

An Innovative Approach Towards Achieving CCE Goals

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Abstract: Evaluation is the Learning Capacitance Curve (LCC) of any education system. To ensure holistic development of an apprentice, the evaluation process should primarily consider three aspects of a student's learning curve--cognitive, affective and psychomotor. The Continuous and Comprehensive Evaluation (CCE) is one such tool used to evaluate the diverse aspects of a student's development from various dimensions, ultimately transforming their learning for life.

The objective of this paper is to study and assess the impact of innovative strategies and pedagogies used under 'Project Enabler', which is supplementary in nature to the Continuous and Comprehensive Evaluation Framework. This ensures effective use of the framework.

'Project Enabler' is an initiative of The American India Foundation, where 200 upper primary government schools of Punjab have been addressed with specific focal points. Under this initiative, students of grades 6, 7 and 8 have been targeted. The specific focus is to gauge the impact of remedial interventions devised and practised under the project, while concentrating on the "Learning Improvement Group (students usually falling under D & E grades)" based on their scholastic and co-scholastic performances. The teachers are provided a platform to innovate and practise activities based on the prerequisite assessment of students such as peer learning, self-reflection, open notebook, star rating, and parental engagement, etc. to ensure better learning outcomes and behavioural changes in students consequently. Analysis of formative and summative assessments revealed that the students have shown substantial improvement in terms of learning outcomes in scholastic and co-scholastic ways.

The study recommends that while it is fundamental to work closely with students, it is equally crucial to encourage them to express their needs and interests. This lays a strong foundation for mentors to develop robust teaching – learning strategies and pedagogies. Students' learning can be improved through well-planned classroom interventions that are inbuilt in the teaching learning process.

Further, the study emphasised on the fact that the role of a teacher is imperative in applying innovative strategies, teaching pedagogies, while acting as a facilitator, and as a mentor for students. Therefore, it becomes vital for teachers to keep learning and upgrading their skills continually.

Keywords: Learning Capacitance Curve (LCC), Learning Improvement Group, Enablers, CCE, Holistic Development, Education, Classroom Strategies

I. INTRODUCTION

Education is the process of facilitating learning, the acquisition of knowledge, skills, values and beliefs. It is the collation of Wisdom, Knowledge, Understanding and Insight

and aims to define the approach the world uses in its behaviour today. Education is the only fundamental way by which a desired change and elevation in the society can be initiated.

The NCF 2005 underlined a clear need for a classroom where learning involves experiential learning, discovery, exploration, creativity, decision making, along with facilitating individual attention to make the learners more competitive in all facets of life. It also emphasised on the need for access to education for all.

The Right to Education Act (RTE), 2009 focused and supported the 'Education for All' movement started by UNESCO in March 1990. RTE states that irrespective of their abilities/disabilities, social-economic status, ethnic background or gender, children are entitled to the Right to Free and Compulsory Education up to their elementary stage.

The ASER – 2014 report reflects that there has been a significant increase in student enrollment i.e. 96.7% between the age group of 6-14 years. We can also see that 98% of habitation now has a school within a radius of 1km. As per India's 12th five year plan (2012-2017), the four main areas of focus in education are Access, Equity, Quality and Governance. One of the major achievements of the government has been to establish a school within the reach of every child and providing free and compulsory elementary education to cater to the need for Access and Equity.

However, it is not only the right to education, but also the quality of education which should be a prerequisite for overall development of the child. Attaining quality education is an enormous challenge considering the limited resources and strict adherence to traditional approach followed in government schools.

The ASER findings show that with RTE, we have been able to address the issue of enrolment and absenteeism. However, the major criticism it faces is that although it has been efficacious in providing access to education, yet it has not been able to address the need for quality education to cater to children's best interests and in a way that it contributes towards their overall growth. The ASER reports from 2007 to 2014 reveal a constant decline in the learning levels of the students. Quality of learning is a major issue and the reports indicate that only 50% of class 5 students can read class 2 textbooks and their poor mathematical ability is a grave concern. Even in urban India where widespread absenteeism by students and teachers is not a matter of concern, the learning levels are astoundingly low.

