Chapter - I
Introduction
CHAPTER – I
INTRODUCTION

The biggest challenge before the country, today, in the field of education is not only education expansion, universalization of education but to improve the overall quality of Education. It is the most vital issue of discussion in education today. Quality is creating an environment where educators, parents, government officials, community representatives and students work together to provide such an education to the students that fulfills their needs to meet current and future academic, social, worldly challenges. To raise the Quality of education is not a destination but is a continuous journey.

In the past few years tremendous effort was made to meet the educational needs of the learners and the nation but most of the work was devoted to the quantitative improvement of education. It was for the first time in National Policy of Education (1986) that emphasis was laid on the qualitative improvement of education. Hence, the emphasis now is on the scientific way of teaching. Designing, structuring and implementing teaching: to achieve Quality standards in education.

Deep and fundamental changes are required to reform educational standards. Technology can be the catalyst for considering full scale changes leading to Quality Education. Educational Technology can provide the spark for prompting educators to envision new ways to teach and for creating the kind of schools needed now. Technology is the application of scientific knowledge to practical tasks of life. If employed properly, it could make education more qualitative, access to education more equal and help tremendously in subjects like continuation and expansion of teacher training, working on innovative teaching methodologies, introduction on assessment of learning achievement as well as monitoring of teaching learning processes for achievement.

One of the vital components of Quality Education is the development of Quality Instruction. Quality Instruction is the vehicle that educationists can use to cope with the forces of change that are befitting our nation’s educational system. One of the dire needs of Educational Technology is in the field of Quality Instruction because Quality education can only be achieved if the schools adopt technological
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Instructional methods like programmed Instruction, computer based Instruction, Mastery learning, cooperative learning and Remedial Teaching, etc.

QUALITY INSTRUCTION

THE CONCEPT OF QUALITY

Quality has become a dynamic concept that constantly has to adopt to a world whose societies are undergoing profound social and economic transformation. Quality is a structured process for improving the output produced. Quality means competence and excellence in all fields. Quality is a dynamic concept, and is a designed continuous process.

Deeming Edwards, M (1990) is generally recognized as the Father of Quality. According to Deeming, Quality is predictable degree of variation for adopted standards and dependability at low cost.

Juran, Joseph M (1989) is also recognized for his contribution to Quality. According to Juran Quality is fitness for use and maintains that the basic Quality mission of a school is to develop programmes and services that meet the needs of the user, i.e. students and society.’

Quality has a variety of contradictory meanings. It implies different things to different people in education. It is perplex to define and often difficult to measure Quality in education. However Quality can be judged to exist when a good or service meets the specification that has been laid down for it.

Quality Instruction as reported by many researchers is accomplished when the instructor teacher demonstrate a thorough knowledge of their subject, are well prepared, are enthusiastic about teaching, seem to enjoy the course, are genuinely interested in the subject and are impartial in assigning grades.

Slavin (1994) defined Quality Instruction as The degree to which information or skills are presented so that students can easily learn them.
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By Quality Instruction Bloom (1976) meant that teachers should:

- Organize subject matter into manageable learning units.
- Develop specific learning objectives for each unit.
- Develop appropriate formative and summative assessment measures.
- Plan and implement group teaching strategies, with sufficient time allocations, practice opportunities, and corrective instruction for all students to reach the desired level of mastery.

Quality of Instruction means when the instructors

- Plan classroom procedures and rules carefully and in detail.
- Systematically teach students procedures and expected behaviours.
- Monitor student work and behaviour closely.
- Deal with inappropriate behaviour quickly and confidentially.
- Organize such Instruction that maximize student task engagement and success.
- Communicate directions and expectations clearly.
- At the end of class/Instruction must be analyzed and reflected.

Essence of Quality in Education

Deeming, Edwards M. (1990) developed fourteen points for education. These points are called Essence of Quality in Education.

- **Create a constancy of purpose**: Create a constancy of purpose to improve students and service Quality with the aim to become competitive with world class schools.

- **Adopt a total Quality philosophy**: Education takes place in a highly competitive environment and is viewed as school system must welcome the challenge to compete in a global economy.
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- **Reduce the need for testing**: Reduce the need for testing and inspection on a mass basis by building Quality into education services. Provide a learning environment that results in Quality student performance.

- **Award school business in new way**: Award school business in ways which minimize the total cost of education. Think of schools which work with parents and agencies to improve the Quality of students coming into system.

- **Improve Quality and productivity and reduce costs**: Improve Quality and productivity and thus reduce costs by instituting a chart-it/check it/change it process. Describe the process to be improved, identify the customer/supplier chain, identify areas for improvement, implement the changes, assess and measure the results and document and standardize the process. Start the cycle all over again to achieve an even higher standard.

- **Life long learning**: Quality begins and ends with training. If you expect people to change the way they do things, you must provide them with the tools necessary to change their work processes.

- **Leadership in education**: It is management’s responsibility to provide direction. Managers in education must develop a vision and mission statement for the district, school or department. The vision and mission must be should and supported by the teachers, staff, students, parents and community.

- **Eliminate fear**: Drive fear out of district, school or department so that everyone work effectively for school improvement create an environment that encourages people to speak freely.

- **Eliminate the barriers to success**: Management is responsible for breaking down barriers that prevent people from succeeding in their work. Break down barriers between departments.

- **Create a Quality culture**: The movement in education should not be dependent upon any one individual or any particular group of individual rather create a Quality culture.
• **Process improvement:** No process is ever perfect, rather finding a better way, a better process always requires equal and non-judgemental way.

• **Help students succeed:** This barrier should be removed of depriving students, teachers and administrations of their right to pride of workmanship. The responsibility of all educational administrations should be changed from quantity to Quality.

• **Commitment:** Management must be committed to a Quality culture. It must be willing to support the introduction of new ways of doing things into the education system.

• **Responsibility:** The transformation is everyone’s job. Put everyone in the school to work to accomplish Quality transformation.

Many attempts, many principles and many policies have been made to improvise the system of education leading to Quality education but still many fields have yet to be explored, changed or modified. One such component, which is of vital concern and is of the utmost importance in Quality education is the development of Quality Instruction. To achieve a Quality education environment, one of the pillars is that of Quality Instruction.

**COMPONENTS OF QUALITY INSTRUCTION**

High Quality of Instruction is essential for effective education. High Quality Instruction programs in schools produce more advanced learners. Quality Instruction has also been defined and conceptualized in terms of various component behaviours.

**Kenneth Feldman (1976)** demonstrated eight component behaviours used to define Quality Instruction, which are

- Clarity
- Classroom management
- Knowledge
- Intellectually stimulating
- Organized
- Enthusiasm
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- Fairness
- Approach ability

Each of the component of Quality Instruction further consists of certain component behaviours which are explained below:

<table>
<thead>
<tr>
<th>COMPONENT – I</th>
<th>COMPONENT – II</th>
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</thead>
<tbody>
<tr>
<td>CLARITY consists of</td>
<td>CLASSROOM MANAGEMENT</td>
</tr>
<tr>
<td>- Explain material clearly</td>
<td>- Use class time wisely</td>
</tr>
<tr>
<td>- Make subject understandable</td>
<td>- Clearly identify student responsibility</td>
</tr>
<tr>
<td>- Present difficult ideas clearly</td>
<td>- Class atmosphere conducive to learning</td>
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<thead>
<tr>
<th>COMPONENT – III</th>
<th>COMPONENT – IV</th>
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<tbody>
<tr>
<td>KNOWLEDGE in terms of</td>
<td>INTELLECTUALLY STIMULATING</td>
</tr>
<tr>
<td>- Thorough knowledge of subject</td>
<td>- Make material interesting</td>
</tr>
<tr>
<td>- Demonstrates importance of the subject</td>
<td>- Stimulate students to think</td>
</tr>
<tr>
<td>- Provides various points of view</td>
<td>- Stimulate intellectual curiosity</td>
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<thead>
<tr>
<th>COMPONENT – V</th>
<th>COMPONENT – VI</th>
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<tr>
<td>ORGANIZED consists</td>
<td>ENTHUSIASM consists of</td>
</tr>
<tr>
<td>- Teacher is well prepared</td>
<td>- Genuinely interest in subject</td>
</tr>
<tr>
<td>- Presentations are well organized</td>
<td>- Enjoys teaching</td>
</tr>
<tr>
<td>- Course content is well developed</td>
<td>- Enthusiastic about course</td>
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<table>
<thead>
<tr>
<th>COMPONENT – VII</th>
<th>COMPONENT – VIII</th>
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<tbody>
<tr>
<td>FAIRNESS consists of</td>
<td>APPROACHABILITY consists of</td>
</tr>
<tr>
<td>- Impartial in assigning grades</td>
<td>- Accessible outside of class</td>
</tr>
<tr>
<td>- Grades based on materials</td>
<td>- Easy to talk to</td>
</tr>
<tr>
<td>- Prove to stress in class</td>
<td>- Genuinely interested in students as individuals</td>
</tr>
<tr>
<td>- Evaluates work fairly</td>
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**Figure: f1.1 Components of Quality Instruction by Kenneth Feldman**

Kathleen Mckinney, (1988), identified five components of Quality Instruction. McKinney, described these components by the acronym, FACES:
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Fairness, Application, Challenges, Entertainment and Service. These components are basic, yet they may be frequently neglected, Mckinney believes all five components are equally important in Quality teaching/Instruction because of the different purposes they serve. And these characteristics should be incorporated through different phases of teaching-formal and informal meetings with students, class preparation, actual classroom Instruction evaluation programmes, grading, activities etc.

- Fairness
  Fairness does not mean being an easy grader or easy teacher. Being too easy is very unfair since you cannot differentiate equitably if they produce different levels of effort and outcomes. Fairness is concern, consistency being responsible, organized, knowledgeable, using a framework rather than arbitrary power.

Strategies for including fairness in teaching
- Use of a contract syllabus.
- Clear and consistent yet challenging workload.
- Treating students as adults.
- Providing some choices for students in class, structure and requirements.

- Application
  This component refers to helping students learn to use what we teach them (theories, knowledge, skills, thinking) in their personal and professional lives. Application, in students lives not only in career goals but add to their Quality of life.

Strategies for Application are
- Use of group projects, discussion, exam questions, which emphasize applied projects.
- Problem solving exercises, thought problems.
- Field placements
- Internships
- Original examples
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• Challenge
   Here, trick is not to aim too high, but to aim above students average current level with regard to reading, assignments and exams. Substance which challenges is crucial in courses along with insisting that students tryout new skills, new projects and new way of thinking.

Strategies for inculcating challenges among students
   - Teaching controversially, playing the devils advocate to encourage thinking
   - Critically analyse and assess the assignments before grading
   - Providing detailed written and verbal feedback on exams, assignments, etc.
   - Giving detailed examples of what is expected and wanted from students.

• Entertainment
   Here, it doesnot mean pure entertainment without subsistental teaching, what is meant that teaching evolves enthusiasm, insight, understanding, and occasionally good humor. Classes should be enjoyable and stimulating.

Mechanism that enhances entertainment in classes
   - Film, video, guest speakers
   - Field trips
   - Debates, simulation games, quiz
   - Interviews of learned people, education in schools

• Service
   High Quality teachers are also very concerned about their discipline and bringing the best of their capabilities, to bear on issues of content, advising, and curricula. Teaching means that there is something to profess substance to critically handle.

Strategies leading to high quality teaching or service are:
   - Representing the discipline by giving guest lectures to wider audiences.
   - Conducting and participating in workshops.
   - Conducting research, especially on teaching.
   - Sitting on committees concerned with teaching.
Mckinney recognizes FACES as ideal for Quality Teaching. She urges to assess the importance and feasibility incorporating each component in everybody’s teaching.

The various Domains and Components of Quality Instruction are also categorized in the following manner

<table>
<thead>
<tr>
<th>DOMAIN I – PLANNING AND PREPARATION</th>
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<tbody>
<tr>
<td>Component Ia – Demonstrating knowledge of content and pedagogy</td>
</tr>
<tr>
<td>- Knowledge of content</td>
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<tr>
<td>- Knowledge of prerequisite relationships</td>
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<tr>
<td>- Knowledge of content related pedagogy</td>
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<tr>
<td>Component Ib – Demonstrating Knowledge of student’s</td>
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<tr>
<td>- Knowledge of characteristics of age group</td>
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<tr>
<td>- Knowledge of students varied approaches to learning</td>
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<tr>
<td>- Knowledge of students skills and knowledge</td>
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<tr>
<td>Component Ic – Selecting Instructional goals</td>
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<tr>
<td>- Value</td>
</tr>
<tr>
<td>- Clarity</td>
</tr>
<tr>
<td>- Suitability for diverse students</td>
</tr>
<tr>
<td>- Balance</td>
</tr>
<tr>
<td>Component Id – Demonstrating knowledge of resources</td>
</tr>
<tr>
<td>- Resources for teaching</td>
</tr>
<tr>
<td>- Resources for students</td>
</tr>
<tr>
<td>Component Ie – Designing Coherent Instruction</td>
</tr>
<tr>
<td>- Learning activities</td>
</tr>
<tr>
<td>- Instructional Material and resources</td>
</tr>
<tr>
<td>- Instructional groups.</td>
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<tr>
<td>- Lesson and unit structure</td>
</tr>
<tr>
<td>Component If Assessing student learning</td>
</tr>
<tr>
<td>- Congruence with Instructional goals</td>
</tr>
<tr>
<td>- Criteria and standards used for planning</td>
</tr>
</tbody>
</table>
### DOMAIN II - THE CLASSROOM ENVIRONMENT

**Component IIa - Creating a environment of respect and rapport**
- Teacher interaction with student’s
- Student interaction

**Component IIb - Establishing a culture for learning**
- Importance of the content
- Student pride in work.
- Expectations for learning and achievement

**Component IIc - Managing classroom procedures**
- Management of Instructional groups
- Management of transitions
- Management of materials and supplies
- Performance of non-Instructional duties
- Supervision of volunteers and paraprofessionals

**Component IId - Managing student Behaviour**
- Expectations
- Monitoring of student behaviour, student response
- Student misbehaviour to be monitored

**Component IIe - Organizing Physical space**
- Safety and management of furniture
- Accessibility to learning by using physical resources.

### DOMAIN III - INSTRUCTION

**Component IIIa: Communicating clearly and accurately**
- Directions and procedures
- Oral and written language

**Component IIIb - Using questioning and discussion techniques**
- Quality of questions
- Discussion techniques student participation

**Component IIIc - Engaging students in learning**
- Representation of content
- Instructional materials and resources.
- Structure and pacing
### Component IIId - Providing feedback to students
- Quality: Accurate, substantive, constructive and specific timelessness

### Component IIIe - Demonstrating Flexibility and Responsiveness
- Lesson adjustment
- Response to students
- Persistence

### DOMAIN IV – PROFESSIONAL RESPONSIBILITIES

#### Component IVa - Reflecting on Teaching
- Accuracy
- Use in future teaching

#### Component IVb – Maintaining Accurate records
- Student completion of assignments
- Student progress is learning
- Non Instructional records

#### Component IVc - Communicating with families
- Information about the Instructional program
- Information about individual students
- Engagement of families in the Instructional program

#### Component IVd - Contributing to the school and district
- Relationship with colleagues
- Service to school
- Participation in school and district projects

#### Component IVe - Growing and developing professionally
- Enhancement of content
- Knowledge and pedagogical skill
- Service to the profession

#### Component IVf - Showing professionalism
- Service to students
- Advocacy
- Decision making
High Quality of Instruction is essential for effective education. Research indicates that high Quality education programs produce more advanced learners with high social skills and life skills.

**MODELS OF QUALITY INSTRUCTION**

Many researchers have tried to put together classroom - Instruction based models that describe the teaching - learning process. A model is a visual aid/picture/layout which highlights the main ideas and variables in any process or system.

Gage and Berliner (1992) states that the use of models as learning aides have two primary benefits. First, models provide, accurate and useful representations of knowledge that is needed when solving problems in some particular domain. Second, a model makes the process of understanding a domain of knowledge easier because it is visual expression of a particular process.

Models have been used extensively in education, to help classify some of the answers researchers have found that might shed light on such questions as,

- How do students learn effectively?
- What is happening in this classroom that facilitates learning better than in another classroom?
- What Instructional methodology assures vital learning?

The various models that are somehow, dealing with the Instructional process, leading to effective quality teaching learning process are explained below: Most current models that categorize the variables or explanations of the many influences on Instructional processes today stem from Carrolls (1963) seminal article defining the major variables related to school teaching learning process.
**JOHN CARROLL’S MODEL**

In his model, Carroll states that time is the most important variable in school learning. A simple equation for Carroll’s model is:

\[
\text{School learning} = f \left( \frac{\text{time spent}}{\text{time needed}} \right)
\]

Carroll explains that **time spent** is the result of **opportunity** and **perseverance**. Opportunity in Carroll’s model is determined by

- **Measure of Opportunity** – allocated time or the amount of time the classroom teacher made available for school learning.
- **Measure of perseverance** – Engagement rates or the percentage of the allocated time that students were actually on task.

Allocated time was multiplied by engagement rate to produce engaged time or time on task which is defined as the number of minutes per school day that students were actually engaged in school work.

**Carroll defined TIME NEEDED as a function of**

![Diagram](image)

**Figure f1.2 John Carroll’s model**
ARCS MODEL OF INSTRUCTIONAL DESIGN

ARCS Model, is a well known and widely applied model of Instructional design. It was developed by John M. Keller of Florida State University (Keller, 1983, 1987). ARCS is a systematic model for designing and motivating Quality Instruction. Simple, yet powerful, ARCS Model is rooted in a number of Instructional theories and concepts. ARCS Model identifies four essential strategy components for motivating Instruction.

(a) **Attention** strategies for arousing and sustaining curiosity and interest.
(b) **Relevance** strategies that link to learners needs, interests, motives.
(c) **Confidence** strategies that help students develop a positive expectation for successful achievement.
(d) **Satisfaction** strategies that provide extrinsic and intrinsic reinforcement for effort.

Keller (1987) breaks each of the four ARCS components along with Instructionally relevant examples are shown below:

### ATTENTION

<table>
<thead>
<tr>
<th>Sub Components</th>
<th>Meaning (Instructional Terms)</th>
<th>Instructionally Relevant Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Perceptual</td>
<td>Provide novelty surprise, incongruity, uncertainty</td>
<td>Eg – The teacher places a sealed book covered with question marks on a table in front of the class</td>
</tr>
<tr>
<td>- Inquiry Arousal</td>
<td>Stimulate curiosity by posing questions or problems to solve</td>
<td>Eg – The teacher presents a scenario of a problem situation and asks the class to brainstorm possible solutions based on what they have learned in the lesson</td>
</tr>
<tr>
<td>- Variability</td>
<td>Incorporate a range of methods and media to meet students varying needs</td>
<td>Eg – After displaying and reviewing each slip in the process on the overhead projector, the teacher divides the class into terms and assigns each team a set of practice problems</td>
</tr>
</tbody>
</table>
### RELEVANCE

<table>
<thead>
<tr>
<th>Sub Components</th>
<th>Meaning (Instructional Terms)</th>
<th>Instructionally Relevant Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Goal Orientation</td>
<td>Present the objectives and useful purpose of the Instruction and specific methods for successful achievement</td>
<td>Eg – The teacher explains the objectives of the lesson</td>
</tr>
<tr>
<td>- Motive Matching</td>
<td>Match objectives to student needs and motives</td>
<td>Eg – The teacher allows the students to present their projects in writing or orally to accommodate different learning needs and styles</td>
</tr>
<tr>
<td>- Familiarity</td>
<td>Present content in ways that are understandable and that are related to the learner’s experience and values</td>
<td>Eg – The teachers asks the students to provide examples from their own experiences for the concept presented in class</td>
</tr>
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</table>

### CONFIDENCE

<table>
<thead>
<tr>
<th>Sub Components</th>
<th>Meaning (Instructional Terms)</th>
<th>Instructionally Relevant Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Learning Requirements</td>
<td>Inform students about learning and performance requirements and assessment criteria</td>
<td>Eg – The teacher provides students with a list of assessment criteria for their research projects and circulates examples of exemplary projects from past years</td>
</tr>
<tr>
<td>- Success Opportunities</td>
<td>Provide challenging and meaningful opportunities for successful learning</td>
<td>Eg – The teacher allows the students to practice extracting and summarizing information from various sources and then provides feedback, before students begin their research projects</td>
</tr>
<tr>
<td>- Personal Responsibility</td>
<td>Link learning success to students personal effort and ability</td>
<td>Eg – The teacher provides written feedback on the Quality of the students performance and acknowledges the students hard work and dedication</td>
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</table>
SATISFACTION

<table>
<thead>
<tr>
<th>Sub Components</th>
<th>Meaning (Instructional Terms)</th>
<th>Instructionally Relevant Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Intrinsic Reinforcement</td>
<td>Encourage and support intrinsic enjoyment of the learning experience</td>
<td>Eg – The teacher invites former students to provide testimonials on how learning these skills helped them with subsequent homework and class projects</td>
</tr>
<tr>
<td>- Extrinsic Rewards</td>
<td>Provide positive reinforcement and motivational feedback</td>
<td>Eg – The teacher awards certificates to students as they master the complete set of skills</td>
</tr>
<tr>
<td>- Equity</td>
<td>Maintain consistent standards and consequences for success</td>
<td>Eg – After the term project has been completed, the teacher provides evaluative feedback using the criteria described in class</td>
</tr>
</tbody>
</table>

The ARCS Model is an easy to apply, heuristic approach to increase the motivational appeal of Quality Instruction. ARCS provides a useful framework for both the design and improvement of Quality of classroom Instruction.

