

## **Our Projects - Year 2011**

1. Quality Improvement of Mathematics – Grade 6- 11.
2. Quality Improvement of Mathematics – Grades 12 – 13.
3. Remedial Programme for strengthening Mathematics Education – Grade 6.

## **Our Activities - Year 2011**

### **Grades 6 - 11**

1. Conduct studies to strengthen Implementation of Grades 6 – 11 Mathematics Curriculum.
2. Preparation of Student Work Book for Grade 9.
3. Preparation of E-content for Grade 10.
4. Preparation of Diagnosis test for Grade 9.
5. Preparation of News Magazine for Mathematics.
6. Capacity Development of ISAA, SDS and Mentors for Grads 6 – 11.
7. Preparation of Certificate Course for Non-Mathematics teachers.

### **Grades 12 - 13**

1. Evaluation of G.C.E. (A/L) Curricula.
2. Conduct Programme to strengthen Implementation of Mathematics and Combined Mathematics Curriculum..
3. Preparation of Resource Book on algebra and Statistics (Combined Mathematics and Mathematics)
4. Preparation of E-content lessons on Combined Mathematics.
5. Capacity development of newly recruited teachers for Combined Mathematics and Mathematics.

### **Grades 6**

1. Training of teachers to implement remedial work in Grade 6.
2. Monitor Learning-Teaching process in Grade 6 class at provinces.

## **Our Productions**

1. Report on Curriculum Evaluation Grade 6 and Grade 10.
2. Mathematics Hand Book for “ Geometry” Grade 6-9.
3. Hand Book for “Geometry” Grades 10 and 11.
4. Teacher’s Instructional Manual for Grade 13 – Combined Mathematics and Mathematics.
5. Practice Question Papers on Combined Mathematics and Mathematics.
6. A Basic Course for Beginners in G.C.E.(A/L) Mathematics.
7. Teacher Training Manual – Grade 12 and 13 Combined Mathematics.

## Our Outputs

### 1. Teacher training workshops – Grades 6 – 11

Serial No.	Province	No. of Participants Called			No. of Participants Attended			Dates
		Teachers	ISAA	Total	Teachers	ISAA	Total	
01	Uva – 1	30	-	30	30	-	30	2010.05.06,07,08
02	Western-1	44	11	55	30	02	32	2010.06.17,18,19
03	North-Western	43	12	55	39	05	44	2010.06.29,30 & 2010.07.01
04	All (Without North & East) Tamil Medium	40	15	55	14	01	15	2010.07.06,07,08
05	Southern	44	11	55	35	02	37	2010.07.08,09,10
06	East (Sinhala) East (Tamil )	40 51	04 04	44 55	23 39	32 00	26 39	2010.07.13,14,15 2010.07.13,14,15
07	Central	40	15	55	31	02	33	2010.07.20,21,22
08	Uva-2	47	08	55	20	00	20	2010.09.09,10,11
09	Sabaragamuwa	48	07	55	36	03	39	2010.09.14,15,16
10	North-1(Tamil)	50	-	50	42	-	42	2010.09.15,16,17
11	Western-2	60	-	60	34	-	34	2010.10.13,14,15
12	North-Central	55	-	55	44	-	44	2010.10.27,28,29
13	North-2(Tamil)	40	10	50	34	06	40	2010.11.13,14,15
	<b>Total</b>	<b>643</b>	<b>97</b>	<b>740</b>	<b>455</b>	<b>24</b>	<b>479</b>	

**Percentage of Participation – Teachers**      **70.8 %**  
**ISAA**    **24.7 %**  
**Total**    **64.7 %**

## **2. Training of Teachers and Subject Directors - Combined**

### **Mathematics and Mathematics – 2010**

The first stage of the series of workshops planned to strengthen the teachers those who teach Combined Mathematics was successfully completed by training 256 teachers island wide. Participants were selected from all the provinces with less than 10 years of experience in teaching Combined Mathematics. These training workshops were conducted in all three languages; Sinhala, Tamil and English.

The following topics were covered in this stage.

1. Real Numbers
2. Functions
3. Polynomial Functions
4. Rational Functions
5. Quadratic Functions and Quadratic Equations
6. Trigonometry I
7. Straight Line
8. Vectors
9. Systems of Coplanar forces

A training manual with detailed notes were prepared in Sinhala and English media (Annexure 1 and 2). Tamil medium manual couldn't be completed due to the lack of resource persons.

University lecturers representing the University of Colombo, University of Sri Jayawardenepura and the University of Jaffna were served as resource persons in delivering lectures in subject content. Some of the practicing teachers, retired chief project officers and retired teachers were contributed in preparation of the training manual.

Provincial Education departments of Western Province, Eastern Province and Northern Province were provided food and accommodation for the participants while the Bilingual unit of the Ministry of Education, contributed for the food, accommodation and for the participants' payment of the participants of the English medium workshop.

