

**Evaluation of
Computer Aided Learning Program
in Karnataka**

**Field Reports from Raichur, Bellary and
Dakshin Kannada Districts**

By

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EVALUATION OF CALP – KARNATAKA

1. BACKGROUND

Computer Aided Learning Programme (CALP) of Azim Premji Foundation - launched to 'make learning play, assessment fun and equal knowledge for all' - envisages use of computers as a medium to impact learning competencies and to create an attractive environment in the school. While the state government provides computers and the required hardware Azim Premji Foundation provides CDs designed to aid the classroom learning process in mathematics, language and environment sciences. It also provides training to the teachers.

The objectives behind setting up the CALC are:

- to improve academic learning levels,
- attract out-of school children,
- provide child centric, joyful, interactive, self paced learning, and
- facilitate improvement of attendance of children.

Training to the teachers is provided either directly or through master trainers who are trained by the Foundation. The teachers are also encouraged to integrate the CDs into the class room curriculum, which is an important aspect of the programme.

The implementation of the programme follows state specific models. In Karnataka the 'on-school' model has been adopted. Here the computers are located within the premises of the primary school and the children thus have easy access the computers.

2. OBJECTIVE OF THE STUDY

The main objective of the study was to document the CALP processes in the schools that were identified as 'good CALCs' and determine factors that differentiate them from the other CALCs. This would provide inputs to replicate the good practices in other schools.

3. METHODOLOGY

The methodology involved understanding the implementation process of the CALP by meeting the stake-holders like the Head Teacher, teachers and YIF, and children. This included group discussion with teachers and children and by attending CALC sessions. To provide a comparative perspective, a school not in the 'good CALC' list was also visited. The schools were visited in two phases between the September 15 and 30.

SAMPLE

According to the information provided by the programme implementation team, the six identified centres with a mix of well performing and other schools were as follows:

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|-----------------------------|--|
| North East Karnataka | 1. GHPS Thalur, Siruguppa, Bellary District (Well performing school) |
| | 2. GHPS Mudatnoor, Siruguppa, Bellary District ?? |
| | 3. GHPS Madagiri, Manvi, Raichur District ?? |
| Dakshina Kannada | 1. ZPHPS Punjalakatte, Belthangady, DK District (well performing school) |
| | 2. ZPHPS Kadeshivalaya, Bantwal, DK District ?? |
| | 3. ZPHPS Sajipanadu, Bantwal, DK District (Well performing school) |

DATA COLLECTION

Data was collected using a combination of the following methodologies:

- Audit Form
- Interviews – Head teacher, teachers, Instructors
- Focus Group Discussions – Head teacher, Teachers and Children
- Questionnaires – Trained teachers
- Observation in the CALC

4. FINDINGS

4.1 GHPS, Thalur, Siruguppa Bellary

This school has classes from 1 to 7 with 661 children - 327 boys and 334 girls. There are 10 teachers, including the HM. The number of teachers present on the day of our visit was 7. The HM has been in this school since 32 years; taught class 1 for 25 years; will retire in a couple of years.

CALP was inaugurated here in 2001-02 and classes 4 to 7 take part. Only three of the 5 computers are in working condition. Two computers are not working since 6 months, say the teachers. But the HM says it is only two months.

The UPS is not working well now; worked well for about 18 months in the beginning. One PC can work on the UPS for 30 minutes.

Teacher training was conducted in two batches between Aug 16 and 24 by Siddlingamurthy, subject inspector at the BRC. APF provided training on the basics for one week during summer.

Timetable for CAL has been drawn up says the HM but the teachers say it is done for this year.. There are 3 periods per class per week.

There are 67 CDs available in the school; one is lost. The HM said all the teachers have viewed CDs pertaining to their subjects. But teachers say the Kannada teacher has watched all the 11 CDs and others have 25% of their subject CDs.

Information collected from children of class VII

Three to 4 children work on one PC and three groups of 20 children have been formed. of They stayed on at the CALC till they completed watching a CD – which took an hour. They have so far watched 20 CDs.

CDs liked: Puttuvina Madhuve, Mysorinalli Ondu Dina (Other CDs recollected: Solar System, On grammar, Place value, Fractions, Rivers and Animals)

CDs that are not favourites: (after a lot of coaxing) Vikramana Parakrama and Kempapuradalli Ondu Dina.

