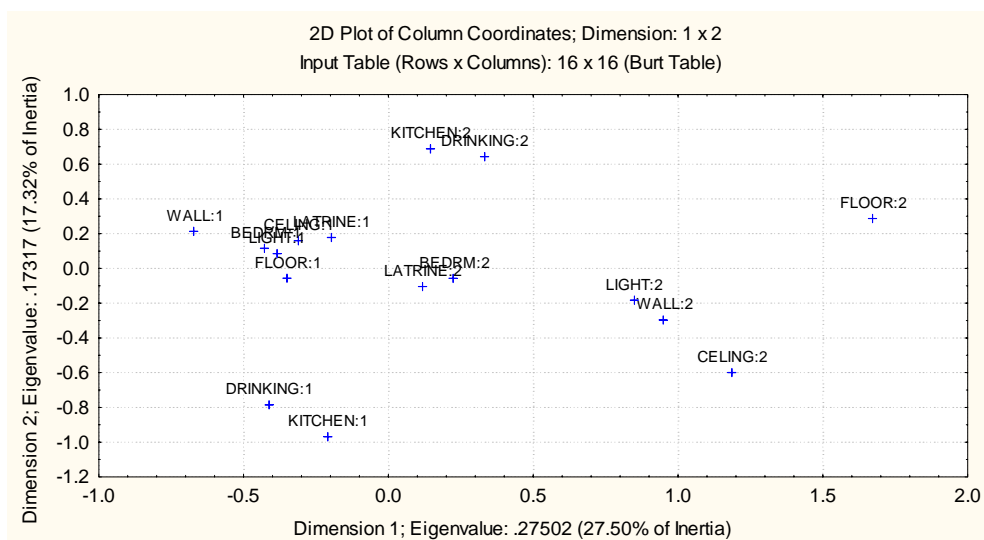
(Mean=16.58, SD=13.51) than female farmers' age (mean = 29.75, SD=8.92) and experience (Mean 16.58, SD=13.51) . No participants were related to each other. Irrespective of sex wise differences, they were middle aged (Mean=37.9, SD=12.47) and experienced (Mean 14.38, SD=12.95). Education: 50% of the total farmers were above grade VI level. They were Hindu (83%), scheduled caste (62%), had nuclear family structure (58%), had 5 members in family.



**Results: Socio-economic condition :** Farmers were asked to report about their monthly income and expenditure in family as well as in agriculture. Analyzing the data, it is noted that their expenditure is higher than the income and many fail to report actual status. During the interview, most of the farmers reported that they did not maintain any log book related to income and expenditure. So, socio economic condition was estimated using their living conditions. 12 farmers reported that their roof was made of hay and bamboos and walls were made of cane and clay (n=17). Their floors were also made of clay. Most of them had no kitchen room (n=17) and single bed room (n=15) and 9 reported no bedrooms. 11 farmers reported no latrine and 13 reported unscientific latrines. Most farmers had no lights (n=31), fans (n=22), radios (n=25), TVs (n=25), phones (n=11). They collected water from the well (n=13). Most of the farmers had agricultural infrastructures as spray machine (n=23), gola (n=12), cow shed (n=17).

**Table 5** Classification of farmers and assigned scores

Variables	Low (Score=1)	High (Score=2)
Ceiling made of	hay, bamboo	Made of tiles, brick
Wall made of	cane, clay	Asbestos, brick
Roof made of	Clay	Brick
Separate kitchen room	Less than two	More than 1
Separate bedroom	Less than 2	More than 1
Latrine type	Unscientific	Scientific
Electricity ownership	No	Rented or own
Sources of drinking water	Canal, pond	Well,tubewell, tapwater etc.



**Figure 1.** Correspondence map of living conditions.  
Chi-square (225)=302.84,  $p<0.004$ )

Farmers were classified into high and low SES groups (Table 5). Results show (Figure 1), living conditions of high SES group were widely diverged than low SES farmers.

Land conditions:

Table 6 shows different categories of statements and frequency distributions to understand land holding, land utilization, irrigated, land salinity, fertility etc.

**Table 6**  
Frequency distribution of Land, crop, irrigation profile

Variables	Categories	N	Frequency
Land type (own land)	Mono crop	7	
	2 crops	14	
	More than 2	8	
Amount	Less than 1 hect	26	
	1 hect		
	2 hect	3	
	3 hect		
Location of land	Deep water	2	
	Rain fed low land	8	
	Rain fed up land	1	
	Rain fed shallow land	10	
	Do not know		
Salinity	Very high	2	
	High	0	
	Low	9	
	Very low	3	
	No salinity	3	
	Do not know	8	
Kinds of Cultivation	Flower		5
	Fruit		3
	Potato		8
	Pulse		9
	Oilseed		13
	Wheat		6
	Jute		17
	Rice		29
Sources of getting seeds	Self		6
	Neighbour		10
	Govt		1
	Private		15
Paddy thickness	Thick grain		19
	Fine grain		5
	Super fine grain		3
Use of hybrid	No		17
	Yes		1
	Mixed		10
Paddy type	AMON		17
	AUSH		2
	BORO		24
Irrigation	Rain water		

	Canal	7	
	Shallow	21	
	Deep tube well		
	Own tube well	1	
Pump for irrigation	No	12	
	Hand operating	11	
	Electrical	5	
Fertilizer	Organic	22	
	Non-organic		
Fertilizer application	Gloves		
	Manually	23	
Insects	Very high quantity	2	
	High	14	
	Low	10	
	Very low	1	
	None		
Insecticides	Self production	7	
	From neighbor	2	
	Govt. officers	3	
	Private dealer	21	
Spray machine	No ownership	3	
	Rented	2	
	Yes	23	
Spray application	Nil	2	
	Without gloves	22	
	With gloves	2	
Infrastructures	SPADE	24	
	KURUL		21
	HASUA		14
	PUMP		5
	SPRYMCHN		19
	DHEKI		2
	GOLA		12
	GOAL		17
	STORE		0
During machine trouble	Self-attempt		6
	Going to neighbor		8
	Going to shop		14
Training centre distance km from house	Within 2		2
	More thn 2 kms		6
Availability of materials discussed in traing centres	NO		14
	Yes		12
Expensive	No		15
	Yes		9
Traing before	No		10
	Yes		17
Able to understand leaflets or books	No		4
	Yes		21

