



The Teacher Foundation

A REPORT ON  
THE EVALUATION OF A PILOT PROJECT  
ON  
INTERACTIVE RADIO INSTRUCTION  
In the Indian State of Karnataka

**Developed for Educational Development Centre, India  
By  
The Teacher Foundation**



The Teacher Foundation  
**Bangalore, India**

### **Table of Contents**

<b>Sl.No</b>	<b>Contents</b>	<b>Page</b>
1	<b>INTRODUCTION</b>	<b>3</b>
2	<b>EXECUTIVE SUMMARY</b>	<b>3</b>
3	<b>METHODOLOGY</b>	<b>4</b>
4	<b>RESULTS AND DISCUSSION</b>	<b>11</b>
5	<b>QUOTES – TTF EVALUATORS</b>	<b>17</b>
6	<b>ROUND I &amp; ROUND II - ANALYSIS</b>	<b>19</b>
7	<b>SUGGESTION</b>	<b>31</b>
8	<b>ANNEXURE</b>	<b>33</b>



The Teacher Foundation

## INTRODUCTION

### OBJECTIVES

- To analyse the impact of IRI program on classroom pedagogy and teacher behaviour by observing teachers in selected IRI Schools and Control schools across two rounds.
- To study the impact of IRI program in IRI Schools during Post-IRI Time and Non-IRI Time as against the Control Schools during Round-I Evaluation.
- To study the impact of IRI program in IRI Schools during IRI-Time, Post-IRI Time and Non-IRI Time as against the Control Schools during Round II Evaluation.
- To administer the Teaching and Learning Quality (TALQ) Scale and use the indicators in the scale to assess educational success through IRI intervention.

### EXECUTIVE SUMMARY

The overall purpose of the study was to evaluate the impact of IRI program on classroom teaching practices in selected IRI Schools and Control Schools across two rounds i.e., Round I and Round II. The study was conducted in three districts in the State of Karnataka during 2004-05 i.e., Chamrajnagar, Gulbarga and Raichur. Teaching and Learning Quality (TALQ) Scale developed by EDC was used to measure educational success through IRI intervention. The 4 categories of pedagogy measured on the 4-point rating scale included: Teacher Knowledge and Skills, Classroom Environment, Student Participation and Student Activities. The scores on the rating scale ranged from a minimum of 0 to a maximum of 3.

During Round I, 3 observations were made and recorded using the TALQ Scale in an IRI School, which included one Post-IRI and two Non-IRI. During Round II, 4 observations were made and recorded, which included one IRI Time, one Post-IRI time and two Non-IRI time. During both the Rounds, three typical classes observations were made in a Control School. Classes observed during IRI-Time were Classes 4 and 5. Classes and subjects observed during post-IRI time in IRI Schools was teacher/s dependent ranging from Class 1 to Class 7.

It was observed that during Round I, Post-IRI time scores were higher for Teacher Knowledge and Skills and Classroom Environment when compared to Non-IRI Time and Control schools. But in case of Student Participation Non-IRI time scores were slightly higher than the Post-IRI scores but much higher than the Control scores. Student Activities remained the same during both Post and Non-IRI time. When comparing the three regions in Karnataka, Chamrajnagar seems to be doing better than Gulbarga and Raichur in all categories of pedagogy. Performance of Raichur in all categories of pedagogy is all time low when compared to Gulbarga and Chamrajnagar.

During Round II, Student Participation significantly higher during IRI-Time followed by Post-IRI and Non-IRI Time. IRI time scores were high for Teacher Knowledge, Classroom Environment and Student Activities. In Control schools, Student Activities were quite low whereas the other three categories of pedagogy were high and almost the same in scores. When comparing the three regions, it was observed that Student Participation was highest in Gulbarga followed by other regions. In comparison, Student Participation was low in Chamrajnagar in Control schools when compared to Gulbarga.



The Teacher Foundation

## **METHODOLOGY**

### **LOCALE OF THE STUDY**

The study was conducted in three districts in the State of Karnataka during 2004-05. The three districts selected for the evaluation are Chamrajnagar, Gulbarga and Raichur.

### **RESEARCH DESIGN**

A comparative study was undertaken to analyse the impact of the IRI program on teaching practices in IRI Schools as against Control Schools during Round-I and Round-II.

The evaluation was conducted in two rounds. The first round was conducted during Nov-Dec 2004 and the second round during March 2005. The interval between the two rounds was about 3-4 months.

### **SELECTION OF SCHOOLS**

Initially a list of IRI and Control schools, both rural and urban, covered in the EDC initiated IRI program was given for the three districts of Karnataka. As suggested by EDC, from this list, TTF chose 8 IRI schools and 4 Control schools from each district depending on the distance of the school from the BRCs office and also the distance between schools in consultation with the BEOs of the respective regions.

Since each TTF evaluator had to cover a maximum of 3 schools in a day for 3 days, which is inclusive of 2 IRI schools, and 1 Control schools, the distance was the major criteria in choosing the schools. The list of schools selected was intimated to EDC. The school selection was further altered when the evaluators visited the selected schools. EDC was kept posted of any changes in the school selection.

In addition, certain criteria were adhered for selecting or dropping some of the IRI/Control schools for the study. The criteria are listed as follows.

#### **Criteria used for selection of IRI schools included:**

- School chosen should have implemented the IRI programme from the date of initiation of broadcast of IRI programme in that particular district.
- IRI equipment should be available in IRI school and in working condition.
- Only IRI teachers observed by evaluators in the respective schools. IRI trained teacher had to be present in school on the 3 days of observation.
- Observation done on 3 consecutive days of the same IRI teacher.

#### **Criteria used for dropping some of the IRI schools included:**

- IRI teachers not available in school for observation. The reasons for teacher's absence from school varied - on deputation for another Training programme, on leave due to personal reasons, deputed on government duty, participation in teacher strikes/agitations.



The Teacher Foundation

- IRI programme not implemented in IRI schools from the first day of broadcast due to 'casualness' on the part of the teacher, headmaster, and government officials such as BEO, BRC, CRC, and CRP.
- Non-availability of radio equipment in the IRI school due to lack of coordination on the part of the school and the Education Department officials
- School selected for pilot study by EDC. Audiotape of IRI lesson used by group two weeks before broadcast.

**Criteria used for the selection of Control schools were:**

- The teacher and the students of the Control school should not have been exposed to the IRI programme in school at any time on their own initiative
- The teacher and the school should be representative of a typical government school

**Criteria used for dropping some of the Control schools included:**

- Control school using IRI programme regularly.
- Teacher in Control school with out-standing achievements and hence not representative of a typical sample
- Teachers not available in school for observation for three consecutive days. The reasons for teacher's absence from the school varied- on deputation for another Training programme, on leave due to personal reasons, deputed on government duty, participation in teacher strikes/agitations.

The study was conducted in Two rounds i.e., **Round-I and Round-II**. During Round-I, 8 IRI schools, 4 Control schools were observed and during Round-II, 8 IRI schools and 2-4 Control schools were observed per region. The decrease in the number of schools-IRI/Control, during Round-II is attributed to the following reasons:

**Reasons for dropping Control School after Round II observation :**

- Teacher observed in Round I had undergone IRI training.  
E.g. GLPS, Konapur in Gulbarga district.

The details of number of schools selected Round-I and Round-II in Karnataka are as follows:

	ROUND I		ROUND II	
	IRI SCHOOL	CONTROL SCHOOL	IRI SCHOOL	CONTROL SCHOOL
SCHOOLS OBSERVED	<b>24</b>	<b>12</b>	<b>20</b>	<b>09</b>
SCHOOLS SELECTED FOR ANALYSIS	<b>20</b>	<b>09</b>	<b>20</b>	<b>08</b>



The Teacher Foundation

## **SELECTION OF TEACHERS**

The teachers selected for the study both from IRI and Control Schools satisfied the above set criteria for the study. The selection of teachers was done by the evaluators in consultation with the BEO's/BRPs when they visited the schools. The same teachers were observed during both Round-I and Round-II. During our visit to schools, no feedback was given to the teachers. The observation was done in an unobtrusive and unthreatening manner with very little interaction with the teachers.

## **SCOPE OF VARIATION WITHIN THE SELECTED SAMPLE**

- The number of IRI and Control schools selected for the study was not equal
- Teachers' profiles varied in terms of educational qualification, teaching experience, subject expertise, previous training in education, socio-economic status, position and status in school, years of experience, age, familiarity with the IRI program etc
- Variation in age amongst students of the same class/classes within the same school and across different schools.
- Broadcast problems in terms of clarity of the program. Some schools are far flung and hence the clarity may have been adversely affected.
- Proximity of the schools from the BRC/Panchayat offices – which may have accounted for a higher level of implementation of the IRI program.
- Even though the program was designed for multi-grade classes(Class 4 & 5), the class size may have affected the performance.
- Some students were first generation learners.

## **INSTRUMENT FOR DATA COLLECTION**

Teaching and Learning Quality (TALQ) Scale developed by EDC was used to measure the educational success through IRI intervention. Based on the preliminary feedback given by TTF evaluators on the Scale, necessary changes were made before it was administered in the field.

The 4 categories of pedagogy measured on the 4-point rating scale included:

- I. Teacher Knowledge and Skills
- II. Classroom Environment
- III. Student Participation
- IV. Student Activities

The scores on the rating scale ranged from a minimum of 0 to a maximum of 3.