Previous visit to CALC: about a month ago; cannot remember the CD viewed.

Observations

Overall

- A few teachers arrived in the same bus from Bellary with me
- HM was already in the school with a couple of teachers. All of them stay in the same village
- Teachers sign the attendance register kept in the HM's office before going to the class

- Mid-day meal was not prepared due to cooking gas problem – children from another village let off after lunch
- A bell is rung to indicate every class
- Cane used by most teachers
- TV set available but not used despite having a dish antenna. Packed and kept.

CALC

- The designated CALC room is used as a high school classroom; and a high school room is used as the CALC room.
- 6 teachers conducted computer based assessment on a rotation basis – at any given time there were 3 teachers in the CALC room; the male teacher and the HM were not involved in assessment.
- 3 computers were used - one each for classes 5, 6 and 7
- The teacher would read the question and ask the child to choose any option and click the mouse. The teacher would explain the question if the child did not understand it; At the end of the day one teacher was seen clicking the mouse after the child pointed the finger at the correct answer
- Children were admonished if the correct answer was not given
- At times there were many children behind the computer while one child was taking the test
- The teachers confided that computer based assessment was a waste of their time as it kept them away from regular class for the whole day. But they were merely obeying the orders.
- No records with the HM on the CALC; HM said the YIF had maintained the records.

Summary of observations

The head teacher's support to CALC is in terms of noninterference. He is supposed to have undergone training but his replies indicate that he has not undergone the training (in August). He is not aware of most details about the CALC such as the number of CDs, number of computers working, etc. The PE teacher is in charge of the CALC after the YIF left last year.

No education department functionary has visited and enquired about CALC so far. However, one of the teachers said that the fact that the Education functionaries trained them in the CD usage showed the interest of the functionaries. A CALC committee that includes the panchayat president and SDMC members has been formed but it seems to be more on paper. But the community is supportive and has contributed for some repairs, etc.

All teachers have been trained and they take the children to the CALC and stay at the centre during the CALC session. They have watched a few CDs & are trying to draw up a time-table, however integration is not taking place. No teacher has been named in-charge. No records are being maintained now.

Two computers are not working. One of them has not been working since 6 months.

4.2 GHPS, Mudatnoor, Siruguppa Bellary

This school has classes from 1 to 8 with 504 children - 277 boys and 227 girls. There are 5 teachers including the HM. The number of teachers present on the day of our visit was 4.

CALP was inaugurated here in 2003-04 and classes 3 to 8 take part. All the 5 computers are in working condition. The UPS is not working since 6 months.

Teacher training was conducted in two batches between Aug 16 and 24 by Siddlingamurthy, subject inspector at the BRC.

Timetable for CAL has been drawn up but not followed because while the periods last only 40 minutes the CDs are for 60 minutes. There are 4 to 6 periods per class per week.

There are 68 (+5 new) CDs available in the school and the HM said he had viewed 25 CDs and one teacher had viewed all the CDs. But the teacher himself clarified that he had viewed about 25 CDs. The other teachers said they had viewed 5 to 8 CDs each.

Information collected from children of class VII

Three to 4 children worked on one PC. They stayed on at the CALC till they completed watching a CD – which took an hour. They have so far watched 25 CDs.

CDs liked: Puttuvina Madhuvu, Jaadugoaligalu and Makkala Dinacharane. & Mysorinalli Ondu Dina (Other CDs recollected: Solar System, On grammar, Place value, Fractions, Rivers and Animals)

CDs that are not favourites: none, even after a lot of coaxing.

Previous visit to CALC: cannot remember.

Observations

Overall

- HM took over only about 10 days ago; was assistant teacher in the same school for 11 years
- School is situated about half a km from the village and has no compound

CALC

- All the teachers are young and enthusiastic about CALP. Their lament: they have a favorable HM but not have a working UPS.
- Teachers said they finished the online assessment in one day by working till 8.30 P.M!
- No records are maintained on the CALC (the YIF used to maintain the records, said the HM and teachers)

Summary of observations

The Head Teacher has just taken charge, has undergone training, is very enthusiastic and promises to make his school's CALC a role model. His predecessor did not support CALC and had even asked his teachers not visit the CALC. The YIF's post is vacant since last year but the Head teacher says he will take the help of the community and appoint a YIF very soon. The HT is sure of community support as he will explain the positive points of the programme to the people.