## GENERAL DISCUSSION

This interim project data analysis reveals that self-efficacy questionnaire is a good device to assess five facets of farmer self-efficacy namely monitoring the environment, enactive mastery, self regulation,

vicarious experience and controlling physiological and emotional states. In the report, data of Hingleganj and Baduria block are presented only to make homogeneity in understanding different issues of the project objectives. Data collected from Kapashanria, Galsi and Haringhata block are under process of analysis. They will reveal some information relating relation of farmer self efficacy with land conditions.

This data analysis provides some directions of future researches as comparing self-efficacy belief of high and low yielding farmers.

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## Psychology Research Unit

# Emotional Display Rules and Personality Pattern Across Different Groups of Individuals

## Interim Report

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Baishakhi Sadhukhan (Project Assistant)

### Introduction

Emotion is the most common aspect of human experience. It is a mental state that arises spontaneously rather than through conscious effort and is often accompanied by physiological changes. So, both mental and physiological state of emotion is associated with a wide variety of feelings, thoughts and behavior, and emotions are subjective experiences.

The universal bases of seven emotions namely, anger, contempt, disgust, fear, happiness, sadness and surprise are well recognizable through facial expressions (Ekman, 1999; Ekman & Rosenberg, 1998). But even though all of us may be able to identify happiness in people's expressions clearly, and we may all experience happiness for similar underlying reasons, it does not mean that we all show our happiness in the same way. This brings up the concept of emotional display rules.

The concept of "cultural display rules" of emotions was originally coined by Ekman & Friesen (1969,1975) who said that cultural display rules are the rules learned early in childhood that help individuals to manage and modify their emotional expressions depending on social circumstances. These emotional display rules vary from culture to culture. Our society and culture teach us when it's okay to show how we feel any emotion and when it is not. We learn these rules early in life through socialization experiences. Carolyn Saarni (1979) has identified two types of emotional display rules – (a) prosocial and (b) self-protective. Prosocial display rules involve altering emotional displays in order to protect another's feelings. On the other hand, self-protective display rules involve masking emotion in order to save face or to protect oneself from negative consequences.

Personality is the supreme realization of the innate idiosyncrasy of a living being. The word "Personality" derives from the latin word 'persona' which means 'mask'. The study of personality can be understood as the study of 'masks' that people wear. These are the personas that people project and display, but also include the inner parts of psychological experiences which we collectively called 'self'.

Individuals with visual impairments experience not only challenges in their physical capacities but also challenges in their psychological capacities to adjust to their disabilities. Even normal human beings experience difficulties in expressing their emotions. Ekman (1972) observed no difference in the display rules of Americans and Japanese when emotion eliciting stimuli were shown to them in private situation but Japanese subjects masked their negative feelings with smiles when they were with higher status experimenter.

The present investigation is concerned with the emotional display rules and personality patterns of visually challenged and normal individuals. As the variable personality is concerned, there is no evidence currently that suggests significant, long-term personality trait differences between individuals with visual impairments and those who are sighted. On the other hand, despite the importance of the concept of emotional display rule in psychology, there has only been a handful of studies examining display rules since the concept was established (e.g. Matsumoto, 1990, 1991, 1993).

In order to address this research gap, the present study is being conducted on emotional display rules and personality patterns across different groups of individuals, for example, visually challenged and normal students reading in different schools.

### Objectives of the study

The objectives of the present study can be stated as follows:

- To understand the nature of personality patterns of visually challenged and normal students.
- To understand the nature of emotional display rules of different groups of individuals, for example visually challenged and normal students.
- To understand the nature of emotional display rules of visually challenged and normal students towards different members of the society i.e. parent, close friend and teacher under two different situations i.e. private and public.
- To explore the nature of relationship between personality patterns and emotional display rules among different groups of individuals.

### Method

*Sample:* Multi-stage stratified random sampling method is being followed in this study. Firstly, cities having blind schools/ institutions from five different zones i.e. north, south, east, west and north-east of India have been selected. Next, 6 to 8 schools (both blind and normal) from each zone were selected and school authorities were contacted for permission for data collection. After getting their permission, 10/15 students from each school are being selected randomly for collecting data for the present study by matching gender, age and educational level. The mean age of the students was 15.94 years with a standard deviation of 1.63. Most of the students were from middle socio-economic status.

**Data collection:** Altogether 462 data have been collected so far from four different zones of India, which is presented in the following table:

**Table: Data collected from different zones of India.**

Groups	North	South	East	North-East	West
Visually Challenged (VC)	63	43	52	33	49
Normal	19	51	43	44	65

### Measures Used:

A set of 3 questionnaires were used for the collection of data for the present study :

- **Display Rule Assessment Inventory (DRAI):** Display Rule Assessment Inventory developed by Matsumoto et al (2005) was used in this study. The version of the DRAI used in this study asked participants what they should do if they felt each of four emotions toward four target interactants in two settings – public and private. The emotions were anger, fear, happiness and sadness. The four interactants were: parent, close friend, teacher and self. The descriptions for the private and public settings were different for each interactant so as to be as realistic as possible. The response alternatives were those corresponding to the theoretical modes of expression management originally described by Ekman and Friesen (1969, 1975): Amplification, Expression, Deamplification, Neutralization, Qualification and Masking. In addition the respondents were provided with an “Other” response to choose a response which is not on the list.
- **Big Five Inventory:** Big Five Inventory (BFI) developed by John, Donahue & Kentle (1991) was used in this study. There are 44 items in the inventory which measure 5 dimensions of individual’s personality like Extraversion, Agreeableness, Conscientiousness, Neuroticism, and

Openness to experience. The BFI uses short phrases based on the trait adjectives known to be prototypical markers of the big five. The items are brief and simple in nature and is provided with a 5-point response format ranging from strongly agree to strongly disagree.

