

## **Traditional methods vs. Smart classrooms: An integrated approach towards early childhood education**

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### **ABSTRACT**

The journey of early childhood education has started from gurukuls to the present day smart classrooms. Educators researched and experimented with different approaches of early childhood education. Traditional teaching is concerned with the teacher being the controller of learning environment. With modernization and technological advancement, the system of educating the foundation years of the child had gone tremendous changes. As a result multimedia became one of the leading means of teaching in today's schools. Presently the classrooms are under the control of the teachers as well as the students. The smart classrooms or digital classes has revolutionized and brought a complete transformation in the traditional method of learning. A comparative study was conducted to find out the most appropriate approach of teaching a group of 1<sup>st</sup> standard children in government and international schools. Evaluation of score cards reveals that there is significant difference in the performance of children between the two schools as importance was given to different learning outcomes. Government/Aided schools followed formal approach of educating the young once and emphasis was on academic performance. International schools followed Techno based approach of education and aims at overall development of the child with improved students' performance. There are different paths of learning and there is clearly no one method/approach towards early childhood education. If the educators take the responsibility for development of 'whole child' it is the integration of traditional and modern techniques which would lead to a holistic approach of education.

**Key Words :** Smart classrooms, Pedagogy, Government schools, International schools

### **Importance of early childhood education :**

Early years of the child are crucial in terms of physical, emotional, language, cognitive and social development. The mental and physical abilities of a child grow at an astounding rate during this period. During their early years, children go through critical stages of development, and consistent, high-quality early childhood education can have long-lasting, beneficial effects on the overall development of children (Davis, 2010). Early childhood education benefits children, their families, and their communities. From improved academic outcomes to the economic savings to schools and states, the benefits of high-quality early childhood education are irrefutable (Chicago Longitudinal Study, 2011).

Learning takes place throughout the life, but not at the intensity which is seen during the early years. That is maximum learning takes place below six years of age. These are the foundation years of the child's life where in high quality care and education has to be provided during this period. For this the environment in which the child is placed during the early years has adverse impact on the child.

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For this an intellectually stimulating and enriched environment has to be provided to children for a holistic development of the child. Research has also indicated that if these early years are not supported by, or embedded in, a stimulating and enriching physical and psychosocial environment, the chances of the child's brain developing to its full potential is considerably and often irreversibly reduced (Upadhyaya, 1996).

To achieve this objective of holistic development of the child picking up a right school is important. Picking up a preschool is easy, but the right choice of the child's first formal educational experiences has to set a stage for life time learning.

### **Historical perspective :**

The philosophical foundation of early childhood education was influenced by the Western philosophers like John Amos Comenius, John Locke, and Jean Jacques Rousseau. Its curriculum and methodology were created by Johann Heinrich Pestalozzi-learning by 3H's, Friedrich Froebel-Play way method, John Dewey-Pragmatic approach, Maria Montessori-Sensory method, and Rudolf Steiner-Spiritual science. While there are differences in the approaches of these progenitors of early childhood education, they are overshadowed by one common principle: that early childhood curriculum and practice must be adapted to the maturing needs, abilities, and interests of the child (David, 2010).

The concept of preschool was introduced in India by the British missionaries in the latter part of the 18th century. Madam Maria Montessori came to India in 1939 as a refugee from the Fascist regime in Italy. Annie Besant, Madam Montessori and Rukmini Arundale set up a teacher training center at Adyar, near Madras. Many early childhood educators received their training under Madam Montessori and then went out to various parts of the country and spread the movement for early childhood education. Gijubhai Badheka and Tarabai Modak were among the early educators who were inspired by Madam Montessori, adapted her methods to suit the Indian conditions. Mahatma Gandhi's pre-basic education was the first indigenous scheme for education of very young children in India. Jugatrambhai Dave and Nanabhai Bhatt were some of the early pioneers of the early childhood education movement in our country. They were all inspired by the down-to-earth, grassroots level approach of Mahatma Gandhi's pre-basic-education scheme and Rabindranath Tagore Open air school. The educational philosophies of Jiddu Krishnamurti- Activity based education and Aurobindo Ghosh –Integrated method played a key role in elementary education in India.