Teachers say that they visited CALC along with the children.

The CALC records were available when the YIF existed but not anymore.

No department functionary has visited the CALC. However, training on CDs was given at the BRC in August 2005.

All the PCs are in working condition but the UPS needs repairs.

4.3 GHPS, Madagir, Manvi, Raichur

This school has classes from I to 7 with 491 children - 263 boys and 228 girls. There are 10 teachers including the HM. The number of teachers present on the day of our visit was 9.

CALP was inaugurated here in August 2003 and classes 1 to 7 take part. Four of the 5 computers are in working condition. During online assessment installation a CD got stuck in a computer two months ago. Class I also?

The UPS is working; it was recently repaired by spending Rs. 3,500 – amount raised by the SDMC with teachers contributing Rs. 100 each.

Teacher training was conducted in October 2004 by Mr. Sripad from APF. Ravi, an asst. teacher has taken training in basics from a private institute by paying Rs. 1200.

Timetable for CAL has been drawn up but not followed. There is one periods per class per week. But Ravi says it is two periods.

There are 68 (+3 new) CDs available in the school and the HM said he had not viewed any CD. Ravi says he has viewed about 35 CDs. The other teachers said they had viewed 15 to 20 CDs each.

Information collected from children of class VII

Three to 4 children worked on one PC. They spend 45 minutes during each visit. stayed. They have so far watched 12 CDs.

CDs liked: Puttuvina Madhuve, Akshara Bandi: Solar System, Oorige Bantu Circus, On division.

CDs that are not favourites: none, even after coaxing.

Previous visit to CALC: some have visited the centre a couple of times this year; while a few have not gone there at all.

Observations

Overall

- HM took over 8 months ago; he has 22 years of experience.
- The visit was on a Saturday – Hyderabad Karnataka Day.
- The school has a bio garden and a compound

CALC

- Teachers have requested for training on CALP
- Records are maintained
- CALC committee formed

Summary of observations

The Head teacher has helped in repairing the UPS, not done by the previous Head teacher. But he is not proactive, as he is awaiting retirement. Nor has he undergone training (as he was not in this school then) and all questions on CALC are directed towards the assistant teacher who is in charge of the CALC in the absence of the YIF. But as per the Foundation directive a regular teacher is not supposed to hold that post. Since the assistant teacher is a trained hand he has been given charge.

All the records are up-to date.

Officials hardly visit the CALC. In fact teacher-training has also not been conducted at the block level. The last training the teachers had was more than a year ago, conducted by Foundation co-coordinators (in October 2004). Without basic teacher training there would be several problems in implementation

The community has been supportive to the extent that each child has been contributing Rs.2 a month for the CALC. There is a CALC committee formed as per the Foundation directives.

Teachers do not know how to fit the CALC into a time-table.

4.4 GHPS, Punjalakatte

This school has classes from 1 to 7 with 396 children - 198 boys and 198 girls. There are 11 teachers including the HM. All the teachers were present on the day of our visit.

CALP was inaugurated here in November 2001 and classes 3 to 7 take part. Class 2 children are being taken to CALC once a week for orientation.

There are 8 computers but only 6 are in working condition. Two computers are out of order for the last 3 months. The YIF suspects the technicians will not come till the AMC expires in December.

The UPS has been repaired recently. The HM says it runs well but the YIF lists its shortcomings and says only four of the 8 PCs could be run on UPS. But the normal practice is to run only one PC on UPS.

Azim Premji Foundation team provided teacher training for two days in November 2004. All the teachers were trained but only 8 of them are said to be confident of using the PCs themselves.

Timetable for CAL has been drawn up by the YIF in consultation with the teachers to get between 2 and 4 periods per class. However, the timetable has been prepared by using the SUPW periods and not subject periods. Each child gets to visit the centre at least once a week or a maximum of twice a week.

There are 73 CDs available in the school and about 5 CDs have been watched by teachers each. During June when the workload is light teachers watch the CDs or spend sometime on the PCs to get an orientation. But after that very few teachers visit the centre, according to the YIF. She has prepared a list of CDs matching them with the competencies and shared it with the teachers. The class teachers tell the YFI which CD can be shown to the children.

