

**Computer Aided Learning Program
A Longitudinal Study in Karnataka**

A Qualitative Report

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1. Introduction

The Computer Assisted Learning Programme (CALP) was a joint initiative of the Azim Premji Foundation (APF) and the Karnataka State government. Under this initiative, semi-urban and rural government higher primary schools were provided with PCs and curriculum oriented educational CDs to schools. At the school the PCs were set up in a separate room within the premises which was called Computer Aided Learning Centre (CALC). During school hours, students were to use the CALC without any fee. The main objective of the initiative was to catalyze elementary education in these schools through the use of educational CDs developed by APF. A secondary objective was to encourage the use of IT resources of the CALC outside school hours by the community by paying a small fee.

CALC employed a IT-trained local youth known as the Young India Fellow (YIF), who facilitated use of the CALC resources by the students and the rural community, and managed the CALC. Salary of the YIF and operating expenses of the CALC during the first year were met by APF. Thereafter, CALCs were expected to become self supporting through paid use of the CALC by the community, benefactors, and other forms of community support.

Phase 1 of the initiative was inaugurated in March 2001 in 12 schools around Bangalore and extended to 36 schools¹ progressively by December 2002. Phase 2 covered 55 more schools; by June 2004 225 CALCs covering 80,000 children were in operation throughout Karnataka State.

In December 2002, the Foundation and the National University of Singapore (NUS) conducted a study of the 35 Phase 1 CALCs². That study focused on the use of the CALC by students and the general attitude of the community towards the CALC. The present study revisits these 36 CALCs of phase 1 and a sample of 10 CALCs³ of Phase 2.

¹ Appendix 1a: 36 Phase 1 CALCs

² One school (Abbenahalli) with 6 computers was removed due to non-performance and the computers were split into two groups and provided to two schools in the same taluq (Chikkaturupathi and Anepura) thereby increasing the number of CALCs to 36

³ Appendix 1b: 10 Phase 2 CALCs

2. The Present Study

2.1 Objectives and scope: The main objective of the present study was to gain an in-depth knowledge of the current state of use of the CALC by the school and the community and develop guidelines on how the objectives of the CALC can be fully achieved. The present study had two parts. While one focused on collecting data on structured close-ended questionnaires from the school and community members the other part focused on collecting qualitative information on open ended structured questionnaires only from the immediate stakeholders: Head teacher (HT), Teacher, Children and School Development and Monitoring Committee (SDMC) President. This report focuses on the qualitative findings.

2.2 Data collection instruments: While for the first part of the study eight questionnaires were used (Non-user; Mediated User; Direct User; HT; Teachers; YIF; SDMC President; and Village Panchayat/Town Council Chief). The second part, which is the focus of this report, consisted of six questionnaire formats⁴:

1. Audit Form
2. HT Questionnaire
3. Teacher Discussion Guide
4. Children's Discussion Guide
5. SDMC President Questionnaire
6. YIF Questionnaire

These questionnaires were initially developed in English and translated to Kannada. The questionnaires were field tested through a pilot visit⁵ to some of the CALCs in one of the districts close to Bangalore. The refined Kannada questionnaires were used in the field study.

2.3 Methodology: The data collection was outsourced to an agency⁶ whose data collectors were trained by APF and given a background of CALP prior to the field visit⁷. Two teams of three data collectors each led by a team supervisor collected the required data from 46 CALP schools (36 CALPs of the first phase and 10 CALPs of the second phase). The data collection commenced on the 28th of August and was completed on 5th of October, 2005. Qualitative data was collected through individual interactions with HT, YIF and SDMC President. From the teachers and the children group response was collected.

⁴ Appendix 2: Qualitative questionnaire formats used in the study

⁵ Appendix 3: Pilot study report

⁶ MODE: MODUS Analysis & Information Pvt.Ltd.

⁷ Appendix 4: Instruction sheet to Data Collectors (provided after the training)

3. Findings

This report focuses on the qualitative findings of the study in which the scope was limited only to the CALP related aspects of the school. The focus here was on the 36 CALCs of phase 1, and any major differences with the 10 phase 2 CALCs, has been provided at the end of the main sub-sections.

3.1 CALC Audit

The audit form provided the current status of the CALP in the schools. The information was sourced from the HT, teachers and the children. The following findings are related to the CALP in 36 phase 1 schools.

