



Chapter I

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CHAPTER I



INTRODUCTION

1.1 Commitment for Education

The Constitution of India has made a commitment to provide free and compulsory elementary education to all children up to the age of 14, through the directive principles (Article 45). The Supreme Court of India recognized elementary education as a Fundamental Right of every citizen in its judgment in Unnikrishnan case (1993). Elementary education is close to being realized as a Fundamental Right of all Indian citizens. This is the aim of the proposed 83rd constitutional amendment, which was introduced in Rajya Sabha in July 1997.

The task of providing basic Education for All (EFA), gained greater momentum after the National Policy of Education (NPE) 1986 which was revised in 1992. The Government of India, in partnership with the State Governments, has launched a variety of programmes to fulfill the constitutional obligations. Though significant improvements are seen in various indicators, the ultimate goal of providing universal quality education for all remains to be achieved. With the launching of the Tenth Five-Year Plan, there is greater urgency to strive for Universalization of Elementary Education (UEE).

1.2 Need of Education

Social justice and equity are by themselves strong arguments for providing basic education for all. The strong linkage that basic education has with the improvement in levels of human well-being, especially with regard to life expectancy, infant mortality, nutritional status of children etc. adds to the case for universal basic education. In recent years, studies on the performance of developed and developing countries have clearly demonstrated that development

of human capital through universal basic education has contributed significantly to economic progress. The return on investment in basic education is one of the highest and, therefore, even from the economic perspective, a country cannot "afford" illiteracy. Apart from its direct effect, the impact of education on poverty is *even wider through its influence on fulfillment of basic needs like better utilization of health facilities, water, sanitation and shelter and also on labour participation and family size, which in turn enhance the productivity of people and yield higher wages and reduce inequality in earnings.*

In the earlier stages of planning, it was expected that economic growth was the primary means of removing poverty and improving the quality of life. Rapid economic growth was, therefore, visualized as the main instrument in achieving this objective. This strategy, however, did not yield the expected results. Although economic advancement took pace, it did not automatically lead to economic well-being of all the segments of the population. Attention had to be shifted to direct provision of health, nutrition and educational services, as an initiative of state policy. A number of anti-poverty and employment generating programmes were designed and initiated. The primary goal of these programmes, was to reduce poverty through income generating strategies. Even these programmes could not fully succeed in reducing the level of poverty. This led the planners and policy makers to recognize that one of the key elements in enhancing human capabilities is literacy and education.

Literacy and education have a direct effect role in human development and are instrumental in facilitating other achievements. Investments in social sectors in developing countries led to higher literacy rates and higher rates of participation in education, particularly basic education. Hence, efforts to reduce and ultimately eliminate illiteracy led to poverty reduction and human development. In India too, literacy programmes have made their impact towards empowerment of women, health and hygiene. It has led to gender equality, improvement of status of



women within families and their evolution into entrepreneurs through better appreciation of savings and access to micro-credit.

While the importance of education in economic and social upliftment is recognized, a great change, witnessed in the nineties, is the increasing demand for Elementary Education amongst the people. As an effect of a number of education programmes like Adult Literacy Programme, Mahila Samakhya (MS), Operation Blackboard (OB), District Primary Education Programme (DPEP), Non-Formal Education (NFE); which involves community mobilization, awareness has been created amongst the populace about the relevance of education. Resultantly, the progress towards Universalization of Elementary Education has been significant.

1.3 Growth of Education

1.3.1. Literacy: The decade of the nineties could be called the watershed decade as far as basic education is concerned. Provisional results of the census 2001 show the highest jump of 13.17% in the literacy rate since 1951, with rate going up from 52.21% in 1991 to 72% in 2001. More significantly, for the first time the absolute figures of illiterates have gone down by 3.19 crores, in spite of increasing population, while the number of literates went up by a phenomenal 20.36crores. Presently, nearly three-fourth of the male population and more than half of the female population is literate. All states, without exception, have shown increase in literacy rate during this decade with male literacy being over 60% in all of them. Another significant feature of the nineties is the narrowing gender gap. While the male literacy went up by only 11.72% in the nineties, the female literacy rate went up by 14.87% in the same period. This has led to the male-female gap decreasing to 21.70% in 2001 against the gap in 1991.

At the stage of elementary education too, the progress towards Universalization



of Elementary Education has been significant. Concerted efforts towards UEE have resulted in many fold increase in the institutions, teachers and students.

1.3.2. Access: During the period between 1950-51 and 1990-2000, the number of primary schools has increased by more than 3 times from 2.10 lakhs in 1950-51 to 6.42 lakhs in 1999-2000, whereas the number of upper primary schools increased 15 times from 13,600 in 1950-51 to 1,98,000 in 1999-2000.