Information collected from children of class 5, 6 and 7

Three to 4 children worked on one PC. Two gender based groups have been formed in each class. Children in class 6 and 7 have watched more than 50 CDs while class 5 children have watched a little less. The YIF says children get some 20 minutes to spend at the centre; it was observed that 30 minutes is the best time attained by a few groups.

CDs liked: Akshara Bandi, Brainstorm, Jaadugoaligalu and Energy

CDs that are not favourites: How things work? Mysorinalli Ondu Dina, Loss and Profit, Bhinnarashi, none, even after a lot of coaxing.

Previous visit to CALC: a week back.

Observations

Overall

- Children seem to enjoy a lot of freedom; when a few class VII children saw me entering class I to talk to the teacher, they came in and also sat besides the class I children for the photograph and the teacher did not mind it.
- Trimester tests had been completed, yet all the teachers were taking classes.
- Children kept themselves busy even during a non-supervised SUPW session.
- The school has a huge open area and shares a very big ground with the high school.
- The Head teacher has a 20 year service, 16-years in this school.

CALC

- The Centre was started in November 2001
- The YIF (Arathi) joined a year ago and learnt about the vacancy from a friend who is neighbour of the school
- Has prepared the time-table and a competency list for 72 CDs which she has given to the teachers to help them integrate
- Teachers come to the CALC only during the first month of the academic year according to the YIF
- A class 3 teacher was seen at the CALC with her child on a separate computer while the YIF assisted the other children
- Children of classes 5 onwards were busy practicing Kannada typing – in preparation for the local content programme
- The YIF said a few children in classes 6 & 7 preferred to do homework to viewing the CDs; they did not like to answer any question in the CD, instead played games; the so called 'dull children' did better than the 'smart children' in the CBA
- The YIF also said children did not take the CALC classes seriously; they had to be refreshed about what they learnt in the previous class.
- During power cuts when the PCs run on the UPS all the children sit in front of one computer and watch the CD; one child gets to operate the PC for about 5 minutes.
- Teachers say that they do not find enough time to visit the CALC or view the CDs, but find a lot of content in CDs they have viewed matching the syllabus
- CALC sessions are not held during exams and holidays
- YIF does not find too much of a difference between the SDMC and the CAL committee as most of the SDMC members are on the other list as well
- No proper revenue generation is possible because the nearby high school has computers
- CDs on social science were requested by teachers
- Though one teacher said that another orientation was required, the rest of the teachers said that they do not need any training as they all know basics

Summary of observations

The head teacher provides only moral and administrative support to the CALC; he has made sure that the CALC has all its requirements. For instance, when the YIF quit a replacement was immediately arranged.

The YIF joined a year ago after the previous YIF quit. YIF has put in extra efforts in preparing a list of CDs and encourages teachers to view CDs to aid integration. She has developed a list matching the CDs to competencies in the syllabus to encourage the teachers to integrate. But teachers have not been able to watch all the subject CDs.

Teachers find time only in first month of academic year (June) to visit the CALC.

Teachers are usually not present during the children's visit to the CALC. And even if they are present they are busy correcting notes, etc. No teacher has been made CALC in-charge.

There is no monitoring system in place by the department officials for CALC. When they visit the school they also visit the CALC, but the school visit itself is a rarity according to the school staff.

The Department has not given training so far. Azim Premji Foundation co-coordinator's training in October 2004 is the only training that all the teachers have undergone except 2 teachers who have undergone INTEL training.

By and large the community has supported the programme; there is a feeble voice of dissent. Funds have been collected from the community for CALC use.

Integration is currently through children who tell the teachers that they viewed a particular concept on the CD.

2 PCs out of the 6 PCs are not in working condition for the last 3 months.

4.5 ZPHPS, Kadeshivalaya

This school has classes from I to 7 with 384 children - 195 boys and 189 girls. There are 11 teachers including the HM. On the day of our visit nine teachers were present.

CALP was inaugurated here in September 2003 and classes 3 to 7 take part. Class 2 children have pressurized the YIF to take them to the CALC and so a weekly orientation is held for them – 2 hours every Saturday.

There are 5 computers but only 4 are in working condition. One computer is out of order for the last 2 months; the maintenance company is not responding to the calls for repair.