School background:

Most of the CALCs were situated in Higher Primary Schools with an average PTR (Pupil-Teacher Ratio) of 38:1. Therefore the schools were not very different from normal Government Primary Schools and the PTR was within the prescribed ratio of 40:1. Less than half these schools had student strength of 250 or less thereby falling into the bracket of medium sized primary schools.

APF had provided the CALCs with 73 CDs. However around 11% of the schools had less than 50 CDs. But most of the schools had more than 60 CDs. And there were no schools which claimed to have had less than 40 CDs.

Training information:

Most of the schools had received training on the CDs exclusively by APF representatives and in many cases training had been provided by APF representatives on the use of 'word' and 'excel' as well. And in a few of these schools training was given even on 'paint brush' and other creative programs. Thus, teachers in most schools were also trained beyond the mere usage of CDs. Overall 69.2% of the teachers in the phase 1 schools were equipped with basic computer skills.

When APF representatives had not provided the training in a school, the schools had received the training from organisations such as INTEL and APTEC/NIIT, especially on the use of 'word' and 'excel'. Very few of these schools (5.5%) have received training from the Education Department Functionaries. While 16.6% of these schools had not received any training on 'word' and 'excel', most importantly, one school had not received any training - including APF training on CDs.

Information on classes involved in the CALP & use of the CALC by the children:

In most of the schools children up to class 7 were involved in the CALP. The largest group (36.1%) of schools was those that included class 1 children into the CALP. On the other hand a small percentage of schools (13.9%) extended the CALP up to class 8. APF had allowed the schools the freedom to choose the classes they would want to involve in the programme, however informally it has been informed that the CDs are best suited for children in classes 3 to 7 and some schools (27.7%) had adhered to these guidelines.

Among those children involved in CALP, most were allowed to work on the computers by themselves without any interference by adult moderators unless it was requested by the children, however in a significant number of the schools (38.8%), 5 or more children used one computer at the same time. Given the number of computers available in each school, APF had felt that 4 children per computer was the best children-computer ratio to be adhered to. This ratio of 4 students per computer or less was followed in a little more than half the number of schools.

Children in about 30% of the schools felt that *all* the CDs were useful and another 40% felt that *more than 25 CDs* were useful. However, children in the remaining schools felt that *less than 25 CDs* were useful. Therefore in a majority of schools children considered at least 25 CDs useful, however, what is of concern and to be probed further is that in more than a quarter of schools the usefulness of CDs was quite limited as only less than 25 CDs were considered of any use.

In few schools it was felt that 'almost all' the children participating in CALP had acquired the basic skills of using a computer and in few others it was felt that 'only a few' children had acquired the skills. Thus, there were a small percentage of schools at both ends of the spectrum, but the majority of the schools held the view that many of their children had acquired the basic computer skills. This signifies that all the schools were not confident that all their children participating in the CALP had acquired the basic skills of operating a computer.

There was little doubt regarding the enjoyment children got by participating in computer aided learning and the positive impact it had on their learning. In most of the schools the HTs, teachers and the children themselves subscribed to this view very clearly.

CALC infrastructure & upkeep:

Though most of the schools had proper infrastructure in place and had kept the CALCs in order, still few schools existed which had no provisions for a separate room for the CALC and some had also not kept the CALCs neat & clean. In few of the schools the CALCs were not big enough to

accommodate all the computers provided to the school and hence computers were not placed suitably hampering its usage by the children.

A surprising revelation was that in a few cases (5.5%) more than one school shared the CALC facilities. This is surprising because in Karnataka each CALC was for the exclusive use of a single school.

Maintenance & breakdown issues:

A very small number of schools (8%) had all the computers in working condition but a large number of schools had frequent breakdowns of computers. Of the total computers available in the phase 1 CALCs only 75.3% of them were in working condition. Compounded with the problem of computer breakdown was the UPS (Unlimited Power Supply) breakdown affecting close to 20% of the schools. Majority of the schools felt that between 5 to 7 hours of electric supply was required even if they possessed a UPS indicating that UPS had not been of use to all the schools.

Record maintenance:

The records expected to be maintained were 'teachers viewing the CDs', 'children viewing the CDs', 'revenue generation records' and 'visitors record book'. All the mentioned records have not been maintained by most of the schools. However, the 'visitors record book' was maintained by a majority of schools (58.3%).