1.3.3. Enrolment: Total enrolment at primary stage has increased by 5.91 times between 1950-51 and 1999-2000, and for girls the increase was 9.16 times. At the upper primary level, the increase in enrolment during this period was more than 13 times, and in the case of girls the increase was about 33 times. The average annual growth rate of girls' enrolment at elementary level was much higher compared to that of the boys. At the primary level the average annual growth rate of girls' enrolment was 2.29% whereas it was 3.46% at the upper primary level.

1.3.4. Expertise: A substantial increase in the number of teachers has been registered since 1950-51. Total number of teachers increased from 6.24 lakhs in 1950-51 to 32.17 lakhs in 1999-2000, i.e., registering an increase of more than 5 times, while the number of female teachers increased from 0.95 lakhs in 1950-51 to 11.52 lakhs in 1999-2000, an increase of 12 times.

1.3.5. Expenditure: The percentage of educational expenditure to GDP that was 0.68% in 1951 steadily rose to 3.77 in 2000. The period between 1982 and 1992 saw the peaking and in 1989 it touched 4.39.

Table 1.1 shows the growth in education.

Redefinition of "Universalization of Elementary Education" in the national Policy of Education 1986, as consisting, not only of access, enrolment and attendance



but also on learners achievement, brought focus on the quality of elementary education in a significant manner.

The following table gives the progress made in Elementary Education during the past fifty years.

Table 1.1 Growth of Elementary Education since 1950

INDICATORS	1950-51	1999-2000
• Primary Schools	2,10,000	6,42,000
• Upper primary Schools	13,600	1,98,000
• Enrolment in Primary	19.2 million	113.61 million
• Enrolment in Upper Primary	3 million	42 million
• Literacy	16.6%	72%
• Public Expenditure on Education (% of GDP)	0.68%	3.77%

Source: Working Group Report On Elementary And Adult Education, Tenth Five Year Plan, 2002-2007. Dept of Elementary Education and Literacy, Ministry of Human Resource Development, Government of India, New Delhi.

1.4 District Primary Education Programme (DPEP):

Central government made intensive efforts, focusing on improving the quality in primary education, along with increasing enrolment and retention. The Central Advisory Board on Education (CABE), in 1992, completed a revision of the



National Policy on Education of 1986 and emphasized on an integrated approach to primary education development focused on the district level. This recommendation resulted in the launch of District Primary Education Programme (DPEP) with districts of below-average female literacy as the program targets. The programme decentralizes planning to district level to encourage popular participation. The DPEP emphasizes investments in the quality of primary instruction, particularly in-service teacher training, improved teaching-learning materials, and improved school facilities. The task before the DPEP was enormous and it is in this light that BRCs (Block Resource Centers) and CRCs (Cluster Resource Centers) were established for continuous induction, orientation, training, monitoring, supervision and support for total improvement in school education, particularly meant for elementary stage. These Cluster Resource Centers has been renamed and identified as Jan Shiksha Kendras.

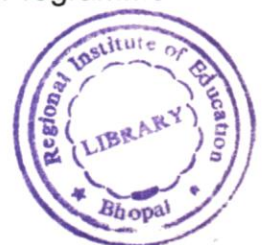
1.5 Computer in Education

Following the Jometian Conference in 1990, basic education has been the focus of international attention. The philosophical aspect behind this attention is, developing “global citizens”. Global has become reachable with information and connectivity explosion through “click by click” intervention. With this advancement computer education became a major priority in the country. Educational institutions at all levels started investing heavily in realizing the potential of computer education in supporting learning activity.

Some efforts had been initiated a few years ago on a large scale.

A. CLASS Project: This project was aimed at motivating the students at 9-12 standard level in schools to learn basic computing skills at a fairly large scale. The “Computer Literacy and Studies in Schools” (CLASS) project was implemented by the Ministry of Human Resource Development, New Delhi. This project was centrally funded.

B. CLAP Project: the M. P. State Council of Educational Research and Training, Bhopal started the “Computer Literacy and Awareness Programme”



(CLAP). This computer literacy programme aimed at developing computer literacy in higher secondary school children. This was a non-government aided model launched with the support of private sector.

These efforts in the area of computer education had two shortcomings, viz;

1. These projects were focused on starting from above i.e. from higher classes; and
2. These projects gave primary significance to computer education as training in computer operating skills, and not as computer aided education to expand learning facilities in all disciplines.