Educational thinkers and practitioners both Indian and Western have contributed their mite to the growth and development of early childhood education. They have dedicated their whole life for the cause of children. It was for the first time in 1944, a government document, known as the Sargent Committee Report (Sargent scheme, 2014), emphasized the importance of pre-primary education and linked it with the child's educational performance in primary school. The National Policy on Education (1986) has given a great deal of importance to early childhood care and education (ECCE), was revised in the year 1992 (National Policy on Education, 2014). It views ECCE as an important input in the strategy of human resource development, as a feeder and support program for primary education.

Draft National Early Childhood Care and Education (ECCE) Policy, 2012 states that India has 158.7 million children in the 0-6 years age group (Census 2011). Early Childhood Care and Education (ECCE) is an indispensable foundation for lifelong learning and development, and has critical impact on success at the primary stage of education (Government of India, 2012).

### **Method :**

The groundwork for early childhood education started two century's back but until the last three decades organized education of the child of primary school age did not receive attention it rightfully deserved. Due to modernization, technological changes and commercialization of education along with research, policies and intervention programs in early childhood education, early childhood

education has received attention. Age 6+ is the transition period to a different stage of education. This is the age the children are get to clear the basic concepts of language (reading, writing), numeracy (mathematical concepts and symbols) and environment education (systematic knowledge of science and social sciences). During this period children start with their first formal educational experiences and set a stage for life time learning. At this age children are trained to follow a structured and well planned curriculum designed by the teachers. They develop regular routines of school and are exposed to an environment at large. This is a transition period for this age group of children as they are placed in different schools according to the family's abilities, capacities, requirements and several other factors.

Various aspects of education have been well researched in terms of quality issues, but what is lagging behind is the study of the role played by various boards in implementing the curriculum and how it affects the performance of the children.

In this paper an attempt is made to explore the teaching strategies and the learning outcomes of grade 1. In this light an attempt is made to conduct a comparative study to find out the most appropriate approach of teaching and expected learning outcomes of a group of 1<sup>st</sup> standard children in government/ aided schools and international schools of Chandigarh. Randomly four schools from each category were selected and related documents such as score cards of children, academic calendars and time table of teachers were assessed. Along with this, visits to the sampled schools were carried out to find out and analyse the teaching strategies followed in these schools. Discussions were held with concerned officials for the present study.

#### **Pedagogy followed in different schools :**

There was not much difference in the syllabus among the eight different schools. Contents of the syllabus were quite similar. What varied is how each school implemented it. It is an Interdisciplinary approach followed in all the schools. Teaching strategies followed for each subject of class 1 in different schools was analyzed and the results are as follows (Table 1).

#### **Government/Aided Schools :**

Government schools serve majority of the children in the country. The services are increasingly accessed by the poor and the marginalized. During a visit to the school the amount of teaching learning material on display in the classrooms and in the cupboards was impressive. Charts, posters and models were displayed in the class. Other than few outdoor activities, all the other topics were carried out within the class. Traditional method of teaching was followed in government schools. However the class rooms were not vibrant in terms of activities and richness of opportunities for learning.

#### **International school :**

In International schools the pedagogy is to emphasize on "How to learn" rather than "What to Learn". The teaching learning method adopted here was more instrumental, memory based, practical and fun based. It aims at developing a variety of skills and attitudes in the students and aims at all round development. Pedagogy followed is more challenging and provides enriched foundation for the children. Children have good command over English. During the visit it was observed that children were more confident, taking initiative and going to the teacher to clarify their queries. They test the students understanding of the concepts and not their memory. Online learning, use of ICT, Interactive boards and Multimedia all these facilities were available in International schools. Children are actively engaged in self learning with little assistance of the teacher. Inspirational learning environment was provided in this school. These schools declare that they have taken education to Hi-Tech level.