Support & integration from teachers:

There was a separate teacher responsible for the CALC in a majority of the schools which also indicated that not all the teachers in these schools were deeply involved in the programme. However, in a vast majority of schools a time-table was in place and a majority of schools had also allotted at least 3 periods per week for every class. Of these schools, interestingly some were able to provide one CALC session to every participating class on a daily basis! A majority had used subject periods to accommodate CALC sessions indicating a positive trend as teachers do not wish to give up their periods and normally prefer to use non-academic periods for the various programmes that are implemented.

Teachers in very few schools felt that *all the CDs* were useful. In 36% of the schools they felt that *more than 50 CDs* were useful. However in about 22% of the schools teachers felt that *less than 25 CDs* were useful and this is of concern.

Community & official support:

A majority of the schools felt that the community had supported the CALP. A majority of schools also indicated that adequate official support is lacking. They also said that Education Department has no monitoring system in place for the CALP. However the schools consider the support from the community and the officials as important for them and currently many schools find that there is lack of such a support.

PHASE 2 SCHOOLS:

10 schools from the phase 2 were included in the study. The CALP was inaugurated in these schools nearly two years after the implementation of CALP in the 36 schools of phase 1. Hence CALCs in these schools were relatively new compared to CALCs in phase 1 schools. Differences were observed between the CALCs in the two phases in terms of some parameters. Only those parameters with considerable difference have been highlighted under the sub-sections covering phase 2 schools.

In Phase 2 CALC schools:

- All schools were provided training on APF CDs by the representatives of the Foundation. (but with regard to training on word, excel and other programs there was little difference between the schools of the two phases).
- None of the CALCs were found catering to more than one school
- The infrastructure requirements and upkeep of the CALC premises was up to the mark in all the schools.
- The CALCs never had frequent computer breakdowns. Only 20% of the schools had breakdown sometimes. Of the total computers in the phase 2 CALCs most (94.4%) were in working condition.
- There were more schools (80%) which had a separate teacher / person in-charge compared to phase 1 (66.6%). This indicated that fewer teachers are deeply involved in the processes of CALP (though almost similar percentage of teachers, 67.2% in phase 2 and 69.2% in phase 1, felt that they had acquired the basic computer skills).
- Lack of deeper teacher involvement also probably explains why only 10% of the schools used subject periods for creating CALC periods in the time-table while almost 39% used subject periods in phase 1. However, all schools had a time-table in place for CALC usage by children compared to this only about 78% schools in phase 1 had a time-table.
- Number of schools where children found *less than 25 CDs* useful was higher than in phase 1.

- Only 10% of the schools had children who felt that *more than 50 CDs* were useful compared to children feeling that way in little *more than 33%* of phase 1 schools. Thus comparatively, there were more schools in phase 2 where children were dissatisfied on the usefulness of the CDs.
- There was no school where the teachers felt that *less than 25 CDs* were useful.
- 90% of the schools felt that there was a monitoring system in place for the CALP (against the 47.2% of phase 1).
- 70% felt that Education functionaries' support was available for CALP (against 47.2% feeling so in phase 1)
- A majority of schools maintain all the required records with 60% being the lowest figures (maintaining revenue generation record) and 90% the highest figure (maintenance of visitor's record book) for maintaining record books.

Thus, children's opinion on the number of CDs that are not useful and lack of usage of subject periods for CALC sessions by teachers emerged as the two negative differences in phase 2 when compared to phase 1. On all other parameters phase 2 schools show a positive difference in the 'health' of their CALC and implementation of the CALP.

3.2 HT's (Head teacher's) perspective

In more than half the schools the HTs had been in the school for over 3 years and in a few others (16.7%) they had been in the school for more than 2 years. This indicated that a good majority of schools had HTs who had been a part of the CALP for a considerable period of time thereby being able to trace the evolution of the CALCs in their schools. If the HT was not part of the school for more than a year, he was substituted by a teacher having served for the longest time at the school, for the purpose of this interview. It is not out of context to mention here that of the HTs interviewed a large percentage of HTs (47.2%) had not received any training. Of the rest who had received training, only 30.6% of the HTs had received training on APF CDs.

When CALP was launched the HTs felt that along with *improving the knowledge of children, increasing computer literacy* among children and *facilitating children's learning* it would also *improve the respect of the school*. Very few of the HTs had no change from the initial opinion, but a good majority (61.4%) of them confided that their opinion at present was better than the initial one as children's knowledge had improved more than expected levels. Of concern was that about 11% of the HTs felt that CALP had let them down as it did not meet their initial

expectations and another small percentage (8.3%) of them felt that there was a need for the YIF, which was not felt earlier.