The children from the disadvantaged groups remained un-benefited by such innovations. The rural children and children from small towns, at the grass root level had no access to computers and hence no computer assisted instructions or learning. There was, thus a need to start from below, from the primary school upward to upper primary schools and secondary schools as well, and make livelier the educational process with the aid of computers and information technology.

With the intention of uplifting the children of the disadvantaged group, a Head Start programme was launched in the United States of America, by a task force recommendation in 1964. This was a federally sponsored pre-school program to meet the needs of the economically disadvantaged children. This program, with its great success, is still continuing successfully and has grown to serve children from birth to age five and their families. This is a child focused programme and has the overall goal of increasing the school readiness of young children from low income families.

1.6 Head Start Programme

Under DPEP, Head Start, a programme about empowerment has been undertaken. It aims to empower children and teachers through information technology, that is, opening up new windows for the less privileged to equalize



This programme has been launched in Madhya Pradesh as a major intervention in the Distance Education Programme (DEP) of the District Primary Education Programme (DPEP).

Education aided by information technology is the tool to level social and economic inequalities and reduce the division between “the connected and the isolated”, between “the knows and the know-nots”. Information technology is used to ensure that the “global” does not cancel out the “local”. This has been one of the primary concerns of the government of Madhya Pradesh and Rajiv Gandhi Shiksha Mission and thus Head Start is launched. Head Start Programme was launched on 14 November, 2000, in 18 centers of each 33 DPEP districts of the state i.e. in 594 Jan Shiksha Kendras.

1.6.1 Jan Shiksha Kendras:

As on September 1999 there were 67,381 primary and 17,916 middle schools in the state academic support and monitoring of these schools is done through the Block Resource Centers (BRCs) and Cluster Resource Centers (CRCs). The CRCs which are middle schools has been renamed as JAN SHIKSHA KENDRAS (Public Education Centers). A Jan Shiksha Kendra functions as a nodal center for schools in its catchment area of a radius of 8 kms. Roughly 15-20 such schools come in its catchment area. Under the Head Start Programme there are 6500 Jan Shiksha Kendras established in 33 districts of the state.

The Head Start is a move from a fixation with computer education to computer assisted education and opening of unbounded opportunities for lifelong learning in a knowledge society. The Head Start uses information technology for providing opportunity structure to the weak to get even with the strong. The mission statement of the Head Start

is;

“ENHANCING EMPOWERMENT THROUGH USE OF INFORMATION TECHNOLOGY”.



With this mission the main objective is to develop computer enabled (CD based) self learning approach in a peer situation.

Head Start also aims to offer education in basic computing to develop capabilities in students from primary stage, to use computing as an effective tool for a variety of purposes including learning of emerging dimensions of science and technology and other areas of knowledge and skill up gradation.

1.6.2 Philosophy behind Head Start

There are two distinct philosophies associated with learning. The “objectivists” assume that the learner is an empty vessel, which can be filled with the knowledge. It leads directly to an “instructivist” pedagogical approach, where the teacher fills an empty vessel, which is the student. The “constructivist” epistemology on the other hand assumes that the learner can build their own knowledge based on an existing set of experiences, so the student is viewed as a researcher. A major goal of the constructive approach is to ensure that learning environment is as rich and interactive as possible.

The Head Start philosophy is maximally based on constructivist approach, where learning is learner-centered. The learner is given a set of different interactive on-computer and off-computer activities, so that s/he can learn in the best activity which suits her/him.

The primary intervention offered to the students in Head Start programme is Computer Assisted Instruction on the subject matter identified as hard spots by the SCERT.

1.6.3 Computer Assisted Instruction (CAI): Meaning

CAI is a term that refers to a learning situation in which the student interacts with and is guided by a computer through a course of study at achieving certain instructional goals. In a typical CAI setting, the student sits at a microcomputer or an optic terminal and communicates with the programmer in the CPU.

Interaction may take place in the following ways:

- (1) The computer presents instructional information and questions.



- (2) Then the student studies the information or instructions presented, answer the questions and perhaps ask questions of his or her own choice.
- (3) The computer then accepts analyses and provides immediate feed back to the students' performance for evaluation purposes.

The simplest and most used form of CAI is the drill and practice approach which is designed to complement instruction derived from teachers printed material and other non computer sources.

1.2.2 Characteristics of CAI:

- 1) It is an instructional technique based on the two way interaction of learner and a computer with the objective of human learning and retention.
- 2) It is an instructional technique in which the computer must actually instruct the students and the computer contains a stored instructional programme designed to inform, guide and test the students until the prescribed level of proficiency is reached.
- 3) Computer is based to control the presentation of stimulus to a student, to accept and evaluate the students' responses, to present further stimuli based on that interaction calculated to shape the student responses in the desired manner.