## **OPERATIONAL DEFINITIONS**

### **A Typical IRI School**

*An IRI school may be defined as a government run school where the teacher is trained in IRI intervention, and where both students and teachers have been initiated into the IRI programme from the first day of IRI lesson broadcast / from the day decided by EDC; and continue to be familiar with the IRI programme through regular participation in IRI programmes during the time of this pilot study as per norms pre-determined by EDC, Bangalore.*

Such a school would typically have:



#### The Teacher Foundation

- Teacher/s trained in using the IRI equipment and educational intervention needed for students
- A Radio provided by EDC - needed for the IRI Programme
- Regular exposure to IRI lessons through IRI broadcast for both the IRI teacher and the select segment of students as determined by EDC, Bangalore
- Support and coordination by BRCs, CRCs and the EDC monitoring team and EDC Staff for the successful implementation of IRI Programme
- Provision of batteries, electrical power for using the Radio
- Provision of printed learning material/ lesson plans to support the IRI programme
- Provision of IRI equipment and learning material

#### **IRI Time**

*IRI Time may be defined as an observation made in an IRI School during the IRI broadcast.*

#### **Post IRI Time**

*Post IRI Time may be defined as an observation of a regular class made in an IRI School immediately after the IRI broadcast..*

#### **Non IRI Time**

*Non IRI Time may be defined as an observation of a regular class made in an IRI School on any other day other than an IRI broadcast day.*

#### **A Typical Control School**

*A typical Control school may be defined as a government run school which does not have IRI intervention in terms of teacher training and student exposure to the IRI programme in school during the time of this pilot study and has been declared as a Control School as per norms pre-determined by EDC, Bangalore.*

Such a school would typically have:

- No intervention of IRI programmes to the teacher and students during school hours
- Checks by EDC monitoring team to ensure the teacher nor the students are exposed to IRI programmes during school hours

#### **A Transition School**

In spite of all checks done by the EDC monitoring team and by EDC, Bangalore, there were some schools which began as Control schools and due to IRI Programme intervention became Transition Schools. This was discovered during the evaluation process by TTF when an evaluator visited a school for observation assuming it to be a Control School and found it to be using IRI.

*A Transition School may be defined as a government run school where the teacher began using IRI intervention, by chance, and continues to be familiar with the IRI programme through subsequent regular participation in IRI programme during the time of this pilot study.*

Such a school would typically have any or all these features:



#### The Teacher Foundation

- Teachers using the IRI equipment and educational intervention needed for students
- The Radio needed for the IRI Programme
- Subsequent exposure to IRI lessons through IRI broadcast for both the IRI teacher and the select segment of students as determined by EDC, Bangalore
- Support and coordination by BRCs, CRCs and the EDC monitoring team for subsequent implementation of IRI Programme
- Provision of batteries, electrical power for the running of IRI equipment
- Provision of printed learning material to support the IRI programme

#### PROCESS OF OBSERVATION

- Initially there were to be 3 Rounds of Observation that TTF had been instructed to carry out which eventually reduced to 2 Rounds. This was owing to paucity of time and impending final examinations. This was a decision taken by EDC, Bangalore after consultation with TTF.
- TTF selected evaluators for the evaluation of the IRI pilot study who had direct school teaching and/or experience in education development work and practitioners of new education approaches. These evaluators were taken through at least 2 training programs to provide an understanding to administer TALQ Scale for evaluation and in understanding the pedagogies involved in the IRI instruction, child centered learning and new paradigms in learning. Follow-up review and training was also done by TTF for evaluators post Round-I observation and pre Round-II observation of the IRI pilot study.
- Each Evaluator was given a minimum of 3 schools per visit, which normally included 2 IRI Schools and 1 Control School observing the teachers and students for 3 consecutive days. This was possible in Round I. **In Round II since some of the IRI and Control Schools were dropped, the number of schools an Evaluator observed varied from a minimum of 2 to a maximum of 4 per visit.** However each school was observed as required for a period of 3 consecutive days.
- The same teacher, whether IRI or Control was observed in Round I and Round II.
- During **Round I**, each Evaluator slipped in and observed one IRI lesson broadcast in each IRI School but did not score the observation. But during **Round II**, each evaluator observed at least one IRI lesson broadcast in each IRI School allotted per visit and used the TALQ Scale to score the observation.
- Each Evaluator observed Non-IRI classes in each IRI School, which included one Post-IRI time and two Non-IRI time observations during both rounds.
- Therefore, **in Round I**, 3 observations were made and recorded using the TALQ Scale in an IRI School, which included **one Post-IRI** and **two Non-IRI**. During **Round II**, 4 observations were made and recorded using the TALQ Scale in an IRI School, which included **one IRI Time, one Post-IRI time and two Non-IRI time**.
- Each Evaluator observed **three** typical classes in a Control School and used the TALQ Scale to score the school during both Rounds of observation.



The Teacher Foundation

- The visit was made as unobtrusive as possible. There was minimum or no intervention by the TTF Evaluators.
- Subjects observed by Evaluators during IRI broadcast included:
  1. Core subjects - Math and EVS
  2. All topics and subtopics for the broadcast of IRI lessons were pre-determined by EDC, Bangalore.
- Classes observed during IRI-Time in IRI Schools were Classes 4 and 5.
- Classes and subjects observed during post-IRI time in IRI Schools was teacher/s dependent ranging from Class 1 to Class 7.
- Classes and subjects observed in Control Schools was again teacher/s dependent ranging from Class 1 to Class 7.
- Each evaluator was required to collect the information using TALQ scale on the Daily Observation Sheet and Three Day Summary Sheet. Scoring for each category of pedagogy was given in reference to the TALQ scale.
- Besides, each evaluator for each round also provided Photographs of the school/classroom/teacher/students/class layout during observation; drawings of layout of classroom showing location of desk/chair, students – boys and girls – Blackboard and all learning resources; and any other relevant/interesting information

#### **PROCESS OF DATA COLLATION AND ANALYSIS**

- On receipt of Evaluators' Three Day Summary and other data collected by individual evaluators, the data was collated. Each Evaluator's scores for one observation, two observation or three consecutive days of observation for an individual teacher/school was entered in an excel spreadsheet for each category and sub-category of pedagogy for each school/teacher.
- To bring the scores numerically on par with three observation scores, the individual scores were multiplied by 3 in case of one observation. In case of two observations, the score was divided by 2 and then multiplied by 3. Average score for each category of pedagogy for each school was taken for graphical representation purposes.
- To bring the scores of IRI time (one observation across 3 days), Post-IRI time (one observation across 3 days), Non-IRI time (2 observation across 2 days) numerically on par with Control School scores(3 observation across 3 days), the following processes were followed:

*IRI Time Scores:* One day IRI time scores were entered as is

- The One day score of IRI time was multiplied by 3 to arrive at the total three day scores to bring it numerically on par with Three Day Scores in Control Schools
- A sum of all the IRI scores(arrived at as above) was taken for each category of pedagogy in all the IRI schools of the region and an average score was calculated. This was to standardize the values across regions where the number of schools varied.



The Teacher Foundation

*Post-IRI Time Scores:* One day Post-IRI time scores were entered as is

- The One day score of Post-IRI time was multiplied by 3 to arrive at the total three day scores to bring it numerically on par with Three Day Scores
- An average of the total three-day Post-IRI scores was taken for each category of pedagogy depending on the number of IRI schools in each region.

*Non-IRI Time Scores:* Two day Non-IRI time scores were entered as is

- The Two-day score of Non-IRI time was divided by 2 to arrive at one-day score, which in turn was multiplied by 3 to arrive at the total three-day scores to bring it numerically on par with Three Day Scores in Control Schools.
- An average of the total three-day Non-IRI scores was taken for each category of pedagogy depending on the number of IRI schools in each region.

Average scores were used for drawing graphs to compare Round I and Round II evaluation of IRI Schools(IRI-Time, Post-IRI Time and Non-IRI Time) and Control Schools in Karnataka.



The Teacher Foundation  
**RESULTS AND DISCUSSION**

**The results and discussion of the study are presented under the following headings:**

**1. Comparison of Round I and Round II**

- 1.1 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools – Karnataka
- 1.2 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools – Chamrajnagar
- 1.3 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools – Gulbarga
- 1.4 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools - Raichur

**2. Round I**

- 1.1 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools – Karnataka
- 1.2 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools– Region wise
- 1.3 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools– Chamrajnagar
- 1.4 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools– Gulbarga
- 1.5 Comparison of IRI Schools-Post-IRI, Non-IRI Time and Control Schools– Raichur

**3. Round II**

- 1.1 Comparison of IRI Schools-IRI-Time, Post-IRI, Non-IRI Time and Control Schools – Karnataka
- 1.2 Comparison of IRI Schools-IRI-Time, Post-IRI, Non-IRI Time and Control Schools – Region wise
- 1.3 Comparison of IRI Schools-IRI-Time, Post-IRI, Non-IRI Time and Control Schools – Chamrajnagar
- 1.4 Comparison of IRI Schools-IRI-Time, Post-IRI, Non-IRI Time and Control Schools – Gulbarga
- 1.5 Comparison of IRI Schools-IRI-Time, Post-IRI, Non-IRI Time and Control Schools – Raichur
- 1.6 Transition of Control School into IRI School



The Teacher Foundation

## 2 ROUNDS OF QUALITATIVE EVALUATION OF THE IMPACT OF IRI - KARNATAKA

Round I&II-Comparison of Post-IRI, Non-IRI and Control-Karnataka

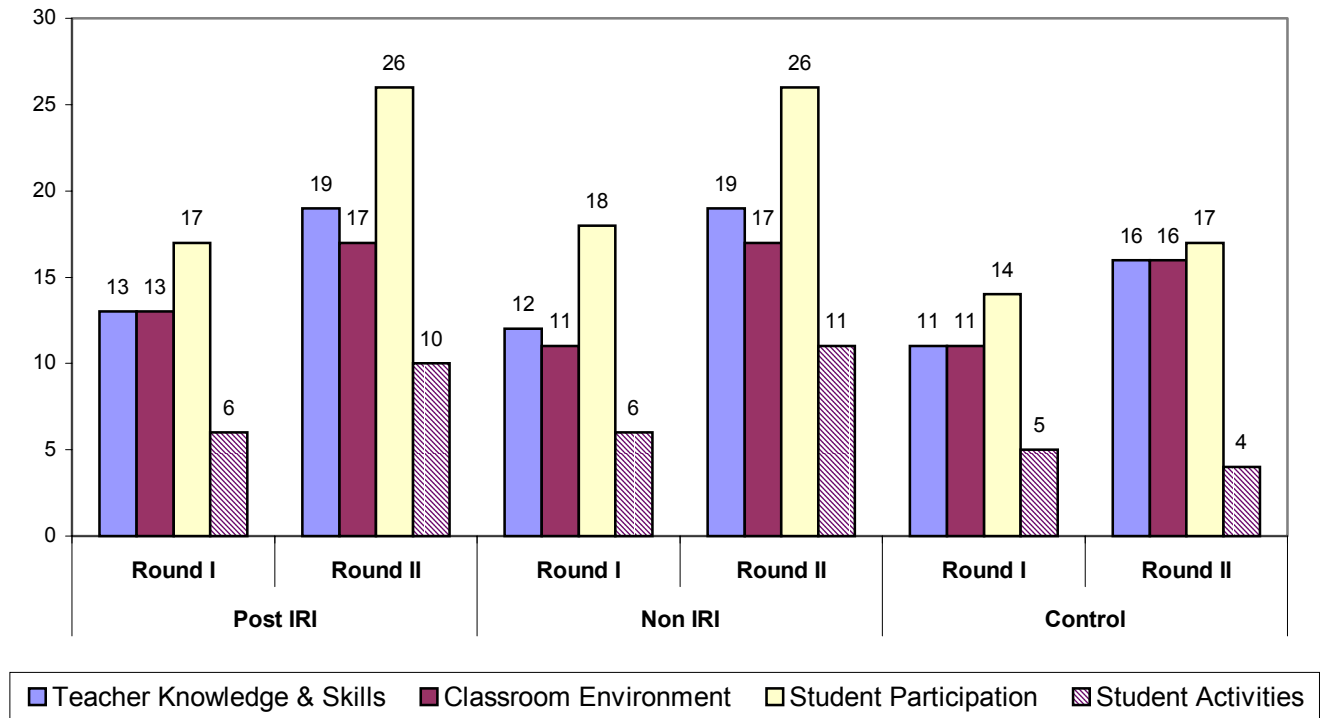


FIGURE 1

A Comparison of Round I and Round II shows a definite improvement in teachers' classroom practice during Round II observations. The rise in scores is across all categories of pedagogy.