<b>Table 1 : Subject wise pedagogy of different schools for class I</b>		
Subject	Government/Aided schools	International Schools
Language- English Hindi	Traditional method and teacher centered (reading loud, drill and repetition, story narration, memorize vocabulary, no direct bond between thought and expression, lack of conversation skills)	Learner centered activity based approach (digital class rooms /multimedia classrooms, audios and videos for listening and dialogue formation, graphics, maps, dictionaries, animated pictures in a single click).Importance on phonetics. Technology driven.
Science	Child centered approach (Loud reading, games, and activities.) lack of clear expression	Enquiry method, practical work use of multimedia. Out of school learning, field visit, experimentation, use if ICT,Cause and effect learning.
Social sciences	Child Centered (book reading, collection of pictures, dramatization, role play )	Open-ended approach, Dramatization, community visit, Discussion oriented, experiential learning, e-teaching.
Mathematics	Activity based approach (use of pictures, work book). Traditional method is also followed.	Concept mapping, Concept inventories, problem solving method, learning by playing, Interactive ICT.
General knowledge	-	Animation
Technology	-	Interdisciplinary approach
Physical education	Child centered approach, Team building.	Child centered approach
Art and craft	Practical work and activity based.	Creative approach through ICT, creative expression, media inputs.
Value education	Traditional method	Spiritual, social and moral values.
Music and dance	-	First hand learning experiences, aural skill development.
Break free day (Saturday clubs)	-	Skill oriented approach.

### **Analysis of pedagogy :**

English was the medium of instruction in all the schools. In government schools English was taught in local language. Government schools had limited scope of home work for children. There was no burden of home work in international schools. International schools emphasized on the use of practical and innovative method of teaching with the help of multimedia, ICT and interactive boards. ICT facility was not available in government schools. International schools were technologically advanced when compared to other schools. Approach to teaching in International schools was more challenging when compared to government schools. Creative, challenging and exploring environment was seen in International schools. Although all the schools had teaching aids to teach children the number, quality and quantity varied. In all the schools, group learning, micro teaching and group discussion methods were given due importance during teaching learning process. Smart class is good especially for primary school students as they learn more from audio visual than from the still picture. Smart class gives practical knowledge to the kids and also helps them in understanding any topic easily and quickly (Ekta, 2013).

### **Assessment of score cards :**

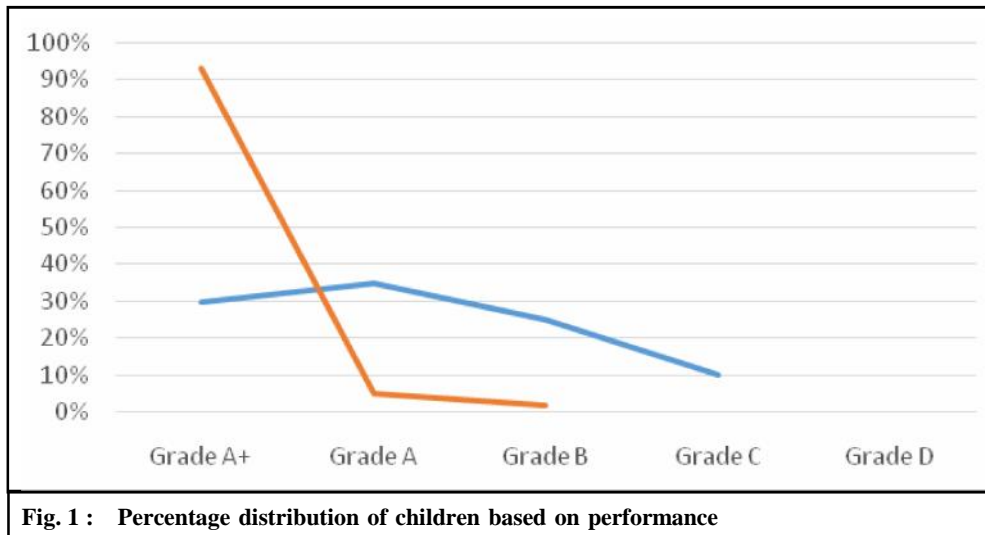
The students of class 1 were assessed on the basis of their daily performance because a single

test cannot give the overall progress of growth and development of the children. Children’s progressive assessment was done through continuous, consistent observation and careful monitoring. In government schools grades were given to them in a five point scale (A+, A, B, C, and D). There were no exams in all the schools. There were multiple techniques of evaluation, such as observation, oral work, evaluation of work/activity sheets, written work, aural skills, creative writing etc. In this way continuous evaluation was carried out throughout the year. Teachers attempt to assess the progress of children while teaching in the classroom. Thus evaluation is considered as an integral part of teaching learning process.