Though a majority of HTs felt that CALP was better than their initial expectation, while tracing the history of CALP an equal percentage of HTs felt an improvement and downward trend in the CALP. Those who felt that there were improvements cited the increase in children's learning, enrollment and attendance and a decrease in drop out as the main reasons while those who felt the CALP had seen a downward trend cited infrastructural problems. Of the latter most of them felt that CALCs functioned well during the initial years but tapered off due to lack of financial resources in maintaining YIF, computers and UPS. They also cited certain departmental rules that did not allow them to make a success of CALP. The department rules stated as hurdles were to do with completion of syllabus and involvement of teachers in other work allowing them no time to get involved in the CALP as deeply as they desired.

Among the factors of success maximum number of HTs felt that a combination of support from all the stakeholders was responsible. Very similar percentage of HTs considered children's interest in the programme also as the reason for success of CALP. A small percentage also identified 'good CDs' as a success factor. *Teacher support* and *SDMC support* followed *children's interest* as the top three individual success factors. ***Children's interest*** was cited as the single most important reason for success of CALP by largest number of HTs (36.2%). Teachers' support was considered as the single most important reason for success of CALP by about 20% of the HTs. Though support of the YIF was mentioned only among 'other' success factors, among the factors responsible for failures YIF issues were put forward by a large number of HTs along with infrastructural issues. And a significant percentage (30.5%) felt that the presence of a well-trained YIF was a non-negotiable for the success of the CALP.

The reasons attributed to failures of CALP were also viewed as the problems that were foreseen for the CALP. Most of the HTs saw every imaginable problem regarding the infrastructure and maintenance of CALC (centre) as a hurdle for CALP (programme). Only half the HTs felt that CALCs will continue to exist as long as schools exist and the other half felt that financial resources are the key for the continued existence of CALCs.

Largest number of HTs (36.1%) felt that the main benefit of CALP was that children of the poor could get an opportunity to work on computers. Almost the same percentage of HTs felt that the main benefit of CALP was that it facilitates children's learning and improves their knowledge as well as grades. '*Opportunity for joyful learning experience*', '*usefulness for children due to the presence of text related content*', '*children understanding concepts easily due to the CDs*', '*good*

stories and cartoons and *'improvement in general knowledge'* were the opinions expressed by the HTs. A majority (66.6%) of HTs felt that content in more than half the CDs matched with the syllabus and according to the largest number of HTs the integration of CD content to what is taught in the classroom took place due to the active participation of teachers who showed the CD to the children after teaching the related concept in the class. There were no roles mentioned for the HTs themselves in this process. Among the suggestions to improve the CD content the largest number of HTs sought more number of CDs and CDs with depth of information on a given topic. The next largest group was of HTs who asked for separate CDs for different classes. However, the third largest group of HTs was of those who felt CDs were good enough and hence had no suggestion to offer.

In phase 2 CALC schools:

- 90% of the HTs have been posted in the school for more than 3 years (as against 52.8% of HTs in phase 1 schools). Thus almost all the HTs in phase 2 were in the same school when CALP was launched.
- More number of HTs had undergone CD training (40% HTs in phase 2 as against 30.6% of HTs in phase 1 schools).
- More number of HTs felt that the CALP had turned out to be worse than their initial opinion (30% among phase 2 school HTs against 11.1% among HTs in phase 1 schools).
- Community support was cited as the single most important success factor by majority of the HTs.
- Maintenance issues were in the forefront regarding problems foreseen for the CALP as half the HTs specifically identified it as a hurdle and only 20% felt that CALP will exist as long as the school exists.
- Half the HTs felt that CDs were fine and no changes were required (as against only 27.7% of HTs in phase 1 schools)

The perception of the HTs in phase 1 and phase 2 schools were more or less similar except in a few of the parameters. Though in phase 2 the community support was considered as an important factor unlike in phase 1, the presence of YIF has come across as a strong non-negotiable for the success of CALP by HTs of schools in both the phases.

Similarly maintenance of CALC was seen as the major hurdle foreseen for the CALP by HTs in both phases, however 50% of the HTs in phase 1 felt that the CALC will function as long as the school exists, but only 20% of the HTs in phase 2 schools felt so.