- **Background Information Schedule:** Background Information schedule included items like subject’s name, age, gender , academic qualification, disability status, family structure, parents’ educational and occupation level, socio-economic condition of the family etc.

*Procedure*

The concerned authorities of each selected school were consulted to formulate a tentative program schedule, according to which each school was visited for the administration of the questionnaires to the students. All the students were very supportive and co-operative at the time of the visit. The set of three questionnaires were administered individually on each selected student. Each subject took a minimum of 15 minutes to a maximum of 25 minutes with an average time of 20 minutes to complete the three sets of questionnaires. At the very outset of each session, the selected students were informed about the purpose of the present study and informed consent were taken from them. Any confusion regarding any items were discussed and thereby doubts were clarified.

*Scrutiny of the data*

Data were scrutinized very carefully so that, for each individual, no items remained unanswered. All incomplete data sheets were completed by the respective subjects, in case of omission, if any.

**Results**

After scoring the data of BFI and DRAI following the standard scoring procedure, data were analyzed by applying some standard statistical methods like Mean, Standard Deviation, t-test, Correlation etc. which are presented in the following tables.

To understand the nature of emotional display rules and personality patterns of different groups of individuals mean, SD, and t-values were calculated and results were shown in the following tables:

**Table 1:** Means and Standard deviations (SD) for different dimensions of BFI of visually challenged and normal students.

Dimensions		Extraversion	Agreeableness	Conscientiousnes s	Neuroticism	Openness
VC	Mean	28.01	34.69	33.89	22.85	37.11
	SD	3.84	4.31	4.32	4.84	3.47
Normal	Mean	27.36	34.47	32.84	23.20	36.45
	SD	4.53	5.21	5.48	6.07	5.06

**Table 2:** t - values between Normal and Visually Challenged students in terms of BFI scores.

Personality Traits	t- value
Extraversion	1.75
Agreeableness	0.52
Conscientiousness	2.41**
Neuroticism	0.73
Openness	1.73

The results indicate that significant difference between the two groups was found only with respect to conscientiousness.

**Table 3:** Mean and SD of visually challenged and normal students for four emotions towards different target persons in two contexts i.e. private (Pri) and public (Pub).\*

EMOTION			TARGET PERSON							
			SELF		PARENT		CLOSE FRIEND		TEACHER	
			Pri	Pub	Pri	Pub	Pri	Pub	Pri	Pub
ANGER	VC	Mean	.56	.50	.64	.51	.72	.50	.51	.50
		SD	.34	.28	.33	.30	.34	.27	.30	.23
	Normal	Mean	.68	.53	.69	.53	.68	.53	.48	.46
		SD	.32	.32	.32	.32	.35	.34	.33	.32
HAPPINESS	VC	Mean	.87	.82	1.02	.93	1.01	0.90	.94	.90
		SD	.28	.31	.15	.24	.19	0.25	.23	.23
	Normal	Mean	.81	.66	.84	.79	.84	.81	.74	.72
		SD	.33	.38	.32	.31	.34	.31	.34	.35
FEAR	VC	Mean	.73	.60	.75	.61	.72	.55	.72	.65
		SD	.32	.29	.31	.29	.31	.30	.30	.29
	Normal	Mean	.51	.43	.56	.44	.52	.48	.54	.53
		SD	.34	.31	.34	.31	.31	.30	.32	.33
SADNESS	VC	Mean	.68	.50	.68	.55	.76	.53	.65	.54
		SD	.34	.26	.31	.31	.29	.28	.31	.26
	Normal	Mean	.48	.37	.42	.35	.49	.35	.37	.36
		SD	.38	.37	.38	.33	.38	.34	.34	.34

\*Pri. = Private      Pub. = Public

**Table 4:** t - values between Normal and Visually challenged students in terms of DRAI scores.

Target person	Emotions	Situations	t- value
SELF	Anger	Private	3.90**
		Public	0.99
	Happiness	Private	2.39
		Public	5.02**
	Fear	Private	7.56**
		Public	6.63**
Sadness	Private	6.11**	
	Public	4.27**	
PARENTS	Anger	Private	1.60
		Public	1.01
	Happiness	Private	7.80**
		Public	5.73**

	Fear	Private	6.46**
		Public	6.44**
	Sadness	Private	8.48**
		Public	6.93**
FRIENDS	Anger	Private	1.24
		Public	1.13
	Happiness	Private	6.65**
		Public	0.89
	Fear	Private	7.51**
		Public	3.05**
	Sadness	Private	8.89**
		Public	6.37**
TEACHERS	Anger	Private	1.03
		Public	0.08
	Happiness	Private	7.82**
		Public	6.97**
	Fear	Private	6.71**
		Public	4.20**
	Sadness	Private	9.70**
		Public	6.82**

The results indicate significant difference between the two groups toward different target persons under two different contexts for happiness, fear, and sadness but for anger no significant difference was observed.

It was observed that the groups responded differently under private and public contexts, and to understand the nature of emotional display rules of visually challenged and normal students towards different members of the society i.e. parent, close friend and teacher under two different situations i.e. private and public, the following table have been formed where the difference between the mean scores were calculated by subtracting the mean score of public situation from the mean score obtained in private situation.