Teacher Knowledge seems to have gone up in Round II right across all 3 regions in the state, but much more so in the **IRI schools** (seen in post IRI as well as non-IRI observations). The same is the case with Student Participation.

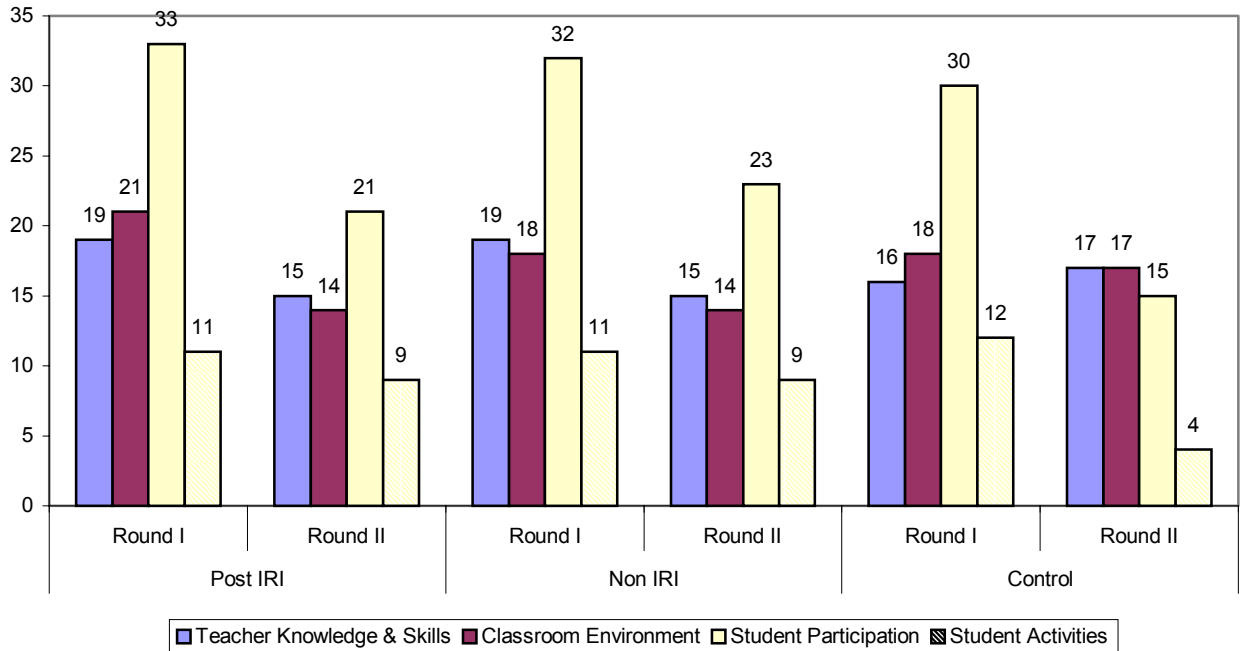
The Classroom Environment too seems to have improved in Round II – but there is no dramatic difference between IRI and Control schools.

One promising feature conveyed by the data is the evidence of teachers in IRI schools getting students to participate in activities even in the Non-IRI observations. Whereas Control schools show a slight drop in student activities in Round II. This demonstrates transfer of good practice in the IRI schools.



The Teacher Foundation

### Round I & II - Comparison of Post, Non IRI & Control in Chamrajnagar



**FIGURE 2**

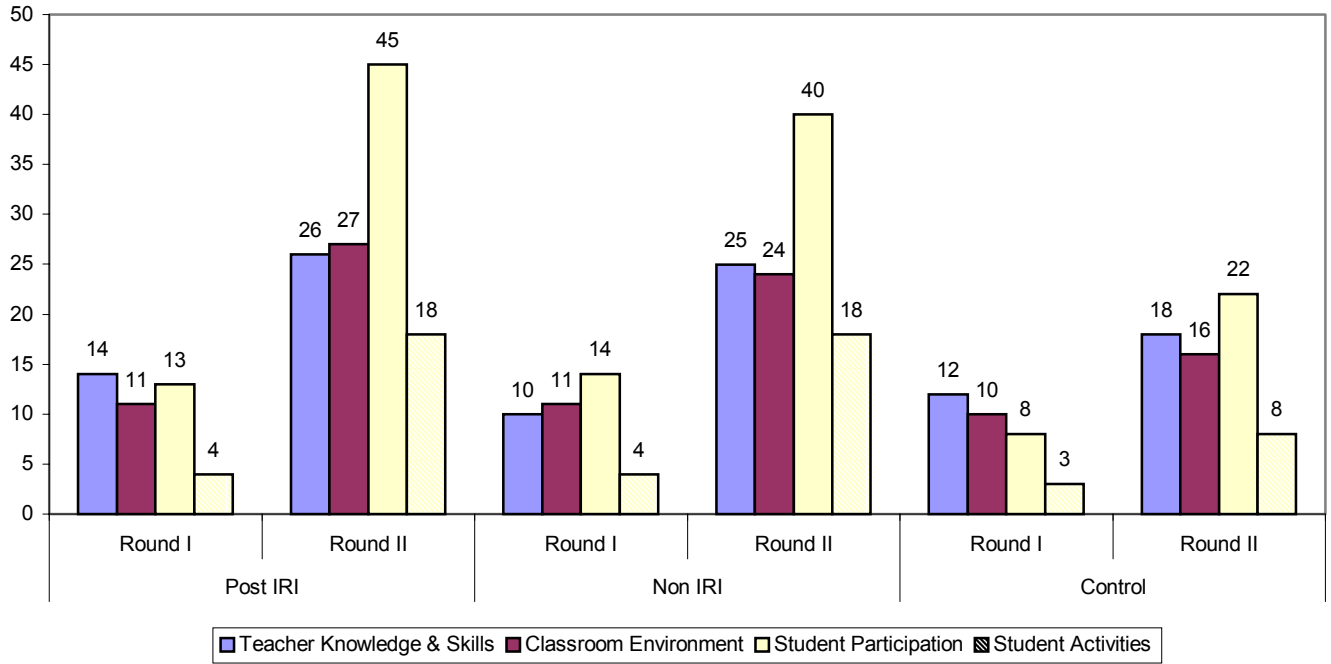
Disappointingly, as mentioned earlier, all the schools in Chamrajnagar, IRI as well as Control schools, seem to have shown a distinct dip in classroom performance. It could be on account of the fact that the Round II observations were done very close to the impending final examinations. Perhaps also, there is an 'overload' of intervention in the region and a sense of complacency has crept in. There were also some broadcast problems faced by some of the schools.

This overall confusion and absence of coherence during IRI broadcasts could not have helped ensure transfer of learning, post IRI or during Non-IRI time.



The Teacher Foundation

### Round I & II- Post,Non IRI & Control in Gulbarga



**FIGURE 3**

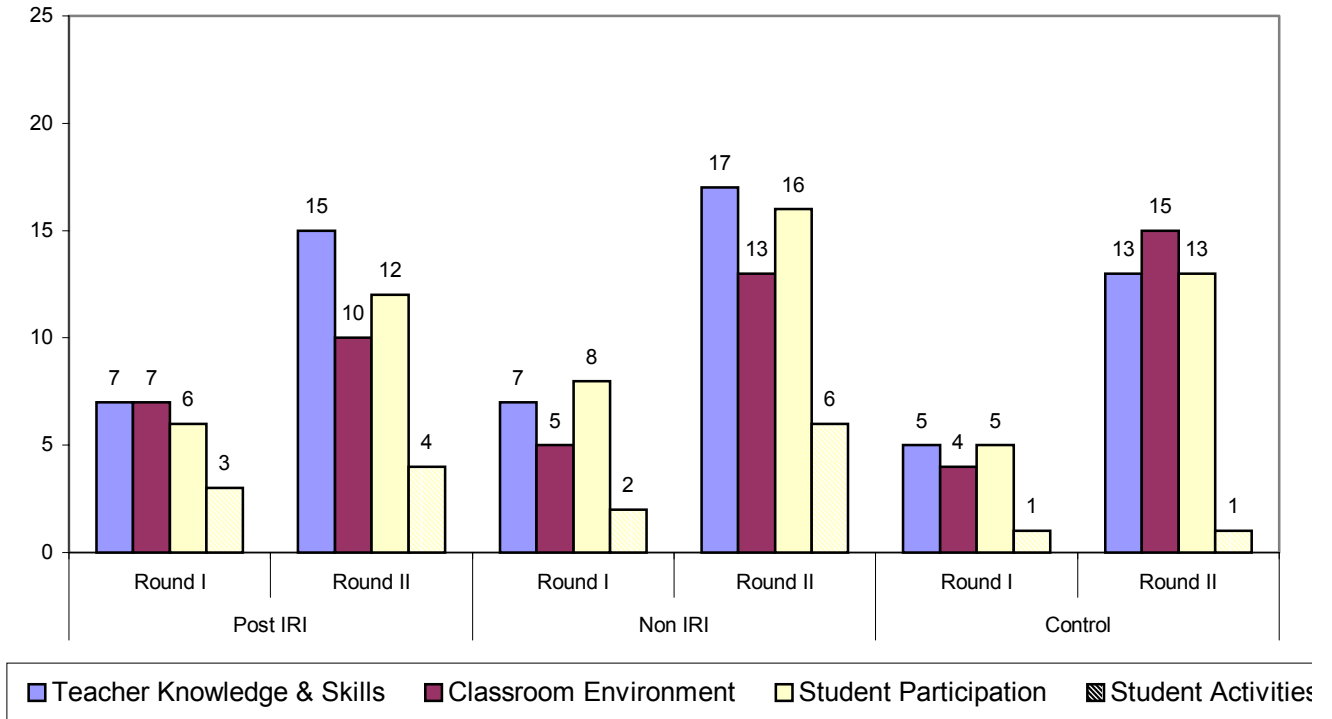
Gulbarga has shown very positive change across all the categories of pedagogy in all the schools, but more so in the IRI schools. There is evidence of transfer of learning from the IRI broadcasts to the post IRI classes and the Non-IRI classes. In fact there is no big variation in overall classroom practice between Post and Non-IRI sessions.