PROCTOR'S MODEL OF QUALITY INSTRUCTION

Proctor (1984) provided a model that includes important teacher and student behaviour as predictors of students achievement. Proctor’s model begins with the factor of the School’s Social Climate. Some of the variables included in this would be attitudes, norms, beliefs and prejudices. This school climate is influenced by a number of factors, including such student characteristics as race, gender, past economic performance. The student characteristics also include teacher attitudes and teacher efficacy.

The next category of variables is the INTERACTION among the individuals involved in the schooling process. This includes the input of administrators as well as that of teachers in Instructional and teaching learning process. If there is high Quality Instructional input, corrective feedback, good communication among students, parents
and educators then the intermediate of student learning and student achievement goes up.

The interactions in Proctor's (1984) model include the school’s overall policy on allowing time for children to learn or promoting other forms of student based help when needed. This include

- **Quality of Instruction** (as in Carolls 1963 model above)
- **Teacher classroom Behaviours** (as in Cruickshanks 1985 model)

Finally, students achievement level in Proctor’s (1984) model is an outcome of all previous factors and variables. It is hypothesized that it is a cyclic relationship among the variables. According to Proctor, the main concept is that achievement in a specific classroom during a particular school year is not an end in itself. It is registered into the social climate of school image and the entire process begins all over again.

The diagrammatic view of the model is given below:
CRUICKSHANK’S MODEL OF QUALITY INSTRUCTION

The model by Cruickshank (1985) is more classroom and teacher based; he was heavily influenced by models created by Mitzel, Biddle and Flanders. Mitzel contributed the concept of classifying variables as **Presage, Process and Product** (Cruickshank).

**Presage:** Teacher intelligence, level of experience, success and other teacher characteristics.

**Process:** Interaction between student and teacher.

**Product:** Learning on the part of the student (change in behaviour or behaviour potential)

The components of the model have been diagrammatically presented below:

**Figure:** fl.4 Components of Cruickshank’s Model
**BIDDLE’S MODEL**

_Biddle_ (as cited in Biddle and Ellena, 1964) showed a relationship between specific learning activities and teacher effects. In his model, Biddle offered categories of variables related to schooling and student achievement. This provided the foundation for Curickshanks model

- School and community contents
- Formative experiences
- Classroom situations
- Teacher properties
- Teacher behaviours
- Intermediate effects
- Long term consequences

**SCHOOL AND COMMUNITY CONTENTS**

A. Physical Equipment  
B. Cost of Characters  
C. Laws and Customs  
D. Needs and ideas of Community Members

**CLASSROOM SITUATIONS**

A. Physical Equipment  
B. Social Incidents

**Teacher Properties**

A. Skills  
B. Motives  
C. Habits  
D. Knowledge

**Teacher Behaviors**

A. Traits  
B. Responses to Environment

**Immediate Effects**

A. Overt Pupil Responses  
B. Covert Pupil Responses

**Formative Experiences**

A. Training  
B. Socialization  
C. Ascribed Positions

**Long Term Consequences**

A. Achievement or adjustment of pupils  
B. New ideas in Education  
C. Adjustment of the profession

Figure : fl.5 Biddle’s seven categories of variables related to school achievement
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BIDDLE, also contributed a model of the transactional process of the classroom by analyzing the structure and function of the communication process. This is reflected in Cruickshanks model through the use of arrows depicting the interactions between teachers and pupil classroom behaviour.

![Image: Model of transactional process of the classroom]

Figure: f1.6 Model of transactional process of the classroom

Flanders (As cited in Cruickshanks, 1985) offered the variables of teacher and student classroom talk and devised an instrument which focused on this behaviour. His was the most frequently used instrument. It permitted observation of teachers use of verbal influence, defined as teacher talk and pupil talk in a variety of classroom situations (Cruickshank). Curickshank put them all together and added additional presage variables such as pupil characteristics, properties (abilities and attitudes) and school, community and classroom climate.
GAGE AND BERLINER’S MODEL

Gage and Berliner (1992) developed a model of Instructional process that focuses on the variables that must be considered by the teacher as she designs and delivers Instruction to students. This model attempts to define, more precisely what is meant by Quality Instruction and presents five tasks associated with the Instruction/learning process. The model is classroom and teacher based and centers around the question, What does a teacher do?

A teacher begins with objectives and ends with evaluation. Instruction connects objectives and evaluation and is based on teachers knowledge of the student’s characteristics. If the evaluations do not demonstrate that the desired results have been achieved, the teacher re-teaches the material and starts the process all over again. Classroom management is subsumed under the rubric of motivating student. Gage and Berliner suggest that the teacher should use research and principles from educational psychology to develop proper teaching procedures to obtain optimal results.

Figure: Gage and Berliner’s model
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**HUITT’S MODEL OF QUALITY INSTRUCTION**

It is one of the most recently developed model (Huitt, 1995) that identifies the major categories of variables related to school *instruction* and school *achievement*. This model is not only school, classroom teacher and student based, but includes additional contextual influences as well. It attempts to categorize and organize all the variables related to Quality Instruction, leading to student achievement. This is a revision of a model by Squires, Huitt and Segars (1983).

Huitt’s (1995) model adds variables related to context and student and teacher characteristics, some of which were the focus of the models by Proctor (1984) and Cruickshank (1985). It is an interactive model along the lines of Biddle and Ellena (1964), Cruickshank (1986).

Huitt’s model shows a relationship among the categories of

- **CONTEXT** (family, school, home and community environments)
- **INPUT** (what students and teachers being to the classroom process)
- **CLASSROOM PROCESS** (What is going on in the classroom)
- **OUT PUT** (Measures of learning done outside of the classroom)

These categories appear superimposed in the model since it is proposed that they are essentially intervened in the learning process.

![Diagram of Huit's model on Teaching/Learning Process](image)

*Figure: fl.8 Huit's model on Teaching/Learning Process*
This model shows **Input** and **Output** as the beginning and end of teaching/learning process. Huitt (1995) believes that educators must first identify or propose an end result (as stated by Gage and Berliner, 1992) because how you measure and identify the end product (output) will influence the selection of important predictor variables (e.g., What you measure is what you get, Hummel and Huitt, 1994). Until the outcome objectives are known, the Instructional process cannot be a success. Thus, the output category is the important focus of Huitt’s model.

In Huitt’s (1995) Model, **Input** variables largely depend upon the qualities the teacher and the students bring to the Instructional process in classroom. The subcategories of **input** variable are:

- **Teacher characteristics** includes such variables as values and beliefs; knowledge of students and teaching/learning process; thinking, communication and performance skills, personality. Teacher efficacy is one the best predictors of student success from this subcategory (Proctor 1984; Ashton 1984). If a teacher believes that in general, students can learn the knowledge of skill and specifically, the teacher can teach them, then the teacher is more likely to be more successful in the Instructional process.

- **Student characteristics** includes variables as study habits, learning style, Age, Sex/gender, race, motivation, moral, socio emotional, cognitive and character development all become important in relationship of Instructional classroom process. However, Bloom (1976) and Huitt (1995) believe that student aptitude and prerequisite skills are probably the best student characteristic predictors.

The most important impact on important measures of school teaching/learning process are those variables related to **Classroom Processes**. These variables are

- Teacher behaviour
- Student behaviour
- Others
Introduction

The category of teacher behaviour has the following subcategories

- **PLANNING** (getting ready for classroom interaction)
- **MANAGEMENT** (getting the class under control)
- **INSTRUCTION** (guiding the learning process)

In general, planning activities have little predictable relationship to student achievement (Gage and Berliner, 1992) and management has moderate relationship with learning achievement (Roseshine and Stevens, 1986). However, three single variables of teacher Instruction that are the best classroom predictors of student success are:

- **Teachers providing corrective feedback**: (eg. Give an explanation of what is correct or incorrect and why)
- **Teachers use of reinforcement**
- **Level of student teacher interaction**: (variables developed from the work of Flanders, as cited in Cruickshank, 1985).

Huitt, believes that **direct instruction/explicit instruction** is the best model of Instruction, leading to **Quality Instruction**. HUITT, W (1996) developed a summary of direct Instruction:

- More teacher directed Instruction (>50%) and less seatwork (<50%)
- Active Presentation of information
  - Gain students attention
  - Providing motivational clues
  - Use advance organizers
  - Expose essential content
  - Protesting/promoting of relevant knowledge
- Clear organization of presentation
  - Component relationships
  - Sequential relationships
Introduction

- Relevance relationships
- Transitional relationships

- Step by step progression from subtopic to subtopic (based on task analysis)
- Use many examples, visual prompts, demonstrations (to mediate between concrete and abstract concepts).
- Constant assessment of student understanding (before, during and after the lesson).
- Alter pace of Instruction based on assessment of student understanding (one is teaching students, not content).
- Effective use of time and maintaining student’s attention (appropriate use of classroom management techniques).

One important addition in this model is the redefinition of Academic Learning Time (ALT), as discussed in Proctor’s (1984) model. Fisher and his colleagues (1978), defined ALT as time engaged in academic learning at a high success rate. Squires (1983) used the more inclusive definition of ALT proposed by Caldwell, Huitt and Graeber (1982) as the amount of time students are successfully engaged on content that will be tested.

Huitt also supports Proctor’s (1984) that intermediate outcomes, or more specifically Academic Learning Time (ALT) is one of the best classroom Process predictors of success of classroom Instruction and student achievement. The three components of ALT given by him are

1) **Content Overlap**: The extent to which the content objectives covered on the standardized test overlaps with the content objectives covered in the classroom, also called *time-on-target*.

2) **Student Involvement**: Defined the same way as Carroll defined time or *time-on-task*. If students are not provided enough time to learn material or are not actively involved while teachers are teaching, they are not likely to do well on measures of school achievement at the end of year/session.
Introduction

3) **Success**: Defined as the percentage of classwork that student complete with a high degree of accuracy. If student is not successful of class academic tasks, the student will likely not demonstrate success on achievement measure.

**Huitt**, (1995) proposes that these three components of ALT should be considered as *Vital Signs* of classroom Instruction. In addition to classroom teaching and Instruction, other time components such as number of days available for going to school (the school year), the number of days student actually attends school (attendance year) and the number of hours the student has available to go to school each day (School day) can influence ALT.

![Levels of Time](image)

**Figure f1.9. Showing Time Components According to Huitt**

Finally, **Huitt (1995)** includes the category of **context**, that includes subcategories like school processes, school characteristics, family, parental involvement; community, TV/Technology and global environment. For example, research shows that student achievement or Instruction process to succeed is impacted by class size (Bracey, 1995) and school size (Fowler, 1995), mothers education and family expectations (Campbell, 1991; Voelkl, 1993; Zill, 1992) as well as technology used at home. School, teacher and student characteristics combine to impact student achievement. Teacher classroom Instruction and behaviour and student behaviour influences in an interactive pattern that eventually results in student achievement. The
following diagram represent the wheel of teaching learning/Instructional process to ensure quality.

**Figure : f.1.10 The wheel of teaching learning/Instructional Process**

**SLAVIN’S QAIT MODEL**

Robert Slavin’s QAIT model (1997) is a revision of John Carroll’s model of school learning. In QAIT model, Slavin eliminated those elements that were not under the control of education and kept or redefined elements those could be altered or modified by teachers. All the following elements, must be present to make Instruction effective in classroom.

1. **Quality of instruction:** Slavin defined Quality of Instruction as, the degree to which information or skills are presented so that students can easily learn them. He also presents his own view of direct Instruction.
2. **Appropriate levels of instruction**: Slavin defined Appropriate levels of Instruction as the degree to which the teacher makes sure that students are ready not only to learn the lesson (i.e. have the necessary skills and knowledge to learn it) but have not already learned the lesson. Slavin has redefined Carroll’s variable ability to understand Instruction which is student characteristic and made it as teacher classroom behaviour.

3. **Incentive**: Slavin defines incentives as the degree to which the teacher makes sure that students are motivated to work on Instructional tasks and to learn the material being presented”. He has redefined Carroll’s variable perseverance which is a student classroom behaviour and again made it a teacher classroom behaviour.

4. **Time**: Slavin defines time as the degree to which students are given enough time to learn the material being taught. This is essentially equivalent to Carroll’s variable of opportunity.

![Figure: Slavin's QAIT Model](image-url)

*Figure: f1.11 Slavin’s QAIT Model*
Slavin has emphasized the importance of classroom teacher in arranging the conditions that will optimize Quality Instruction leading to student achievement. The major difference between Slavins and Huitt’s classroom Instruction Models in that Slavin has redefined the important variables of Carroll’s model into Teacher Classroom Behaviour. He has simultaneously, eliminated student classroom behaviour as an influence on teacher behaviour. A more complete version of Slavin’s Model is shown in the following diagram (Slavin, 1995).

Slavin included student characteristics as an important part of the teaching/learning process. He also adopted the concept of intermediate outcomes as advocated by Criuickshank (1985). However, he considered student achievement as measured by standardized tests as the only measure of student outcomes of schooling.

While Slavin includes content overlap as own important component of Quality Instruction. However, he omitted Teacher Efficacy and context variables as category of success in classroom Instruction leading to student achievement.

**MADELINE HUNTER INSTRUCTION MODEL**

Madeline Hunter (1994) suggested various elements that might be considered in planning for effective/ Quality Instruction. The Madeline Hunter gave a seven step lesson plan to carry out Instruction in class. The plan contained the Hunter Direct Instruction Plan Elements: They are

- Objectives
- Standards
- Anticipatory set
- Teaching
  - Input
  - Modeling
  - Check for understanding
- Guided practice/monitoring
- Closure
- Independent Practice
Introduction

• **Objectives**: The teacher should have a clear idea of what the teaching objectives are. What, specifically should the student be able to do, understand, as a result of teaching. Hunter considers Bloom’s Taxonomy of Educational objectives gives an idea of the terms used in an Instructional objectives and recommends Robert Mage on behavioural objectives of writing specific content is required.

• **Standards**: The pupils should be informed about the standards of performance standards: an explanation of the type of lesson to be presented, procedures to be followed, and behavioural expectations related to it, what the students are expected to do, what knowledge or skills are to be demonstrated and in what manner.

• **Anticipatory set**: This is sometimes called a hook to grab the students attention or set indication; actions and statements made by the teacher to relate the experiences to the objectives of the lesson.
  - To focus student attention on the lesson
  - To create an organizing framework for ideas, principles, etc.
  - To extend the understanding and application of abstract ideas through the use of example or analogy.

• **Teaching/presentation includes**
  - **Input**: The teacher provides the information needed for students to gain knowledge or skill through lecture, film, tape, video, pictures, etc.
  - **Modeling**: Teacher shows students examples of what is expected as an end product of their work, students are taken to application level (problem solving, comparison, summarizing, etc.).
  - **Checking for understanding**: Determination of whether students have got it before proceeding. Questioning strategy should progress from lowest to highest six levels of cognitive domain of Taxonomy of Educational Objectives: knowledge, comprehension, application, analysis, synthesis and evaluation.

• **Guided practice**: Students demonstrate groups of new learning by working through an activity or exercise under teachers direct supervision to determine the level of mastery and to provide individual remediation as needed.
• **Closure**: Closure is used to
  - Cure students to the fact that they have arrived at important point in the lesson or end of a lesson.
  - To help form a coherent picture, to consolidate and eliminate confusion.
  - To reinforce the major points to be learned, reviewing and clarifying them, lying them together ensuring their utilizing in application, forming conceptual network.

• **Independent practice**: It should be provided on a repeating schedule so that learning is not forgotten. It may be homework, group or individual work in a class. It should provide for decontextualization.

Hence, these were the seven steps or seven elements suggested by Madeline Hunter Model in planning for Quality Instruction.

### INSTRUCTIONAL EVENTS DEVELOPED IN VARIOUS MODELS FOR QUALITY OF INSTRUCTION

One of the components of any model for effective classroom Instruction is Instructional Events. If the events to be carried out in the teaching learning process are properly planned, organized and directed leading to student achievement, then it is definitely a vital component of Quality Instruction. The models have already been discussed earlier, however, few models have specifically emphasized on the **Instructional events**, which have been discussed and compared below:

**SLAVIN'S QAIT MODEL**: The following is a brief overview of the Instructional events that he included in his model of Quality Instruction.

- **State learning objectives and orient students to lesson**: Tell students what they will be learning and why it is important. Relate current lesson to previous and future lessons.
Introduction

- **Review Pre Requisites**: Be certain that students have the prerequisite knowledge or skills for the current lesson. It is an important component during orientation phase of lesson.

- **Present New Material**: Presentation should have an organizational structure with many concrete examples and demonstrations and including following relationships.
  - Component relationships
  - Sequential relationships
  - Relevance relationships
  - Transitional relationships

- **Conduct learning probes**: Ask relevant level of questions
  - First subskill
  - Conduct learning probes on first subskill
  - Second subskill
  - Conduct learning probes on second subskill
  - Third subskill
  - Conduct learning probes on third subskill

- **Provide Independent Practice**: Give students an opportunity to work alone; after they have done some supervised or guided practice.

- **Assess Performance and Provide Feedback**: Review independent work or perhaps give a quiz, provide corrective feedback for all work.

- **Provide Distributed Practice and Review**: Assign homework, allow students to work, give assignments that require students to use the content and skills in different circumstances.
INSTRUCTIONAL EVENTS IN MC CARTHY’S 4 MAT SYSTEM

The 4 MAT SYSTEM is designed to provide every student with a preferred task during every lesson. Listed below are the 8 Instructional events proposed by this system.