**Table 5:** Difference between the means of four emotions towards different target persons in two contexts i.e. private and public of visually challenged and normal students.

EMOTIONS		Self	Parents	Friends	Teachers
Anger	VC	.06	.13	.22	.01
	Normal	.15	.16	.15	.02
Happiness	VC	.05	.09	.11	.04
	Normal	.15	.05	.03	.02
Fear	VC	.13	.14	.17	.07
	Normal	.08	.12	.04	.01
Sadness	VC	.18	.13	.23	.11
	Normal	.11	.07	.14	.01

The results show that the mean difference of four emotions in private and public contexts, is lower in case of teachers, but relatively higher in case of self, parents and friends

To measure the nature of relationship between personality patterns and emotional display rules among different groups of individuals Pearson’s Product Moment correlation coefficients have been calculated and the significant values have been shown in Table-6.

**Table 6:** Significant correlation values between five personality factors and four emotions expressed towards different target persons of visually challenged and normal students in private (1) and public (2) contexts.

	VC	NORMAL
EXTRAVERSION	Self-Happiness:1 (.12*)	Self-Sadness:1 (-.15**)
	Parents-Happiness:1 (.13*)	
AGGREGABLENESS	.Self-Happiness:1 (.13*)	Self-Anger:2 (-.12*)
	Friends-Sadness:2 (.16**)	Self- Fear:2 (-.13*)
		Parents-Anger:2 (-.16**)
		Teacher-Anger:2 (-.16**)
		Teacher-Fear:2 (-.14*)
CONSCIENTIOUSNESS	Parents-Anger:2 (.16*)	Self-Happiness:1 (-.77**)
	Parents-Happiness:1 (.16*)	Self-Fear:2 (-.13*)
	Parents-Fear:1 (.13*)	Parents-Anger:2 (-.17**)
	Parents-Sadness:2 (.20**)	Parents-Happiness:2 (.14*)
	Friends-Happiness:1 (.14*)	Parents-Fear:2 (-.12*)
		Teachers-Anger:2 (-.14*)
		Teachers-Fear:2 (-.17**)
	Teachers-Sadness: 2 (-.17**)	
NEUROTICISM	Parents-Anger:2 (-.20**)	Parents-Fear:2 (-.13*)
	Teachers-Anger:1 (-.12*)	
	Teachers-Anger:2 (-.15*)	
OPENNESS	Self-Sadness:1 (.17**)	Self- Happiness:1 (-.17**)
		Self-Sadness:1 (-.14*)
		Parents-Happiness:2 (.12*)
		Friends-Anger:2 (-.19**)
		Teachers-Anger:2 (-.17**)

**Discussion**

The analysis so far done indicate that visually challenged individuals show more extraversion, agreeableness, conscientiousness, and openness than normal individuals. This indicates the affective, open –mindedness, self discipline, sociable, altruistic and control dimensions of their personality. In case of neuroticism normal students scored more than the visually challenged students.

From the results depicted in the Table-2 it can be said that among all the traits of personality, only conscientiousness show significant mean difference between normal and visually challenged students.

The display rules for emotions indicate that the positive emotion – happiness was expressed more in private situation by both visually challenged and normal individuals. On the other hand, negative emotion like anger; fear and sadness are expressed less in public situation by both the groups but varied depending upon the target person. The probable explanation may be that in our culture showing negative emotions in front of everyone is not a good sign of behavior. In case of students the restriction is more, so they prefer to express the emotion in private contexts.

But while considering the difference between the two groups, there are several significant mean differences between normal and visually challenged students. Among all the four emotions expressed towards four target persons in private and public situations, only anger has not shown significant mean difference between normal and visually impaired students. Except anger, the rest three emotions like

happiness, sadness and fear have significant mean differences. Thus it can be said that the variable disability has no significant effect on the emotion anger expressed towards different people in any situation. In other cases, disability has significant effect on the emotion happiness, fear and sadness. It may be due to the fact that anger is such an emotion, which brings an individual in a very arousal state, no matters whether the individual is normal or disabled. So the expression of the emotion anger also does not differ from individual to individual.

From the Table 5 which depicts the mean difference of four emotions in private and public situations, it can be clearly said that, in all cases means of the private situation is higher than the public situation. The difference is lowest in case of teachers, thus it can be said that there is no such difference between the expression of emotions in public and private situations when the target person is teacher. It may be that we consider teachers as out-group members. The difference of means tend to be higher in case of anger, fear and sadness expressed towards parents and friends by both visually challenged and normal students.

From the Table 6, which shows the significant correlation values between personality dimensions and the emotions expressed towards different target persons, it can be said that extraversion is positively and significantly correlated with the emotion happiness in private situation towards self and parents. This is also supported by some earlier research studies done by Emmons & Diener, (1985, 1986); Pavot, Diener, & Fujita, (1990). The facets of extraversion include warmth, excitement seeking etc and students with these personality traits amplified their happiness towards these target persons. On the other hand, when considering the normal students, extraversion found to be negatively correlated with the emotion sadness expressed towards self in private situation.

Visually challenged students show significant positive correlation between agreeableness and the emotion happiness and sadness towards self and friends. On the other hand, in case of normal students agreeableness show significant negative correlation with negative emotions like anger and fear expressed towards self, parents and teachers. This shows that people, who score high on agreeableness, score low on negative emotions and vice versa.

In case of Conscientiousness, visually challenged students show significant positive correlation with all the four emotions towards parents, and happiness towards friends. Thus, it can be said that conscientiousness is positively correlated with both positive and negative emotions for visually impaired students. But in case of normal students, conscientiousness is negatively correlated with negative emotions like fear, anger and sadness.

In case of neuroticism, it is observed that neuroticism is negatively correlated with the emotion anger expressed towards parents and teachers in both the situations. Again in case of normal students, neuroticism is negatively correlated with fear towards parents in public situation. Thus it can be said that neuroticism is negatively correlated with negative emotions for the both groups.