In spite of the aforesaid initiatives, the major challenge still stands regarding what are children learning and how can we, as facilitators, develop their knowledge, skills and attitude to make them independent learners and creative thinkers. The current level of students reveals the gap between policy frameworks and learning outcomes. Improving the quality is the next big challenge for both state and central governments.

Many theories on education indicate that there are three major factors that need serious attention to achieve improved and value-added learning level of students irrespective of grades or subjects:

- ✓ Catering to different learning style of students
- ✓ Teacher's effectiveness and
- ✓ Evaluation.

One such theory of "Multiple Intelligence" has been proposed by Howard Gardner (1983), which states that all children are naturally motivated to learn and are capable of learning. This means that every child has a unique style of

learning and absorbs knowledge through a variety of ways such as visual, logical, kinesthetic and linguistic. It is evident that learning takes place in every facet of life, irrespective of school boundaries.

Coleman's Study (1966) claimed that learning outcomes are highly dependent on individual race and family background. However (Wright, Horn, Sanders 1997) stated that effectiveness of the teacher in the classroom is very important. Effectiveness of a teacher depends on the way they use different strategies as there is no single process that suits every situation. Therefore, it's high time to get rid of '*one size fits all*' approach. The teaching/learning strategies need to be planned according to the diverse needs of children. Teachers need to incorporate effective pedagogical strategies that include student engagement, connectedness to the real world, and conducive learning environment. Effective pedagogical practices build confidence among students and teachers towards the quality of learning in the school.

It is equally important to keep evaluating the strategies, delivery process and students' need to meet the expectations in terms of overall development of students. Evaluation is a process of collecting and interpreting information of the student's progress in cognitive and non-cognitive areas. In order to ensure holistic development of the student, three main aspects of a student's personality--cognitive, affective and psychomotor--are considered. It helps teachers to collect evidences through various tools, analyse them and help to take certain decisions to improve classroom practices to attain required learning levels.

In 2009, to focus on improvement in learning outcomes and to support teachers, the Central Board of Secondary Education (CBSE), along with the enactment of the Right to Education (RTE-2009), introduced Continuous and Comprehensive Evaluation (CCE) to cater to the need for different learning styles and also to bring about a holistic development among students.

The objective of CCE was to identify the learning difficulties at regular intervals right from the beginning of the session and employ suitable remedial measures for enhancing learning. The CCE was devised to help the teachers for evaluation which was continuous and was conducted at regular intervals. It facilitates students' effective learning as well as their overall growth with the help of multiple evaluation tools, techniques and corrective measures. It was comprehensive as it covered both the aspects of scholastic and co-scholastic areas of learning. The pattern of CCE evaluation is focused on making the teaching learning process an activity centered on the learner by including two dimensional assessment strategies - formative and summative. The formative assessment of CCE was designed to monitor and assess the student's growth during the teaching and learning process. On the other hand, a summative assessment tests the instructional knowledge of the student. CCE is a step forward to ensure the holistic development of the child and to bring a paradigm shift from the traditional way of instructional teaching process to student-centric learning.

Undoubtedly, CCE is a wonderful tool to track each student's overall growth and help teachers to make course correction in teaching – learning practices. However, field experiences clearly elicit that currently CCE is merely used as

a data capturing tool for the teachers rather than as an evaluation tool for learning improvement in most of the cases.

II. PROJECT ENABLERS

To address aforesaid issues and support teachers to use the CCE framework objectively, The American India Foundation (AIF) introduced 'Project Enablers' in 200 upper primary government schools of Punjab under the Digital Equalizer Program.

Project Enablers is an initiative to ensure development of all the students with specific focus on 'Learning Improvement Group' (LIG) of the classroom through different innovative strategies. Operational Definition of LIG students: these are those bottom 20% students of the classroom who usually fall under 'E' and/or 'D' grade based on their scholastic and co-scholastic performance. These students are not disabled, but they struggle to cope with the traditional academic demands of a regular classroom because of several reasons. Their slower learning rate typically requires certain accommodation to ensure their success in school. Most of all, they require maximum support from teachers. Ironically, this seldom happens in reality. The effort under 'Project Enabler' is to identify their learning needs and support them to tap their potential. We would like to acknowledge the idea of focusing on Learning Improvement Group given by Mr J. Sundarakrishnan, Director, Digital Equalizer Program, which proved to be a timely help to achieve the desired outcomes.