<table>
<thead>
<tr>
<th>Step</th>
<th>Left Mode</th>
<th>Right Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>WHY?</td>
<td>Create on experience (CONNECT)</td>
</tr>
<tr>
<td></td>
<td>(Motivate and develop meaning)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Analyze/reflect about the experience</td>
<td>WHAT? (Reflection and Concept development)</td>
</tr>
<tr>
<td></td>
<td>(EXAMINE)</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Integrate reflective analysis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(IMAGE)</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Develop concept/skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(DEFINE)</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>HOW?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Usefulness and Skill development)</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Practice define ‘givens’ (BY)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Practice and Add something (EXTEND)</td>
</tr>
<tr>
<td>7.</td>
<td>IF? (Adaptation)</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Analyze application for relevance</td>
<td>Do it and apply to more components (INTEGRATE)</td>
</tr>
<tr>
<td></td>
<td>(REFINE)</td>
<td></td>
</tr>
</tbody>
</table>

Figure: f1.12 Instructional events proposed in the MC Carthy’s 4 MAT system
INSTRUCTIONAL EVENTS IN HUITT, W DIRECT INSTRUCTION: A TRANSACTIONAL MODEL

The following chart of Instructional events along with the teacher behaviour and student behaviour are well explained by Huitt in his Instructional model. The following material is adapted from: Caldwell, J. Huitt and French. V

<table>
<thead>
<tr>
<th>EVENT</th>
<th>TEACHER BEHAVIOUR</th>
<th>STUDENT BEHAVIOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>• Presentation provides an opportunity for students to recall/examine what they have already learned in preparation for the current lesson</td>
<td>• Focus on prerequisite skills and concepts</td>
</tr>
<tr>
<td></td>
<td>• Focus on prerequisite skills and concepts</td>
<td>• Check homework and discussion difficult questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Link the lesson to</td>
</tr>
</tbody>
</table>
### Introduction

- Work a problem similar to those done already.
- Review the previous lesson explaining what they did and why

<table>
<thead>
<tr>
<th>Overview</th>
<th>WHAT</th>
<th>WHY</th>
<th>EXPLANATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Presents the specific content concept and skill (s) to be learned</td>
<td>States a reason or a need for learning the skills (S) or concept (S).</td>
<td>Develops or explains the concepts and skills to be learned</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>See concrete examples</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Watch films or films vitps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Read explanations in textbooks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interact with computer Assisted Instruction program</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Answer teacher questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Verbalize understandings</td>
</tr>
</tbody>
</table>

- read a stated objective for the lesson
- hear what the topic of the lesson is.
- See what they will be able to be able to do at the end of lesson
- See how the lesson is related to real world and to their own interest
- Discuss how the skill or concept can be applied to other subject areas.
- See how the lesson relates to their deficiencies
- Hear an explanation.
- Use manipulative materials to develop concepts and skills
- Have class discussions

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### Introduction

**DEMONSTRATION**

- Probes students as to their initial understanding of concepts and skills
- Model demonstrated processes
- Generate examples and non-examples of concept

**PRACTICE**

**GUIDE PRACTICE**

- Closely supervises the students as they begin to develop increased proficiency by completing one or two short tasks at a time
- Read a paragraph aloud in a group
- Complete one or two math problem from an assignment, while teacher monitors their work
- Complete an activity on the blackboard while others do the same.
- Activity at their seats, and the teacher monitors the work
- Use structural analysis skills to orally decode new vocabulary words
- Complete seatwork assignments

**INDEPENDENT PRACTICE**

- Allows students to work independently with little or no teacher interaction to reinforce individual proficiency with concepts and skills
- Drill on basic arithmetic facts
- Begin or complete homework assignments
- Play games related to specific skills or concepts

**PERIODIC REVIEW**

- Provides students opportunity to have distributed practice on previously covered content skills
- Demonstrate retention of previously learned concepts and skills
### Assignment and Evaluation

<table>
<thead>
<tr>
<th>Daily Success</th>
<th>• Checks students work each day and offers corrective instruction as necessary</th>
<th>• Complete independent work at or above a given level of proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASTERY</td>
<td>• Checks students work at the end of each unit of instruction</td>
<td>• Demonstrate knowledge and application of concepts and skills at or above a given level of proficiency</td>
</tr>
</tbody>
</table>

#### Monitoring and Feedback (Provided throughout the class/lesson as needed)

<table>
<thead>
<tr>
<th>Clues and Prompts</th>
<th>• Provides students with signals and reminders designed to sustain the learning activity and to hold students accountable</th>
<th>• Attend to signals and reminders continue working on assigned activity</th>
</tr>
</thead>
</table>
| COPRECTIVE FEEDBACK | • Tell students whether their answers are correct, see on hear the correct answers, an are total why those answers are correct | • Read correct answers aloud  
• Write correct solutions on the board  
• Check spelling by comparing their answers to those on a transparency.  
• Support their answers to reading comprehension questions by reading aloud from the text. |
Introduction

The following chart (adapted from Slavin, 1995, p. 287) provides a comparison of Instructional events from several well known direct Instruction models that incorporate these principles leading to Quality Instruction.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Inform the learner expected outcomes</td>
<td>2. Review</td>
<td>2. Review Prerequisites</td>
<td>2. Review Prerequisites</td>
<td>- Home work</td>
</tr>
<tr>
<td>3. Stimulate recall of relevant prerequisite capabilities</td>
<td>2. Review homework; mental computations; review prerequisites</td>
<td>3. Input &amp; modeling</td>
<td>3. Present new material</td>
<td>- Relevant previous learning</td>
</tr>
<tr>
<td>4. Present the stimuli inherent to the learning task</td>
<td>3. Development</td>
<td>4. Check understanding &amp; guided practice</td>
<td>4. Conduct learning probes</td>
<td>- Prerequisite skills</td>
</tr>
<tr>
<td>9. Ensure retention and make provisions for transferability</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Examples</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Check understanding</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>3. Guided practice</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- High frequency of questions</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- All students respond</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- High success rate</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Continue to fluency</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>4. Corrections</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Feedback</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Process</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Sustaining</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Reteach</td>
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<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>5. Independent practice</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Help during initial steps</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Continue to automaticity</td>
</tr>
<tr>
<td></td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>Letters of this day</td>
<td>- Active supervision</td>
</tr>
</tbody>
</table>
| | Letters of this day | Letters of this day | Letters of this day | 6. Weekly & monthly reviews

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Introduction

In all of the above discussed various models of Instruction, the Instructional events given by various educationists leading to Quality Instruction, have been designed with one single focus i.e. the students can have highest strides of achievement if they have mastery over the content.

Experts in the field of education are adopting a variety of approaches for reaching to achieve the goal of Quality Education. Mastery learning being one of major Quality Instructional Strategies.

QUALITY INSTRUCTION THROUGH MASTERY LEARNING MODELS

Mastery learning is one of the models of teaching under the behavioural systems family of models (Joyce and Weil, 1990). Behaviour Theory based on skinner’s operant conditioning and Wolpe’s counter conditioning as well as training psychology from some of the important basis of mastery learning. In mastery learning, the primary emphasis is on reinforcement, stimulus control and immediate feedback.

Mastery learning procedures closely follow the principle of Quality Instructional design described below:

• Specification of goals and tasks.
• Specification of subtasks
• Training activities to ensure mastery of each sub task.
• Sequencing sub tasks to ensure transfer.
• Achievement of pre-requisite learning before more advanced learning.

Encyclopedia Dictionary and Directory of Education (1994) defines Mastery learning as a term used by Morrison (1980) for the method of securing mastery of a subject matter in which testing forms the beginning, middle and end of teaching and emphasized that learning process of the teaching may be appropriately adopted to the need of the learns.

Mastery learning is a set of old and new individualized Instructional ideas and practices that help most students to learn excellently quickly and self confidently
(Anderson and Block, 1987). Slavin (1987) sums up defining characteristics of Mastery learning as follows:

- Establishment of a criterion level of performance held to represent ‘mastery’ of a given skill or concept.
- Frequent assessment of student progress towards the mastery criterion
- Provision of corrective Instruction to enable students who do not initially meet the mastery criterion to do so on later parallel assessment.

Anderson (1986) quotes six essential feature of Mastery learning identified by Anderson himself in 1985 and the last seventh added to the list by Guskey (1987) as follows:

- Clearly specified learning objectives
- Short, highly valid assessment procedures.
- Preset mastery performance standards
- A sequence of learning units, each comprised of an integrated set of facts, concepts, principles and skills.
- Provision of feedback of learning progress to students.
- Provision of additional time and help to connect specified errors and misunderstandings of students who are failing to achieve the preset Mastery learning standards.
- Need of consistency among all of the previous six features

During 1960’s Bloom (1968) learning for Mastery focused new attention on the philosophy of Mastery Learning. Bloom (1968) learning for mastery is recognized as the classical theoretical formulation on Mastery Model. Bloom is widely viewed as the major theoretician and promulgator of mastery learning.

According to Anderson and Block (1987), Bloom based his approach on some of the elements in the Winnekia Plan of Washburne and on Morrison’s ideas. The common elements of this approaches are listed by MC Neil (1969) as follow:

- The learner must understand the nature of the task to be learned and the procedure to be followed in learning it.
- Specific learning objectives relating to the task must be formed.
Introduction

- Useful to break the course into small units of learning and to test at the end of each unit.
- Teachers should provide feedback after each test.
- Teacher must find ways to alter the time some individuals have at their disposal to learn.
- It may be profitable to provide alternative learning opportunities.
- Students efforts are increased when small groups of two or three student meet regularly to review their test results and to help one another overcome the difficulties identified by means of the test.

Carroll, J (1963) Bloom derived a critical and quantitative ingredient of Instruction – The time. In his model of school learning proposed that degree to which a student could be expected to learn is a function of the ratio of the time actually spent in learning to time needed.

\[
\text{Degree of learning} = f \left( \frac{\text{Time actually spent}}{\text{Time needed}} \right)
\]

This model given by Caroll has already been discussed earlier in the preceding section of this chapter. Two prototypes of Mastery learning models popularly used are:

- Group Based and Teacher Paced Mastery learning Strategy (Bloom).
- Individual based & learner paced Personalized System of Instruction (Keller).

**INSTRUCTIONAL EVENTS OF MASTERY LEARNING STRATEGIES**

Whether Bloom’s group based and Teacher Paced Mastery learning strategy or Keller’s Individual based and learner paced personalized system of Instruction, each has the following four components listed by **Anderson and Block (1987)** to design instructional events in mastery learning strategies.

- Defining Mastery
- Planning for Mastery
- Teaching for Mastery
• Grading for Mastery

Each component has specified task and sub tasks that a teacher must undertake to insure Mastery through Quality Instruction, Ahuja, M (2000) as follows:

• For Defining Mastery

Main Tasks are
- Specify long term and short term objectives
- Specify abstract outcomes and concrete representations of these abstract outcomes.

Sub Tasks include
- Identify most essential and critical learning outcomes
- Prepare a final summative test.
- Set the level of acceptable performance
- Divide the entire course content into series of smaller unites
- Sequence the units
- Decide what constitutes mastery for each unit.

• For Planning for Mastery

Main Tasks are
- Prepare the plan which includes teaching learning activities and materials related to unit objectives
- Plan additional supplementary activities/materials for students failing to attain the performance standard on unit formative test.
- Monitor student learning on a unit by unit basis.
- Plan and design step/measures to overcome errors.

Sub Tasks are
- Design a general plan for students to master unit objectives.
- Prepare methods for interpreting and using information of formative test.
- Develop a set of alternative Instructional material and learning activities keyed to each objective on the units formative test.
- Plan for time.
• **For Teaching For Mastery**: The teacher here is focused on management of learning rather than managing learning.

**Main Tasks**
- Specify what is to be learned (Mastery performance)
- Motivate students to learn it.
- Provide them with Instructional material.
- Administer these material at a rate suitable for each pupil.
- Monitor student progress
- Diagnose difficulties
- Give proper remediation
- Give praise and encouragement for good performance (feedback procedures to be planned in advance)
- Gives review and practice

**Sub tasks required for accomplishing main tasks include**
- Provide orientation to students
- Teach each learning unit in sequence
- Administer unit’s formative test
- Announce the day on which initial Instruction relative to next unit will begin.
- Analyse the adequacy of connective Instruction
- Pace this cycle.

• **For Grading For Mastery**

**Main Tasks**
- The purpose of grading after implementing teaching is to reward students for the acquisition of essential and critical course objectives.

**Sub Tasks include**
- Administer a summative test

The sequence of learning events in Keller’s Mastery learning and Sequence of Mastery Learning tasks for Bloom’s Mastery learning strategy are given below.
Introduction

Figure f1.14: Figure showing sequence of Mastery Learning Tasks for Keller's Personalized System of Instruction (KPSI)
Figure f1.15: Showing the sequence of Mastery Learning Tasks for Bloom's Mastery Learning Strategy (BMLS)
High Quality Instruction Leading to Mastery learning should necessarily consists of the following features.

1. Specification of Instructional objectives
2. Communication of these Instructional objectives to students.
3. Optimal sequencing of learning activity.
5. Clarity of expression
6. Enthusiastic teaching, increasing pupil participation.

Based on above mentioned models the Quality Instruction in the present investigation was characterized by the following components:

- Pre-test of competency
- Specification of behavioural objectives
- Initial Instruction (Quality Instruction through Mastery Teaching).
- Diagnostic formative evaluation.
- Need based (home based remediation)
- Post evaluation (Summative evaluation)

REMEDIATION

Remedial teaching means giving special help to students whose progress in learning is not commensurate with reasonable expectation (Harris, 1990). Remediation is the reteaching of skills that the child did not master when they were presented in the regular classroom instruction. Students might be remediated in only one or two concepts or they might need extensive interventions and placement in below grade level books or exceptional education classes.

Remedial teaching tries to be specific and exact. It attempts to find a procedure, which will be used by the child to correct his errors of skill and thought. The functions of remedial teaching are:
• to recondition habit and skill
• to correct errors is knowledge
• to improve personality traits
• to resolve conflicts
• to substitute good attitudes, interests and ideals for describable ones. (Shan, Shukla, Trivedi, and Smant, 1974).

Some reasons why remediation is necessary are.

• The program for the lowest group may frustrate the least capable students.
• The teacher cannot give enough individual attention to meet the needs of struggling students.
• Detailed diagnosis are needed when dealing with server cases of learning disabilities.
• Even if the classroom teacher does know how to diagnose he/she may not have the time.

Remedial teaching and classroom instruction have likeness as well as differences. Remedial teaching resembles good classroom teaching because both have the same desired outcomes and both involve application of the same basic principle of learning and motivation. However, the differences between classroom instruction and remediation are: remediation allows for diagnosis of individual needs, instruction is tailored to those needs to a degree few classroom teachers can match, skilled remedial teachers are more expert than classroom teachers at both diagnosing learning problems and individualizing instruction.

CHARACTERISTICS OF REMEDIAL INSTRUCTION

• Remediation instruction is aimed at improving a skill or an ability in a student for catching up.
• Providing more practice or more explanations.
• Repeating information
Introduction

- **Devoting more time** to work on the skill. A student having low reading level could be given remediation through one-on-one reading instruction, phonic instruction, **practice** on reading aloud.

- **Using multimedia software programs** on-line remedial Instruction which provides privacy, objectivity, timeliness of feedback, individualization of instructional flexibility, convenience and non-threatening learning environment (Wilson, 1992).

Reys, Suydam and Lindquist (1995) recommended that effective remediation begins with **effective diagnosis**. Once teachers have a clear picture of Childs needs, they can plan activities to provide the missing prerequisites that are at the source of a difficulty, develop the understanding that has been missed, provide the practice that is needed and give the encouragement that is so vital is effective remediation.

Research has also indicated some **pointers for effective remediation** (Driscoll 1981):

- Involve the child in **planning** his or her remedial program.

- **Design** remedial instruction to be different from previous instruction.

- Provide **multisensory experiences**.

- **Guide the child** from a concrete, intuitive understanding of mathematical ideas toward being able to represent his or her understanding verbally and symbolically.

- Encourage the child to **estimate answers**.

- Have the child use a **calculator**.

**COMPONENTS OF SUCCESSFUL REMEDIATION**

According to many research studies, in fact, one of the early research on effective components of remediation.

- **Establishing clear cut goal and objectives** for remedial courses is crucial (Rouche, 1968; Rouche, 1973). Later studies by Donovan (1974), Kulik and
Kulik (1991), and Boylan, Bonham, Claxton, and Bliss (1992) also found that remedial instruction based on carefully defined goals and objectives is associated with improved student performance.

- Another component emphasized for remedial instruction was **Mastery Learning** (Roueche 1968; Roueche and Wheller, 1973). All of the approaches to mastery learning utilized small units of instruction and frequent testing and required students to be able to master the material in one unit before progressing to the next unit. This emphasis on mastery is beneficial to students in remedial courses because it provides regular reinforcement of concepts through testing. An emphasis on mastery that is must for remediation is to develop the prerequisite knowledge for success in a given course and to demonstrate this knowledge through testing.

- Effective remediation should provide a **structure**. Roueche (1973) found that students taking remedial courses required a high degree of structure for their learning experiences. The provision of highly structured learning experiences helped students compensate for this shortcoming by modeling appropriate methods of organizing information.

- Another component emphasized in effective remediation was the **use of a variety of different teaching methods** in remedial instruction (Roueche 1968; Roueche and Wheeler, 1973). Even Roueche and his colleagues argued for the use of a wide variety of teaching techniques featuring class discussions, group projects, and various types of mediated learning. Kulik and Kulik (1991) and Casazza and Silverman (1996) all found that students in remedial courses were likely to be more successful when a variety of instructional methods are used.

- Another early finding from the work of Roueche, was that remediation is most effective when they are based on **sound cognitive theory** (Roueche 1973, Roueche and Wheeler 1973, Roueche and Kirk, 1974). Theory based remedial courses are always more effective as remedial instruction is more systematic and clearly based.
Introduction

- Roueche and his colleagues have long advocated that remedial courses and services should be provided by a separate and centralized program as opposed to individual academic departments (Roueche and Kirk, 1974) Donovan (1974), Boylan, Bonham, Claxton and Bliss (1992).

- Centralized Programme: Of remediation are likely to be retained for longer periods of time and remediation occurs most easily in a centralized program.

- Remedial programs performed better when evaluation included a combination of formative and summative evaluation and when formative evaluation data is used to define and improve the programme. Donovan’s (1974) and Snow’s (1977), Boylan, Bliss and Bonham (1997), analysis of remedial programs, found that those remedial programs that were evaluated on a regular and systematic basis were more successful than those that did not.

- Programme Definition: Early studies and later ones too argued that successful program should be guided by a clearly defined philosophy accompanied by clearly specified goals and objectives (Rouche and Snow, 1977), Casazza and Silverman (1996). The presence of an underlying program philosophy appears to characterize successful programs.

- Research also identified mandatory assessment and placement of students in remedial courses as a characteristic of successful remediation efforts (Rouche and Baker, 1987; Roueche and Roueche 1993; Roueche and Snow, 1977). The students participating in remediation under voluntary placement system. Therefore, tend to be more highly motivated or to recognize the need for
developing their are likely to be more successful than less motivated and less realistic students.

- Successful remedial programs also have a strong educational counseling component (Keimig 1983, Casazza and Silverman (1996). In order for counseling to be successful with remedial students it has to:
  - Be integrated into overall structure of the remedial program (Kieming 1983).
  - Be based on the goals and objectives of the program (Casazza and Silverman 1996).
  - Be undertaken early in the semester (Kulik, Kulik and Schwalb 1983).
  - Be based on sound principles of student development theory (Higher Education Extension Service, 1992).
  - Be carried out by counselors specifically trained to work with development students (Boylan, Bliss, and Bonham, 1997).

- Research by MacDonald (1994), Casazza and Silverman (1996), concluded that tutoring does affect the remedial program. Apparently the effectiveness of tutoring is strongly influenced by the quality and the amount of training received by tutors. This is particularly true when the subjects of tutoring and under prepared students. As MacDonald (1994) pointed out, tutors will be ineffective unless they are able to consistently and usefully apply strategies appropriate to each students situation, which can only be accomplished through training.

- Computer Based Instruction is most successful when it is used as a supplement to regular classroom instruction. Activities is remedial programs can only be enhanced by computer based Instruction. Kulik and Kulik (1986) found that the use of computer as a tutor designed to implement regular instruction had several positive affects. These included:

  - more student learning in less time
  - slightly higher grades on post test
  - improved student attitudes toward learning
However, recent research studies on factors contributing to successful Remediation have incorporated various other factors, which are listed below:

- Classroom/Laboratory Integration (Boylan, Bliss and Bonham, 1997)
- Consistency of Academic Standards (Boylan, Banham, Claxton and Bliss, 1992)
- Learning Communities and Paired Courses (Adams and Huneycutt, 1999).

PARENTAL INVOLVEMENT

Parental Involvement has been touched for years as a very important predictor of student achievement in schools. In recent surveys, also teachers focus on the need to increase Parental Involvement. Strengthening parents role in the learning of their children has been identified by teachers as an issue that should receive the highest public education policy (Louis Harris and Associates, 1993 in U.S. Dept. of Education (ED) 1994). Moreover a, 1993, Metropolitan life survey of teachers found that a large majority believed that the nations schools could be improved by the federal govt. if they encouraged parents to be more involved in their children’s education (Richardson, 1993).

The common wisdom is that Parental Involvement and strong schools are inseparable that you cannot have one without the other. Indeed, research indicates a strong link between Parental Involvement and student achievement (Hester, 1989). Parental Involvement in child’s education appears to be associated with a range of positive outcomes for elementary school children including fewer behavioral problems (Comer, 1984), lower drop outs and higher student achievement (Kolb, 1984; Muller; 1993; Reynolds 1992; Stevenson & Baker 1987). However, the definition of effective Parental Involvement is not the same for everyone.

Parental involvement may be defined as the degree to which the parents are committed to him or her role as a parent and in the fostering of the optimal child development (Macober and Martin, 1983).
Parental Involvement implies how the parent involves themselves in developing the overall personality of the child. Involvement, reflects parents dedication and positive attention to the child learning process and is facilitator of both identification and internalization of social values (Cyronlick and Ryan 1987; Ryan et al, 1992).

Gronlik and Slowlaczeczek (1994) defined it as an allocation of resources to the child’s academic endeavours. In other words, it denotes the extent to which parents take a keen interest and participate actively in their child’s education.