The responses given by the HTs indicated that they are not involved deeply in the CALP. Most of the HTs have not received any training on the use of computers or CDs and feel that issues of integration are best left to the teachers. Most of them feel that the CALP requires support on certain fronts, such as financial support, for it to survive for long. Whether the CALP was set up during phase 1 or phase 2 the issue of maintenance of computers and UPS has cropped up and is a critical one to be addressed.

3.3 Teachers' perspective

A group of teachers in all the schools that were studied were asked a similar set of questions that were posed to the HTs of these schools.

From the responses of the teachers it was learnt that a majority of them initially thought that it will improve children's learning and for teachers in more than 80% of the schools it turned out to be better than what was thought initially, and unlike the high percentage among the HTs, only teachers in about 5% of the schools felt let down from the initial expectations. Teachers in a majority of schools felt better than what was expected initially because it has *improved children's knowledge* and also *improved the results*. In around 22% of the schools the teachers also felt that *children's self confidence* had improved. Like the HTs in phase 1 schools, largest number of teachers too felt that the single most important reason for the success of CALP was the tremendous support for the programme shown by the children. Among the other factors of success identified by the teachers were the CDs, followed by community support and then teacher support. Interestingly teachers in very few schools (5.5%) felt that HTs' support was a success factor, on the contrary around 22% of the HTs found teachers' support for the CALP as one of the success factors. Issues with the maintenance of YIF and lack of financial support were considered as the reasons behind failure of CALP by teachers in the largest number of schools. Teachers in around 36% of schools believed that regular financial support to maintain the computers as the non-negotiable for the success of CALP.

Teachers in half the schools foresaw maintenance issues as the hurdle. Payment of YIF salary and other financial constraints are seen as other hurdles for the future. Though teachers in a significant number of schools felt that the CALP will last as long as the school runs, the majority put conditions to be met for the CALP to last as was the case among the HTs.

Teacher in nearly half the schools felt that improved results shown by the children was the biggest benefit of CALP and almost all the teachers believed that teachers should watch all the

CDs available in the school rather than watch only CDs related to certain subjects. This however could be because in the lower classes the teachers teach all the subjects. But the truth of the matter is that over the years almost none of the teachers have been able to view all the CDs.

According to teachers in a majority of schools, the content in the CDs have helped improve the general knowledge of the children. Teachers in most of the schools believed that at least 50% of the CD content matches the syllabus. Among the suggestions put forward to improve the CD content teachers in the largest number of schools believed that more CDs are required and those seeking class-wise CDs formed the next largest group. The teachers were said to be integrating the CDs in most of the schools by allowing the children to view the CDs after the topic had been taken up in the class. Teachers in a significant number (27.7%) of schools said that they are solely responsible for the integration of CDs into the syllabus.

In phase 2 CALC schools:

- Majority of the teachers felt that CALP had been better than what was expected, and unlike the opinion of the HTs in these schools only 10% felt that it had been worse.
- The SDMC support was considered as the single most important reason for success by teachers in maximum number of schools. Among the other reasons the teachers considered themselves as crucial for the success of CALP.
- YIF was clearly the non-negotiable for the CALP, considered so by all the teachers.
- In 40% of the schools the teachers considered CDs as a good teaching aid and hence being very beneficial.
- In 40% of the schools teachers sought better navigation of the CDs and also more number of CDs.

SDMC's importance was highlighted for the first time and secondly teachers in a significant percentage of phase 2 schools voiced their opinion regarding the navigational aspects of the CDs. However on most of the parameters the teachers in the schools of both the phases were almost identical in their perspectives on the CALP and the functioning of the CALC and other related aspects.

It is interesting to note that most of the teachers felt that the programme had exceeded their expectations and this was contrary to the views expressed by the HTs in some of these schools. However on most of the aspects the views of the teachers matched with those of the HTs including considering the presence of YIF as the non-negotiable for the success of CALP. Similarities were also found on the success factors, reasons for failures, opinions on CD content

and even regarding suggestions for improvement. Of these what probably requires further probing is the fact that YIF was attached high importance; in spite of the teachers believing that the usage of CDs by the children had led to increase in knowledge of children and also better results in the exams they did not believe that it reduced their effective teaching time and hence wanted the assistance of a YIF in the CALC.

3.4 Children's perspective

A group of children from class 5 were considered for this section. The logic behind choosing class 5 children was the assumption that children in this class would have participated in CALP for at least a year. Except in one phase 2 school where the CALC had stopped functioning⁸, discussions were held with children in all the schools that were a part of the study. At first presented below are the perspectives of the children in schools of CALP phase 1.