In Control schools too, there is improvement in all categories of pedagogy during Round II.



The Teacher Foundation

**Round I & II - Post, Non IRI & Control in Raichur**



**FIGURE 4**

Raichur in contrast to Chamarajnagar shows heartening improvement in classroom practice by both IRI schools and Control Schools. But IRI schools seem to be performing better, especially during Non-IRI time as evident from the Figure 4.

The Control Schools seem to have also done well in Round II. One reason is of course the smaller numbers of Control schools automatically that raises the scores. Another reason could be the better preparedness of all schools for the second round of observations.



The Teacher Foundation

## SUMMARY:

### ROUND I & II

1. **Teacher Knowledge** seems to have gone up in Round II right across all 3 regions in the state, but much more so in the IRI schools (seen in post IRI as well as non-IRI observations). The same is the case with **Student Participation**. It does seem that IRI classes have in fact improved Teacher's own understanding of the subjects she/he teaches in Karnataka.
2. Gulbarga has shown positive change across all the categories of pedagogy in all the schools, but more so in the IRI schools.
3. Raichur in contrast to Chamaraj Nagar shows heartening improvement in classroom practice in both IRI schools and Control Schools, barring Student Activities. This could be attributed to the fact that teachers as yet, lack the skill of planning and conducting meaningful activities done by students in the classroom.
4. All the schools in Chamaraj Nagar, IRI as well as Control schools, seem to have shown a distinct dip in classroom performance for reasons not entirely evident.
5. It is apparent that IRI, in a short span of few months has created an impact on classroom practice. However, it would help for the effects of IRI to be sustained by coherent teacher support and training.



The Teacher Foundation

### PERSONAL FEEDBACK - QUOTES FROM TTF EVALUATORS:

1. TTF evaluator said in **Karnataka** *“From observation of one class it was clear that his teaching skills are very good. Above all, he is emotionally involved with children, school and the community. Children seem to bond with him very well and this is communicated to children and whatever he teaches is picked up by the children quickly and effectively.”*
2. The TTF evaluator said of an **IRI school in Chamarajnagar** *“The rooms that I was in have a lot of work up on the walls in terms of charts, vocabulary words (put up like streamers across the class), etc. Sometimes, these are used to point out something – though not efficiently.”*
3. Here’s what the TTF evaluator has to say of an **IRI class in Kollegal** during Round II *“During the IRI class, three of them, Prema, Anitha and Deena, were in the room with the children. .... However, what I saw was that Deena was busy writing a sort of ‘lesson plan’ of the radio lesson in a log book – this has to be signed by whoever goes in for observation. She would briefly lift her head from her work and shout out instructions, along with Anitha, who’s a bit sharp and intimidating. .... Prema is by far the quietest of the lot..... The instructions and talk of the classroom teacher sometimes drowns out the IRI teacher....I also got the feeling that the regular IRI programme facilitators are Deena and Anitha – not Prema.*
4. Another **teacher in Manjunathnagar** is described as follows *“Mr. Malick asked me to ‘choose’ what kind of lesson I wanted to see. **IRI style or normal**. He could do both, he said. I left it to him and mentioned that I would like to see how he normally taught. What I saw was that he rifled through the text book, read out, first quickly, then dramatically – god knows what those poor children understood.....he’s very insensitive, and makes statements like “these are all Muslim children”.*
5. About a **teacher’s knowledge**, the TTF evaluator says *“ She is knowledgeable and comfortable with content in lesson. Uses many ideas from IRI lessons across subjects. Explains concepts and new words in innovative ways.”*
6. Of another teacher, in another **Gulbarga school**, the evaluator says, *“ the teacher uses many locally and culturally relevant examples. Encourages students to narrate simple anecdotes and uses them to connect to concepts being taught.”*
7. Other evaluators too have similar observations to make of various teachers in **Gulbarga** : *“ The teacher uses many ways of giving attention to all students. Students volunteer answer individually, work in pairs and groups. Sometimes when the teacher makes mistakes, students correct her and they all have a good laugh!”.(Non-IRI time)*
8. *“ The teacher’s interaction with the students, the atmosphere of the class, the enthusiasm amongst the students, to respond, clarify, question etc. symbolizes the teachers positive attitude towards teaching.” (Non- IRI Time)*
9. *“ The students are free with him and are very eager to answer and participate”. (Non-IRI Time)*



The Teacher Foundation

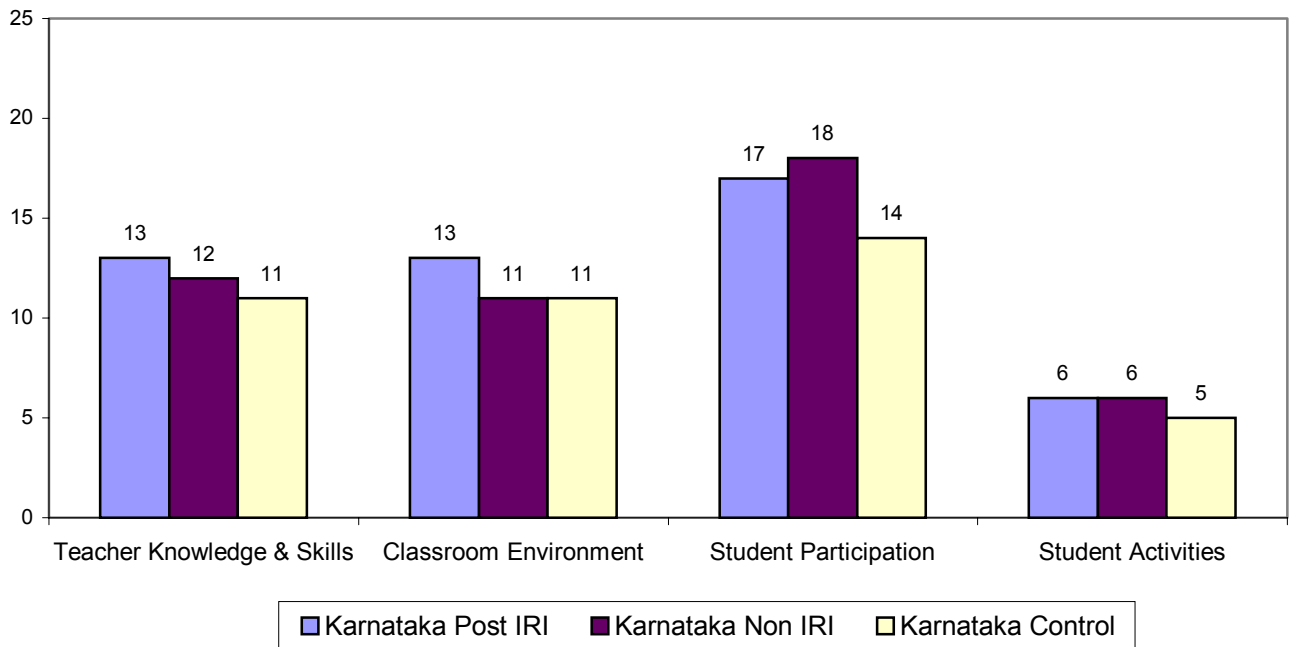
10. One TTF evaluator mentions of a **Non-IRI** session, “ *the teacher clearly states the goals and methods in the beginning of the lesson. She started it off with a story, using a picture chart*”.
11. Another evaluator says of another **non-IRI** session, “ *The teacher often refers to personal experiences and local situations. For e.g. she asked the question, when do you sleep inside the house and when do you sleep outside? This was to help the children understand the difference between increase and decrease in temperature*”.
12. “*Mr. Chinnappa is a reluctant teacher and seems to be doing this job as he has no alternative. When meeting him outside the classroom, he came across as an intelligent and sensitive person. In the classroom he is very different - is cynical about IRI lessons, community involvement, teaching material, ...Has an attitude ‘nothing will happen’ and a waste of resources.*”
13. “*The teacher does not know whom to approach for complaints /suggestions/ comments/ concerns regarding IRI lessons. He does not find the IRI lessons very useful because the children understand a dialect ‘lambani’ and all lessons are explained in Kannada and Lambani but the IRI lessons do not give him that scope.*”