A. NEED FOR INTERVENTION

CCE is an effective tool to gauge the developmental growth of learners at regular intervals. Implementation of CCE largely depends on the teachers who have a key role to play in order to create a positive impact in the classroom. Field experiences reveal that teachers need to be sensitized in order to effectively use CCE tools to evaluate the students' learning. Project Enabler helps the teachers to devise remedial teaching strategies as per the needs of students. Teachers are encouraged to identify different learning styles of students in the beginning of the academic session and create appropriate strategies and activities to strengthen students' learning capabilities.

B. OBJECTIVES

- ✓ Support and train teachers to use innovative strategies to implement CCE objectively
- ✓ Improvement in the learning outcome of the LIG students, along with all other students in class
- ✓ To enable a conducive environment in the classroom for effective teaching-learning
- ✓ Promoting holistic development of students (scholastic and co-scholastic)

III. METHODOLOGY

The study is based on action-oriented research and a series of personal interviews and focused group discussions in schools and with Principals and District Education Officials.

A. AREA OF STUDY

The study was conducted in 10 districts of Punjab including Patiala, Ludhiana, Barnala, Sangrur, Fatehgarh Sahib, Amritsar, Ropar, Mansa, Ferozepur and Jalandhar, covered under the Digital Equalizer Program.

B. SAMPLE OF THE STUDY

Under the project, a total of 200 government upper primary schools of Punjab were selected. The study was conducted amongst students of 6th, 7th, and 8th classes in selected schools for the academic year 2015-16.

C. SAMPLE SELECTION

The study represents the total number of LIG students i.e. 5607 from each grade across 200 schools covered under Project Enabler.

D. TOOLS USED FOR DATA COLLECTION

CCE results of formative assessments were collected for the LIG students and analysed for the academic year 2015-16 as primary data for the study. In addition, focus group discussions and personal interviews were conducted with the teachers to support the findings of CCE results.

IV. THE PROCESS

The first step of 'Project Enablers' is to identify the challenges and varied needs of students based on their interest and learning styles. A rigorous analysis was done to find out the bottlenecks in learning, considering the result of 1st formative assessment as baseline data. These findings were used to devise remedial strategies to cater to students' interest and active engagement, which ultimately leads to improved learning outcomes.

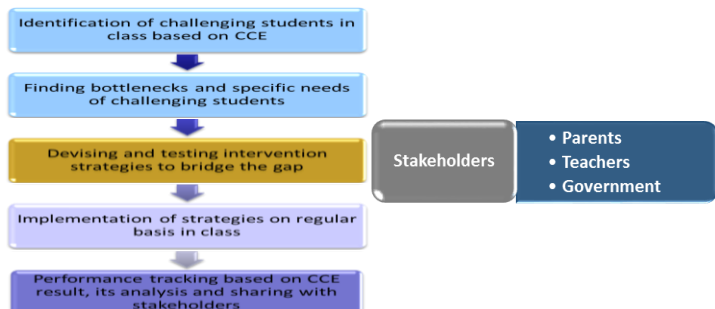
These innovative strategies are practiced by the teachers in class and their impact is assessed. Furthermore, the strategies that proved to be fruitful and have shown positive results and disseminated in other schools to maximize the impact. This enables educators to engage students in a manner that is best suited to their interest, inclination and gasing abilities.

Based on the CCE parameters, continuous monitoring of interventions and outcome is performed by subject teachers. In-depth analysis of CCE results is done at regular intervals to gauge improvisation and pitfalls. On the basis of the learning and findings, remedial actions are redefined to best suit the needs of students.

Finally, overall results and findings are shared with the stakeholders to ensure their involvement in the whole process.

A well-researched process has been structured under 'Project Enablers' for an end-to-end solution to ensure effective teaching – learning aligned with CCE pattern.

STEPS FOLLOWED IN PROJECT ENABLERS



V. STRATEGIES

Research shows that teachers have a crucial role to play in nurturing and supporting a child's growth. This can be exemplified further by bringing creativity in their teaching. 'Project Enabler' encourages teachers to use creative and innovative strategies based on the needs of the students and their classroom environment. Initially, teachers are provided with a list of strategies developed in collaboration with the subject experts to cater to the holistic development of the child. Additionally, teachers are also given equal freedom to create different activities depending on their classroom needs. The aim of the project is to bring students, teachers and parents together to collaborate and contribute towards the overall development of students. Results reflect that few core interventions emerged as a key catalyst in creating a positive impact on the overall growth of the student.