Parental Involvement refers to either (a) voluntary involvement in the school or (b) planned, goal oriented programs of the school, family, and community partnerships that are organized and implemented to engage all parents in their children’s education. Parental involvement has been linked with student outcomes including increased achievement test results, a decrease in dropout rate, improved attendance, improved student behaviour, higher grades, higher grade point average, greater commitment to school work, and improved attitude towards school.

Parental involvement, care support and monitoring are related to many perceptions and behaviours of children including:

- Internal locus of control (Baumrid, 1991; Trusty & Lampel, 1997)
- Self esteem (Chubb and Fertman, 1992)
- Positive school attitudes (Chubb and Fertman 1992; Trusty 1996).
- Academic success (Paulson 1994; Steinberg, Lamborn, Dornbush and Darling, 1992).
- Adaptive school behaviour (Trusty, 1996).

Successful Parental Involvement sponsor their child’s academic achievement by
Introduction

- Establishing and enforcing particular rules for ‘appropriate’ behaviour inside and outside the home.
- Maintaining regular verbal interaction with the child around school issues, personal behaviour, plans for the future.
- Engaging the child in recreational activities with parents both inside and outside the home, conveying warmth.
- Maintaining contacts with the school. (Baker and Stevenson, 1986; Clark 1983; Henderson 1987):

Davies (1991) has defined Parental Involvement from a shifting perspective. The society restructures itself, as community restructures themselves and as schools restructure, Parental Involvement also is being transformed. The following table shows the paradigm shift.

<table>
<thead>
<tr>
<th>Old Paradigm</th>
<th>New Paradigm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent Focus</td>
<td>Family Focus</td>
</tr>
<tr>
<td>Family</td>
<td>community agencies</td>
</tr>
<tr>
<td>School</td>
<td>Home/Neighbourhood setting</td>
</tr>
<tr>
<td>Eager Parents</td>
<td>Hard to reach families</td>
</tr>
<tr>
<td>Teacher/Administrator Agendas</td>
<td>Family Priorities</td>
</tr>
<tr>
<td>Deficit view of urban Families</td>
<td>Strengths of Families</td>
</tr>
</tbody>
</table>

(Adapted from Davies 1991).

COMPONENTS OF PARENTAL INVOLVEMENT

Parental Involvement has two independent components:
- Parents and supporters
- Parents as active partners

These two components are independent yet focusing on one of these components alone is not a sufficient approach to parental involvement. Parents can be
both, yet not supportive of the education process. They also can be supportive but not active at the school, of course, the ideal is the parent who is both supportive and active; but this often is difficult when both parents work outside the home, or when there is only one parent in the home.

Whether it is both and/or an active role, parental involvement can mean very different things, depending on one’s perspective. Teachers may want Parental Involvement in the form of helping children with homework. Parents may see parental involvement as making major decisions in the school. The truth to that Parental Involvement takes many forms right from reading to preschool children, getting children ready for school, volunteering at the school, serving one collaborative decision making committees, supervising to their homework, actively participating in PTM, to many more examples:

LEVELS OF PARENTAL INVOLVEMENT

There are many different levels of parental involvement according to Schickedanz, 1995.

There is the
- authoritative parent
- harsh parent
- passive parent

Authoritative parent is considered the best category of involvement

These students are
- more competent
  - have higher self control and self reliance
  - more serious about school work.

Harsh parent is the one who becomes too disciplinary on their children

These students are
- more pressured
  - have a lower self esteem.
  - less motivated

However they have the beginning of moral development, but parents have problem distinguishing when discipline goes too far.
Introduction

Passive parents are those who rarely get involved in their child’s life. These students are considered neglected — developed a more antisocial behaviour — they usually perform poorly academically as well (Schickedanz, 1995).

TYPES OF PARENTAL INVOLVEMENT

Parental involvement can be generally categorized on two main lines. The first occurs within the home and ideally will include behaviour such as following:-

- Setting higher expectations
- Monitoring home work
- Discussing school events with children
- Valuing and taking about education
- Showing respect for teachers and all school staff
- Limiting TV viewing or outside work, knowing child’s friends

The second kind of involvement is the physical presence of parents in the schools. This may range from

- Occasional attendance at a parent teacher meeting
- Regular participation in the school events
- On going participation in the school activities

Hester, 1989, has identified three types of parental involvement.

- Parents as supporters of activities
- Parents as learners
- Parents as advocates

Hester also emphasizes the importance of communication between parent and child as an important part of involvement.

Berla and Henderson, 1989, reviewed literature regarding Parental Involvement and found that children do best when their parents are enabled to play four types of parental involvement pertaining to four types of roles.
As teachers, parents create a home environment that fosters child development and learning and reinforces what is being taught at school.

- As supporters, parents contribute their time, knowledge, and skills to the school.
- As advocates, parents help children navigate the system and receive fair treatment.
- As decision makers, parents serve on advisory councils, school committees, management terms, participating in joint problem solving at every level.

Moore (1991) had identified three types of parental involvement in the schools:

- Parents as policy makers
- Parents as volunteers
- Parents as facilitators of children’s development.

Weisz (1990) has elaborated the category of parents as volunteers in schools and has suggested the following ways of involvement:

- Parents serving as resource pool.
- Helping with tutorial and remedial work.
- Working with small groups or individuals in classes.
- Explaining school programs and needs to the community
- Helping with field trips
- Assisting with extra curricular activities.
- Raising money for school projects
- Help arrange open house activities and meetings

The National Parents Teacher Association, U.S.A. (PTA) has dealt with defining and strengthening Parental Involvement. The National PTA Board of Directors (1993) has endorsed three types of parental involvement:

- Parents as first educations in the home
- Parents as partners with the school
- Parents as advocates for all children and youth in society.
Introduction

Epstein. J (1996) has given a typology of Parental Involvement that works as a framework to understand the various categories and role of parents. Epstein’s Typology includes the following:

- Parenting
- Communicating
- Volunteering
- Learning at home
- Decision making
- Collaborating with community

- **Parenting:** This includes families with parenting skills and setting home conditions to support children as students, and assists school to understand families. For eg, while TV viewing (eg rules) has no direct effect on student achievement, it is impacted indirectly and positively through some complex mechanism of parenting practices (Keith, 1993).

- **Communicating:** This refers to conducting effective communications from school programmes and children programme. (MaNeal, 1999) indicates that because school home communication and levels of parental involvement vary by race and income level that parent involvement programs should develop positive communication strategies unique to the context of their own community.

- **Volunteering:** It includes parental involvement at and for the school. It means parents as volunteers and audiences to support the school and students. Finding suggest that there is overall relationship between this component of PI and student achievement scores (Sui-Chu and Williams, 1996).

- **Learning at home:** It includes parents getting involved with their children in homework and decisions. (Sui-Chu and Williams, 1996) found that home discussion of academic and other school activities was one of the stronger predictors of student achievement.
- **Decision making:** Parents act as participants in school decisions and develop leaders and representatives. Parents actually become involved in the running of the school through site-based decision making committees.

- **Collaborating:** It emphasizes on co-ordinating resources and services from the community for families, students and the school and in return parents provide services to the community.

Hence, Epstein has included the various categories of parental involvement which overall lead to the idea of parents in the educational process.

**ENHANCING THE LEVEL OF PARENTAL INVOLVEMENT**

Research has shown that parents do want to get involved with their children; however they need a little direction as to how to go about doing it. It has been verified through many studies that training in these areas that training in these areas prove beneficial both for parents and school. There is ample information available about how to increase levels of parental involvement. Successful parental involvement programs investigated successfully by various researchers have been given below:

**Chavkin (1987)** of the Southwest Educational Development Laboratory (SEDL) have identified seven elements as essential for effective parental involvement:

- Written policies
- Administrative support
- Training
- A partnership approach
- Two way communication
- Networking
- Evaluation

**Berla, Henders, Kerewsky (1989)** included the following strategies of involving parents, which are based on the common sense approach, which according to the researcher works the best.

- Develop a policy for parental involvement
- Make sure that at least one person in the building knows every child well.
Introduction

- Maintain a friendly school office
- Encourage parent to parent communication.
- Hire a full time parent contact person
- Have a parent room in the school building
- Determine and meet family needs for services
- Provide translation services when appropriate

Fredericks and Rasknki (1990) have identified fourteen ways to involve parents, they are:
- Flood them with information
- Make it a school wide effort
- Recognize students and parents
- Involve students in recruiting parents
- Conduct participatory projects that include the entire family
- Recruit community members
- Make the classrooms and the school a comfortable place.
- Use the telephone as an instrument of good news
- Find out why parents are not involved
- Have a variety of event scheduling plans
- Operate a parent hotline
- Use community members to endorse the program
- Videotape programs for parents
- Provide support services like babysitting

Johnson (1991) emphasized that when attempting to strengthen a parent involvement program, it should also make effort to get low income parents involved. Here are some suggestions laid by Johnson (1991).

- Have regular meetings to discuss homework, behaviour and curriculum.
- Conduct special parenting skill seminars.
- Help parents reinforce reading and math skills in children.
- Teaching parents how to help kids with home study.
- Encourage parent volunteerism.

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- Encourage parents to become educated themselves
- Make opportunities for students and parents to learn together.
- Offer community education classes to get parents to come to the school.

Jackson and Cooper (1992) have identified 10 factors that see successful urban programs when examining New York City high school projects:

- Leadership
- Accessibility
- Time
- Cultural awareness
- Active teacher roles
- Continuity
- Public recognition
- Broad based support
- Adolescent focus
- Recognition of parents as people

Edweek, (2002), Stressed that in order for parental involvement to do well it must cooperate with programs provided by the school and community. This article describes following programs:

- Schools can communicate with families about school programs and student progress and needs.
- Schools can work to improve recruitment, running schedules to involve families as volunteers in school activities.
- Schools can encourage families to be involved in creative activities at home.
- Schools can include parents as participants in important schools decisions.
- Schools can co – ordinate with business and agencies to provided resources and services for families, students, and community.

Parents Involvement is a vital ingredient in a child’s education. Without this key aspect, children are put at a disadvantage in comparison to other students. Schools are under constant pressure due to decreasing resources, increasing needs of children
and demands of the century. They cannot do the big job of polarity on precious resource for the future alone. Hence, parents can be the must important resource to schools if used wisely.

Since Parental Involvement is a multidimensional concept, the present investigation has been focused around the home based remediation i.e. the academic guidance provided to the child at home through parents, and the aspects focused for investigation included:

- **Behavioural involvement of parents** by way of Academic guidance by parents, amount of direct instructional time, parents willingness to devote time.
- **Personal involvement of parents** by way of planned cultural activities, nature of discipline, interaction between parent and child emotional security
- **Cognitive stimulation provided by parents** in the form of boosting educational aspiration of child, intellectual climate at home and parent work habit.

**LIFE SKILLS**

Over the last three decades the approaches to literacy and education seem to be swinging away from literacy to education for its own sake, and their potential and actual use in the real life contexts. It is agreed that literacy is best derived from the experience of developing life skills rather than being developed first as a perquisite of a programme. The subject matter or themes of such learning are about development, either personal development or community, social or economic development. In literacy programmes these themes are integrated with the educational skills of reading. Empowering literacy is thus a part of life skills, and life skills and literacy are part of basic education.

Thus education process is life long process, and it must be based on four pillars as stated in UNESCO report *Learning: The Treasure Within* (1997) by the International Commission on Education for the 21st century emphasised these for
pillars as: Learning to know; learning to do; Learning to live together and Learning to be.

These four pillars can be achieved only when there is proper development of all the skills which are helpful to live with dignity. These skills are called skills for life or life skills, which are must for everyone to deal effectively with the demands & challenges of this society.

MEANING OF LIFE SKILLS

Skills refers to superior performance that is acquired through extended practice and training. Life skills are abilities to adapt positive behaviour that enables us to deal effectively with other culture and environment. That, the meaning of life skills is the same as the skills for life. So, life skills means ability based on behaviour that enables us to create circumstances for self happiness and safety in society. There are many different understandings of life skills but no definition is universally accepted. Different organizations attach different meanings to the term.

UNICEF has defined life skills as a behaviour change or behaviour development approach designed and skills. The UNICEF education is based on the research evidence that suggests that shifts in risk behaviour are unlikely if knowledge, attitudinal and skills based competency are not addressed.

Life Skills are essentially those abilities that help promote mental well being and competence in young people to face realities of life. In short, life skills empower young people to take positive action to protect themselves and promote health and positive social relationships. Life skills have been defined by the World Health Organization (WHO) as the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life.

Life skills refer to a groups of psychological, social, and interpersonal skills which can help people make informed decisions, communicate effectively, and develop coping and self management skills to lead to a healthy and productive life (Coffey and Knoul, 1998).
It is not enough to ask how life skills are defined in general; rather it is essential to ask how they are defined in particular life situations and throughout life (Ouane 2002; Goody 2001). Life skills are developed as a result of a constructive processing of information, impressions, encounters, and experience, both individual and social that are a part of one’s daily life and work and the rapid changes that occur in the course of one’s life (Ouane 2002).

Life skills are general capabilities which the students acquire and which prepare them to cope better with life. They are useful general attitudes, skills, and knowledge such as:

- Attitudes and skills to listen actively
- Skills speak out and give and take feedback.
- Knowledge, attitudes, and skills to identify and solve problems.
- Skills and attitudes to work together with others.
- To deal with pressure, anxiety, and grief.
- Knowledge, skills, and attitudes to identify what is important, to understand and appreciate others with a different background, norms, and attitudes to recognize and deal with social, economic, gender inequalities, and injustice.

Life skills are also defined in terms of outcomes i.e. it is the general functions of life skills programme to help persons to live more successfully and functions better in their multiple roles and this definition consists of multiple components.

Components have been drawn primarily from the following four areas:

- **The World of Work**: Filing applications, writing resumes, interviewing, work ethic, and job keeping skills.
- **Practical Skills**: Money Management, housing, transportation, parenting and health.
- **Personal Growth and Management**: Good setting, responsibility, moral reasoning, and anger control.
- **Social Skills**: Getting along with people, conflict resolution, mediation. Components of life skills.
WHO (World Health Organization) categorized a core set of life skills into the following three components.

A) **THINKING SKILLS**: Include self awareness, social awareness, goal setting, problem solving and decision making. To be able to think critically, information should be provided in order to make informed decisions and choice. These skills can also be developed if teenagers are made to look at different perspectives of an issue, the pros and cons of making one decision over the other.

B) **SOCIAL SKILLS**: Include appreciating/validating others; working with others, understanding their roles, building positive relationship, with friends and family, listening and communicating effectively, taking responsibility and coping with stress. To accept social norms and provide foundation for adult social behaviour.

C) **NEGOTIATION SKILLS**: Means not only negotiating with other but with oneself as well. For effectively negotiating with others, one needs to know what one wants in life, is firm on one’s values and beliefs and can say ‘NO’ to harmful behaviour and risky temptations.

**Unicef Presents The Following Components Of Life Skills**

A) **THE SKILLS**: This involves a group of psychosocial and interpersonal skills which are interlinked with each other. For example, decision making is likely to involve creative and critical thinking components and values analysis.

B) **CONTENT**: To effectively influence behaviour, skills must be utilized in a particular content area. What are we making decisions about? Learning about decision making will be more meaningful if the content is relevant and remains constant. Whatever the content area be like drug use, HIV prevention, suicide prevention, sexual abuse, etc, a balance of three elements viz : knowledge, Attitudes and Skills need to be considered.
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C) METHODS: Skills can not be learnt when there is no interaction among participants. It relies on groups of people to be effective. Interpersonal and psychosocial skills cannot be learned from sitting at home and reading a book. If this approach is to be successful, all three components of skills, content and method should be in place. Life skills can only be learned through certain methods and tools.

TYPOLOGY OF LIFE SKILLS

There is no definite list of life skills. The choice of and emphasis on different skills varies according to the topic and local conditions. However, many organizations and educationists have tried to give their typology of life skills.

World Health Organisation (WHO) (1993) mentions that life skills consist of 10 skills (5 pairs) and divide the intelligent behaviour into three types each consisting of a set of life skills as follows:

Figure: fl.17 Life Skills according to WHO
Life skills of **COGNITIVE DOMAIN** Consists of

a) **Creative Thinking**
   It means the extensive thinking that has no frame and is without any restriction. It enables us to explore the available alternatives and various consequences of our actions or non-action. It helps us to look beyond our direct experience and even if no problem is identified, or no decision is to be made, creative thinking can help us to respond adaptively and with flexibility to the situations of our daily lives.

b) **Critical Thinking**
   It means the consideration, thinking, analyzing other situation problems, deciding and judging the information and experiences in an objective manner. Critical thinking can contribute by helping us to recognize and assess the factors that influence attitudes and behaviour such as values, peer pressure, etc.

**AFFECTIVE DOMAIN** consists of following life skills

a) **Self Awareness**
   It means finding and understanding good or bad point of ourselves. It includes our recognition of ourselves, of our character, of our strengths and weaknesses, desires and dislikes. Developing self awareness that helps us to recognize when we are stressed or feel under pressure. The students can know the difference between themselves and others on factors such as ability, age, level of education, strengths, etc.

b) **Empathy**
   It means imaginative and involuntary project of one’s self in to an object or learning to sympathetic understanding. It is the ability to imagine what life is for another person, even in a situation that we may not be familiar with. Empathy can help us to understand and accept others, who may be very different from us, which can improve social interactions and encourage nurturing behaviour.
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3. **PSYCHOMOTOR DOMAIN** consists of following life skills

a) **Inter Personal Relationship**
   It helps us to relate in positive ways with the people we interact with. This may mean being able to make and keep friendly relationships, which can be of great importance to our mental and social well being. It may mean keeping good relations with family members, which are an important source of social support. It may also mean being able to end relationship constructively.

b) **Effective Communication**
   It means that we are able to express ourselves, both verbally and non-verbally, in ways that are appropriate to our cultures and situations. This means being able to express opinions and desires, but also needs and fears. And it may mean being able to ask for advice and help in time of need.

   **Communication skills include:**
   - Verbal/non-verbal communication
   - Active listening
   - Expressing feelings, positive and negative both without blaming
   - Receiving feedback and giving feedback.

c) **Decision Making**
   It helps to select priorities, analyzing options between good and bad. It helps us to deal constructively with decisions about our lives. Validating various consequences actively making decisions about action in relation to various aspects of life like health, education career, personal problems, etc and assessing the different options.

d) **Problem Solving**
   It enables us to deal constructively with problems in our life. Significant problems that are left unsolved can cause mental stress. Hence by this skills students can select, evaluate, decide among suitable choices and solve various activities and problems leading to physical and mental strain in life.

e) **Coping With Emotions**
   It involves recognizing emotions in ourselves and other being aware of how emotions influence behaviour, and being able to respond to emotions appropriately.
Intense emotion like anger or sorrow can have negative effects on our health if we do not react appropriately, so it helps to evaluate emotion.

f) Coping With Stress

It is about recognizing the sources of stress in our lives, recognizing how this affects us, and acting in ways that help to control our levels of stress. This may mean that we take action to reduce the sources of stress, it may mean learning how to relate, so that tensions created by unavoidable stress do not give rise to health problems.

THE SAMARITANS AND KELLY SUPPORT GROUP (1999) has identified seven life skills by the 4-4 program as being essential for productive and healthy lives. They are as follows:

- Creative thinking
- Decision making
- Acquiring knowledge
- Responsibility
- Communication
- Understanding self
- Getting along with others

UNICEF, during an information session on HIV/AIDS prevention and awareness. Cairo, Egypt mentioned the following list of life skills. The list is divided under the following domains.

![Figure: fl.18 Domains of Life Skills according to UNICEF](image_url)
COMMUNICATION AND INTERPERSONAL SKILLS

INTERPERSONAL COMMUNICATION SKILLS
- verbal/nonverbal communication
- Active listening
- Expressing Feelings
- Giving feedback
- Receiving feedback

NEGOTIATION/refusal SKILLS
- Negotiations and Conflict
- MGMT
- Assertiveness skills
- Refusal skills

ADVOCACY SKILLS
- Influencing skills & persuasion
- Networking & motivation skills

CO-OPERATION & TEAMWORK
- Expressing Respect for others contributions.
- Assessing one's own abilities and contributing TO THE GROP
DECISION MAKING AND CRITICAL THINKING SKILLS CONSIST OF

DECISION MAKING AND PROBLEM SOLVING SKILLS
- Information gathering skills
- Evaluating future consequence of present action for self and other
- Determining alternative solutions to problems
- Analysis skills

CRITICAL THINKING SKILLS
- Analyzing peer & media influences
- Analyzing attitudes, values, social norms, beliefs, and factors affecting these
- Identifying relevant information and information sources

COPING AND SELF MANAGEMENT SKILLS INCLUDES

SKILLS FOR INCREASING INTERNAL LOCUS OF CONTROL
- Self esteem/confidence building skills
- Self awareness skills
- Goal setting skills assessment/self monitoring skills

SKILLS FOR MANAGING FEELINGS
- Anger management
- Dealing with grief and anxiety
- Coping skills for dealing with loss, abuse, trauma

SKILLS FOR MANAGING STRESS
- Time management
- Positive thinking
- Relaxation techniques
Introduction

LIFE SKILLS BASED EDUCATION (LSBE)

Life Skills Based Education reveals that it is a means to empower the younger generation and assist them in facing the challenging situation in their lives. Including both the processes of teaching and learning, the LSBE caters to the acquisition of knowledge and in doing so develop the need skills and attitudes to support healthy behaviour.