Joyful learning through games making it easier to grasp concepts was cited as the reason behind liking CALP by most of the children in almost all the schools. This reinforced what the HTs and the teachers had said about the children's involvement. There was no doubt that the almost all the children enjoyed participating in the programme by viewing CDs. However it was highly interesting that in nearly 20% of the schools children confided that some of their peers did not like to participate in the programme. There is a need to probe this aspect further to get better insights on the displeasure of the children.

It was learnt that in almost all the schools the teachers accompanied the students to the CALC. Though most of the teachers assisted the children during their interaction on the CDs, interestingly in a few of the schools the teachers were said to play games on the computers while the children interacted on the CDs. Children in all the schools were unanimous in preferring to have their teachers with them at the CALC.

Contrary to what was shared by the HTs and the teachers, the children gave a slightly different picture of which classes participated in the CALP. Children in only about 14% of the schools said that CALP began at class 1, whereas in many more schools it was so according to the HTs (in 41.67% schools) and the teachers (in 50% of the schools). In the largest number of schools children identified class 3 as the year when they participate in the CALP by viewing CDs. In fact in a few schools (5.7%) children said that they start visiting the CALC only from class 5 onwards. One of the reasons for this discrepancy could be that HTs and teachers have considered even the

⁸ Government Primary Model School, Lingadahalli – CALC non-functional for close to two years

exploratory visits to the CALCs as a participation in the programme and it is said to be a common practice in many schools to take the children from class 1 & 2 to the CALC to familiarize them to the computers.

Though in most of the schools the children had no complaints whatsoever with the CDs, in a little over 11% of the schools the children spoke of their dislike for some of the CDs. The reasons attributed were '*bad quality pictures*', '*difficult to understand*' and '*out of syllabus & boring topics*'. And in one of the schools due to lack of proper opportunity to view the CDs the children have formed a dislike towards the programme. A probable reason for this could be found in the child-computer ratio. Again contrary to what the HT and the teachers liked us to believe the children have shared that in a little over 11% of the schools 6 children work on one computer at the same time. In fact, according to the children in about 27% of the schools, 5 or more children work on one computer at a time and this was also corroborated by the information in the audit form which indicated an even higher percentage of schools. Another information provided by the children which is substantiated by the audit form were the number of visits children made to the CALC in a week. In about 22% of the schools children were able to visit the CALC more than 4 times a week which is a good frequency in the given circumstances. In half the number of schools children were able to visit the CALC 3 times a week. Such frequent visit to the CALC bodes well for CALP as the chances of the desired impact on the children will be higher.

Almost in all the schools children were of the view that all the CDs that they have viewed so far match the syllabus. And except in very few schools (5.5%), in the rest the teachers were said to be active in integrating the CD content to the syllabus after the children have viewed the CDs. In almost half the schools the children felt that easy understanding of the syllabus by viewing the CDs was the most beneficial aspect of CALP. In a significant percentage of the schools (28.5%) the children felt that CALP's biggest benefit was the introduction of the joyful learning concepts using the CDs.

In a majority of schools the children were unable to suggest any improvements. However in nearly 14% of the schools the children suggested that they should get one CALC session per day and in another 11% of the schools they suggested providing more computers.

Almost all the children shared that even their parents were aware of the benefits of CALP and hence when the children returned home they were asked by the parents about the sessions they have had at the CALC. In fact it is interesting to note that during the '*pre-CALP*' days in around 30% of the schools parents never enquired about the happenings in the school and now almost

in all the schools parents were said to be enquiring about the school from their children. This is one of the most positive findings that emerged out of the discussion with the children in the phase 1 CALC schools.

In phase 2 CALC schools:

- Though like in phase 1 schools most of the teachers went to the CALC along with the children, in a significant number of the schools (22.2%) the teachers were said to sit silently doing some other work; however in the remaining schools the teachers were said to be involved in assisting the children.
- In no school did the CALP get introduced above class 3, unlike in some of the phase 1 schools where CALP was introduced even as late as class 5.
- In one school children shared that they dislike CDs because the cartoon characters were not attractive.
- Children who went to the CALC twice a week was the feature in the largest number of schools.
- In a good majority of schools the children felt that making the syllabus easy to understand was the biggest benefit of CALP.
- There were a small percentage of schools where some parents were unaware of CALP; In about 22% of schools parents have not bothered to ask about the CALC; however in a majority of the schools parents ask children about CALC and even during pre-CALP days the parents in most of these schools were said to enquire about school
- Unlike in phase 1 schools, there were no schools in phase 2 in which children were unable to provide any suggestion to improve the CALP. In largest number of schools children suggested that at least one CALC session per day should be scheduled to make the CALP better; increasing the number of computers and providing more number of CDs were suggested by children in the remaining schools.