Some of the strategies are listed below:

A. STUDENT MOTIVATION AND ENGAGEMENT

Student motivation is their desire to participate in the learning process. If the students do not find value in what they are learning, they may not be motivated to perform. On the other hand, if students find interest in what they are learning, they will develop intrinsic levels of motivation. Studies have shown that lack of interest in academics leads to absenteeism and in most of the cases we have seen that prolonged absenteeism leads to dropouts from the school. Study shows that more than 50% of the students drop out of the school at the primary level. Teachers came out with various innovative strategies and reward systems to ignite students' interest and motivation levels in the classroom. For example;

✓ SETTING GOALS FOR STUDENTS

Students are motivated to learn if they know what goals they are working towards. Goal setting can improve student learning and motivation (Zimmerman 1990). In the classroom, teachers help the students in setting up simple academic goals

and help them to keep a track of these goals on a regular basis. Achieving those goals helps to boost confidence among students.

✓ STAR RATING

Based on different aspects of academic and behavioural performance, students are given stars. Students with maximum stars are rewarded on the timely basis, which helps to motivate the students. Teachers found this strategy to be very useful as it is easy to implement and it also developed a healthy competition among the students.

✓ REWARD FOR ATTENDANCE

Students are rewarded for improvement in classroom attendance. Studies reveal that higher rates of attendance had greater learning gains and lower rates of repetition. (Miske, Dowd et al 1998)

B. PARENTAL ENGAGEMENT

Parents and community play an important role as they are the first teachers of the student. Their involvement in the education of the child correlates with higher academic performance. Research shows that higher involvement of the parents addresses the school dropout crisis and fosters higher educational aspirations. In order to provide a stimulating environment at home, parental inclusion is required in the education process. Parent Engagement is one of the most effective strategies, which worked well in majority of the classrooms. Teachers involved the parents on the regular basis. In the process, teachers introduced the tools like "Homework Tracker" where the parents were able to assess the child's activity every day. Every month, the parents were invited for analysis of the tracker. This process not only ensured that the students are completing their work but also increased parents' accountability towards the learning of the child.

Analysis of the progress report helped both the teachers and parents to find the problem areas and take necessary corrective measures on a timely basis. The objective was to understand the different learning pace of the students and work around the same. Students were able to visualize their own growth; therefore this not only got the child appreciated at home but also gave them the intrinsic motivation to perform better.

During the parent teachers' meeting (PTM), one of the parent expressed that "Initially, I used to involve my son to help me to earn livelihood for the family in whatever way possible. I still remember that after several invitations from school, I attended a PTM where teachers explained us the potential of our children and the importance of education. He further started calling me in each PTM and updating the progress of my child on a regular basis, which changed my perspective. Now my only aim is to support my son all along the way to complete his schooling and become competitive to live a successful life.

C. GROUP LEARNING

Group learning, also known as cooperative learning, is considered to be one of the most effective strategies to ensure student participation. It aims to organize classroom activities into academic and social learning experience. Research has also proved that students learn better from each other than they do from a teacher (Barkley et al 2005).

In this method, students work in groups to complete a task collectively towards academic goals. Students with different levels are grouped together. The role of the teacher in this process is more of a facilitator. According to Johnson and Johnson meta-analysis, students in cooperative learning settings compared to those in individualistic setting perform better and gain high self-esteem. The key aspect of cooperative learning is that it increases positive interdependence and also builds individual and group accountability. This method is effectively implemented in many classrooms and it is evident from the results that it not only helped to improve students' learning but also developed their interpersonal skills.

An example was shared by one of the teachers on how cooperative learning helped her to motivate the students to participate in the class. She explained that she selected students of different levels and formed a heterogeneous group in the class. The grouping not only helped her to increase student engagement but also encouraged the shy students to become active participants in the class.

D. PEER LEARNING

Peer learning refers to students learning from and with each other as a fellow learners, without any implied authority. Students learn a great deal by explaining their ideas to others and by participating in activities in which they can learn from peers (Boud, 2001).