The United Nations Associate Organizations (UNICEF) also requires that Quality Education must include life skills based education and has thus been made a critical element in their definition of Quality education.

Perhaps more than 164 nations across the world have embraced the need for Education for All including Life Skills Based Education as one of the major components of educational curriculum.

The World Health Organization, Deptt. of Mental Health, 1999 defines life skills based education, LSBE, as designed to facilitate the practice and reinforcements of psychosocial skills in a culturally and developmentally appropriate way; it contributes to the promotion of personal and social development, the prevention of health and social problems, and the protection of human rights.

Life Skills Based Education combines learning experiences that promote the acquisition of new knowledge and attitudes as well as the skills to change behaviours. Such skills are particularly effective in the context of supportive communities and environments and to provide Quality education in the 21st century, school will need to appreciate the balanced approach of LSBE to help prepare pupils meet and face the challenges of the world.

LSBE approach is a behaviour changing strategy leading to Quality education. The purpose of LSBE is two folded. It is to:

- Enhance the already positive, pro-social, healthy characteristics of the young pupils.
- To prevent or reduce risks to various aspects of development, such as social, emotional, health, etc. leading to better learning outcomes.
Objectives of LSBE are:

- To experience a range of lesson and activities which illustrate how to integrate life skills into education.
- To have the ability to analyse the Quality of teaching and learning materials for education.
- To produce a draft, education scope and sequence chart for early, mid and late grades in schools.
- To be able to facilitate workshops based on life skills based education.
- To plan the implementation of life skills based education.

LSBE approach cannot be applied alone. The types of skills generally agreed as important to the life skills approach are interpersonal skills, decision making skills, critical and creative thinking skills, coping and stress management skills and self awareness skills.

The WHO, has stressed that all schools should have Life Skills Based Educational programmes. LSBE programmes cover the following domains:

- **Personal Effectiveness**: It refers to the ability to understand and appreciate accept and develop oneself for personal well being, the ability to make wise decisions, solve problems, manage change. Ability to be open to and sensitive to the needs to others and communicate empathy, function effectively in a group.

- **Interpersonal effectiveness**: It is a major determinant of success in family, world and social relationships. Individuals who demonstrate form of intelligence understand the importance of interdependent of people. They know how to keep friends and resolve conflicts.

- **Effect learning**: Individuals who demonstrate effective learning are independent learners who are able to continuously acquire, process and apply the knowledge they have gained.

- **Transition to work**: It is highly important in career self awareness, and exploration, changes is work place & globalization. Schools equip pupils to work in increasing global and cosmopolitan world. Schools are encouraged to establish
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partnership with community groups, industries to organize school based talks and
career exhibitions, open houses, industrial visits, work experience programmes,
etc.

- **Fostering A Caring Community**: It is individuals responsibility to share in
mutual concern for the well being of his/her fellow citizens making beneficial
contributions to society. Pupils are required to complete minimum of six hours
of community involvement programme. Voluntary Welfare Organisation, Self
groups, Community Development Councils/Resident Communities/Community
Centers/ Clubs, etc that are interested to collaborate with schools should be linked
with schools for life skills training packages at each level primary secondary and
junior college levels. Along with these the Ministry of Education has been
collaborated with subordinate court to introduce the peer group Advisors
programme and peer Mediation programme.

Criteria for successful Life Skills Based Education

- It should not only address knowledge and attitude change, but more
importantly **behaviour change**.

- Traditional **information based** approaches are generally not sufficient to yield
changes in attitudes and behaviours. The lectures are not enough, they should
be substantiated with **exercises and situations** where participants can practice
safe behaviours and experience its effects, associating with experiences and
practice. LSBE will work best when augmented or reinforced. The message
when given once cannot have the same remonstrance until it is recapitulated,
reviewed, reinforced and repeated several times.

- LSBE will work best when **combined with policy development, community
development and media**.

Hence, last but not the least, LSBE tries to give children the knowledge,
adjectives, and skills that they need to lead healthy, successful lives.

The **curriculum** developed by life skills based education is designed for every
area of personal and academic life by:

- increasing self esteem and self responsibility
- inspiring them to stay in school
- developing a lifetime enthusiasm for learning.
- Developing positive social skills
- Developing critical thinking and decision making skills
- Training them to protect themselves from harmful influences
- Empowering them to take charge of our plant and our future.

**REVIEW OF RELATED LITERATURE**

The review of the literature provides the background and context for the research problem (Wiersma, 1995).

The literature review accomplishes several purposes.

- It shares with the results of other studies that are closely related to the study being reported (Fraenkel & Wallen, 1990).
- It relates a study to the larger, ongoing dialogue in the literature about a topic, filling in gaps and extending prior studies (Marshall & Rossman, 1989).
- It provides a framework for establishing the importance of the study, as well as a benchmark for comparing the results of a study with other findings.

Keeping in mind, the above-mentioned purposes, the research literature related with variables under investigation was reviewed and has been reported under the following heads:

- Research Studies Related to Life Skills
- Research Studies Related to Parental Involvement
- Research studies related to Quality Instruction
- Research Studies Related to Remediation
RESEARCH STUDIES RELATED TO LIFE SKILLS

Virginia (1987) reported about students' motivation and discussed factors that affect students' motivation to learn, considers techniques that can increase motivation, and identified schools that have developed activities to enhance motivation. Students bring characteristics to the learning situation that vary tremendously (abilities and aptitudes, confidence, background experiences). These characteristics and unique combinations of factors influence the level of motivation. Motivation is also affected by the nature of the learning environment, including the degree of interest in a subject or a teacher, and the physical and psychological environment. Several theories provide explanations for motivational behaviour. Behaviorists stress positive reinforcement. The rewards, however, may become more important than the learning. Abraham Maslow's theory of motivation proposes that "deficiency" needs (safety, love, esteem) must be satisfied before "growth" needs (self-actualization, knowledge). Others hypothesize a need for achievement and a contrasting need to avoid failure. Students who experience failure in school are less motivated to do well. Techniques to improve motivation include the following: (1) consider individual differences; (2) ensure that deficiency needs are satisfied; and (3) make subject matter interesting and relevant. Several schools and districts illustrate how programmes and activities can develop motivation. In New Hampshire, for example, Amherst Middle School requires the students to use the skills of all academic areas in life-oriented, thematic units. The document provides addresses and contacts of seven schools and districts.

Brochu and Souliere (1988) studied long-term evaluation of life skills approach for alcohol and drug abuse prevention. Three-day life skills re-education programme, embedded in 10-week new employee basic training had no long-term effects on alcohol and drug knowledge and attitudes. Findings suggest that primary prevention programme targeting adults may be too late to affect alcohol and drug habits, life skills approach may work best in secondary prevention efforts, and long-term evaluations are necessary.

World Health Organization, WHO (1988) organized to examine ways and means of improving the status of substance abuse education for health professionals in some European presented. Conference participants included researchers, psychiatrists, advisers, clinicians health administrators, and experts from 10 European
countries and the United States involved in the design and implementation of substance abuse course in the curriculum of medical schools both at the postgraduate and undergraduate level. The report discusses several important aspects: (1) substance abuse problems in the European region including Austria, France, Spain, Sweden and the Soviet Union; (2) differences among national substance abuse policies in the European region; (3) substance abuse education in the United States; (4) the objectives of substance abuse training; (5) training methods; (6) structural conditions for the implementation of training programmes; and postgraduate training programmes. A number of general and specific recommendations are provided for undergraduate and postgraduate training programmes. Specific guidelines for the training of general practitioners and general psychiatrists, and for implementing programmes for disciplines specifically related to substance abuse problems are outlined together with recommendations for training non-medical health professionals. Participants, and their addresses and affiliations, are listed.

Santa (1990) suggested getting set for success which consists of three booklets: the text, success portfolio, and facilitator’s guide. Unit 1 in the text tests the students’ Coping Skills. Contracts in the success portfolio for this unit enable the student to determine the sources of Stress and ways of coping; describe different procedures for managing time, assess sources and ways of Coping with depression; recognize and practice assertive behaviour; and define a problem, seek alternatives, and implement a plan. The focus of unit 2 is understanding self, particularly the Positive and negative supports to constructive personal and interpersonal skills. Contracts in the success portfolio enable the student to increase self-regard and self-acceptance; use strategies to overcome self-defeating behaviour; understand the importance of taking charge of college life, explore according to Maslow’s ladder of values the needs that impel the student to achieve in college; and explore ego states of parent, adult, and child in self as the student relates to instructors and classmates. Unit 3 focuses on carrier awareness problem solving skills. Contracts in the success profile, and follow the steps toward playful Decision – Making Skills and goal setting.

Hamburg (1990) reported deals with essential life skills for young adolescents. Attention was given to: (1) school-base interventions, including
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Interpersonal Problem Solving, Social competence training, a drug and alcohol project, linked school and community programmes. Promising new conceptual models including the school development programme, the next section discussed programme implementation and evaluation. Concluding remark focused on the need for dissemination of information about effective life skills training and recommendations for implementation of preventive programmes in middle schools.

Meyer and Steyn (1992) reported on a pilot programme on Acquired Immune Deficiency Syndrome (AIDS) and life skills training implemented in 12 schools in Pretoria, Laudium, Cape Town, and Soweto (South Africa). Data was collected through pre – and post – questionnaires and focus group interviews. The purpose of the programme was to provide adolescents with accurate information on which decisions about AIDS prevention behaviour and tolerance towards people infected with the Human Immunodeficiency Virus (HIV) would be based. The programme had 10 modules, each with specific teaching objectives; suggested teaching methods, teaching aids, and learning activities; and suggestions for additional reading. The modules addressed puberty and adolescence, relationships (e.g., peer, family, opposite sex), love, human sexuality, Decision Making, sexually transmitted diseases (STDs), and HIV/AIDS. Findings indicated that students showed a general improvement in AIDS-related knowledge topics well as more Positive perceptions of condom use, and more realistic perceptions regarding susceptibility, and the seriousness and outcomes of HIV/AIDS. There was also an increased perception of peer. Pressure to engaged in sexual activity.

Albama (1993) reported life skills curriculum, grades 7-12 for drug – free schools and communities programme: Teacher guide. This is a compilation of many separately – paginated documents, class and learning activities, and teaching aids designed to help develop Confidence – Building Skills in junior and senior high school students. The implementation of these curriculum teacher guide showed enhancement in various life skills of both teachers and students as the documents were intended for both students and teachers, but without any real instructions for teachers, include case studies quizzes, self-assessment instruments, exercises, lesson
plants, and helpful hints. Topics covered include Stress management, conflict management, improving Communication Skills, Self-Esteem, values, career, and life-planning skills, and Decision Making.

Halter and Lang (1994) designed to help adolescents develop skills which will encourage them to make health and Positive choices about life. In addition, its design will assist adults, parents and teachers, as they guide young people through the process. The book uses a series of written exercises designed to help organize the students’ goals and aspirations for life. The subjects are divided into five sections: Appreciating differences, personal development, family and values, making choices, and making difference. The guide contains 96 one hour a week. Topics in the text include gender equity and cultural diversity. The stages of personal development are examined in depth, with special attention given to Self-Esteem, creating dreams, and skills development (Communication, Decision Making, and time management). The importance of personal integrity and personal health are also highlighted, along with the need to maintain health relationships with friends and family. Since choosing a career is among the more important decisions one makes, a section on career planning is offered and is supplemented by a discussion of the importance of money management. Finally, ways that students can create change and address world problems are explored. Numerous worksheets and exercises are included to help students learn these solutions.

Smith and Martin (1997) focused on life skills training and cross-age teaching of younger students. Parents reported Communication with their child about the programme; increased knowledge about Life Skills, support from school, and empowerment; and greater strengths in their children.

Steven Pario (1997) designed a study to determine if sixth-grade students’ problem solving skills were improved by means of their experience with a computer-based logical puzzle game designed to increase reasoning skills, and, in turn, problem solving ability. Students worked on this game either in cooperative learning pairs or alone. Baseline and post-experimental problem-solving ability was measured through the administration of a Problem Solving Test; Form A was utilized as a pretest for this purpose, Form B was used as a post-test. Comparisons of Problem Solving ability based upon post-test scores (Form B) were made among four groups of students.
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(N=106): Group 1: Students (n=27) who worked on the computer-based puzzle game in cooperative learning pairs. Group 2: Students (n = 27) who worked on the computer-based puzzle game as individuals. Group 3: Students (n=24) who worked on a computer-based social studies stimulation in cooperative learning pairs. Group 4: Students (n=29) who worked on a computer -based social studies simulation as individuals. A t-test comparison of post-test data between all students who worked on the puzzle game and all students who did not work on the puzzle game showed no significant difference between the two groups’ problem solving abilities. However, an analysis of variance comparing the mean of all four groups showed that the students in Group 1 performed significantly better (F=3.783, p<.05) than those in the other three. These results indicate that students who participated in a computer-based cooperative learning experience using software that fostered the use of problem solving skills showed significant improvement in their problem solving ability. Students who used the same software as individuals showed no such improvement, nor did students who participated in a computer-based cooperative learning experience using social studies software.

Field, Sandra Truitt (1997) devised and implemented a curriculum that encompasses not only the development of musical skills but also the development of Life Skills like creative and Critical Thinking Skills. Therefore, the purpose of this project was to develop an instructional model for the secondary choral music program that restructures traditional methods and learning content and provides the choral director with rehearsal strategies designed to develop critical thinking skills.

The strategy is structured to incorporate the processes was critical thinking and emphasizes problem solving, decision making and participation in the performance outcome. Rehearsal strategies designed within this structure encompass performance skills, musical literacy and musical understanding.

Because of its multi-dimensional nature, the instructor is able to create not only a profile of the student’s varied abilities but also assess those cognitive processes identified as thinking skills within the framework of authentic performance tasks. Qualitative measures were used to track student work, problem solving strategies, self-assessment and reflection over time.
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While the results have shown the students benefit greatly from instruction that engages them in creative & critical thinking processes, choral conductors continue to express reservations regarding time constraints, intrusion upon performance obligations and realistic vs. idealistic expectations.

Coffey and Knoll (1998) presented the general purpose of life skills programme to help person live more successfully and to function better in their multiple roles as members of a family, community and workforce. Life skills training was treated as an educational programme emphasizing the world of work, practical living skills, personal growth and management, and Social Interpersonal Skills.

Rooth (2000) studied the enhanced relationship between Participants in Life Skills Courses and the Environment, Human needs, Resources and the Environment Publication Series. Aims of the Life Skills Project include: (1) training facilitators in experiential learning technique with life skills as content matter; (2) running Life Skills workshops on requested Psycho-Social Life Skills topics; (3) materials development; (4) provision of networking facilities. (5) consultation services on workshop implementation and design; and (6) conducting action research. The Life Skills Project includes courses for Communication, conflict management, Coping with Change, leadership, health management, and team building. The project was evaluated through action research. Participant reflections were documented during workshops, and written evaluations were obtained after each workshop session, at course end, and in follow-up meetings. In addition, facilitator reflections were recorded. The research concluded that there are advantages of intervention granted in experimental learning, and that participants in life skills course developed enhanced Self-perceptions and were more empowered.

Richard (2002) studied to predict Social Problem Solving Skills of adolescents: The role differentiation of self and attachment security. This study investigated the role that a set of familiar variables, parents level of differentiation of self and parent child interaction play in the development of Social Problem Solving Skills of adolescents 210 adolescents and their parents were for participation in the study, with 23 mother-child and 8 father-dyads completing the test materials. The results suggested that both the quality of the mother-child attachment and mothers
levels of self are positively associated with better Social Problem Solving Skills in 
adolescent children. Furthermore, mother-child displayed a significant unique 
influence with the process were found to be significantly associated with the familial 
variables: problem orientation and evaluation.

Cooper (2002) investigated Social Responsibility among college students 
involved in three different types of service learning, responsibility, the dependent 
variable, was analyzed using on the Social Responsibility Inventory Three 
institutions, representative of master I Colleges and Universities, were involved in the 
study and 198 students competed the questionnaire. No difference was reported 
between traditional community service and curricular service learning.

Thayer; Fox and Koszewski (2002) studied an extension programme, 
building Nebraska families, works with employment first families, Nebraska’s 
welfare reform programme, to teach family management and life skills using an 
individualized, flexible curriculum to help families make successful transitions from 
welfare to work. Evaluation strategies included an entry/exit behaviour checklist and 
success markers that document transformational changes and incremental gains 
achieved.

Griffith (2002) examined the effects of SERVOL’s (Service volunteered for 
All) Adolescent Development Programme (ADP) on participants in Trinidad 10 years 
after participation. The ADP was developed as a 3-month programme in 1981 to 
develop the social skills of adolescents between the ages of 16 and 1 and focused on 
Self-Understanding, Emotions and Problems Solving, Parenting Skills, and 
Motivation for further academic or job skills. Findings indicated that the former 
SERVOL trainees benefited from the programme: they became better parents, had 
Improved Communication with their own parents, and developed high levels of Self-
Esteem. These findings were reinforced by parents, community leaders, and 
employers. The former SERVOL trainees themselves believed that the course 
enhanced their parenting skills and had a positive impact on their lives. 
Recommendations for possible improvement of the programme include adapting the 
programme for inclusion in the school curriculum and developing strategies alliances 
with regional and international organizations.
West (2003) studied contextual variability in the transfer of Problem Solving Skills. The purpose of this study was to describe how individuals learn from examples and retrieve known problems to help solve new ones. Solvers who did not receive contextual variability in training but solved a simple transfer problem showed improved transfer and recognition of embedded principles. It was believed that variation across surface features in problems de-emphasized the utility in problems used to categorize problems.

Giordani (2003) studied individual and organizational level moderators of physician Communication Skills training. The present study examined the effectiveness of two complementary interventions targeted at enhancing physician patient communication on issues related to patients’ satisfaction with medical encounter. Results indicate that, contrary to prediction, physician readiness change and perceived behavioural control were associated with significantly less patient and physical talk and lower judge of communication skills. Future, positive physician attitudes found to negatively moderate training related gains in verbal interviewing behaviours.

Phelps, Connie S. (2005) The purpose of this study was to compare self-reported perceptions of personal and leadership life skills development of Louisiana high school 4-H leadership activity participants by whether they participate in the 4-H Junior Leader Club (JLC) and/or the CHARACTER COUNTS! (CC) peer teaching program. The target population for this study was all high school students who participated in either the CC peer teaching program or the 4-H JLC. Therefore, this study was limited to those parishes that have both a CC peer teaching program and a 4-H JLC. A survey instrument was mailed to 321 high school students with 165 surveys returned. The survey instrument for this study was the Leadership and Personal Development Inventory (LPDI) developed by Richard Carter (1989). Louisiana high school 4-H leadership participants are typically 15 years old, female, white, live in towns with a population under 10,000 and receive mostly A’s and B’s in high school. Mean scores for the LPIDI indicated that participants agreed they demonstrated the items on the inventory. Results showed no difference existed in the perceived personal and leadership life skills development among the three groups on the LPDI. Membership in 4-H JLC explained a small amount of the variance (2.4%)
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in the development personal and leadership life skills after variance in personal and demographic variables were controlled. Further research should consider using the researcher’s reconfigured scales from Carter’s (1989) Leadership and Personal Development Inventory survey to study 4-H participants involved in a more structured 4-H experience that has requirements to complete membership.

**Martin-Grisson, Deborah A. (2005)** This dissertation examined the role of learning resiliency and life skills in adolescents who were involved with the foster care system and their subsequent impact on successful adult outcomes. Over the last ten years, empirical researchers have found an increase in the number of children in the United States being victims of sexual, physical, and emotional abuse, which has led to an increase of the number of children being placed in foster care. Additionally, minority children are over-represented in the foster care system, and adolescents make up almost one-half of the foster care population (Haerian, 1998; Terpstra & McFadden, 1993). Empirical evidence also shows that childhood experiences of abuse and neglect are positively correlated with poor developmental outcomes, including serious and violent juvenile delinquency (Jonson-Reid & Barth, 2000).