Among the positive differences of phase 2 in comparison to phase 1 schools was the fact that in no school did the CALP get implemented for the first time beyond class 3 and there were no schools in which children were unable to provide suggestions for improvement of the programme. However on the negative side was the fact that in some of the schools parents were not aware of CALP at all. However, as with the case of the HTs and teachers there were very few differences in the children's perspective between the schools in the two phases. The most positive feedback got was that children in most of the schools felt that there were tangible benefits of using the CALC.

3.5 YIF's perspective

YIFs were available in 31 phase 1 schools and 8 phase 2 schools. Through an individual interview with the YIF an attempt was made to get his/her response on various parameters including those answered by the HT and the teachers.

About 40% of the YIFs were working in the CALC of that very school for more than 2 years. However, a quarter of them were relatively new to the job and had been in the position for less than a year. A large number of YIFs (48.3%) were clueless as to when their CALC began functioning. This is of concern because wherever a YIF exists, he is the closest link to the CALC in a school and hence should be aware of certain basic information regarding the CALC he looks after. Added to this concern 45% of the YIFs had not viewed more than 50% of the CDs that were available in the school.

Though most of the YIFs had got to know of the availability of the YIF position through the school staff, interestingly in a few schools (6.4%) the SDMC President had told them about the vacancy indicating the interest shown by the community leaders. The YIFs in half the schools confided that the previous YIF had not transferred any knowledge or information to them to enhance their efficiency. This could be an aspect that the schools can look into to enable any new YIF to perform efficiently.

In 13% of the schools the YIF felt that CALP was a failure so far and in the largest number of schools the support from all the stakeholders including that of the YIF was considered as the reason behind the success or failure of CALP. Among the problems foreseen for the future, similar to the other stakeholders, majority of the YIFs too felt that maintenance and financial issues were critical. In the largest number of schools the YIFs considered financial resources as the non-negotiable for the success of CALP. In most of the schools the YIFs felt that the involvement of teachers in the CALP was important to a large extent.

According to the YIFs in a majority of the schools (64.5%) children came to the CALC with the serious intention of improving their learning using the CDs. However in some schools the YIFs felt that children came to the CALC to play games, to become computer literate and to do creative things. According to many YIFs all the classes in a school should be part of the CALP. In about 35% of the schools the YIFs believed that they should interact with the children to play a more effective role in the programme, rather than being just monitors of CALCs. While about

38% of the YIFs believed that the longevity of CALP relied on the financial aspects, about 20% of them believed that CALP will last a long time without attaching any conditions to it.

In phase 2 CALC schools:

- All the YIFs were at least a year old in the job.
- All the YIFs were aware when their CALC commenced operations.
- 50% of the YIFs were trained and oriented into the job by their predecessors.
- 25% have felt that CALP has failed so far.
- Community support was considered as the single most important reason for success by maximum number of YIFs.
- Experienced and trained YIF was considered as the non-negotiable for a successful CALP.
- A majority of YIFs believed that they should also play the role of a teacher to enable the programme to become successful.
- 25% of the YIFs had not watched more than 50% of the available CDs.
- Only 25% of the YIFs believed that the CALP longevity does not depend on any conditions, the remaining 75% believed that certain conditions had to be met for CALP to continue for a long time.

At the outset there are not many stark differences, either negative or positive, between the YIFs in the two phases. However the YIFs in the phase 2 schools came across as better prepared to handle the job than their counterparts in phase 1. They seem to attach more importance to the community support and the support by their own fraternity compared to the YIFs of the phase 1 schools.

On the negative side is the fact that 25% of these YIFs believed that the CALP has been a failure so far due to financial constraints that have arisen. A majority of them believed in going beyond their mandate to teach the children and integrate the CDs into their lessons, this when a quarter of them have not seen more than half the CDs available; hence not advisable. Other than some of these differences mentioned here the YIFs were unanimous in their opinion on some of the basic aspects of the CALP.