Peer learning helps in self-directed learning skills and lays the foundation for life-long, continuing self education. It helps in building the interpersonal communication skills. During one of the interviews, a principal gave the example of a positive outcome of peer learning in one of her classrooms. She paired one of the low performing students with the high performing student of the classroom. Towards the end of the session, she observed that not only did the low performing student become regular in the class, he/she also completed the homework on time and started participating in class discussions.

VI. DATA ANALYSIS

The study aims to assess the effectiveness of CCE interventions on students' holistic development if practiced in the right manner. For the purpose of the study, CCE results of Formative Assessments (FA) of the LIG students were collected and analysed at regular intervals. Results of FA-1 were considered as a baseline for the study, and they were utilized for benchmarking the potentials and learning abilities of the selected students. Formative Assessment-4 was considered as the end line for the study. A comparative analysis of FA – 1 versus FA – 4 was done to understand the

progression shown by the beneficiaries over a period of time. The following graph represents the findings of LIG students for the academic year 2015-16 in 200 schools.

RESPONSE OF LIG STUDENTS FROM 2015-2016

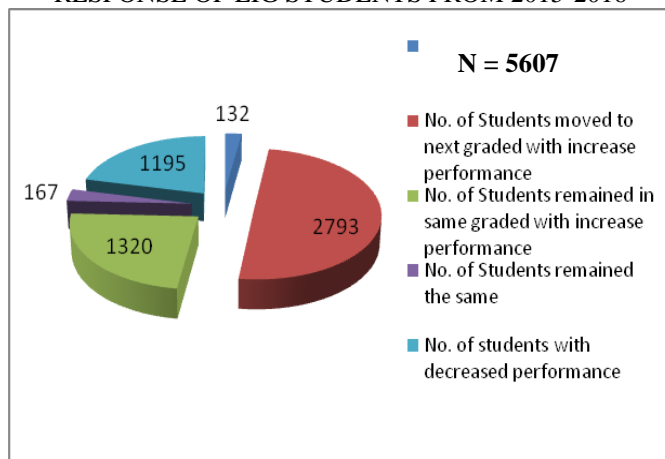


Figure 1

It is evident from the study that intervention strategies designed based on the needs of target beneficiaries contributed to attain the overall development of students. In all, close to $\frac{3}{4}$ of the total LIG students (73%) have shown significant growth in their overall performance in terms of scholastic and co-scholastic areas. This indicated that teachers who are faced with high dropout rates and poor retention can benefit from such a project. They can also use this project to benefit students of all capabilities for better results. When these students go on to the next class, they tend to be more motivated as well as better prepared for the new session.

An inevitable finding of 'Project Enabler' is that it helped to address the challenge of dropouts in elementary classes, which is one of the major concerns in the schools in India. As per the report of District Information System for Education (DISE-2014-15), out of every 100 children enrolled only 32 children are able to complete their schooling. It has emerged from the study that 'Project Enabler' was able to bring down the dropout rate to 3% for target beneficiaries.

Current education policy focuses on the learning outcomes as one of the top priorities. Further analysis of the results of LIG students clearly reflects that students have shown considerable amount of growth in learning outcomes. Diving deep into analysis reveals that more than half of the LIG students not only showed improved performances but they also moved to the next grade. Although some students remained in the same class, there was an improvement in their performance. This works well for students who are otherwise faced with the challenge of competing with their peers. There were a significant number of students who showed poorer performance than earlier. Newer ways need to be identified to bring them back into the circle.

About 22% students showed a downfall in their performance. In-depth analysis of focused group discussions and interviews with the teachers revealed that key contributing factors responsible for the downfall in performance are as follows.

- ✓ Illness and absenteeism
- ✓ Socio-economic condition of parents
- ✓ Lack of interest in education due to illiterate parents

- ✓ Lack of appropriate infrastructure and teaching – learning practices for effective concept clarity

LIG students have a different pace of learning and they are the ones who require need-based support. 'Project Enabler' supported the teachers to cater to the need of these students. This project is well appreciated by teachers as it helped them to effectively use the CCE framework to improve performance of LIG students in their class. Considering the positive outcome of these interventions, teachers not only used the strategies for the LIG students but also rolled it out for the entire classroom.