To this end, adolescents in foster care are at higher risk for failure in adulthood, (e.g., homelessness, welfare dependency, and incarceration), following their emancipation from foster care (Mech, 1988; Moynihan, 1988). When many of these adolescents are emancipated from foster care, and attempt to integrate into adulthood and mainstream society, they encounter difficulties, as they are not prepared to function independently as adults (Johnson-Reid, 1998). This study investigates the impact of a model training program on the resiliency and life skills of adolescents in foster care.

**Camrmack, Chad Curtis (2006)** The purpose of the study was to implement a drug and alcohol program to ninth grade students and determine the impact in student attitudes and resistance skills. The study addressed a problem that was found at John Dickinson High School. The federal government’s No Child Left Behind Act of 2002 and Safe and Drug-Free Schools and Communities Act created a sense of urgency to implement a program. Delaware Department of Education personnel recommended the use of a curriculum called Life Skills, which was written by Gilbert J. Botvin. Pretest, posttest and survey results from Thomas McKean High School were used to measure the impact the curriculum had on student attitudes and
resistance skills. After reviewing the results of the study, there were measurements showing an impact in student attitudes and resistance skills. Examples of the positive impact upon student attitudes could be seen as pretest and posttest results were compared. The comparison results indicated overall improvement in student attitudes after completion of the drug and alcohol prevention curriculum. There were subgroup improvements in resistance skills. The improvements were with African-American female and white female subgroups. African-American male and white male subgroups showed less likelihood of using resistance skills.

RESEARCH STUDIES RELATED TO PARENTAL INVOLVEMENT

Kohli (1986) in a study of concept and expectation of parents and teachers regarding Pre-school education in Chandigarh also found that there was no uniformity of curriculum for Pre-schools. The activities and even the age of admission to schools varied. Majority of parents reported play way to be the best method of teaching followed by individual attention and story telling. It was also found that majority of schools did not have any regular health programme nor was there any provision of any orientation or inservice training for teachers. In the mode of assessment majority of parents preferred graded system while teachers preferred non-graded system.

Vinograd-Bansell, C.R. and Bansell, R.B. (1987) presented the results of a study in which 195 parents taught their first graders word recognition skills at home, using material provided by the school. These students significantly outperformed controls. The findings were also from study on home tutoring. Home tutoring format included (1) professionally supervised tutoring (2) professionally administered training (3) televised instruction (4) materials only (like the format of the study). All formats were found to be useful, with the materials only format viewed as having the widest feasibility.

Tangri S. and Moles, O. (1987) conducted a research on the effects of different kinds of parent involvement on student outcomes like Achievement and affective benefits (attendance interpersonal behaviour, attitudes) were associated with: parents serving as paid classroom aides, parents working as volunteers, home school communications, phone contacts, home visits, parent-teacher conferences, homework assistance, home tutoring, and home educational environment. Research was
conclusive about the effects on students’ achievement of parents’ involvement in decision making.

Chavkin (1989) reported the results of a survey of parents and educationists in six southern states on parental involvement in general, in decision making and parental involvement roles in other skills of child activities. Chavkin further identified from the results seven elements that were essential for effective parental involvement which were written policies, administrative support, training, partnerships approach, two-way communication, networking, and evaluation.

Herts, Ruth Simmons. (1990), conducted a study on the impact of parental involvement on reading achievement in a desegregated elementary school environment. This study was conducted to determine whether a parental involvement intervention program might impact reading achievement at the third grade level.

The results suggested that, parental involvement intervention program on reading achievement was not significant. The second portion of the study involved using a thirty-item questionnaire to survey parents and third grade teachers about their perceptions of parental involvement. Teachers and parents felt that schools should have the responsibility of working with parents to increase students’ reading achievement.

Utterback, Phyllis Hicks. (1991), conducted a study on parent attitudes toward their children’s schools based on level of parental involvement in a public school system. This research study investigated the attitudes of three different parent groups towards their children’s schools. The groups were parents, who seemed as evaluators of a major curriculum program for a public school system; parents who were active volunteers in their children’s school but had not served as evaluators; and parents whose involvement in their children’s schooling was attendance at special programs, sports events, and parent conferences. Findings indicated that there was not a significant difference in level of parental involvement and parent attitudes towards their children’s schools. The conclusion is that level of parental involvement does not appear to engender positive attitudes of parents towards their children’s school.

Opdyke, Mary Ann Lorey. (1991), studied gender effects in a model of relationship between parental involvement and student performance. The findings revealed that the separate and joint effects of gender of student father involvement
and mothers' involvement were generally the same for the eight sub-groups. The only expectations were, when achievement was the criterion, that gender of student differed significantly by sub-group; when the background variable was ability, and when grades was criterion variables, all three grouping variables differed significantly by sub-group.

Hadden, Thomas Edward. (1991), conducted a study on the degree and type of parental involvement in the education of their children in Lutheran parochial schools. The research was conducted at elementary schools in a suburb of Los Angeles. The differences in parental involvement between parents of children in elementary school and in middle school was examined. Findings indicated that there was a significant difference in the level of involvement at the instructional and institutional levels. There was no significant difference in involvement between elementary and middle school, only four of sixteen predictors proved significant.

Russell, Dariene Loretta-Spencer. (1993), took over a study on parents perceptions of the middle school and its impact on parental involvement and student achievement. The findings indicated that relationship did exist between parents, perceptions and various aspects of students achievement and parents’ perceptions and parental involvement. The study also revealed that when parents perceived the middle school positively, there was a decrease in students perceptions and an increase in students’ attendance.

Hickman, Catherine Wehlburg, (1993), conducted a study on parent involvement: relationship between socio-economic status, gender, grade-level, and academic achievement at the secondary school level. A sample of 47 primary care-giving parents was randomly drawn from the population of parents in Alachua county, Florida Public High Schools.

The results indicated that only the home-based type of parent involvement was related to GPA in a positive direction. However, other types of parent involvement were significantly related to SES, gender and grade level. Parent as learner and parents as supporter types were found to be statistically related to SES. The students who were not on a state subsidized lunch program had parents who evidenced higher amounts of both of these types of parent involvement. Students gender variable was
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significantly related to the home-based communicator and advocate types of parent involvement. Parents of females were found to be more involved in these types.

Kincheloe, J Bradford. (1994), studied the effect of directed parental involvement in achievement. The study was designed to test the hypothesis that planned parental involvement through the use of specially designed study material given to the parents or guardians of students in upper level mathematics courses will have positive impact on achievement in those classes.

No significant differences were revealed in achievement for the two groups. The findings indicated that (i) sending specially designed study materials to parents at home, increased achievement or (ii) that there existed a correlation between the number of times a parent worked with their child on homework and the students subsequent achievement.

Gross, Gali M. (1995) studied parental involvement and the reading achievement of third grade students. The sample consisted of 197 students, aged seven through ten years old, both male and female, randomly selected and mixed ethnicity from various socio-economic background and various families configuration and parents of those students. The results indicated that there was statistically significant relationship between parental involvement & reading achievement.

Chilampikunnel, Mani Augustine. (1995) studied parental involvement and students performance and self-esteem in suburban and city parochial elementary (k-6) schools. The participants of this study included 317 elementary school children from three Catholic Schools in Westchester country and three from the Bronx in New York City.

The major findings indicated that parent involvement in school related activities at home, school-home communication; and parental attitude towards school had a significant correlation with children’s performance, attendance and self-esteem. The study also found that students from Westchester country catholic schools had significantly higher self-esteem and attendance than those from the Bronx.

Hagan, Mary M. (1997), studied teachers perceptions of parental involvement in southern Illinois elementary schools. The study concluded that teachers and principals should develop an open atmosphere which will encourage parents to become more involved in the elementary school setting. A positive school
communication process which process on the development of a dynamic climate in which parents are encouraged to offer opinions about salient school issues should be maintained by teachers and principals.

Gonzalen, Mary Ellen Martinez. (1997), conducted a case study of parent involvement in a middle school in the Rio Grande Valley of South Texas. The qualitative study was conducted at a middle school using four types of data: a teacher survey, open interviewing techniques with teachers, administrators, support staff, and parents field observators and document review. The investigation used the in-case qualitative analysis to determine the critical strategies and factors contributing to effective parental involvement at the middle school.

Findings of the study indicated that there were different types of enabling strategies used by school personnel to influence the parents to be involved. Communication strategies, organizational strategies, instructional strategies, planning and teaming strategies, encouraging strategies and interpersonal strategies. These strategies impact the following factors which facilitate effective parental involvement: personal construction of the parental role, sense of efficacy for helping children succeed in school and opportunities and demand for involvement.

Blanton-Balthazar, Debera. (1998), studied parent and teacher perceptions of parent involvement in schools (Elementary school, middle school, urban, education, organizational climate, ethnicity). The sample population consisted of 615 randomly selected parents and teachers from four elementary and four middle schools from an urban school district in south-east Texas. Parents and teachers were asked to respond to a locally developed instrument.

The results indicated that there were no differences in the perceptions of teachers and parents towards the responsive participative, and active components with regard to ethnicity and level of school.

Melemore, Standra Lee. (1999), conducted a case study of how the perceptions of school personnel affect their behaviours concerning parental involvement in the school’s operations. The purpose of this study was to investigate the interactions between staff and parents at the elementary school to discover patterns of behaviours or practices that foster positive or negative parental involvement.
Patterns of Parental behaviours were found, which created both positive and negative parent access. Positive parent access allowed equal partnership in school operations. Negative access limited parent perception to traditional roles such as room mother, hall monitor, or reinforcing teacher/school curriculum and doctriner.

Jonathan Gershuny (2000) of the Institute of Economic & Social Research investigated that the time British parents spend playing, doing home work or reading with their children has more than quadruple during the past 35 years for both working & non-working parents. The research is based on the analysis of weekly diaries from 3,000 British parents and 60,000 worldwide parents in 1961, 1975, 1985 & 1995. The research showed that although women go out to work than at any time on the past 100 years, the average working hours mother spends now than twice as long as ready & playing with her young children than mothers did in 1961. This helped in producing excellent results. The study showed that in 1995 a British working mother spent an average of 135 minutes a day reading to her young children compared with 95 minutes in 1961. Farmers who are working full time now invested an average of 88 minutes a day looking after their children eight times more than they did in 1961, helping children gain confidence & fetch better marks in house tests.

Lamb & Michael (2000) studied the four important social trends that have fundamentally changed the social cultural context in which children develop: women’s educational statues, increased self esteem of adolescents, increasing involvement of parents in teenaged children & their academic achievement. The result’s showed an increasing influence of family’s involvement on academic achievement of child, which in turn seems to be affecting childrens and father’s developmental trisections. The sample composed of about 1600 children of 7 leady schools of US. The results showed an increasing impact of fathers involvement on positive academic outcome & overall personality development.

Rhodes, Jean E; Grossman, Jean B; Rische – Nanay L. (2001) tested a conceptional model in which the effects of mentory relationship on adolescent academic outcomes were hypothesized to be mediated partially through improvements in parental involvement. The parameters of the model were compared with those of an alternative, in which improved parental relationships were treated as an outcome variable rather than a mediator. The study included 959 young
adolescents (aged 10-16 yrs). In addition to improvement in parental relationship. Mentory led to reductions in unexcused absences & improvements in academic achievements. Direct effects of Parental Involvement & grades were directed. It was found that academic compliance & performance improved dramatically through parental relationships & understanding.

Carson, Alison S, Banuazizi and Ali (2002) studied the impact of Parental Involvement on the development of aspirations of future goals of adolescents. This study was based on a theoretical model that depicted future goals as an important factor for achievement. Data was collected from a sample of 247 young adults aged 16 to 22 from nine countries, Australia, Belgium, Peris, England, Italy, India, Japan, USA and Thailand. Confirmatory factor analyses indicated that good rapport between parents & children helped in great achievement motivation & high Parental Involvement was co-related to positive aspiration for future goals.

Cotton and Wiklund (2002) studied the importance of the relationship between school and parents and its findings demonstrated that parent involvement in a child's learning is positively related to their achievement. During this study, when the families as a whole participated in children’s education in positive ways, there were noticeable changes in the child’s test scores, attendance records, quality of work, attitudes and behaviour, graduation rates, and it was also observed that the more intensively parents were involved in their children’s learning the more beneficial were the achievement effects. It was also observed & concluded that when parents monitor homework, encouraged participation in extracurricular activities, were active in parent teacher associations and helped children developed plans for their future children responded & did well in school. It was seen that more activity each parent had put in there was greater achievement for that student in comparison to the children with passive parents.

Xitao Fan (2003) studied parental involvement and student's academic achievement. A meta analysis was conducted to synthesize the qualitative literature about the relationship between parental involvement and students academic achievement. The findings revealed a moderate, and practically meaningful relationship between parental involvement & academic achievement. Using moderator analysis, it was revealed that parental aspiration/expectation for children’s
education achievement has the strongest relationship while parental home supervision has the weakest relationship, with student's academic achievement. In addition the relationship is stronger when academic achievement is represented by a global indicator than by a subject specific indicator.

Schickedanz (2003) studied the different levels of parental involvement. The different levels that were taken were of cumulative. One, who was extremely & aggressively involved in child's education, house parent, who became too disciplinary on their children, lastly, the passive parent who rarely gets involved in child’s life & school. Among these categories it was concluded that the best one was authoritative parent, it was observed that these students were more competent, had higher self control and self-reliance and were more serious about their school work. Children with harsh parents also did well in school., however, these students felt more pressured had a lower self esteem, were less motivated, and were categorized as a more rejected group. However, children with passive parents were considered neglected, and developed a more antisocial behaviour. Children of passive parents were found to perform poorly academically as well.

The major research objective of this study was to assess the effect of parental involvement on student’s academic growth during the high school years. The National Education Longitudinal study, data was used, and the latent growth curve analysis within the framework of structural equation modeling was the major analytic tool for accomplishing the research objectives. The major findings of the study were a) parental involvement appeared to be multidimensional b) ethnic group samples reported comparable degree of parental involvement c) parent aspiration for their children’s education attainment stood out for its consistent and positive effect on student’s academic growth and d) the effect or lack thereof of parental involvement appeared to be consistent across ethnic group samples and across data sources (student’s parent data). Plausible reasons for the consistent effect of parents aspiration on student academic achievement were discussed. Some suggestions were made for the observation that some parental involvement dimensions showed negative though generally small, effects on student’s academic growth.

Jennifer Jun-Li Chen, (2005) In this study the extent to which students’ perceptions of academic support from parents, teachers, and peers simultaneously
affect their achievement was well examined. The participants were 270 students (mean age = 15.41 years, range = 14-20 years) from three grade levels (Forms 3-5, equivalent to Grades 9-11 in the U.S.) in a Hong Kong secondary school. Data were collected from a questionnaire (written in traditional Chinese and matched colloquial Cantonese used in Hong Kong). The questionnaire consisted of a background profile and four scales assessing students’ perceptions of the availability of parental support, teacher support, peer support, and their own academic behaviour. Findings supported the hypothesis that perceived academic support from parents, teachers, and peers indeed indirectly contributed to students’ achievement through influencing their academic behaviour. The strongest indirect influence on student achievement was exerted by teacher support, followed by parental support, and then peer support.

Although the indirect effect of parental support on achievement was not as strong as that of teacher support, the fact that it was significant suggests that parents still play an important role in influencing their children behavioral and achievement outcomes.

Findings also revealed that the effects of academic support (from parents, teachers, and peers) on student behaviour and achievement were actually complex and differed across grade levels depending on the source of support. Interestingly, parental support significantly influenced academic behaviour for Form 3 students, but it was negatively and directly linked to academic achievement for Form 4 students.

The greater influence of parents on academic behaviour for younger adolescents (in form 3) and of peers on academic behaviour for older adolescents (in form 5) reflected that a) younger adolescents’ need to rely on parents for academic support, (b) older adolescents desire to seek academic support from peers who are experiencing similar development and academic challenges, and (c) older adolescents’ motivation to seek independence from their parents. This study suggests that schools should encourage communication between parents and teachers, such as having regular parent-teacher conferences.

Pedro F. Casanova, (2005) compared the distribution of parental educational styles and the scores reported both by parents and students for various family characteristics (acceptance, control, involvement, and expectations) and socio-demographic factors (socio-economic status, family structure, number of children, and
order of birth of the children) in a group of adolescents with normal achievement (n=105) and in a group which present low achievement (n=205). Likewise, it examined which variables best predicted academic achievement in the two groups and of adolescents. The results indicated differences in the distribution of parental styles in the two groups for the majority of the variables analyzed. It also observed a differential pattern in the prediction of academic success. In the group of adolescents with normal academic achievement, socio-demographic variables better predict achievement; for students with low achievement, family variables played a more important role in predicting achievement.

William H. Jeynes, (2005) undertook a meta-analysis including 21 studies, to determine the impact of parental involvement on the academic achievement of minority children. Statistical analyses were undertaken to determine the overall effects of parental involvement obtained for each study as well as specific components of parental involvement. Four different measures of academic achievement were used. The possible differing effects of parental involvement by gender and socioeconomic status were also considered. The results indicated that the impact of parental involvement overall was significant for all the minority groups under study. For all groups, parental involvement, as a whole affected all the academic variables under study by at least two tenths of a standard deviation unit. However, among some of the races, certain aspects of parental involvement had a greater impact than did others. The significance of these results was discussed.

RESEARCH STUDIES RELATED TO QUALITY INSTRUCTION

Jones, D. A. (1986) designed a study of mastery with an interactive information mapped textbook format of physical examination, textbook preference and state anxiety of undergraduate nursing students. Seventy undergraduate students, from three university nursing programs located in the Boston area were given a homework reading assignment on the physical examination of the lungs and thorax, as supplement of Quality Instruction in Mastery situation. Each subject was randomly assigned to either the traditional textbook format (n=36) or interactive information mapped textbook format (n=34), instructed to read the assignment and return in one week to complete post-test measures. The results of this investigation supported the
belief that textbooks format (i.e. interactive information mapped format) integrating verbal and visual information resulted in a significant increase in mastery scores, text preference ratings and study time. Also, students using the mapped format appeared to have a moderate increase in state anxiety associated with higher mastery scores.

Guskey and Pigott (1988) conducted a meta-analysis on 46 studies on Mastery in the same five areas addressed by Guskey and Gates (1986): student achievement, student learning retention, time variables (including measures of time on task and time spent), student affect, and teacher variables. It was found that in regards to student achievement a positive effect was obtained as a result of the application of group-based mastery learning strategies. The effect sizes differed depending upon the subject area to which mastery learning was applied. Bloom suggested that mastery learning would enhance learning in all subject areas with larger effects in mathematics and science. This analysis found more positive effects' in language arts. Positive effects of mastery learning were seen across all levels of education; they appeared to be larger for younger students in elementary classrooms than for older high school or college students. The results showed a positive effect upon students' retention of the material. All three time variables showed positive effects. Remediation time spent by students and instructors significantly decreased as the student reaches higher instructional units. For student affect the authors found that students who learned under mastery conditions generally liked the subject they were studying more, were more confident of their abilities in that subject, felt the subject was more important, and accepted greater personal responsibility for their learning than students who learned under non mastery conditions. In the areas of mastery and its effects upon teachers, it was found in one study that the expectations formed by teachers about students' abilities was increased because many students had far greater achievement than the teacher originally anticipated.

Salim, M. I. (1988) designed a study to determine the effects of a Mastery Learning strategy on the achievement of secondary school chemistry students in Sabha, The Socialist People's Libyan Arab Jamahiriya. The influence of gender and aptitude (independent variables), on achievement (dependent variable) was also
studied. Two hundred and ninety eight, male and female first-year secondary school students (tenth grade) participated in this study. The treatment groups consisted of eight classes with four teachers. Four classes were assigned to Mastery Learning (experimental group) and the other four classes were assigned to the non-Mastery Learning (control group). The treatment lasted thirty-days and was centered on two chemistry units: Matter and its Change and Laws of Chemical Reactions. Achievement was measured with two summative tests, one at the end of each unit. Students’ aptitudes were assessed with The School Qualification Test (SOT), which is required of all students holding a preparatory certificate, to enter the secondary schools. The following conclusions were made from this study: (1) There were significant differences in achievement due to instructional strategy. The Mastery Learning students had significant achievement gains in chemistry across all achievement tests. (2) Under these study conditions, female students of first-year secondary chemistry have significantly higher overall achievement mean scores than male students. However, these findings are questionable. (3) There was a significant difference in achievement between students of different aptitudes across all levels of treatment. Students of high aptitude have higher achievement scores than students of average or lower aptitude. (4) Although, females and males did significantly better under Mastery Learning, the instructional strategy appeared to reduce gender differences. (5) Although, all aptitude students benefited from Mastery Learning, high and average aptitude students benefited more than low aptitude students.