3.6 SDMC president's Perspective

Of the 36 schools of phase 1 the SDMC Presidents could be interviewed in only 26 of the schools and in the phase 2 schools the SDMC Presidents were available in 9 out of 10 schools. The SDMC

Presidents were asked similar questions that were posed to the HT and the teachers. On most aspects there is nothing fresh that has come up and hence only highlights of some of the perspectives are provided, to begin with from SDMC Presidents in phase 1 schools.

Half the SDMC Presidents were not more than 2 years in the president's position. This indicates that either they had followed the rules and had a fresh body of representatives elected as per the norms. Unfortunately some of the SDMC Presidents were not too aware of the CALP. This gets indicated in the fact that nearly 23% did not know as to when the CALP was inaugurated in their school. 20% of the Presidents also did not know as to which are the classes that are involved in CALP. However, nearly 20% are also the ones who have been to the CALC and used the computers there either to watch the CDs or do something else.

For the majority of SDMC Presidents the CALP had exceeded their expectations. One of the chief benefits of CALP as seen by them was the improved knowledge among the children participating in the programme. However 15% of the presidents consider the CALP as a failure so far due to the maintenance and financial issues. A majority of them consider *children's learning and support* as the single most important reason for the success of CALP. Among the other reasons for the success or failure of the programme, 'community support' was mentioned as the factor by the largest number of SDMC presidents. 15% even mentioned APF's contributions as one of the reasons for success. YIF is once again mentioned as the non-negotiable for the success of the programme. Maintenance issues were once again highlighted as the main problem that is foreseen.

In phase 2 CALC schools:

- About 66% of the SDMC presidents were in the position for more than 2 years time.
- Only about 11% of the SDMC presidents did not know when the CALP was implemented.
- A very small percentage considers CALP as a failure.
- YIF support is considered as the single most important reason for the success or failure of CALP by most of the Presidents.
- Largest number of SDMC Presidents considered community support, teacher support and electricity as the other reasons for success in that order.
- All the infrastructural problems one can imagine along with issues of YIF were considered as the problems that are foreseen by largest number of SDMC Presidents.
- Almost all the SDMC Presidents were aware as to which are the classes that are involved in the CALP.
- None of the SDMC President had ever used the computers in the CALC.

Like the YIFs in the phase 2 schools even the SDMC Presidents seem to be more aware of the various aspects related to CALP compared to the SDMC Presidents of the phase 1 schools. Importance has been attached to the YIF once again and maintenance issues come to the fore front regarding the problems for the future. Teacher support is rightly seen as one of the reasons for success, however it was still not given as much of importance as it deserved and one big negative difference was the fact that none of the SDMC Presidents in phase 2 have tried using the computers in the CALC. Non-usage of computers by the SDMC Presidents indicates either a fear in the minds that has not been removed by the teachers or the YIF, or a disinterest in the new technology; given the context and the number of SDMC Presidents involved in CALP it seems more of the former reason.

4. Conclusion

A few critical issues have emerged from the study of the 46 schools. None of the issues may be new revelations; however they reinforce certain issues that have emerged earlier through smaller studies or anecdotal experiences. Some of these issues are as follows:

1. The differences between the CALCs implemented in the two phases are not stark, but does exist in terms of the health of the infrastructure in place; more number of computers are in working condition in the phase 2 CALCs. However regarding the problems foreseen, stakeholders from both the phases identify infrastructure and financial issues.
2. A majority of those interviewed felt that CALP has exceeded their expectations so far, as they had not expected that the programme will impact the children as much as it has.
3. In most of the schools certain pattern is followed regarding the classes participating in the programme, number of children to be sitting in front of one computer, etc and in most of the cases the norms laid down by the Foundation are followed.
4. Presence of a YIF is considered as a non-negotiable by most of the stakeholders; children's interest, community support, and teachers support are seen as the other success factors.
5. No one visualizes a role for the HTs in the CALP; and even for the teachers a strong role has not been prescribed even though the stakeholders believe that children have been able to improve their academic performances. Instead the YIF has been identified as the flag bearer.
6. Certain issues need to be probed further, such as, dislike of CDs by some of the children and the reason behind the teachers not playing an active role in spite of the programme aiding children in their learning.
7. Children's interest in CALP seem to have been underestimated initially, hence it has been considered as one of the prime factors of success by all the stakeholders.