In order to assess the progress of the children in government schools class tests were also carried out in subjects like English, Hindi and Mathematics. On the other hand international schools equips students with the tools needed to succeed in higher education, such as creating interest in reading books, developing self-confidence, preparedness, organizational skills and being actively engaged in self learning. Assessment in international schools was carried out by a check-list and the progress of the child was assessed on a rating scale (Able to, beginning to, needs more exposure, not yet). The check-list was prepared by dividing the whole syllabus into small subtopics from simple to complex and the progress was rated accordingly for the whole year. A checklist for the observation of behavior and skills was created to keep in track of the progress of the child in the major domains of growth. Later on the performance was graded as A+, A, B, C and D.

To know the performance in each subject individual portfolios are maintained by international schools but not by government schools. In international schools the evaluation is done based on the comparison of performance of each child with the set objectives to be achieved at the end of the session.

When the results of 100 score cards were assessed from each school it was observed the children from international schools scored better compared to government schools. The results are as follows (Fig. 1):



**Fig. 1 : Percentage distribution of children based on performance**

The results seem to indicate that the instructional delivery method and the nature of instruction appear to make significant difference in student learning and eventually the performance. Smart class is a comprehensive solution designed to assist teachers in international schools in meeting day to day classroom challenges and enhancing student’s academic performance with simple, practical and

meaningful use of technology. Smart class rooms seems to make the atmosphere of the classrooms interesting both for teachers and students

**Matter to be addressed:**

***Controlling commercialization of education:***

The schools once known as “Temples of Learning” are now transformed into five star hotels. As a result only 2% of the children are able to use this facility of Hi-tech education. This is leading to inequitable distribution of education for the young children. Commercialization has to be handled properly, if not it could lead to serious consequences.

***Intervention programs:***

Smart classes are good for learning but are expensive too. Facilitating smart classes in each government school will be very expensive. Intervention Program has to be planned for government schools to teach the subject more effectively and new rules should be implemented for improving education quality in government schools.

***Resource utilization :***

High-quality early childhood education has long-term benefits and produces strong returns on investment. Human and material resources should be lavishly used for this section of children, so that children get the best of educational experiences during their early years. This will enable them to see their future bright and leads to holistic development without any disparity among varied sections of society.

***Research:***

Smart class is good for primary school students as they learn more from audio visual than from the still pictures such as charts and posters. Virtual class gives practical knowledge to the kids and also helps them in understanding any topic easily and quickly. The interactive electronic whiteboard is a colorful tool. Research indicates that students respond to displays where colour is employed (Bell, 2002). Smart classes are good for children until it doesn't harm their senses. Although smart classrooms are advantageous, the distraction of Hi-tech gadgets on young children is a cause for concern. Uniformity in standards of teaching has to be maintained.

***Strengthening of early childhood education:***

Instead of strengthening the facilities and improving the performance of already existing schools government is focusing on opening more schools. Quality is deteriorating because the government is busy in meeting the norms of opening a school at every 1.5km by which the quality of education imparted to the children is ignored (Bhanu, 2015).

***Holistic approach of government toward education system:***

Early childhood education aims at integrated approach of education for the holistic development of children. Similarly the government should follow integration and link between various elements of monitoring, controlling and evaluation of early childhood education policies and programs for strengthening the holistic development of education system.

**Conclusion :**

Along the years different teaching methods have been developed to meet the changing needs and requirements of children. Each method of teaching claims to be the best. Single pedagogy may not suit all the children, so different methods have to be followed in an integrated way. Traditional

classroom teaching methodologies are well researched, but smart classrooms, on the other hand, are new and high tech. Variety and flexibility are the important features to teach in any class. To conclude an integration of traditional and virtual class room method is best suited to meet the emerging needs, abilities and interest of the young learners. This would lead to a holistic approach of education. Holistic approach pays attention to children's physical, personal, social, emotional and spiritual wellbeing and cognitive aspects of learning. Blended learning is the need of the hour.

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