In case of openness, visually challenged students show positive significant correlation with sadness towards self. On the other hand, openness is negatively correlated with negative emotions like sadness and anger expressed towards self, friends and teachers respectively.

## ***Conclusion***

From the analysis of the data and the discussion done so far, it can be concluded that there is a relationship between the personality dimensions and emotion displayed towards different target persons in different contexts. It can be further concluded that the expression of different emotion towards different target persons changes from situation to situation and from situation to situation.

**Future plan of work:**

The data collection from different zones from other challenged group like hearing-impaired will be completed. Then final analysis and report writing will be done. Papers will be prepared for publication in journals and presentation in different conferences.

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# **Bullying in Schools and its Effects on the Behavioural Aspects of School Students**

Interim Report

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## ***Introduction:***

Violence and aggression in schools are a problem in many countries around the world (Rigby and Slee, 1991; Pepler et al., 1994, Smith and Sharpe, 1994, Genta et al, 1996, Okabayashi, 1996, Olweus, 1991). One form of aggression that takes place at school is bullying. Bullying is an interaction in which a dominant individual (the bully) repeatedly exhibits aggressive behavior intended to cause distress to a less dominant individual (the victim) (Olweus, 1991; Smith and Thompson, 1991). While definitions of bullying often differ semantically, many of the researchers have one concept in common. Rodkin et al. studied fourth through sixth grade boys found that aggressive boys may be among the most popular and socially connected children in elementary class room, as viewed by their fellow students and even their teachers. Farrington (1993) defined bullying as repeated oppression, physical or psychological, of a less powerful person by a more powerful person or group. It may not be the same thing as conflict, violence or disagreement- although it may involve all these. Illustrative other views are:

a. it is deliberate, harmful, verbal, physical and psychological behaviours

( Tattum and Tattum, 1992)

b. it is the context of an imbalance of power between the bully or bullies and the victim (Rigby, 2000).

Bullying among school children is a very old phenomenon. The fact that some children are frequently and systematically harassed and attacked by other children has been described in the literary works, and many adults have personal experience of it from their own school days. Though many are acquainted with the bully / victim problem, it was not until fairly recently in the early 1970s that the phenomenon was made the object of more systematic research. For a number of years, these efforts were largely confined to Scandinavia. Norwegian Researcher Dan Olweus is pioneer in this area who started after 1970. In the 1980s and early 1990s, however, bullying among school children also has attracted attention in other countries such as Japan, Great Britain, the Netherlands, Australia, Canada, and the USA. There are now clear indications of an increasing societal as well as research interest into bully / victim problems in several parts of the world. Olweus (1987) described bullies as having an aggressive personality pattern that predisposes them to respond aggressively. By bullying, these children employ their aggression to assert power and dominance. In contrast, victims are characterized as being passive, anxious, weak, lacking self-confidence, unpopular and as having low self-esteem. Askew, 1989 and Peterson (1993) revealed that little is known with certainty regarding the characteristics of bullies. They may be attempting to seek or gain power, contrariwise, some bullies may be attempting to ward off attacks from others by appearing to tough. Perhaps contrary to what might be expected, bullies have not been observed to score low on self-esteem inventories unlike more overtly aggressive children (Olweus, 1993b;

Peterson, 1993). Olweus, (1978) described bullies as physically strong, aggressive, impulsive, demonstrating the need to dominate, and expressing a positive attitude towards violence. Many more former childhood bullies experience contact with the human service and criminal justice system at adulthood than adults who had not bullied others as children (Johnson Institute, 1994; Olweus, 1993b). Bullying appears to fit the overall pattern of antisocial and risk behavior. Most studies agree that overall, boy / girl bullying was rated as more distressing than girl / boy bullying (Soutter and McKenzie, 2000). Along with the immediate effects of bullying and victimization, this behavior has long-term negative consequences for all those involved. Aggressive behaviour identified in the school years can also persist in adulthood as higher rates of criminality, marital violence, child abuse and sexual harassment. Researchers have also found that there are developmental patterns in the type of aggression (Bjorkqvist et al; 1992). Evidence from longitudinal studies indicates that the tendency to bully others at school significantly predicts subsequent antisocial and violent behavior (Rigby K, 2003).

### ***Effect of bullying:***

There are different forms of bullying which may results into irritability, sense of panic, social ostracism, feeling of loneliness, anxiety and depression, aggressive behaviour, formation of subgroups, introvertness and shyness and impaired concentration and hampering of educational progress etc. It is one of the root causes in the development of cognitive process, personality, academic achievement and future behaviour profile.

### ***Forms of bullying:***

#### **Bullying**

#### **Physical**

#### **Non-physical**

#### **Verbal**

#### **Non-verbal**

#### **Direct Non-verbal**

#### **Indirect Non-verbal**

Examples of all the forms of bullying are presented below:

Physical bullying – Hit, kicked

Non- physical bullying is of two types –

- i. Verbal – Abusive telephone calls, name calling, threatening etc,
- ii. Non-Verbal – It is not directly physical. It is also of two types
  - c. Direct non-verbal: Rude gestures
  - ii. Indirect non-verbal: Ignoring, excluding, isolating

During the last decade, bullying of and by children of all ages has become a prominent social, educational, legal and media issue. Many recent studies have sought to quantify students' experience of bullying in schools (Glover, Cartwright and Gleeson, 1998; Rigby, 1999). Bullying is an issue of concern to educators because it has the potential to affect student's academic and social development (Banks, 1997; Griffiths, 1996). There is no common consensus in defining bullying (Besag, 1989).