The Teacher Foundation

## ANALYSIS OF DATA FROM THE INDIVIDUAL ROUNDS

### Round I - Comparison of Post, Non IRI and Control- Karnataka



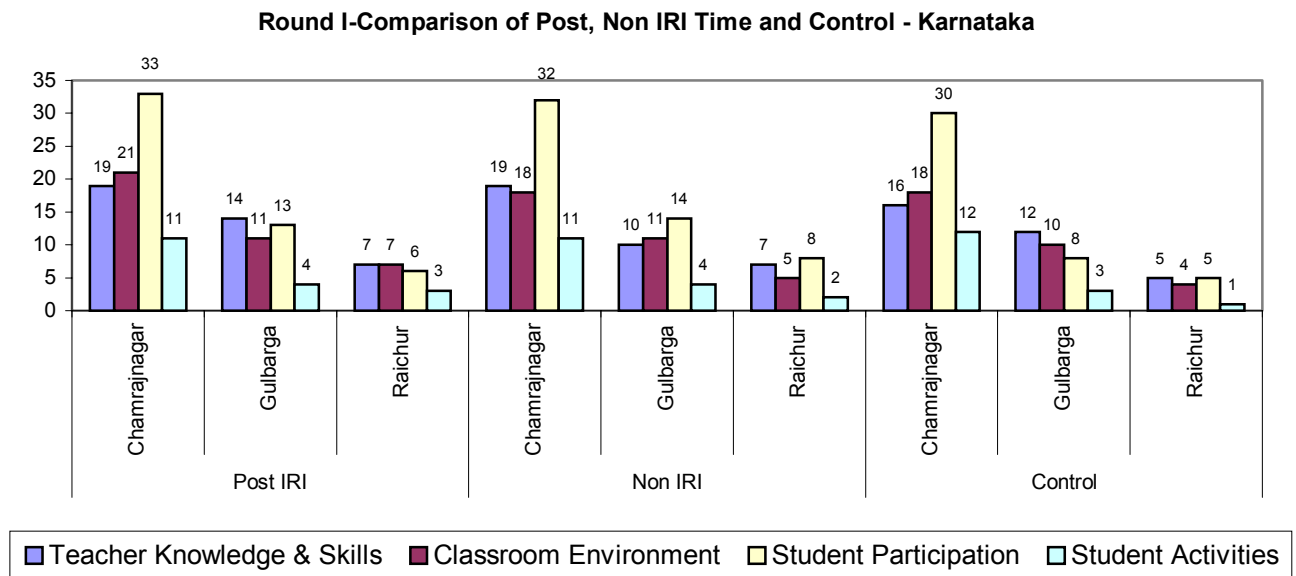
**FIGURE 5**

Figure 5 shows the comparison between IRI schools and Control Schools. During this round, observations in IRI Schools included Post-IRI Time and Non-IRI Time.

Post-IRI time scores were higher for Teacher Knowledge and Skills and Classroom Environment when compared to Non-IRI and Control schools. But in case of Student Participation Non-IRI time scores were slightly higher than the Post-IRI scores but much higher than the Control scores. Student Activities remained the same during both Post and Non-IRI time. In fact the overall score for Student Activities was uniformly low for IRI schools and Control Schools, especially compared to Student Participation. It perhaps indicates the fact that teachers do not sufficiently plan for student activities, even under the influence of the IRI lesson broadcasts. It is likely the influence of the IRI lesson remained with the teachers – during the Post-IRI observation, explaining the higher score. It is also important to emphasize here that the variation in scores between IRI schools and Control Schools is not very much in this first Round of observations.



The Teacher Foundation



**FIGURE 6**

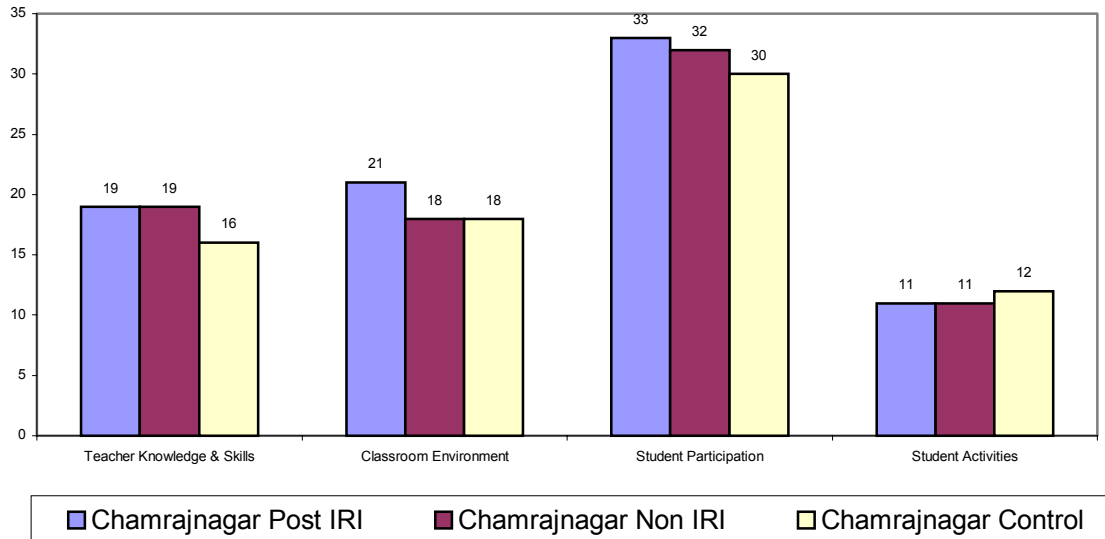
Chamrajnagar seems to be doing significantly better than Gulbarga and Raichur in all categories of pedagogy. Student Participation has highest score when compared to other categories of pedagogy in IRI Schools both during Post-IRI and Non-IRI and also in Control Schools in Chamrajnagar. There was no great variation in scores between Post-IRI-Time, Non-IRI Time and Control schools in any of the 3 regions. Could all the scores have been influenced by the external evaluator's presence?

Performance of Raichur in all categories of pedagogy is very low when compared to Gulbarga and Chamrajnagar. Student Activities is very low in Raichur in IRI schools- Post-IRI, Non-IRI and Control school. This is educationally one of the deprived regions in the state.



The Teacher Foundation

### Round I-Comparison of Post, Non IRI and Control in Chamrajnagar



**FIGURE 7**

In Chamrajnagar, Student Participation scored significantly high in IRI Schools-Post-IRI, Non-IRI and Control Schools when compared to other categories of pedagogy. Teacher Knowledge and Student Activities remained the same during Post-IRI and Non-IRI time. However, the IRI schools fared better than the Control schools during this round except for Student Activities, which Control schools fared better.

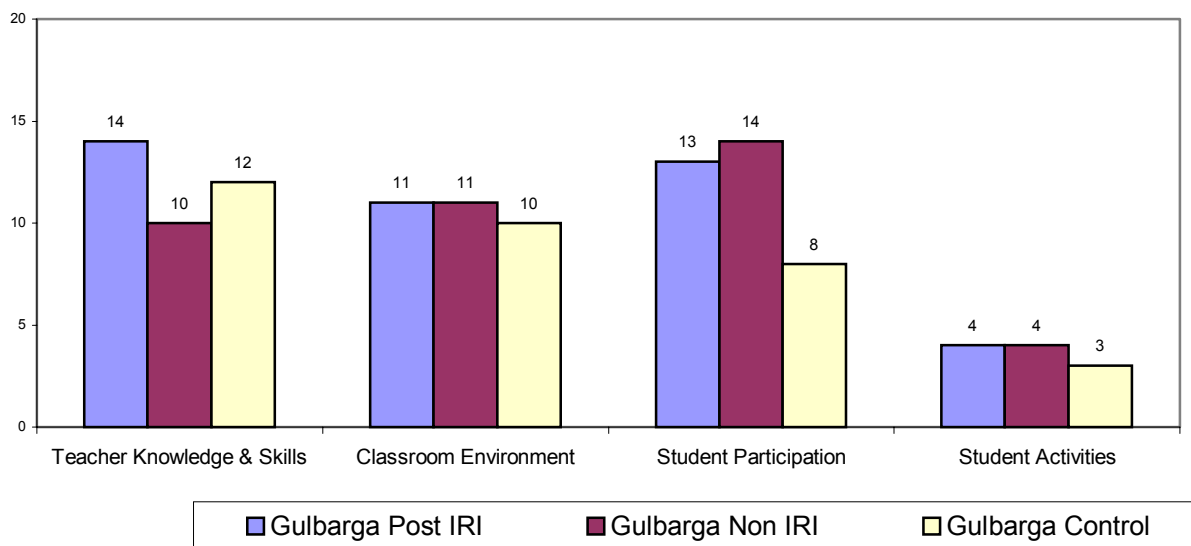
But overall, a bird's eye-view picture of this data conveys certain 'sameness' amongst the IRI and Control schools.

Of course, this region has had many interventions and training programmes for teachers, which could have raised the benchmark for all the schools.



The Teacher Foundation

### Round I-Comparison of Post, Non IRI and Control in Gulbarga



**FIGURE 8**

In Gulbarga, it can be observed from Figure 8, that IRI schools scored only slightly better than Control schools in most of the categories of pedagogy except for Student Participation, which was much higher. This could be owing to the IRI broadcasts.

In IRI schools, Classroom Environment and Student Activities remained the same during both Post-IRI and Non-IRI time. Teacher Knowledge was higher and Student Participation slightly lower during Post-IRI time compared to Non-IRI time. These could be a trend emerging in IRI schools that is still too early to make sense of.

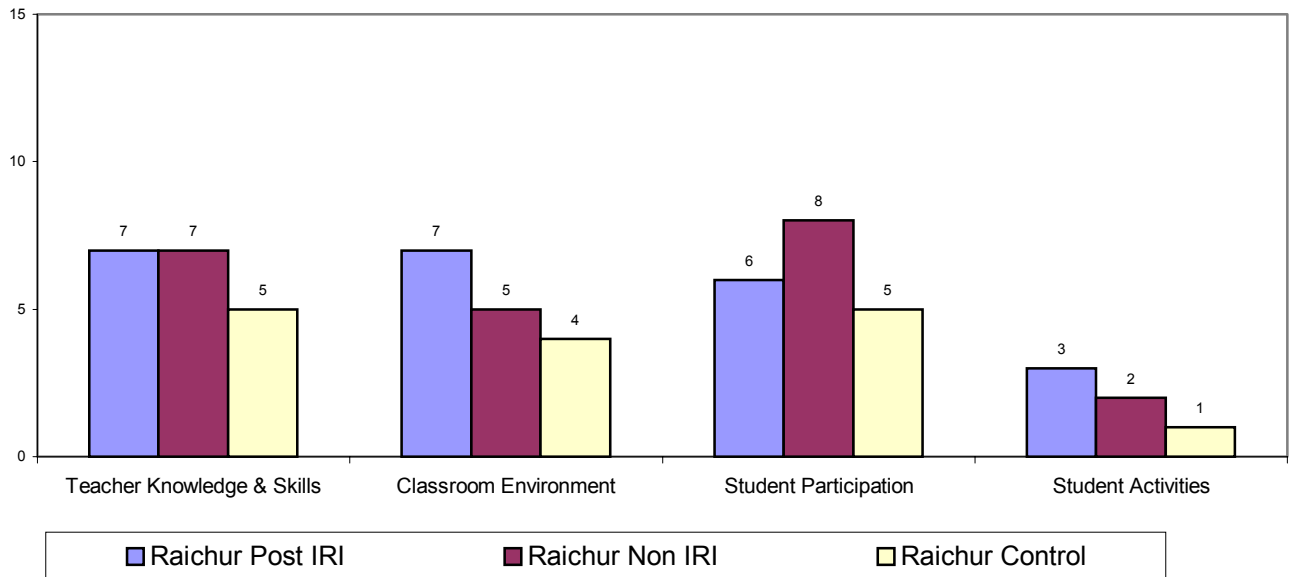
In Control schools, Teacher Knowledge was scored high followed by Classroom Environment, Student Participation and Student Activities.