Monger, C.T. (1989) conducted a study to examine the effects of a Mastery, Learning instructional strategy on student achievement and on students’ subject-related attitudes. Of particular interest was the potential difference in elementary and middle school Mathematics achievement and attitudes between learners instructed by an instructional strategy based on Bloom’s theory of Mastery Learning and learners instructed by traditional methods. A quasi-experimental design was used to examine the effects of Mastery Learning Instructional strategy on achievement and subjects related affect of learners. To identify differences in achievement a two-group pretest-posttest design for each of the three grade level i.e. two, five and seven was used. It was found that there was no significant difference between the achievement and subjects’ related effect for second and fifth graders. For Seventh grade, control
group outperformed the experimental group in Maths concepts and total Maths. So Bloom's theory of ML was not supported by the study.

**Kincaid, D. D. (1991)** studied the effectiveness of **mastery-based setting compared to a traditional lecture-discussion setting** in two developmental mathematics courses at a two-year college in central Texas. The developmental courses studied included a basic Mathematics course and an introduction to Algebra course. One of eight sections of Basic Mathematics used the traditional lecture-discussion format, while the other sections employed the mastery-based setting. This setting was actually **a blend of Bloom Mastery Learning** and Keller's Personalized System of Instruction, as repeated unit testing was allowed, along with an 80% mastery level. Two of the nine sections of Introduction to Algebra the entire course but mastering at least 50% of the course units were allowed to take an in-progress grade (IP) and complete the course in future semesters. In each course, the posttest scores of those participating in the mastery-bases settings were significantly higher than those in the lecture setting. It was concluded that the posttest scores of those who participated in the mastery based setting were significantly higher than those in the lecture setting.

**Adams, S.E. (1992)** conducted a study to investigate the teacher's perceptions and attitudes regarding the integration of **Mastery Learning and emerging technologies**, distinguish factors which are enhanced by the integration and develop conclusion, implication and recommendations for future implementation. Data was collected from 15 teachers who utilized the integration of method of instruction like Mastery Learning and emerging technologies in their classrooms and 13 key informants who have knowledge of the strategies' integration. A multi-site case study, utilizing a qualitative research methodology, was used in this study. The findings of this study established: (1) The most important goal of integrating Mastery Learning and emerging technologies is to individualize instruction; (2) The integration of Mastery Learning and emerging technologies positively impact the capabilities of teachers to **individualize instruction** and decrease student discipline problems; (3) Teachers are optimistic in regards to the impact of Mastery Learning and emerging technologies on the capacity of students to learn; (4) The integration of
Mastery Learning and emerging technologies increase students' motivation to learn and achieve in the classroom: (5) Teachers utilizing Mastery Learning and emerging technologies experience a high level of self-efficacy; (6) Teacher who utilize the integration of Mastery Learning and emerging technologies in their classroom perceive themselves as possessing a high level of instructional effectiveness.

Defranco, A.L. (1993) investigated the effect of using the modified mastery paradigm with an announced mastery criterion level (80% out of 100% as mastery) on: (1) the academic achievement of hotel and restaurant students; (2) the attitudes of the students towards the course and; (3) the attitude of the students towards the instructor. The three null hypotheses stated that the modified mastery paradigm would have no significant effects on both academic achievement and attitudes. Forty-six subjects were randomly assigned to the Experimental Group while fifty were in the Control Group. A pretest posttest for achievement were administered to both groups. The treatment, the modified mastery paradigm, was only introduced to the Experimental Group. The data collected on achievement were analysed using the Analysis of Covariance (ANCOVA). The data for the teaching evaluation were collected during the second to the last class day and were analysed using a T-test for unpaired samples. Although the achievement scores of the Experimental Group increased in a positive direction, the difference was not statistically significant enough to reject the null hypothesis. Similarly, there was no statistically significant difference in the attitudes of the students toward the course and the instructor. The data suggested that the modified mastery paradigm, as used in this study, was not significant enough to affect a strong difference in achievement and attitudes.

Ford, J. S. (1994) conducted a study to consider the most effective way to deliver first-year algebra instruction to all students and to assist secondary school principals in determining their role in the implementation of the algebraic instruction. A form Instruction developed by the author called the Controlled Unipack Management System (CUMS) was used as the major structure of the case study in which all ninth grade students above MiMH level studied algebra for three semesters rather than the traditional two. On the Indiana State Test for Educational Progress (ISTEP), students in the ninth grade made a substantial gain in mathematical
computation (from 14 percent to 35 percent in the upper quartile). There were limited failures and a large decrease in discipline referrals. Anecdotal records showed that self-esteem of students and faculty was improved. It was concluded that expanding the time constraints from a traditional two-semester Algebra I course to three-semesters appeared to be effective for all students above MiMH level when combined with a Mastery Learning concept like CUMS. The principal serves as a leader and facilitator in the implementation of the model for first-year algebra instruction.

Lovett et al. (1994) conducted a study which measured the effectiveness of remediation strategies for RD children between 7 and 13 years of age which taught strategies for phonological decoding of words through direct instruction to one group, and taught metacognitive strategies for decoding of words to another group. Training took place four days per week for 35 one hour sessions.

Through direct instruction, materials were introduced in a carefully graduated sequence of steps, with many opportunities for over learning of content and skills using various components of quality instruction. The major focus was on word segmentation and blending, which are considered prerequisite skills for word identification learning.

The Word Identification Strategy Training (WIST) consisted of training RD children in the acquisition, use, and monitoring of effective word identification strategies and providing remediation accordingly to each student.

1. World identification by analogy – which taught children to compare an unfamiliar word with one already known (from a list of keywords).
2. Vowel variation – which taught children to attempt alternate pronunciations for vowels until they came up with a real word that was part of their vocabulary.
3. Seek the part you know – which taught children to identify segments of unfamiliar words that were smaller words that they already knew.
4. Peeling off – which taught children to separate affixes at the beginning and end of a word, reducing the unfamiliar word to a smaller root word.

When compared to a group of Red children who took a Classroom Survival Skills (CSS) course, performance on all measures of content learning, phonological
processing, and transfer were superior for the experimental groups learning with direct instruction. It was noted that children who had participated in the program performed better on post-test tasks requiring phonetic processing than other groups. It was concluded that RD is remediable and that a combination of both phonetic and whole word instruction are necessary for an effective remediation program.

Hudson, C.B. (1995) conducted a study titled a modified Mastery Learning/inquiry approach to physical geology for at-risk students. A semester course in physical geology, taught using a modified Mastery Learning approach with inquiry based laboratory investigations, was offered in 1991 and 1992 to a class of at-risk students who were enrolled in the University of South Carolina's Opportunity Scholars Program. The courses were similar, although the material presented during the second year was more extensive. The goal of the courses was to enhance the learning of students who are considered academically challenged for reasons other than mental capability. The extent to which this goal was achieved was measured by the extent to which four objectives were fulfilled. One was to increase student knowledge of geological topics. Other objectives were to increase affective scores of value, interest and enjoyment of the study of physical geology, to identify preferred instructional strategies of the at-risk students and to increase the students’ confidence and self-esteem. The 1991 experiment was evaluated using a repeated measures design. The students had significant gains in knowledge and affective scores of enjoyment and overall feeling about the course. Comparison of the more rigorous 1992 course to the 1991 course, using a non-equivalent control group design, showed significantly higher cognitive achievement in the 1992 group without sacrifice of any of the affective attributes of value, interest or enjoyment. Preferences for various teaching strategies and aids were similar for both years. Strategies associated with Mastery Learning received the highest ratings, however, it was not possible to attribute the students’ gains specifically to the Mastery Learning approach. Informal contact with a number of students in the following semesters provided response indicating that the students had gained confidence and self-esteem.

This study evaluated the effect of using the Mastery Learning technique of self-directed feedback, reinforcement and remediations of knowledge on the performance of a work-related task involving 130 Navy recruits tying a Bowline knot. The study utilized the randomized subjects, posttest-only control group design. Success or failures on the first trial or the number of trials to successful performance of the task (tying the Bowline knot) were the dependent measures used. The Mastery Learning intervention was conducted via a work book that provided feedback to the students on his or her knowledge attainment after instruction, yet before the evaluation of the transfer task. The first hypothesis that Mastery Learning would have an effect on the transfer of knowledge from the classroom to a work-related task was statistically significant when the outcome measure was the results of the first trial. There was no statistically significant difference on the mean number of trials to successful performance of the task. The second hypothesis investigated participants’ affective response to both traditional and experimental methods of instruction through the use of an attitudinal instrument. Statistical significance was found on this hypothesis, though in the opposite direction than predicted. A few mitigating factors appear to explain this conflicting result. Nonetheless, the findings of the study support the claim that the use of a Mastery Learning technique can have a significant positive effect on the ability of participants to transfer knowledge from a classroom-training context to a work related task.

Pezeshki, G. H. (1998) examined the effect of an innovative approach of teaching college algebra on the achievement of Mexican-American students as compared to the traditional approach. A total of 213 students participated in this study. Results indicated that cooperative learning and Mastery Learning were effective teaching strategies. These two strategies were used by the researcher as the innovative approach to teaching college algebra to Mexican-American students. Studies conducted of the achievement effects of Mastery Learning and cooperative learning found significantly greater achievement in treatment classes than in control classes. The mean scores on the post-test of the students enrolled in the treatment groups were higher than the mean scores on the post-test of those enrolled in the control groups.
S. Brand Gruwel, Aarnouloe and K.P. Van Den Bos (1998), the goal of this study was to determine whether it is possible to teach children test comprehension strategies. The subjects were fourth grade students from elementary schools and 9 to 11 year old students from special schools for children. All the children were poor in decoding and reading comprehension, and they scored poorly or normally on a listening comprehension test. Four strategies, classifying, questioning, summarizing and predicting were trained through direct instruction and reciprocal teaching in reading and listening settings. The effects of direct instructional method Quality component were measured by using a pretest posttest retention test control group design. The dependent variables were the ability to apply the four strategies, general reading and listening comprehension performance and knowledge of reading strategies. Analysis of each variable indicated significant main effects for school types (children from elementary schools perform better than children from special schools), Time of Testing (There was a general progress from pretests through retention tests). However, these positive quality instructional program effects were restricted to pretest-post test comparisons and they were applied more to strategic variables than to general ready comprehension.

Leu, Castek, Hartman, Coiro and Henry (2000) This study focused on integrating levels of intensity of instruction and the Internet within content-area classroom Instruction and examines new online reading comprehension skills required to learn science content online. This study focused on a middle school with approximately 416 students in a suburban/rural New England district with a minority enrollment of 4 percent. Grade-7 classrooms and students were selected because of the increasing attention on reading and learning of adolescent youth. Science was chosen as the target discipline of this study because science education has become increasingly important in the global context. Four conditions were identified in this study representing four levels of intensity of Instruction and Internet integration in the classroom: (1) Internet use with intensive strategy instruction, (2) Internet use with moderate strategy instruction, (3) Internet use with no strategy instruction, and (4) no Internet use and no strategy of quality instruction but regular classroom instruction (control).
The results of this analysis show that, generally, students in the three Internet conditions increased their online reading comprehension performance on the Online Reading Comprehension Assessment with Instant Messaging (ORCA-IM) more than the control group, which did not use the Internet and did not receive strategy instruction in online reading comprehension. Internet integration resulted in lower achievement on simple declarative knowledge and greater conceptual knowledge in science learning.

No association was found between students’ performance on either of the measures of traditional reading comprehension (January and June DRP) and their performance on the measure of online reading comprehension (ORCA-Blog). This study served to demonstrate the need for more comprehensive research in the area of new literatures.

Pacific Research Institute (2003) in its comprehensive study of California’s class size, reduction program, it looked at the effect of class-size reduction on student achievement, and also examined the impact of various teacher characteristics on student performance and low teaching quality and empirically proven instructional methods improved student performance. The consortium studied data from six large school districts, which had six percent of all third-graders in California and which had hired 178 more less-experienced, not-fully-credentialed, and less-educated teacher than smaller districts in order to meet the increased demand for teachers in newly created classrooms. The consortium wanted to examine the importance of these teacher characteristics in promoting student achievement in reduced-size classes. In particular, the consortium was interested in getting districts with teachers who had emergency credentials using quality instructional methods, using individualized instruction.

The consortium concluded, “The results of this study do not imply that teacher characteristics do not matter, but that the teacher variables that are easily measured and conveniently obtained do not seem to matter.” The report found an overwhelming bias in favour of “progressive” student-centered teaching methods like individualized direct instruction regular assessments, feedback, remediation program emphasize
students discovering and constructing their own knowledge with teachers acting merely as facilitators rather than transmitters of knowledge.

The lesson, then, was that willingness to implement empirically proven curricula and teaching methods like are individualized direct instruction, feedback, remediation more important to student achievement than whether teachers hold regular teaching credentials.

Elizabeth B. Bolton, Robert E. Burford, John C. Chastain (2004) developed a model in cooperation with the University of Florida’s Welfare to work Project (WTW). The purpose of the model was to improve and sustain the participation of the Welfare to Work clients in the instructional programs offered by the University of Florida Institute of Food and Agricultural Sciences Welfare to Work project (WF/IFAS WtW).

The first priority, with attention to group participation, role-play, site visits, and other quality instructional methods. Employed training and life skills preparation included six courses that comprised the initial curricula.

A linear instructional model was used in which each course was a stand-alone program. This linear approach to instruction resulted in a high level of success and course completion rate by WtW students. It was determined that the curriculum provided the student with sufficient entry skills to obtain and maintain employment under normal conditions. As implied in the continuum concept, the UF/IFAs courses were offered on a continuous basis and improved work ethic. The focus was on the WtW client developing a set of career and life skills using quality instructional programmes and the requisite GED.

Washington Elementary Reading Program (2005). The basis of this program was a daily, uninterrupted, two hour reading block in grades 1-3. Provide specific phonics instruction. One hour of this block is in small, ability groups. The other hour is whole group instruction. It provides small class sizes by utilizing specialists and paraeducators during small group instruction. Allows for more individualized instruction. Frequent assessment allows for immediate, specific remediation. Students have the opportunity to move from group to group.
Teachers and paraeducators are trained in programs.

Next, it scheduled a minimum, uninterrupted two-hour reading block daily for the primary grades. Struggling readers received an additional time in small remediation groups outside the two hour reading block.

Group size was significantly reduced leading to direct individualized instruction leading to quality instruction.

Frequent assessments were given to determine if students are learning what we are teaching.

Remediation groups were implemented.

Parent involvement was encouraged through evening reading program.

Conley, Millicent Marr Watkins (2005) Numerous studies have explored the direct relationship between teacher expectations and pupil achievement. Large number of students in urban schools are found to be at risk of academic failure when the educational expectations held for them are low. Mastery learning research and systematic classroom strategies leading to Quality Instruction have shown significant, positive linkages to pupil achievement. That is, students in a variety of school settings attained higher school achievement and higher self-concepts when their teachers utilized mastery learning strategies and, therefore, set a expected high academic achievement for them. This study examined the effectiveness of a staff development program for teachers from a large urban school district. This was a pre-test, post-test design. The experimental teachers met weekly all year to work on mastery learning procedures for reading comprehension. The control teachers did not participate in the in service program. The staff development produced statistically significant results. First, reading comprehension gain scores on the standardized Gates-MacGinitie Reading Test were significantly greater for the experimental students, who made twice the reading comprehension achievement gains than did the control students. Secondly, the formative reading assessment results on the reading comprehension instructional units were statistically significant for the experimental students and showed mastery attainment. Also, the experimental teachers spent more instructional time and used quality instructional strategies and held higher achievement expectations for their students.
Introduction

Folger, Elizabet Laws (2005) A quasi-experimental design was used to examine the interactive effect of mastery learning instruction and conventional instruction with gender and the cognitive entry behaviours of pretest performance, aptitude, and prior achievement on students’ science achievement. Eighty-four seventh graders were assigned to two treatment groups and participated in the administration of a pretest, instruction on specific objectives, and administration of a posttest. Results of a multiple linear regression model indicated no statistically significant two-way interaction effects between treatment and gender, pretest performance, prior achievement, and aptitude. A second multiple linear regression model tested the relative effectiveness of mastery learning and revealed that mastery learning students did not benefit significantly more than conventional instruction students. These results conflicted with an interactive relationship between cognitive entry behaviours and instructional methods as postulated by Bloom.

Konrad, Moira (2005) The current standards-based reform movement, teaching academic to all students identifying interventions that can teach transition skills (e.g., self-determination) and academic skills (e.g., writing skills) and various other life skills, simultaneously by. This study was conducted to investigate the effects of such an intervention. The purpose of this study was to determine the effects of GO 4 IT & help; NOW! Strategy instruction on written IEP goal articulation and paragraph writing skills of 9 middle school students with disabilities. Findings showed a functional relationship between GO 4 IT & help; NOW! Strategy instruction and (a) students’ abilities to write IEP goals and objectives, and (b) the quality of students IEP goal paragraphs. However, no functional relationship was found between GO 4 IT & help; NOW! Strategy instruction and the quality of students generalization paragraph, indicating that students were unable to transfer the writing skills to other types of paragraphs.

Knutson, Jennifer S. (2006) Investigate the instructional components necessary to change the reading trajectories necessary for progress of students who struggle the most with reading. This study explored the critical instructional feature of corrective feedback and individualized practice guided by formative evaluation. The purpose of this study was to determine whether intensifying this component of mastery learning would have a positive effect on reading levels and slopes for
students who did not make adequate gains in two previous levels of reading intervention. A hierarchical linear model design with elements of multiple baseline across subjects and interrupted time series was utilized in this study. Ten students were matched on oral reading fluency level and slope. Each student within a matched pair was assigned to the intervention group or comparison group. Because some interventionists taught more than one student, students could not be randomly assigned to treatment group. The invention phase started following a four week baseline phase. The effect of intervention was examined on repeated measured of oral reading fluency and pre-post-test scores on the Woodcock Reading Mastery Test-Revised, Gray Oral Reading Test-Fourth Edition and the Test of Word Reading Efficiency. Both visual and statistical analyses of results indicated that adding the corrective feedback and individualized practice routine guided by formative evaluation did not change reading trajectories or outcomes for students who had not responded to previous reading intervention. The results of this study highlight the complexity involved in ameliorating reading difficulties for two to six percent of students in school who experience serious, sustained, lack of adequate progress when provided with generally effective intervention.

RESEARCH STUDIES RELATED TO REMEDIATION

Jacobsen, G. H. (1986) conducted a study on incorporating learning styles in Mastery Learning classrooms. The study involved seventh grade students attending the Frank Britton Middle School. The problem of this study was to determine if student achievement could be improved and/or the number of remediations required for mastery reduced by incorporating learning styles into initial instruction in a Mastery Learning classroom. Six teachers, representing the subject areas of math, geography, art, industrial arts and language arts, were chosen to participate in this study. Each teacher taught an experimental class and a control class. The teachers incorporated learning styles into initial instruction using Bernice McCarty's 4MAT system in the experimental group. The control groups were taught initial instruction without learning styles. At the end of the first semester the students were given a CRT achievement test to determine student achievement. The students were also given an attitude instrument to determine if there was difference in attitude between the
L. Cebulski, (1986) Conducted three studies to determine the sources and frequency of children’s subtraction errors and to examine four approaches of remediation. In study 1, 56 third graders were asked to solve subtraction problems requiring borrowing and were questioned about their solution procedures. In study 2, 80 third graders were promised rewards for correct solutions or were instructed to borrow on subtraction problems. In study 3, 67 third and fourth grade children were assigned to one of the three conditions – component skills for borrowing, feedback for performance, no training (control). Both treatment conditions resulted in a significant increase in the number of borrowing problems correctly solved, but neither condition produced a significant reduction in the number of computational, borrowing or other errors. Neither condition produced an increase in correct solutions, and instruction inflated incorrect attempts to borrow.