The following case study reflects that how the intervention of 'Project Enabler' helped teacher to overcome the problem of classroom management.

Daljit Kaur, a teacher from Govt. High School Kalaran, Ropar says, "I was facing a lot of challenges in classroom management, especially to cater students' interest in subject matter of Social Science. That was the time when I got an opportunity to be part of 'Project Enablers' in my school, which proved to be a milestone in my journey. I was able to overcome these issues effectively and also achieved improved learning outcomes of students in my class. We started practicing several simple but innovative strategies to address the need of students based on CCE analysis. One of the important strategies incorporated in my day-to-day class was "Peer Learning" approach.

As a part of Peer Learning, Buddy system was introduced in the class where I paired the LIG students having challenges in learning and expressions with the students with higher proficiency in learning. Students were encouraged to be accountable for their own learning and respective partners. This strategy worked well for both the students as it has been experienced that "learning is enhanced through teaching". The positive outcome of aligning intervention activities with CCE parameters is that, it not only helped the LIG students to improve their academic performances, but it also developed their co-scholastic areas such as interpersonal skills, sense of ownership and responsibility."

VII. OUTCOMES

'Project Enablers' proved to be an immediate course of interest for subject teachers due to its innovative strategies and complete alignment with CCE guidelines. Teachers found that the project eventually made CCE very useful to ensure holistic development and parity in a class. Some of the direct and indirect outcomes are mentioned in ensuing paragraph.

A. IMPROVED LEARNING PRACTICES

There were improved learning practices that enabled positive behavioural changes in teachers as well as students, resulting in better classroom environment and better results.

B. TWO-FOLD LEARNING

There was significant improvement in the learning of students in Scholastic as well as co-scholastic areas of

learning. With some changes in the teaching methodology, teachers were able to generate desired results in academic as well as other areas.

C. CHANGED LEARNING METHODS

Teachers of different subjects were able to create new and more effective learning strategies. They were also able to develop lesson plans to address CCE objectives, which they will be able to sharpen over the years and make it more effective.

D. IMPROVED CLASSROOM ATTENDANCE

Teachers saw an improvement in the attendance in class following the implementation of this program. It is of greater significance because of the focus group of students.

E. DECREASE IN DROP-OUT RATES

Although Indian schools, particularly in the LIG segment, are constantly faced with the challenge of a high dropout rate, implementation of such results could reverse things around in the long run. A modest beginning is possible with the implementation of the program.

F. ACTIVE STUDENT ENGAGEMENT

An easy and active educational program encourages better student interaction and participation. This eventually results in better attendance and quality learning.

VIII. RECOMMENDATIONS

Effectiveness of the CCE implementation is totally dependent on the way teachers implement it. A great part of responsibility lies on the shoulders of teachers, but it is equally important that we should equip them with the necessary skills. Thus, following recommendations are made on the basis of results obtained from the study of 'Project Enabler':

- ✓ Teacher's Orientation: Due to lack of necessary skills and objectivity, teachers are using CCE merely as a report card for the child. A well-paced systematic approach and teachers' orientation is required to create awareness about the need and importance of CCE to ensure its effective implementation.
- ✓ Pedagogical Innovations: Each individual is different, therefore teaching – learning styles may differ from person to person. Teachers should be supported with a variety of pedagogical innovations in order to strengthen their skills to bring out the potential of the students.
- ✓ Need Based Interventions: It is important to develop diagnosis tools aligned with CCE to bring out the needs of each child in the class. Teaching strategies should be mapped with felt-need reflected by students which ultimately contribute to the overall growth of the child.
- ✓ Student Centric learning: Teachers should promote a student-centric learning environment where their role should be more of a facilitator. Students should be

encouraged to take charge of constructing their own knowledge instead of passive receiver of information.

IX. CONCLUSION

Evaluation is a critical process to ensure holistic development of students. Continuous and Comprehensive Evaluation is a tool that facilitates effective learning using various remedial interventions and corrective measures. It can be an effective tool if it is used in a right way and can ensure both cognitive and non-cognitive aspects of learning. It emerges from the study of 'Project Enabler', that teachers are able to create a student centric learning environment by using different innovative strategies. This results in the desired performances from students.

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