Overall, the IRI schools seem to have scored best in Teacher Knowledge and Student Participation.



The Teacher Foundation

### Round I-Comparison of Post, Non IRI and Control in Raichur



**FIGURE 9**

Generally the performance of IRI schools and Control schools in Raichur was very low compared to the other two regions.

In IRI Schools, however, Student Participation was slightly higher during Non-IRI time, Teacher Knowledge and Classroom Environment scored the same during Post-IRI time. Student Activities score was the least of all the categories of pedagogy.

In Control schools, Student activities was lower compared to other three categories of pedagogy.

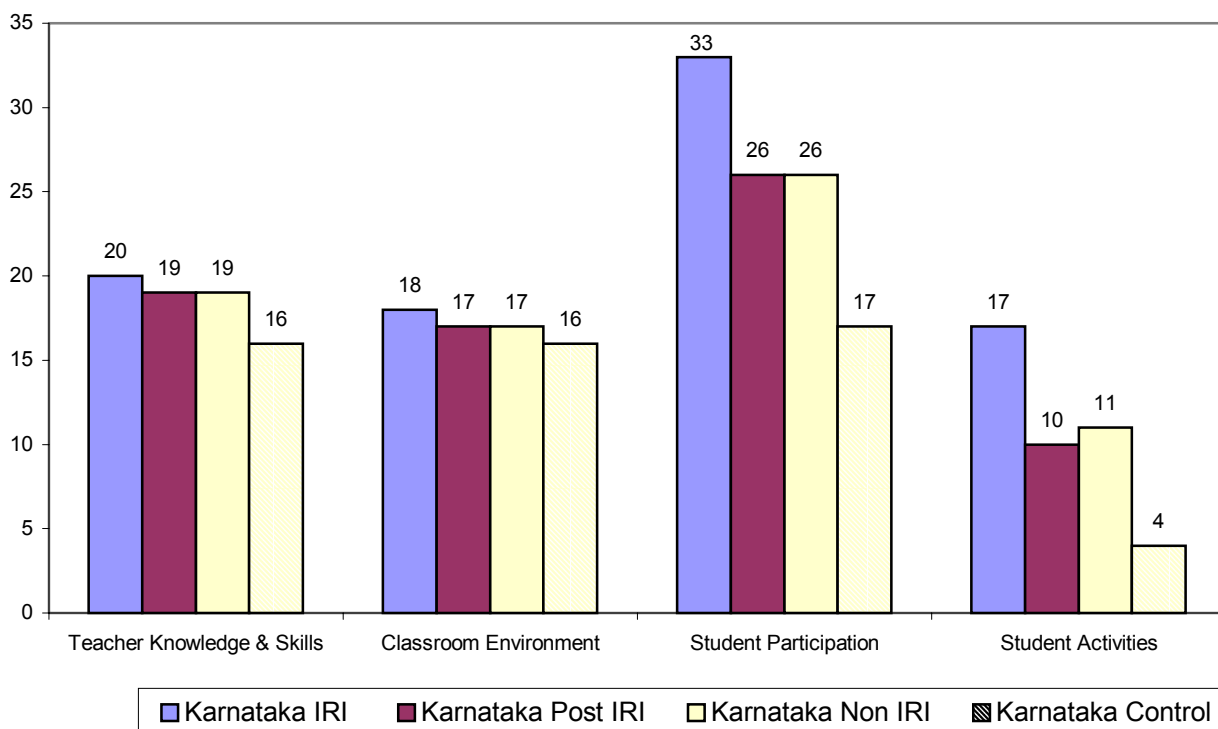
Overall the picture one gathers though, is again that there is no dramatic difference in Round 1 between the IRI and Control schools, with scores all being under 10.



The Teacher Foundation

## **ROUND II**

### **Round II-Comparison of IRI, Post, Non IRI and Control in Karnataka**



**FIGURE 10**

During this round, an additional observation was made during the IRI broadcast.

It was observed in Karnataka, Student Participation was significantly higher during IRI-Time followed by Post-IRI and Non-IRI Time. Obviously the positive influence of the IRI lessons can be seen here. The teacher's classroom practice is significantly higher during IRI, especially for Student Participation and Student Activities, compared with the corresponding scores for Post-IRI and Non-IRI time.

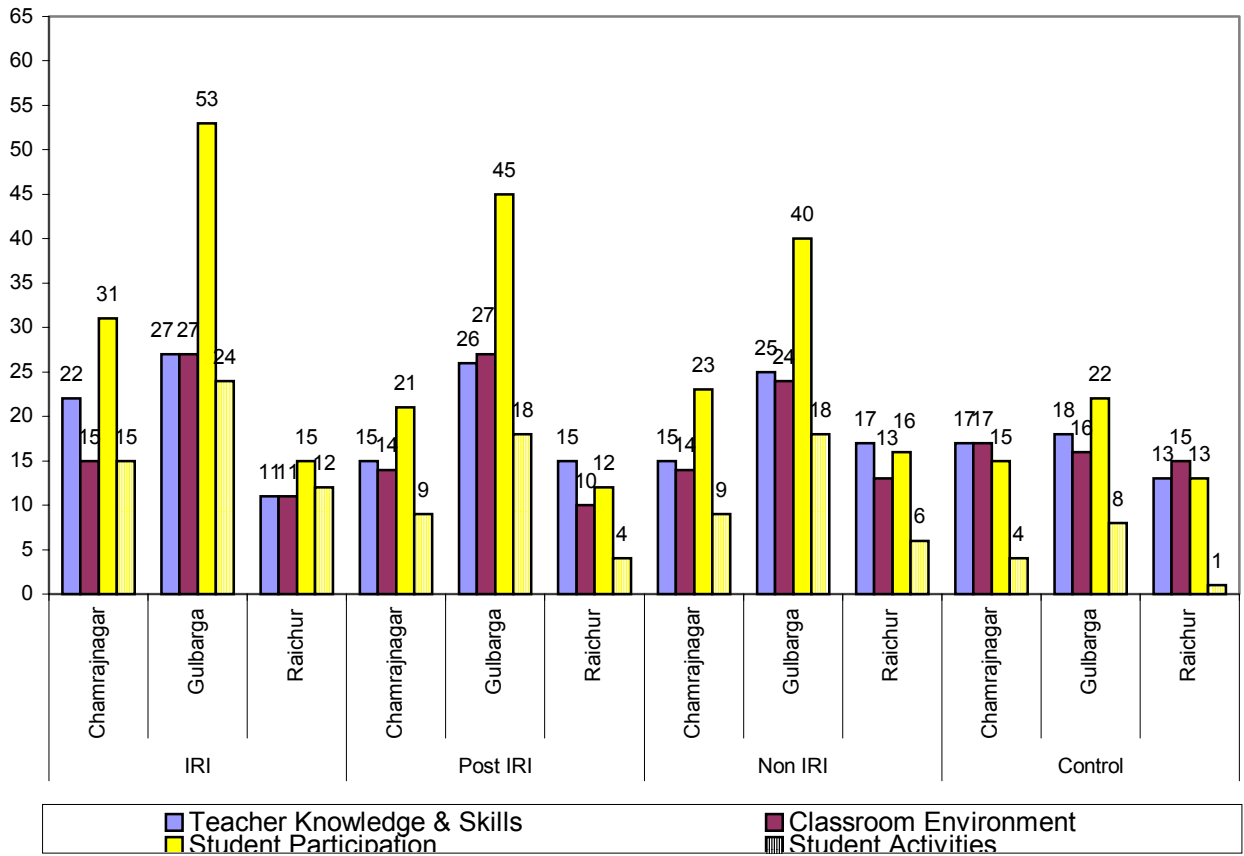
Teacher Knowledge and Classroom Environment remained the same during Post-IRI and Non-IRI time.

In Control schools, the score for Student Activities was quite low whereas the scores for other three categories of pedagogy were higher almost equally.



The Teacher Foundation

**Round II-Comparison of IRI, Post, Non IRI and Control in Karnataka-Region wise**



**FIGURE 11**

When comparing the three regions of Karnataka, it is evident from Figure 11 that Student Participation was highest in Gulbarga followed by other regions during IRI-Time, Post-IRI and Non-IRI Time. In comparison, Student Participation was low in Chamrajnagar in Control schools when compared to Gulbarga.

Student Activities was very low in Raichur (the same as in Round 1) compared to other regions.