### ***Scope and justification for the project:***

Evidence of enough research does not appear to be there to gain a clear picture of bullying especially in India. There are no reported investigations that study the contribution of social class and socio economic characteristics for being bullied and bullying others. Studies may help to explore some possible

mitigation measures. Considering the paucity of data from India and taking into account the potential of this phenomenon which causes damage to the well being of children, this research problem is felt needed.

**Objective of the study:**

The objective of the study is

- i. to assess the level of bullying in school and its relation to personality, academic achievement etc. of the school students in rural and urban settings.
- ii. district level estimation of the incidents of bullying behaviour of two districts in West Bengal.
- iii. In the case of bullying, deviation of normal behaviour is assumed. Results (bullying behaviour and its correlates) may be useful to identify the bully students and may help necessary counseling by competent psychologist.

**Method Sampling:**

Only Government or Government Aided schools of Kolkata and 17 districts of West Bengal excluding Darjeeling but including Siliguri Sub-Division of Darjeeling District are to be covered.

From Kolkata, an SRSWOR of 20 such schools have been chosen. From each chosen school 5 students of Class VII are to be chosen by SRSWOR and also 5 such of Class VIII are to be chosen by SRSWOR giving a sample of  $(5+5) \times 20 = 200$  students. In addition, from each chosen school 2 teachers teaching in Class VII but not in Class VIII are to be chosen by SRSWOR plus another SRSWOR of 2 teachers teaching in Class VIII but not in Class VII are to be chosen. If no such teachers are found, an SRSWOR of 4 teachers teaching in both Class VII and Class VIII is to be chosen. Thus 80 teachers are to be sampled.

Similarly, out of all the cities and towns of Hooghly 2 are to be chosen by SRSWOR. Out of all the villages in Hooghly District an SRSWOR of 10 villages is to be chosen. Out of every such chosen cities / towns / villages 2 schools are to be chosen by SRSWOR method. Thus, in all 24 schools are to be chosen altogether. From each chosen school an SRSWOR of 5 students of Class VII and 5 of Class VIII are to be chosen giving altogether a sample of 240 students of Hooghly district. In addition, from each chosen school 4 teachers teaching in classes VII and VIII are to be chosen by SRSWOR method. Thus, in all 96 teachers of Hooghly District are to be chosen.

On canvassing the Questionnaire among the  $200 + 80$  students altogether in Kolkata and  $240 + 96$  students plus teachers in Hooghly District of altogether 100 bullies can be identified and addressed the purpose of the survey's served.

If less than that target is only achieved, Adaptive sampling design is to be adopted in the following way.

**Adaptive sampling:**

Fearing that very few bullies may be figured out in the sampled schools among the students encountered while anticipating that there may be a sizable number of them in the aggregate in all the schools taken together in the district 'Adaptive sampling' may be tried. For this we need the following steps.

For every school take itself and two other schools in its closest physical neighbourhood within the district as a set of three schools constituting a neighbourhood of the first school.

If we find 5 or more bullies in classes VII and VIII together of the school surveyed we should visit the two additional schools in its neighbourhood and go on doing this so long we get 5 or more bullies in the schools visited next. If we get 100 or just more than 100 bullies in the cluster of schools thus covered in the survey, we stop. This is to be repeated independently in both rural and urban areas in Hooghly.

The entire sampling design is mentioned above. Following this design, till date data have been collected from 6 schools in Kolkata and 4 schools in Hooghly.

### **Measures used:**

The following measures have been used depending upon the purpose of the study. As the medium of instruction in all the selected schools is Bengali, the Bengali Version of the Questionnaires was administered on the students.

- a. Schedule for identification of bullying behavior by teachers opinion.
- b. Personality Questionnaire – It contains 50 items, separated into 5 dimensions viz., i)Intellectual curiosity, ii) Self disciplined and dutiful, iii) Assertiveness, iv)Cooperativeness and v)Emotional stability.
- c. Peer relation Questionnaire by Ken Rigby and Phillip Slee. It contains 20 items and 3 sub-scales i.e. Bully Scale, Victim Scale and Pro-Social Scale.
- d. Academic Achievement – Annual Examination marks of the students.
- e. One Biographical as well as Socio-economic Questionnaire.

### **Procedure:**

The measures along with the socio-economic information have been administered on the selected students of the sampled schools. At the same time annual examination marks of the students have been collected from the school records. After collecting the data, these were scrutinized carefully and scoring was done following the scheduled scoring procedure. The data so far analysed have been presented in the findings section.

**Table-1** Data collected from 2 districts of West-Bengal

District	No. of students	Bully Students	Non-bully students
Kolkata	85	63	22
Hoogly	69	34	35
Total	154	97	57

**Table-2** Mean and Standard Deviations of Bully and Non-bully students on Bully questionnaire

	Mean	SD
Bully (N=97)	6.46	2.488
Non-bully (N=57)	5.68	1.872

**Table-3** Mean and Standard Deviations of Bully and Non-bully students on Personality questionnaire

	Bully (N=97)		Non-Bully (N=57)	
	Mean	SD	Mean	SD
IC	12.34	3.313	11.70	2.699
SD & DU	10.98	2.570	10.96	2.260
AS	13.43	2.590	13.14	3.136

CO	10.45	3.691	10.30	3.151
ES	12.88	4.287	13.40	3.995

Note: Intellectual Curiosity (IC), Self Disciplined and Dutiful (SD & DU), Assertiveness (AS), Cooperativeness (CO), Emotional Stability (ES)

**Table-4** Mean and Standard Deviations of Bully and Non-bully students on Academic Achievement for Class VII

Subjects	Bully (N=54)		Non-Bully (N=25)	
	Mean	SD	Mean	SD
Bengali	46.33	19.492	48.20	15.446
English	44.31	19.883	46.44	19.954
Mathematics	36.04	18.368	42.12	20.531
Science	43.37	19.356	50.68	16.760
History	41.93	19.811	45.80	20.589
Geography	38.72	18.442	43.56	19.387
Total	250.70	105.316	276.80	103.894