The UPS fuse keeps burning out, otherwise there is no problem. When there is a power shutdown only one PC is run on UPS; the FYI does not know how long the UPS can supply power.

Azim Premji Foundation team provided teacher training for two days in October 2004 to all the 11 teachers; two teachers were also trained by Intel for 17 days. During discussion only seven teachers said they were confident of using the PCs themselves.

Timetable for CAL has been drawn up by the YIF in consultation with the teachers allotting 3 periods per class per week. Each child gets to visit the centre at least thrice a week. The YIF uses the blackboard at the centre to connect the games and the CD content to the syllabus of a given class. The entire class watches the CD on a single PC which is operated by a student; for each section of the CD content there is a new student to operate the PC.

There are 73 CDs available in the school and a few CDs have been watched by most of the teachers. The YIF wants the teachers to visit the CALC regularly and view more CDs.

Information collected from children of class 6 and 7

The whole class makes do with one PC; while one child operates the rest watches. But when there are new entrants orientation is given on one PC for three students. They spend 40 minutes at the CALC. Children have watched more than 50 CDs. Class 7 children seem to have watched all the CDs, except for the latest ones.

CDs liked: Solar System, Vikramana Sahasa, Jaadugoaligalu, English CDs, Mysorinalli Ondu Dina, and Shambhu's green fields.

CDs that are not favourites: Choo Mantar, Shambhu's green fields.

Previous visit to CALC: before the trimester tests, 10 days back.

Observations on the day

Overall

- The Head teacher is not supportive and is not even in the school for most part of the time; A senior lady teacher is in-charge
- SDMC is very active, holds regular meetings and has a good control over the school (teachers were observed signing the registers before taking the register to the SDMC meeting)
- School has a compound wall and gate
- Community members have donated liberally to the school, including to the CALC

CALC

- The YIF (Shalini) has been here since the inception of the programme
- Requests for a separate CAL committee as the SDMC acts as the CAL committee currently
- CALC generates revenue by teaching local college children - a certificate is awarded to those who pass the course
- Teachers from 2 neighbouring non CALC schools brought their children here to get a feel of the computer
- A few class 6 girls were seen watching the latest English CD during lunch break; two boys were viewing a bike racing games CD
- Like in Punjalakatte school, as revealed by the YIF, some of the 'smart children' have not done very well in the CBA; But most of the children from all classes have scored above 20 with the highest by a 4th grader (49 out of 50)
- There is some confusion regarding the warranty period – the school and YIF think it has expired, but the maintenance company says it has expired
- Teachers requested for CDs in History, Civics, Geography and Grammar for higher classes and more CDs for lower classes which will have stories and songs!
- The INTEL trained teacher pointed out that the information regarding longitude and latitude was wrong in the CD 'India & her neighbours'
- The PE teacher who is in-charge of the CALC enquired if he could hand over the responsibility to the INTEL trained teacher who was more equipped.
- Teachers said that only the bright children benefit the most from the CALP & hence the programme did not really lighten their classroom teaching load
- The Block Education Officer has barred the school from collecting funds and hence the staff is worried about managing the CALC; but the SDMC says it will manage with the funds they already have

Summary of observations

The Head teacher is never present in school as he is a union leader. His deputy is the senior most teacher who is not too aware of the CALC. However, he does not obstruct the CALC functioning in any manner, nor is pro-active.

The YIF follows an interesting model - one child operates the PCs while the rest watch. The concept is then reiterated on the black board available at the CALC. The teachers want this model followed so that the CDs are actually used for learning the concepts in the syllabus. The YIF is also asked to take regular English classes if the teacher is absent. Many records have been maintained.

There is no monitoring system and no department official has visited the CALC; nor the department has given training so far. Azim Premji Foundation co-coordinator's training in September 2004 is the only training for all the teachers. Two teachers have also undergone INTEL training

The highly supportive community has contributed funds for CALC. A donation list is put up in the CALC. The SDMC says the CALC will not be shut for want of funds.

One computer has not been working since 2 months. The YIF has a different model in operation which has been promoted by the teachers who find it useful. The YIF is trying to 'integrate' the CDs to the syllabus, but the teachers have not been doing it in the class. The PE teacher has been made the school in-charge of the CALC. But he wants to hand over this responsibility to a teacher who has been recently trained by INTEL as he would be more competent.