1.6.3 Objectives of Head Start

The outcomes of Head Start are aimed at:

1. Capacity building of teachers of primary and upper primary classes in the use of computers for achieving educational processes.
2. Computer enabled education to Head Start JSK students of classes 1st to 8th.
3. Improving the quality of learning through use of information technology.
4. Familiarization of elementary school children in basic computing.
5. Provide for interactive learning by children and thereby transform pedagogic process towards self-learning.



1.6.4 Implementation Model:

A. State Technical Advisory Group (STAG):

The head Start programme is guided by a four member "State technical Advisory Group". This consists of,

1. Mission Coordinator,
2. Mission Director,
3. Vice Chancellor, Bhoj (Open) University, Bhopal
4. Additional Mission Director, Rajiv Gandhi Shiksha Mission, Bhopal.

The main role of this group is to advise on head Start and monitor as well as review Head Start developments.

B. Academic Group:

The academic group is a multi-disciplinary group and consists of subject experts, pedagogists, teacher educators and teachers. The group is headed by a Coordinator. This group is responsible for all academic aspects of Multi Media Rich Lessons (MMRL) development and their use.

C. Technical group:

The technical group consists of computer programmers, script-writers, instructional designers, media-specialists, graphic artists and audio/video recordist. The group is headed by a Coordinator. This group is responsible for the development of scripts, making scripts multimedia rich, deciding the navigational structure and approach, designing multi-disciplinary on-computer and off-computer activities and conducting formative and summative evaluation of CD-based educational programmes.

1.6.5 Inputs Provided in the Head Start Programme:

A. Information Technology Support:

Each Jan Shiksha Kendra has been provided with one Pentium-III computer, a printer, CDs developed by Rajiv Gandhi Shiksha Mission with technological support of Bhoj (Open) University, Bhopal.



B. Staff Development:

Each Jan Shiksha Kendra (JSK) is headed by Coordinator, renamed as Jan Shikshak. Each JSK Coordinator with other two JSK teachers has been trained in the operation and use of computers in the schools. In collaboration with Bhoj (Open0 University, Bhopal) a ten-day training course in computer literacy is given to the Head Start center teachers. The training involved Windows-98, MS-Office features and Using CDs for teaching and learning. The training also incorporated maintenance of computer and other peripherals. The salient feature of these training courses was that the teachers identified hard-spots in the course content and after orientation in script writing, wrote scripts for CDs.

C. Computer Disc(CD) Development Strategy:

Computer Disc development for Head Start is done by Rajiv Gandhi Shiksha Mission and MP SCERT in collaboration with Bhoj University. This initiates with the identification of hard-spots in the curriculum. The CDs are not electronic versions of the text-books. These are based on self-instructional approach and incorporate exercises on self-evaluation. The CDs serve as additional enrichment on topics of the text book. Each CD is based on two types of activities namely "on-computer" and off-computer" activities. The off-computer activities are meant to motivate the learner on the topic and are meant to be performed pre or post CD period. The on-computer activities are designed for CD-based learning on a computer. The students are motivated to make mistakes and accept challenges, win and lose in a game, and again play till s/he wins. This facilitates the learner to learn at own pace and concentrates on individualized instructions. A Head Start Jan Shiksha Kendra is allowed to devote 2-3 hours of school time for the Head Start activities out of a total 6-1/2 hours of working in a day. During these 2-3 hours of time different days are allotted to different classes.

This programme seeks to the development of disadvantaged children by shrinking the information gap and giving them opportunity and medium for



quality learning and also, there is political commitment with resource support to back this programme. It has been claimed and proposed by the Chief Minister of Madhya Pradesh, in a press conference, that it will be implemented on a large scale and at higher levels, soon.

Head Start is the only and currently the largest computer-enabled education programme at elementary school level in India, primarily rural India.

1.7 Need and Importance of the Study:

In the age of “information exploration” and “information explosion”, for an educator and educating agency, it is essential to know the effective and efficient ways of imparting knowledge to the learner and guiding for their all round development. A number of efforts have been initiated for bringing about quality improvement in elementary education. As a result of consistent efforts one idea emerged that education should be treated as an individualized activity. This concept led to the involvement of a new instructional strategy i.e. Computer Assisted Instruction (CAI). A learner can learn at his own pace with the help of computers.