**Table-5** Mean and Standard Deviations of Bully and Non-bully students on Academic Achievement for Class VIII

Subjects	Bully (N=43)		Non-Bully (N=32)	
	Mean	SD	Mean	SD
Bengali	41.12	15.500	46.75	15.620
English	33.91	15.973	47.38	21.615
Mathematics	31.00	20.995	37.25	25.590
Sanskrit	34.31	21.538	42.56	21.884
Physical Sc.	34.23	20.206	42.12	21.242
Life sc.	43.62	16.556	53.12	17.342
History	37.05	21.308	42.94	23.373
Geography	39.63	19.426	49.50	17.283
Total	293.05	136.489	361.62	149.620

**Table-6** District wise Mean and Standard Deviations of Bully students on Bully questionnaire

	Kolkata (N=63)		Hooghly (34)	
	Boys (N=29)	Girls (N=34)	Boys (N=23)	Girls (11)
Mean	6.86	5.88	6.74	6.64
SD	2.263	2.371	2.816	2.693

**Table-7** District wise Mean and Standard Deviations of Bully students on Personality questionnaire

	Kolkata (N=63)				Hooghly (34)			
	Boys (N=29)		Girls (N=34)		Boys (N=23)		Girls (N=11)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
IC	12.55	3.562	12.47	3.378	12.65	2.933	10.73	3.165
SD & DU	11.10	2.366	10.82	2.691	11.35	2.740	10.36	2.541
AS	13.24	2.747	13.62	2.425	14.17	2.498	11.82	2.401
CO	10.10	3.498	10.85	3.483	10.83	4.163	9.36	3.982
ES	13.86	3.861	12.26	4.826	13.48	3.642	10.91	4.415

**Table-8** District wise Mean and Standard Deviations of Bully students on Academic Achievement for Class VII

Subjects	Kolkata Boys (N=17)		Kolkata Girls (N=20)		Hooghly Boys (N=13)		Hooghly Girls (N=4)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Bengali	59.41	15.000	35.85	14.072	40.38	18.104	62.50	27.258
English	50.00	19.326	37.20	17.564	49.31	22.943	39.50	16.543
Mathematics	42.29	19.741	34.20	18.833	33.38	15.956	27.25	15.478
Science	53.82	18.307	35.00	16.601	42.00	19.434	45.25	21.823
History	53.53	16.648	35.55	18.443	40.46	20.911	29.25	17.173
Geography	50.24	16.828	28.80	18.072	38.23	15.303	41.00	8.794
Total	309.29	99.797	206.60	94.972	243.77	102.939	244.75	103.181

**Table-9** District wise Mean and Standard Deviations of Bully students on Academic Achievement for Class VIII

Subjects	Kolkata Boys (N=12)		Kolkata Girls (N=14)		Hooghly Boys (N=10)		Hooghly Girls (N=7)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Bengali	52.50	18.278	38.43	10.435	34.80	14.305	36.00	12.383
English	49.17	12.438	26.29	13.023	36.10	11.742	19.86	9.406
Mathematics	47.17	20.780	24.21	19.920	27.20	20.220	22.29	8.845
Sanskrit	45.33	22.281	30.43	23.290	29.10	15.666	30.00	21.194
Physical Sc.	47.33	26.616	27.79	16.220	33.20	16.739	26.14	7.105
Life Sc.	51.00	18.246	40.29	14.182	42.70	19.097	38.17	11.686
History	59.17	14.751	29.71	13.714	36.20	20.021	15.00	9.916
Geography	49.00	20.302	38.14	21.408	38.00	18.457	28.86	7.841
Total	400.67	134.877	255.29	120.210	277.30	127.973	206.57	74.498

**Findings:**

Mean and Standard Deviations of Bully and Non-bully students on Bully questionnaire, Personality questionnaire and Academic Achievement for Class VII and VIII are presented from Table 2-5. Table 6, 7, 8 and 9 shows District wise Mean and Standard Deviations of only Bully students on Bully questionnaire, Personality questionnaire and Academic Achievement for Class VII and VIII.

**Future Plan:**

Further data will be collected from selected schools and analysis will be done accordingly.

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## List of Publications

### 1. D. Dutta Roy (Assistant Professor)

- Dutta Roy, D. - Some strategies to make organization innovative. *The vision*, **2005**, 1,4,19-25.
- Dutta Roy, D. - What do computer programmers want for job satisfaction ?: Problem of Human resource Management. *Journal of Applied Psychological Issues*, **2005**, , Vol. 11, 1&2, 7-14.
- Dutta Roy, D. - Managing school infrastructure for indigenous people in hills of Manipur, *The Vision. Journal of Management and Allied Sciences*, **2006**, , 2, 1, 27-32.
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Social Sciences Division  
Divisional Plan-Project Expenditure Statement 2011-12