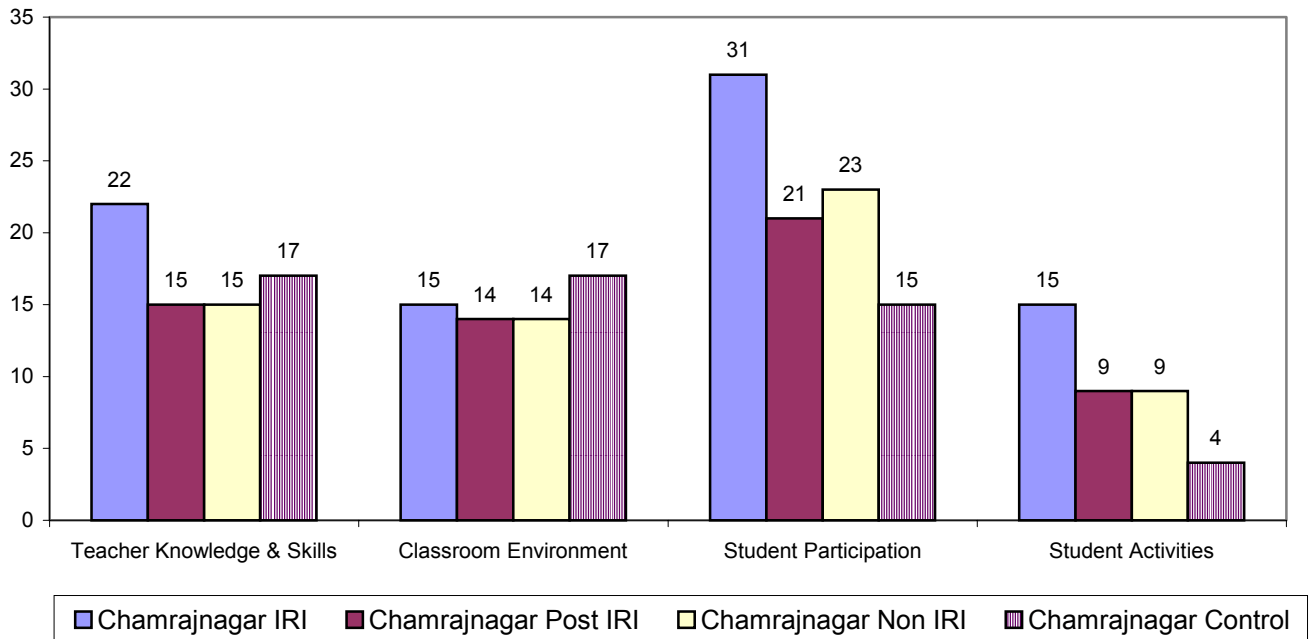
Teacher Knowledge is high in Gulbarga in IRI schools-IRI, Post-IRI and Non-IRI and also in Control schools in comparison to other regions.

Overall, there seems to be a dramatic improvement in classroom practice of teachers observed in Gulbarga, in Round II compared to Round 1. The disappointment has been the lowered performance of schools in the Chamarajnagar region.



The Teacher Foundation

**Round II-Comparison of IRI, Post, Non and Control - Chamrajnagar**



**FIGURE 12**

As observed in the earlier Figure, it is evident that during IRI-Time, Student Participation was the highest followed by Teacher Knowledge and Classroom Environment & Student Activities.

Teacher Knowledge, Classroom Environment and Student Activities were the same during Post-IRI and Non-IRI time. Student Participation was higher during Non-IRI time when compared to Post-IRI time.

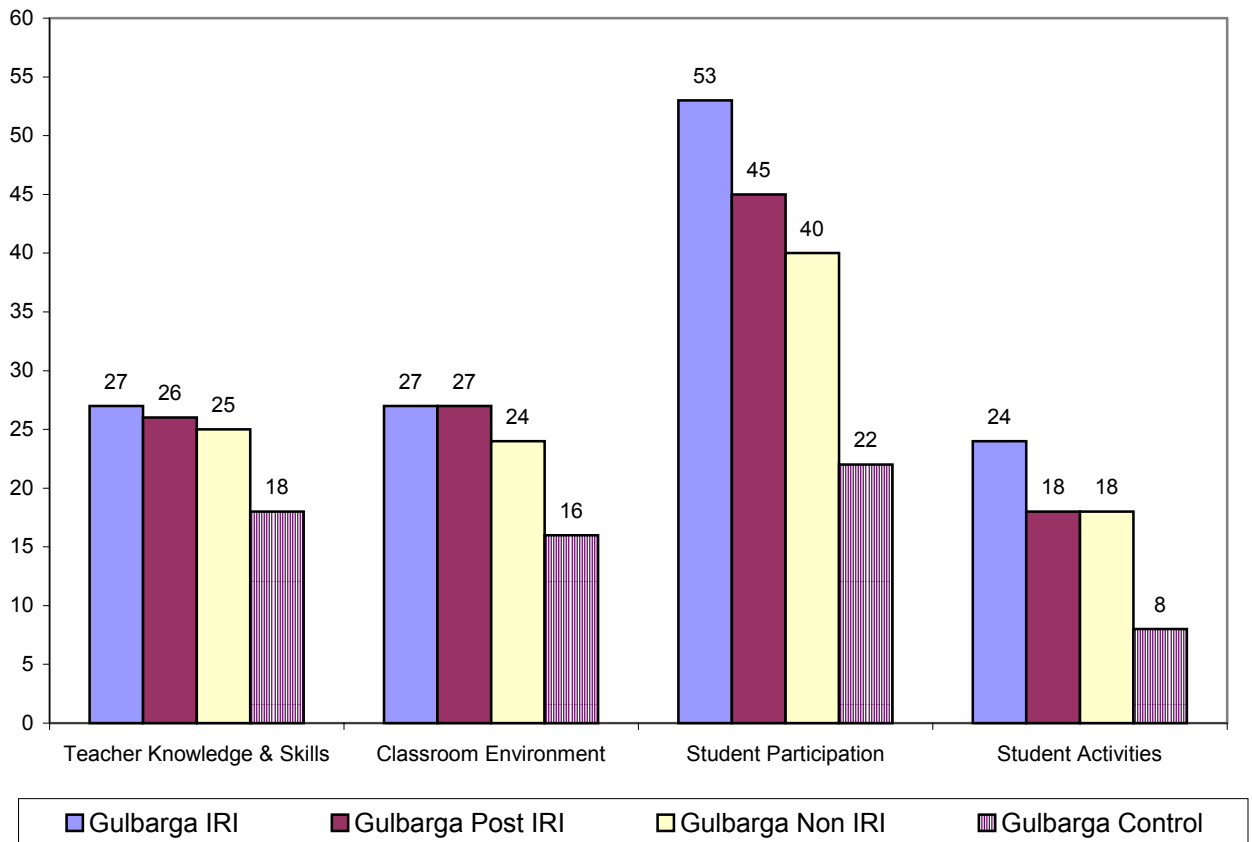
In Control Schools, the score for Student Activities was low but the scores in other categories were high and almost the same as in IRI schools. This could be attributed to the brief period of intervention of IRI broadcasts, so far, for any significant changes being evident in Teacher Knowledge, and Classroom Environment.

Overall, the scores for IRI time seem to be higher than in all other situations. The influence of IRI broadcasts is perhaps only now beginning to get felt – so it is perhaps premature to expect a transfer of learning to Post -IRI time and Non-IRI time.



The Teacher Foundation

**Round II - Comparison of IRI, Post, Non IRI and Control - Gulbarga**



**FIGURE 13**

In Gulbarga, Student Participation scores are the highest compared to the other categories during IRI-Time. The same is evident during Post-IRI and Non-IRI time too. This is indicated in Figure 13.

Comparatively Teacher Knowledge and Student Activities are slightly higher during IRI Time.

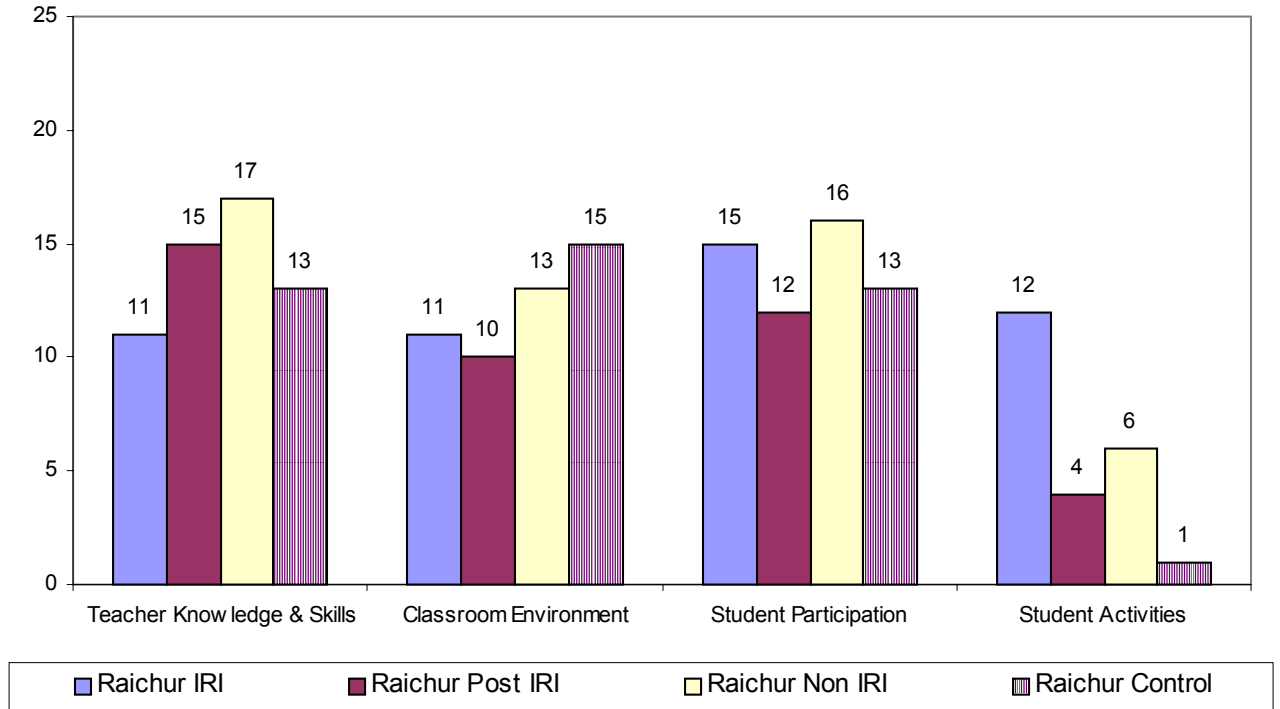
Student Participation is higher compared to other categories of pedagogy whereas Student Activities is the lowest in Control Schools.

The impact of IRI seems to have raised the scores of all the categories of pedagogy, in the IRI schools.



The Teacher Foundation

**Round II - Comparison of IRI, Post, Non IRI and Control - Raichur**



**FIGURE 14**

Figure 14 indicates that Teacher Knowledge is high during Non- IRI Time followed by Post-IRI. This could be owing to teachers' greater fluency in the regular lessons they teach – but complemented by the positive influence of IRI broadcasts.