Serial No.	Dates	Province / Zone	Venue	Medium	Expenditure (Rs)
1	29.06.2010 - 01.07.2010	Eastern	Hindu College, Batticalao	Tamil	46 800
2	27.07.2010 – 29.07.2010	North	Computer Resource centre Vavunia	Tamil	37 800
3	28.09.2010 – 30.09.2010	North	Central College, Jaffna	Tamil	44 400
4	29.09.2010- 01.10.2010	Western except Colombo, Piliyandala and kelaniya	N.I.E	Sinhala	55 500
5	06.10.2010- 08.10.2010	Southern, Colombo, Kelaniya	N.I.E	Sinhala	37 500
6	12.10.2010- 14.10.2010	Central, Ratnapura	N.I.E	Sinhala	35 700
7	02.11.2010- 04.11.2010	North Western, Uva, Kegalle, North Central, Eastern, Piliyandala	N.I.E	Sinhala	47 100
8	09.11.2010- 11.11.2010	All Island	N.I.E	English	15 600
9	09.11.2010- 11.11.2010	All Island except North and Eastern	N.I.E	Tamil	29 400
<b>Total</b>					<b>349 800</b>

## Number of Participants

Serial No.	Province	Number of Teachers	Medium
1	Western	56	Sinhala
2	Central	10	Sinhala
3	Southern	14	Sinhala
4	Sabaragamuwa	10	Sinhala
5	North Western	9	Sinhala
6	North Central	3	Sinhala
7	Eastern	3	Sinhala
8	Eastern	38	Tamil
9	North	68	Tamil
10	All Island	45	English

## Evaluation of the workshops by the teachers

The following results were obtained by analyzing the evaluations of the teachers about the workshop.

### Evaluation of Workshop

#### 1. Content of Workshop

##### 1.1 Straight Line

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.1.1 Understanding of subject areas related to the straight line that should be taught to	47	53	0

students was broadened.			
1.1.2 Understanding acquired contributed to the development of the learning-teaching process in the classroom.	29	65	6
1.1.3 Skills regarding solution of various problems based on the straight line were broadened.	50	50	0

## 1.2 Vectors

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.2.1 Understanding based on subjected area related to vectors was broadened.	59	41	0
1.2.2 Contribute to the success of the learning teaching process in the classroom.	24	71	5
1.2.3 Understanding of subject areas that mean to be emphasized in the teaching of this subject area and in the correction of mistakes commonly made by students was broadened.	39	50	11

### 1.3 Real Numbers

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.3.1 Understanding of subject areas related to the straight line that should be taught to students was broadened.	74	26	0
1.3.2 Understanding acquired contributed to the development of the learning-teaching process in the classroom.	56	44	0
1.3.3 Skills regarding solution of various problems based on the straight line were broadened.	67	28	05

### 1.4 Functions

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.4.1 Comprehension of the subject areas related to real numbers have been broadened.	53	41	6
1.4.2 Contributes to the development of the learning-teaching process were broadened.	62	36	2
1.4.3 Broadened grasp of correct concepts and correction of errors commonly made by students.	56	33	11

### 1.5 Polynomials and Rational Functions

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.5.1 Broadened understanding of polynomial functions and rational functions.	70	27	03
1.5.2 Contributes to the development the learning-teaching process in the classroom.	64	34	02
1.5.3 Understanding of subject areas that mean to be emphasized in the teaching of this subject area and in the correction of mistakes commonly made by students was broadened.	59	24	17

### 1.6 Co-planar forces acting at a point

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.6.1 Understanding of co-planner forces acting at a point was broadened.	52	45	3
1.6.2 Contribute to the success of the learning teaching process in the classroom.	37	60	03
1.6.3 Understanding of subject areas that mean to be emphasized in the teaching of this subject area and in the correction of mistakes commonly made by students was broadened.	35	53	12

### 1.7 Quadratic functions and quadratic equations.

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.7.1 Broadened understanding of subject area related to quadratic functions and quadratic equations.	70	28	02
1.7.2 Contribute to the success of the learning teaching process in the classroom.	61	37	02
1.7.3 Understanding of subject areas that mean to be emphasized in the teaching of this subject area and in the correction of mistakes commonly made by students was broadened.	61	33	06

### 1.8 Trigonometry.

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
1.8.1 Broadened understanding of subject area related to trigonometry.	18	76	06
1.8.2 Contribute to the success of the learning teaching process in the classroom.	18	59	23
1.8.3 Understanding of subject areas that mean to be emphasized in the teaching of this subject area and in the correction of mistakes commonly made by students was broadened..	12	65	23

2. Should a similar workshop be conducted in the future.
  - (a) Topics to be discussed in order.
    1. Complex Numbers
    2. Simple Harmonic Motion
    3. Circular Motion
    4. Integration
    5. Matrices
    6. Determinants
    7. Conics and all the other topics
  - (b) Other areas that should be taken into consideration in a workshop on the subject of making the learning-teaching process more effective in the classroom.
    1. Preparation of test items
    2. Teaching Methods
- 3.

Statement	Responses		
	Strongly Agree %	Agree %	Disagree %
3.1 Organization of the workshop was quite high standard.	63	26	11
3.2 Time allocated for the academic activities of the workshop was adequate.	50	44	06
3.3 Individual conducting of the workshop were concerned.	44	44	12
3.4 Break for tea and lunch were adequate	Food was provided to 3 workshops only.		
3.5 Food provided was excellent and clean	Food was provided to 3 workshops only.		
3.6 An quite willing to participate in any future workshops of this nature	59	41	0
3.7 Teacher Training manual provided was of quite a high standard	35	59	06
3.8 Participated in a workshop of high quality	41	59	0