Units	Name of the Project	Rupees in lakhs		
		Revenue	Capital	Total
<b>New Project</b>				
<i>General</i>				
<b>4 PRU</b>	4.2 Workshop on Application of Reliability Statistics in Psychological Research	2.950		2.950
	4.3 Personality Profile, Stress and Job Satisfaction of Indian Sea Farers.	2.780		2.780
<b>5 SRU</b>	5.1 Utilization of developmental inputs by the Scheduled Castes (SCs), Scheduled Tribes (STs) & Other Backward Class/communities (OBCs) and their Social Networks: Experiences in Jharkhand.	1.500	0.400	1.900
<b>Sub-total:</b>		<b>7.230</b>	<b>0.400</b>	<b>7.630</b>
<b>North East</b>				
<b>2 LRU</b>	2.1 Interlexical study of Asamiya in a substantivist framework.	2.500		2.500
<b>4 PRU</b>	4.1 Cognitive Processing through PASS model in different groups of students of North-Eastern India.	2.600		2.600
<b>Sub-total:</b>		<b>5.100</b>	<b>0.000</b>	<b>5.100</b>
<b>On-Going Project</b>				
<i>General</i>				
<b>2 LRU</b>	2.2 Substantivist lexicological study of Bangla	2.010		2.010
<b>3 PSU</b>	3.1 Multiple Decrement Tables in Population Health Insurance Policies: Deterministic Approaches.	2.720		2.720
<b>4 PRU</b>	4.4 Self-efficacy of agricultural farmers.	2.940		2.940
<b>6 PU</b>	6.1 Annual Conference on Economic Growth and Development	2.000		2.000
<b>Sub-total:</b>		<b>9.670</b>	<b>0.000</b>	<b>9.670</b>
<b>North East</b>				
<b>6 PU</b>	6.2 Understanding deforestation in North-East India	3.872		3.872
<b>Sub-total:</b>		<b>3.872</b>	<b>0.000</b>	<b>3.872</b>
<b>Grand Total :</b>		<b>25.872</b>	<b>0.400</b>	<b>26.272</b>

## Non-Project Expenditure Statement 2011-12

## Social Sciences Division

Sl. No.	Name of the Project	Rupees in lakhs		
		Revenue	Capital	Total
<b>Economic Research Unit</b>				
1	Visiting Scientists	6.000		6.000
2	Seminar	0.500		0.500
3	Computer Consumables	2.000		2.000
4	Maintenance	1.500		1.500
5	Office Expenditures	0.400		0.400
6	Capital Expenditure		4.500	4.500
	<b>Sub-total:</b>	<b>10.400</b>	<b>4.500</b>	<b>14.900</b>
<b>Linguistic Research Unit</b>				
1	Visiting Scientists	0.600		0.600
2	Seminars (departmental, on regular basis)	0.200		0.200
3	Internal travel	0.500		0.500
4	Computer Consumables	0.500		0.500
5	Maintenance	0.200		0.200
6	Office Expenditures	0.500		0.500
7	Capital (Computer, Software, Scanner, Printer, Furniture, etc.)		3.000	3.000
	<b>Sub-total:</b>	<b>2.500</b>	<b>3.000</b>	<b>5.500</b>
<b>Population Studies Unit</b>				
1	Visiting Scientists	1.560		1.560
2	Research Fellows, PLP, Statistical Trainees etc.(1 JRF + 1 SRF)	4.600		4.600
3	Computer Consumables	0.600		0.600
4	Seminars by invited external experts	0.550		0.550
5	Office expenses	0.400		0.400
6	Repair, Maintenance, etc.	0.550		0.550
7	Capital Expenditure		2.440	2.440
	<b>Sub-total:</b>	<b>8.260</b>	<b>2.440</b>	<b>10.700</b>
<b>Psychology Research Unit</b>				
1	Visiting Scientists/Research Collaborator	0.800		0.800
2	Computer Consumables	0.800		0.800
3	Research Fellow	2.500		2.500
4	Maintenance for computer & equipment	0.850		0.850
5	Seminar/Workshop/Training programme	0.850		0.850
6	Software	2.000		2.000
7	Office Expenditure	0.750		0.750
8	Internal travel	0.350		0.350
9	Submission fee for publication in Journals	0.150		0.150
10	Capital Expenditure		4.500	4.500
	<b>Sub-total:</b>	<b>9.050</b>	<b>4.500</b>	<b>13.550</b>
<b>Sociological Research Unit</b>				
1	Visiting Scientists	1.200		1.200
2	Seminar	0.850		0.850
3	Internal travel	0.700		0.700
4	Research Fellow (two)	3.250		3.250
5	Computer Consumables	0.850		0.850
6	Maintenance / Office expenditure	0.850		0.850
7	Software	1.500		1.500
8	Capital Equipment: Upgrading furniture/computers A/C and other equipment		4.500	4.500
	<b>Sub-total:</b>	<b>9.200</b>	<b>4.500</b>	<b>13.700</b>
<b>Planning Unit (Delhi)</b>				
1	Visiting Scientists	14.000		14.000
2	Travel of Scientists	1.000		1.000
3	Seminar Series	1.000		1.000
4	PC, Xerox, Stationery, Consumables	1.500		1.500
5	Misc. Including Communications & fax	0.750		0.750
6	Journal Submission	1.000		1.000
7	Maintenance	0.750		0.750
8	Upgrading of Computers manuals software Furniture, fittings, equipment etc.		6.000	6.000
	<b>Sub-total:</b>	<b>20.000</b>	<b>6.000</b>	<b>26.000</b>
<b>Economic Analysis Unit (Bangalore)</b>				
1	Visiting Scientists/New Appointments	6.000		6.000
2	Computer Consumables	0.750		0.750
3	Furnishings		0.500	0.500
4	Computer/Econometric Software		1.000	1.000
5	Computer related Capital Expenditure (Laser printer, PC updating etc.)		1.000	1.000
5	Repair, Maintenance & Facelift	0.750		0.750
	<b>Sub-total:</b>	<b>7.500</b>	<b>2.500</b>	<b>10.000</b>
<b>Social Sciences Division Office</b>				
1	Visiting Scientists	3.000		3.000
2	Computer Consumables	0.500		0.500
3	Office Expenditure	0.500		0.500
4	Travel for Academic Purpose	2.000		2.000
5	Maintenance	1.000		1.000
6	Capital Expenditure		5.000	5.000
	<b>Sub-total:</b>	<b>7.000</b>	<b>5.000</b>	<b>12.000</b>
	<b>Grand Total:</b>	<b>73.910</b>	<b>32.440</b>	<b>106.350</b>