The efforts and inputs put for the quality improvement need to be researched in order to arrive at the conclusive results. Researches need to be conducted for studying the interventions given in the form of CAI. A number of studies have been carried out in this field importantly by Paul (1985), Barbara (1986), Henry (1986), Eric (1987), Calvin (1988), Salavert (1988), Moore (1988) etc. All these studies had been conducted abroad in altogether different socio-cultural and economic setting.

The relevant studies, conducted in India, are few in number in this field and these are conducted by Prabhakar and Sansanwal (1989), Bhardwaj (1990), Jeyamani (1991), Mahapatra (1991), Singh, Ahluwalia and Verma (1991), Stella V (1992).



Dubey and Adhikari (1999), Gautam (1999). Reddy and Ramar (1999), Shah and Agrawal (1999),

All these studies primarily aimed to assess the effectiveness of CAI in terms of students' achievement in various subjects. In most of the studies the software used for content teaching through CAI in the experimental design was researcher made and thus lacked standardization and expertise. The studies were conducted on urban and secondary school children.

Head Start, as mentioned earlier, is a programme of CAI for rural and disadvantaged urban, elementary level students and has been recently launched. Its effectiveness has not been studied by researcher to the best of present researchers' exploration knowledge. The prime features of Head Start programme, viz; elementary level students, rural and disadvantaged urban locale, and expert made content software; are not the constituent of any of the studies. Much significance, thus, lies with the present study, as the results showing effectiveness or the ineffectiveness of the programme can suggest to its expansion in different dimensions or realizing its fruitlessness and extravagance.

1.8 Statement of the Problem:

The researcher in this study aspires to measure the effectiveness of the Computer Assisted Instruction, the major intervention in the Head Start Programme, in terms of students' achievement in English Language, comparing the achievements of the students studying in the Head Start schools and Non-Head Start schools.

Title of the study is:-

"A Comparative Study of the Achievement in English Language of Class VI Students', Studying in Head Start Schools and Non-Head Start Schools".



1.9 Objectives of the Study:

1. To analyze the differences, if any, in achievement in English Language, between the students studying in Head Start schools and Non-Head Start schools.
2. To analyze the difference, if any, in achievement in identified hard-spot components of English Language, between the students studying in Head Start schools and Non-Head Start schools.
3. To study the effect of locale on the achievement of Head Start school students.
4. To analyze the difference in achievement in English Language, of Head Start school students, in relation to gender.
5. To assess the opinion of students towards "computer assisted instruction" input provided to them under Head Start programme.
6. To study the effect of locale on the opinion of Head Start school students towards Head Start interventions.
7. To analyze the difference in opinion towards the interventions of Head Start programme, in relation to gender.

1.10 Hypotheses of the study:

Ho1. There is no significant difference in the achievement in English Language between Head Start school students and Non-Head Start school students.



Ho2. There is no significant difference in the achievement in “Alphabetical Knowledge” component between Head Start school students and Non-Head Start school students.

Ho3. There is no significant difference in the achievement in “Knowing Animals” component between Head Start school students and Non-Head Start school students.

Ho4. There is no significant difference in the achievement in “Identifying Colours” component between Head Start school students and Non-Head Start school students.

Ho5. There is no significant difference in the achievement in “Knowing Body Parts” component between Head Start school students and Non-Head Start school students.

Ho6. There is no significant difference in the achievement in “Sentence Formation” component between Head Start school students and Non-Head Start school students.

Ho7. There is no significant difference in the achievement in “Phonetics” component between Head Start school students and Non-Head Start school students.

Ho8. There is no significant difference in the achievement in English Language between urban Head Start school students and rural Head Start school students.

Ho9. There is no significant difference in the achievement in English Language between boys of Head Start schools and girls of Head Start schools.



Ho10. There is no significant difference in the opinion towards Head Start interventions between urban Head Start school students and rural Head Start school students.

Ho9. There is no significant difference in the opinion towards Head Start interventions between boys of Head Start schools and girls of Head Start schools.

1.11 Delimitations of the Study:

Depending upon the focus of the study the present study has following delimitations:

1. The study is limited to the schools of Chattarpur District only.
2. The study is limited to eight schools, four each from urban and rural locale of Chattarpur district.
3. The study is limited to eight schools, four each with Head Start inputs and without Head Start inputs from the specified locales and district.
4. The study is conducted only on class VI students from the specified schools.
5. The achievement comparison is confined to achievement in English Language only.
6. The components of English Language, that are analyzed in terms of achievement in the study are limited to those which are identified as hard-spots by the SCERT and for which CD-based Multi Media Rich Lessons were provided as inputs in the Head Start schools.



7. The study is limited to the opinion, of the specified sample, towards “computer assisted instruction” input provided under Head Start programme.