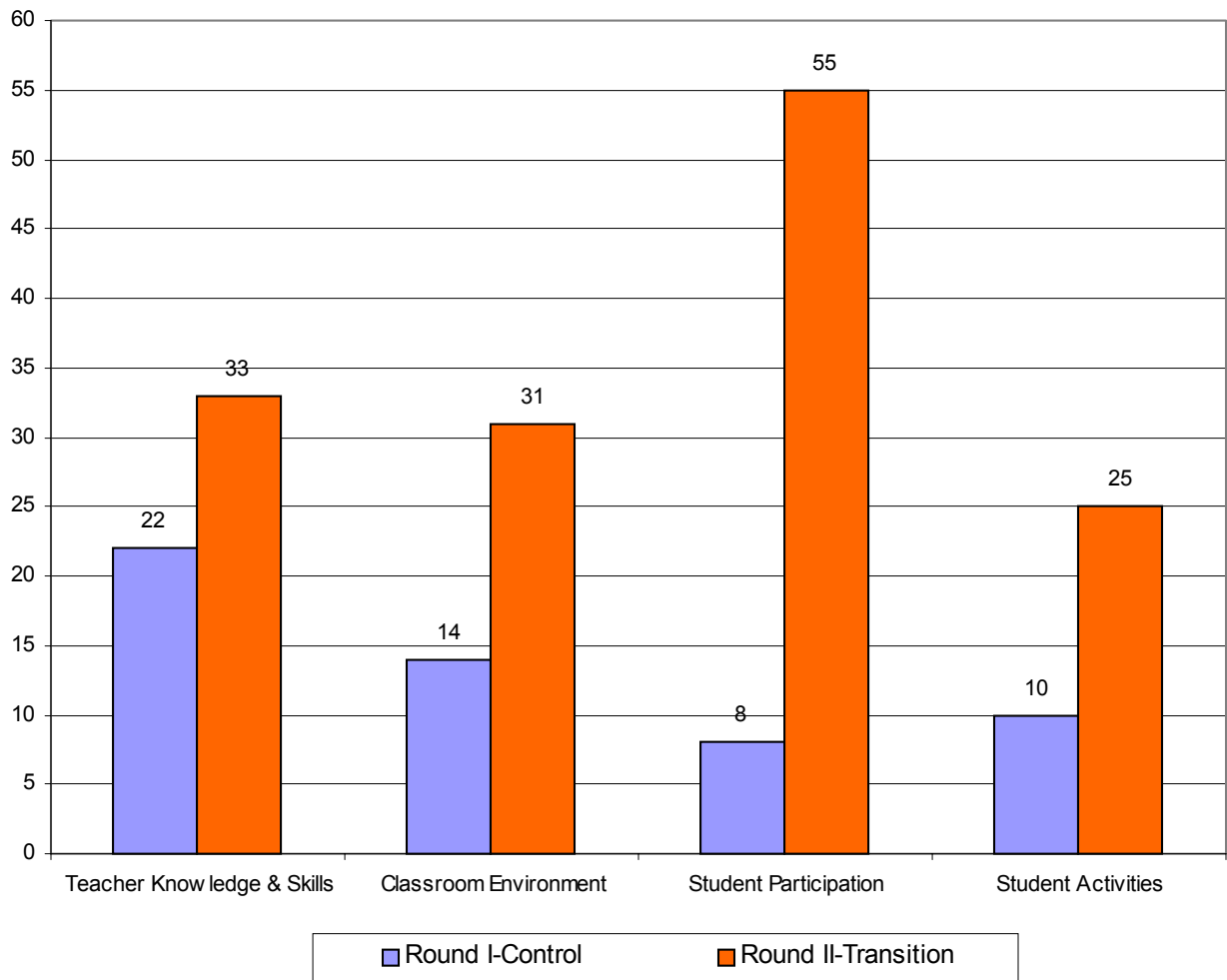
The scores are lowest during the IRI-Time in Raichur. This could be attributed to disturbances in broadcasts.

In Control schools, Student Activities is very low in Raichur compared to other categories of pedagogy, which is considerably high. Classroom Environment is relatively high.



The Teacher Foundation

**Transition of GLPS Konapuri from Control to IRI**



**FIGURE 15**



The Teacher Foundation

### **GLPS, Konapur in Karnataka Shifts from Control to IRI School Transition School**

Only one Control School in Karnataka – GLPS, Konapur. Sedam in Gulbarga district - can be justified into being categorized as a Transition into IRI School since there is evidence of:

- Availability of IRI and IVI Equipment in the school
- EDC monitoring team (Girish of Sedam) confirms the initiation of IRI intervention in this school at a later stage since the school was earlier categorized as a Control School
- EDC monitoring team confirms that the school has been regularly participating in IRI programme subsequent to the delayed initiation into IRI Programme
- IRI Trained teacher

On studying the graphical representation of data, observation documents and other data available of scores of the school in Round I and Round II, the following is observed:

- Vittal Kande, teacher at GLPS, Konapur said he was interested in the IRI Programme being introduced in his school. With the support of the HM and other interventions the school was transformed into an IRI School during the time between Round I and Round II.
- Vittal Kande scored quite well in the category of Teacher Knowledge and Skills in Round I when compared to some of his contemporaries. IRI intervention has brought great improvement in his scores in Round II. It is wonderful to see his enthusiasm level and interest in teaching. He has also watched the IVI lessons. He is ably supported by the HM of the school.
- In all the other three categories of pedagogy, namely Class Environment, Student Participation and Student activities GLPS, Konapur has shown remarkable improvement in scores. On all the 3 days of observation during the Evaluator's visit to the school in Round II, he had planned his lessons well, prepared teaching tools and also brought in local resources to foster meaningful learning. He is still not comfortable with group work and says he needs to understand how to go about it.
- One aspect that may have also contributed to this positive change is the small numbers in school and the high level of interest amongst students.
- The teacher asks many questions and allows students to interact with him freely. Students are allowed to give their opinions and take initiative in class. He uses the local dialect to explain concepts and then reverts to Kannada time and again so that children are familiar with both languages.

Being a tribal school, the teacher uses songs, movement and rhythm in his class as energizers. Children enjoy this and the songs in IRI Programme thoroughly.



The Teacher Foundation

## SOME SUGGESTIONS

1. The objectives and methodology of the lesson needs to be clearly defined in the beginning of every IRI lesson. Teachers in IRI schools were not aware of the importance of introducing and connecting goals and methods of lessons they were teaching. When this is done through IRI lessons, teachers will begin to implement such meaningful teaching practices while they are teaching.
2. IRI intervention needs to encourage teachers to enhance Classroom Environment. The lesson design must promote more use of tools by students. Also when the Radio teacher praises and using an encouraging tone, IRI teachers will learn to practice being more openly appreciative of their students. Teachers can also be made aware of this through Training.
3. Most IRI teachers use songs and games but generally they are not connected to the lesson the teacher is delivering in class. Some teachers still believe that children learn only when they write continuously. Writing and drill work is the only way to ensure learning happens according to them. Making teachers aware of the significance of IRI and introducing them to other ways of assessing students will help teachers use activities and group work as necessary elements of child-centred learning.
4. Many teachers have not understood the significance of song, movement and rhythm in contributing meaningfully to the joy of learning.
5. Each IRI lesson can have an interesting worksheet, which the teacher can use for assessment, revision, and recall or to reinforce a concept taught through the IRI broadcast. This would be most helpful in subjects such as Mathematics, English, Map Work, Science Experiments and so on.
6. Teachers in IRI Schools are using group activities, but there needs to be greater awareness and action by them to include all students in these activities. The brighter students generally get called on since the teacher is so particular about getting it right. Can the lesson design of IRI lessons address this by giving such instructions when groups need to be formed as “ ... Children those of you who have already participated in the first activity please sit down. The ones who have not been part of the group activity, now please form a group. If there are only few students in your class, teacher you may ask the same students to form the new group.” Such thoughtful instructions have been included in some Kannada lessons.
7. Some IRI teachers found IRI time hectic and stressful. For e.g. Aruna Kumari, from GHPS Agara, a very active IRI teacher felt that IRI activities stress her out since she has to listen and act immediately within the short pauses given in the lessons that are aired. When she teaches on her own, she works at her pace and also has time to plan the activities in advance. Hence she is able to prepare well and also delegates responsibilities to her students.
8. All instructions must be thought through carefully and sensitively before lessons are aired. Lessons therefore need to be carefully validated.



The Teacher Foundation

## **SUMMARY**

### **ROUND I**

- In Karnataka, Post-IRI time scores were higher for Teacher Knowledge and Skills and Classroom Environment when compared to Non-IRI and Control schools. But in case of Student Participation Non-IRI time scores were slightly higher than the Post-IRI scores but much higher than the Control scores. Student Activities remained the same during both Post and Non-IRI time.
- When comparing the three regions in Karnataka, Chamrajnagar seems to be doing better than Gulbarga and Raichur in all categories of pedagogy. Performance of Raichur in all categories of pedagogy is all time low when compared to Gulbarga and Chamrajnagar.
- In Chamrajnagar, Student Participation scored significantly high in IRI Schools-Post-IRI, Non-IRI and Control Schools when compared to other categories of pedagogy. However, the IRI schools fared better than the Control schools during this round except for Student Activities, which Control schools fared better.
- In Gulbarga, IRI schools scored slightly better than Control schools in most of the categories of pedagogy except for Student Participation, which was much higher.
- Generally the performance of IRI schools and Control schools in Raichur was very low compared to the other two regions.

### **ROUND II**

- In Karnataka, Student Participation was very high during IRI-Time followed by Post-IRI and Non-IRI Time. IRI time scores were high for Teacher Knowledge, Classroom Environment and Student Activities. In Control schools, Student Activities was quite low whereas the other three categories of pedagogy was high and was almost the same in scores.
- When comparing the three regions of Karnataka, it was observed that Student Participation was highest in Gulbarga followed by other regions. In comparison, Student Participation was low in Chamrajnagar in Control schools when compared to Gulbarga.



The Teacher Foundation

**ANNEXURE:**

1. [Round I & II - Schedules](#)
2. [Round I - Raw Data](#)
3. [Round II – Raw Data](#)
4. [Round I – Graphs](#)
5. [Round II – Graphs](#)
6. [Round I & II – Graphs](#)
7. [Categories of Pedagogy](#)
8. [Daily Classroom Evaluation Instrument](#)
9. [Three Day Summary Classroom Qualitative Evaluation Form](#)