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study. Each teacher taught an experimental class and a control class. The teachers incorporated learning styles into initial instruction using Bernice McCarty's 4MAT system, in the experimental group. The control groups were taught initial instruction without learning styles. At the end of the first semester the students were given a CRT achievement test to determine student achievement. The students were also given an attitude instrument to determine if there was difference in attitude between the experimental and the control groups. The teachers recorded the amount of time taken for initial instruction and the number of remediations required for the students to achieve mastery of the material. An analysis of variance showed an improvement in achievement in industrial arts, but there was no improvement in achievement in any of the other subject areas. In math, language arts II, art and industrial arts, there was a reduction in the number of remediations required for mastery, while in geography and language arts I there was no difference in the number of remediations between the experimental and the control group. There was no learning style preference treatment interaction, nor was there any, gender-treatment interaction. Based on this analysis, the researcher concluded that by incorporating learning styles into initial instruction in Mastery Learning classrooms, the number of remediations necessary for mastery could be significantly reduced.

Kass, Corrine E and Wade, Joseph (1986) conducted deficit and academic remediation of learning disabilities. Twenty-seven teachers carried out remediation with 76 elementary children labeled teaming disabled. Scores in the Stanford Diagnostic Reading Test (SDRT) of children receiving component deficit remediation plus academic deficit remediation were higher than those receiving only academic deficit remediation, when effect size analyses were made. Scores improved immediately after component deficit remediation on every subtest.

Ciechalski, Joseph C and Parker, Larry D (1990) examined academics remediation for students identified at – risk by kindergarten screening instruments. With experimental group (n=84), school counselor participated in assessment and facilitated remediation process throughout school year. With control group (n=100), counselor coordination assessment procedure, with remediation being
Introduction

classroom teacher functions, found significant difference in overall group achievement test scores between control and experimental groups.

Kulik and Kulik (1991) Studied impact of computer based instruction on remediation. Kulik and Kulik (1986), during a study, found after analysis of computer based instruction at 123 colleges and universities, that the use of computer as a tutor designed to supplement regular instruction had several positive affects. These included a) more student learning in less time b) slightly higher grades on post test c) improved student attitudes toward learning. He further concluded that computer based instruction had raised student achievement in numerous settings. Found that remedial instruction based on carefully defined goals and objectives was associated with improved student performance and students exposed to mastery learning techniques in remedial courses were more likely to pass these courses, obtain higher grades and be retained than students whose remedial courses were taught using more traditional techniques.

Boylan, Bonham, Claxton and Bliss (1992). Found that remedial instruction based on carefully designed goals and objectives was associated with improved student performance and students taking remediation courses required high degree of structure for the learning experience and provided the most benefit to the weakest students. Analysis of his finding also suggest that students participating in centralized remedial programs were found to be more likely to pass their remedial courses and more likely to be retained for longer periods of time than students participating in decentralized programs. His study also supported the use of counseling component with personal counseling for students as a source of success of such remediation programs. They found that there were no significant different on the performance of students participating in remedial programs whether they received tutoring or not, unless tutoring program included a strong tutor training component and training of staff and faculty, contributed to increased effectiveness of individual program components as instruction.

Lovett et. al. (1994) conducted a study which measured the effectiveness of remediation strategies for RD children between 7 and 13 years of age which taught strategies for phonological decoding words through direct instruction to one group,
and taught met cognitive strategies for decoding of words to another group. Training took place four days per week for 35 one hour sessions. Phonological analysis direct instruction (PHAB/DI) involved teaching children letter-sound and letter-cluster-sound correspondence. Materials and methods of teaching were based for Engelmann’s work with the Reading Fast Cycle 1/11 Program. Through direct instruction, materials were introduced a carefully graduated sequence of steps with many opportunities for over learning of content and skills.

Strategies were based on work by Gaskins and the Benchmark Program. Four strategies that were taught were (Word identification by analogy, Vowel Variation, Seek the part you know and Peeling off).

When compared to a group of RD children who took a classroom Survival Skills (CSS) course, performance on all measures of content learning, phonological processing, and transfer were superior for the experimental groups. It was noted that children who had participated in the PHAB/DI program performed better on post test tasks requiring phonetic processing than other groups, and children who participated in the WIST program performed better on post-test tasks requiring whole word processing. It was concluded that RD is remediable and that a combination of both phonetic and whole word instruction are necessary for an effective remediation program.

Chaffee (1997) developed a model to integrate critical thinking into remedial programme. He emphasized the use of critical thinking throughout the remedial curriculum which proved successful in improving the performance of under prepared students. The model used by John Chaffee at La Guardia Community College, is, methods of integrating critical thinking into the remedial curriculum. It involves teaching students to solve challenging problems, analyze complex issues and arrive at reasoned conclusions, establish appropriate goals and design plans for action, analyze complex bodies of information and make informed decisions, communicate effectively through, speaking, discussing and writing, critically evaluate the logic, relevance and validating of information. And participation’s such programs designed to teach critical thinking skills has proven to enhance student learning, (Reading and Writing) skills, improve student attitude towards learning and improve student ability
to do class assignments, and hence, enable the students to gain more from remedial courses and therefore reduce the amount of time spent in remediation.

**Batzer, Lyn Ann (1997)** designed to measure the performance of academicians during the study of Texas Community Colleges found that students were more likely to pass a state mandatory achievement test when remedial courses were based on recognized theories of teaching and learning. And, apparently, students performed better during remedial programs when evaluation included a combination of formative and summative evaluation and when formative evaluation data was used to refine and improve the program. During the study it was also examined that mandatory assessment of students in remedial courses is early associated with successful remediation efforts. Mandatory, placement, in programs of remediation however, appeared to have a statistically significant, negative impact on the retention of students in remedial programs.

**Lamire (1998)** identified the use of a **variety of different teaching methods in remedial instruction**. He likely to be more successful when a variety of instructional methods were used. Lamire rated half a dozen studies of community college students indicating that a dominate learning style among them was visual followed by what he referred to as haptic or learning by doing. Apparently the use of variety of instructional methods, particularly those using visual or hands on approaches to learning were more likely to appeal to the learning styles of students typically enrolled in remedial courses.
Roueche, J (1999) and others looked at successful community college remedial education programs in an attempt to identify those components or activities associated with student success. (Rouche and Kirk, 1974; Rouche and Snow, 1977; Rouche and Roueche, 1993; Rouche and Roueche, 1999). Their findings were:

- Mastery learning as a component of effective remedial instruction.
- Remedial courses require a high degree of structure.
- Use of variety of teaching methods in remediation increases student performance.
- Remedial courses, one most effective when based on sound cognitive theory.
- Successful remedial programs are guided by clearly defined philosophy accompanied by clearly specified goals and objectives.
- Mandatory assessment and placement of students as a characteristic of successful remediation efforts
- Successful remedial programs had a strong counseling component.
- Use of computers for students to do writing assignments and as a tutor in mathematics contributed to the success of remedial courses.

Hammons, Lisa D and Mathews, Jerry G (1999) looked at graduation rates of urban, historically black, comprehensive community college to compare source rates of students who took a remediation course with those students. Data were collected from 659 first time freshman enrolled at Bisa State Community College (AL). Chi-square tests were conducted and showed that ultimate there was no significant dependent relationship between enrollment in math and SW remediation courses and program completion. The study also looked at how selected such as; (admission status, age, ASSET test, Recipient of financial aid, Gender, Race and Enrollment status influence grade point averages).

Sniezyna Watras – Gans, Hanni Dorn (2000) Neuropsychological deficits in problem-solving are commonly found in patients with severe affective disorders. However, in an acute care setting, treatment efforts do not typically. This study aimed
to evaluate the **effectiveness of short-term problem solving remediation** in psychiatric inpatients. Twenty-eight psychiatric inpatients identified as having a verbal problem-solving deficit received 6 h of either verbal problem-solving remediation Instruction. Before and after treatment a nurse rated the patient's psychiatric status and the patient completed verbal and nonverbal problem-solving tests, and a self-report rating of symptoms and ability to cope with symptoms. Both groups of patients improved on the measure of verbal problem solving but those receiving problem-solving remediation proved significantly more. Both groups made symptomatic improvement, but the patients receiving problem-solving remediation made significantly more improve meal on the measure of coping ability and the nurses rated them as more improved, with regard to coping deficits are responsive to short-term remediation in an acute care setting, and treatment effects may generalize to improve ability to cope with psychiatric symptoms.

Maureen W. Lovett (2000) studied the **components of effective remediation** for developmental reading disabilities: Combining Phonological and Strategy Based Instruction to improve Outcomes. The efficacy of a combination of phonological and strategy-based remedial approaches for reading disability (RD) was compared with that of each approach separately. Eighty-five children with severe RD were randomly assigned to 70 intervention hours in 1 of 5 sequences: PHAB/DI (Phonological Analysis and Blending/Direct Instruction) WIST (Word Identification Strategy Training), WIST PHAB/DI, PHAB/DI x 2, WIST x 2, or CSS → MATH (Classroom Survival Skills → Math, a control treatment). Performance was assessed before, 3 times during and after intervention. Four contrasts based on a linear trend analysis model were evaluated. There were generalized treatment effects on standardized measures of word identification, passage comprehension, and nonword reading. A combination of PHAB/DI and WIST proved superior to either program alone on nonword reading, letter-sound and keyword knowledge, and 3 word identification measures. Generalization of nonword decoding to real word identification was achieved with a combination of effective remedial component.

Frantz, Sonja (2000) tested the **effectiveness of the infusion of remedial instruction derived for the Reading Component Model**, on the reading
achievement of children in learning disabilities and Title I classrooms. Results indicated that 43% of the poor readers from both treatment and control groups had weakness in decoding skills only, 33% had weakness in both decoding and comprehension, 0% had weakness in comprehension skills only, and 24% showed no significant deficiency in either decoding or comprehension. Students with a weakness in decoding and comprehension skills received 10 hours of phonetic awareness training and 10 hours of comprehension strategy instruction. Results indicated that treatment groups irrespective of category did not make significant statistically, difference positive gains when compared with the control groups.

Barbara W., Jeremiah Ring and Richard K. Olson (2000), conducted a study to see the individual differences in gains from computer-Assisted Remedial Reading. Two hundred second- to fifth-grade students (aged approximately 7 to 11 years) spent 29 hours in a computer-assisted remedial reading program that compared benefits from accurate, speech-supported reading in context, with and without explicit phonological training. Children in the "accurate-reading-in-context" condition spent 22 individualized computer hours reading stories and 7 small-group hours learning comprehension strategies. Children in the "phonological-analysis" condition learned phonological strategies in 7 small-group hours, and divided their computer time between phonological exercises and story reading. Phonologically trained children gained more in phonological skills and untimed word reading; children with more contextual reading gained more in time-limited word reading. Lower level readers gained more, and benefited more from phonological training, than higher level readers. In follow-up testing, most children maintained or improved their levels, but not their rates, of training gains. Phonologically trained children scored higher on phonological decoding, but children in both conditions scored equivalently on word reading.

Thongpaitoon, Supaporn (2000) studied Mastery Learning in Science Subject of Mathayom Suksa Students, Participating in Remedial Computer-Assisted Instruction for the topic of digestion. The subjects were 36 Mathayom Suka 2 students registered in the semester academic year 1999 from Wachirawit School. Amphur Maung. Chiangia Province. The students took a pretest before learning
through a lesson plan taught by researcher. After that, they took a posttest. The students who achieved less than 80% were supposed to study through Remedial Computer-Assisted Instruction. Then, they were given the posttest. The data were analyzed to find out the percentage, mean, and the standard deviation. The data were also analyzed by using item by Objective Analysis. The results of the study indicated that

1. There were 75% of students who could achieve the mastery learning.
2. Remedial Computer-Assisted Instruction was effective.
3. The students achieved learning objectives in the average of 83.33%.

Rendal, L, Lisa Tell (2001) investigated the effectiveness of the algebra and geometry of the INVEST Learning Program as remedial instruction, using a sample of 40 ninth and tenth grade remedial math students at a rural public high school. Maths subtests of Wechsler Individual Achievement Test (WIAT) were given as pre and posttests. Significantly higher Numerical Operations posttest results were found for the treatment group than for the control group. A significantly higher mean active time-on-task percentage was found for the treatment group. Results of secondary analyses found two significant interaction effects. The results of this study suggested that the INVEST Learning Program may be more effective in raising computational math skills and as Program may be more effective in raising compared to traditional math instruction for remedial public high school students in the rural setting.

Simpson, Katherine P (2002) designed a remediation program to meet Students needs and to find out what a student knows and needs to know. An online testing program, such as education Test, may provide the answers. The test is a versatile instrument that offers, benchmark tests, grade specific tests, and strand tests in the four content areas for grades K through 8. The results, data assessment, and feedback are immediate and specific. The use of education Test online was studied with seven sixth grades who had not passed Virginia's Standards of Learning (SOL) test in grade 5. The results show increased improvement in all areas of reading ability for the students in the remediation program. The test was not a perfect indicator of
improvement on the SOL test but it provided a point to gauge progress and set remediation goals.

Benita A. Blachman (2003) studied the effects of intensive Reading Remediation for second and third grades and a 1 year follow up. Second and 3rd grade children with poor word-level skills were randomly assigned to 8 months of explicit instruction emphasizing the phonologic connections in words and text-based reading or to remedial reading programs provided by the schools. At posttest, treatment children showed significantly greater gains than control children in real word and nonword reading, reading rate, passage reading, and spelling, and largely maintained gains at a 1-year follow-up. Growth curve analyses indicated significant differences in growth rate during the treatment year, but not during the follow-up year. Results indicate that research-based practices can significantly improve reading and spelling outcomes for children in Remedial programs.

Lane, Patrick Matthew (2004) studied students with achievement problems: extent to which their positive and negative mindset moderates the impact of education remediation. In the study, the positive and negative mindset for achievement and social emotional well-being of 32 students (14 males, 18 females in grade 6) referred to a university Educational Psychology Clinic for academic remediation were compared with the mindset of a non-matched group of similar age students who presented no achievement problem. Results indicated that in comparison with students with no achievement problems, who were 1 or more years below grade level in reading or math, were rated by their pan as being lower in academic confidence, work persistence, organization and getting along higher in general work avoidance, general disorganization and rebelliousness-anger mindset of students receiving remediation did not appear to moderate their degree academic engagement during remediation. Their affective disposition at the end remediation nor their degree of academic improvement.

Mross, Maryellen (2004) studied one middle school supplemental programme designed for remediation in middle school mathematics and preparation for a state standardized test. In Pennsylvania, students who are not proficient in mathematics reading as demonstrated by their performance on the state
exams Pennsylvania System School Assessment (PSSA) are provided with the opportunity for additional instruction in order to achieve the proficient level in the subjects. A one-group pretest-posttest design utilized to determine the effectiveness of the supplemental instructional program in mathematics. The Terra-Nova Second Edition Survey CTBS (Terra-Nova) was the standardized test that was used for the pretest and posttest. A significant treatment effect of Math Edge program was found for both seventh and eighth grade students. There was a demonstrated improvement in math scores of both grade levels on a standardized test. An interaction of grade level and mathematics score growth also showed a significant effect were with eight grade students exceeding seventh grade students in mathematics score growth on a standardized test.

David Montague, Karen Belzer (2005) developed a model called Washington Elementary Reading Program. Washington Elementary was a K-5 school in Kennewick, WA with 560 students, 57% low income families, and 25% minority population. The basis of this program was a daily, uninterrupted, two hour reading block in grades 1-3. It provided specific phonics instruction at least half of this time. One hour of this block was in small, ability groups. The other hour was whole group instruction. It provided small class sizes by utilizing specialists and paraeducators during small group instruction. Low readers had very small reading groups which allowed for more individualized instruction. Since our students were ability grouped, they received instruction at the appropriate level. Frequent assessment allowed for immediate, specific remediation. Students had the opportunity to move from group to group.

The Process of Programme included

- It developed a K-3 phonics based reading program for school.
- It adopted a K-5 reading series so reading program could flow from one grade to another. The current program was the Open Court reading series used in conjunction with the CORE Reading Program.
- It scheduled a minimum, uninterrupted two-hour reading block daily for the primary grades. This was for direct reading instruction. SSR, AR,
computerized reading activities, etc. would not be allowed. "Struggling readers" would receive additional time in small remediation groups outside the two hour reading block.

- Group size was significantly reduced during the small group time by rescheduling staff time so that our counselor, librarian, P.E., and music teachers all taught one reading group.

- Frequent assessments were given to determine if students were learning what we were teaching and so immediate remediation can be given within the group. In addition, assessments were used to identify the struggling reader. They help with group placement, the formation of intervention groups and in determining participation in after school Study Buddies program.

- I Remediation groups were implemented.

- Parent Involvement is encouraged through evening reading program. "Baggy books" were sent home nightly beginning in first grade. Variations of the program were implemented in grades K-5. Completion of evening reading was recorded on the report cards to let the parents know how important this is to their child's reading success.

- In addition to reading program, it also runs an after school program called Study Buddies. Participation is by "invitation" only. Students are selected in grades three and four on the basis of assessment scores and teacher recommendation. We target those students who are in the borderline areas of passing the district functional level tests and the state WASL. The program runs two days a week from December to May for one hour after school. This is direct instruction time, not a homework room. We average a staff of 15 with 50 students participating in the program.

- Our program has proven to be very successful for us. We have met our district's 90% reading goal for the past five years. Our state assessment (WASL) scores in reading have risen from 60% in 1999 to 92% in the spring of 2004.
LEAP Remediation Program (2005) The Louisiana Dept. of Education, has developed the LEAP Tutoring Program which provides supplemental instructional time for low-performing 4th and 8th grade students throughout the regular school year. It provide, intervention for first-time 4th and 8th graders and for students repeating the 4th or 8th graders.

The opportunity for additional intense anc. focused in shall be offered as remediation to 4th and 8th graders have been retained because of failing LEAP, and as a intervention to initial 4th and 8th graders whose grade Iowa Test scores (at or below 35th percentile) that they may be at risk of failing.

The program shall offer each eligible student a tours of tutoring between the beginning of the school the Friday before spring testing begins. The pupil tutor shall be no more than 7:1. All schools offering tutor use an online reporting system to enter the number of tutoring attended by each eligible student at their School.

The LEAP Summer Program provides extended instruction to those 4th and 8th grade students who wish to prepare summer retest.

The program shall be offered at no cost to the follow students:

- 4th and 8th graders who did not take the spring LEAP Test and who failed to achieve the passing standard required for promotion.
- Nonpublic and home-study 4th and 8th grade students who failed the spring administration of the LEAP tests and wish to prepare for the summer retest.
- Students with disabilities who participate in LEAP Assessment, Level 2 (LAA 2), are eligible to attend the summer remediation programs but will not participate in summer retest.

Schalago–Schirm, Cynthia (2005) studied whether the computer-assisted remedial mathematics program at Kearny high school lead to improved scores on the N.J. Early Warning Test? Eighth-grade students in New jersey took the Warning Test (EWT), involves reading, writing, and mathematics. Students with EWT scores below the state level of competency take a remedial mathematics course that provides students with computer assisted instruction as well as regular classroom instruction.
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The study was conducted using 73 ninth-grade students enrolled in the Kearny High School remedial course. The students were retested with the "New Jersey Special Edition EWT-Grade9" after 6 months remediation, and the sample mean score was compared with the sample mean score (March 1993). Results indicated, a statistically significant gain but more than 50% the sample still needed further remediation.

SIGNIFICANCE OF THE STUDY

It recent years, a number of developments have occurred and studies have been performed, which indicate that the emphasis is now on the Qualitative Development of Education. In the field of education, the scientific way of teaching is in the growing phase in India. As such individual is unique, hence the selection of right type of Instructional experience, teaching methodology used for making teaching and learning more effective and purposeful is of significant importance. Quality Education, which is one of the vital goals of education today, includes Quality Instruction as one of its inseparable part. Quality Instruction is much more than just mastery learning, as perceived by most of the researchers in the past. Quality Instruction makes an individual learn content material by an integrated methodology, an integration of different material and media suiting to different needs of the group. Quality Instruction has certain indices which constitute a basic framework for such instructional process. It has been observed that these indices are not much talked about. In past researches especially catering to Indian scenario, there have been research works on Quality but Quality Instruction with its components was hardly explored, even though there is nationwide drift from quantitative expansion of education to qualitative expansion of education Quality Education is not only restricted to programmes like mastery learning, but has a wider scope than this. Quality Education aims at over all development of the child, development of his intellectual and creative skills as well as attitudes accompanied by knowledge that the children need as a must for healthy, successful lives.

A lot is being said and rather being proposed by various educationists globally on the development of skills in children through our education system. Internationally, the focus of education is being shifted from academics to overall development of children, preparing them for life and for this, life skills training is
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becoming a part of school curriculum today. But, in India, Life skills Training is still in the proposing and planning stage. Nothing much has been done for the implementation of such training programmes. Rather it is surprising to see that in Indian scenario, certain skills which are supposed to be beneficial both for the child and society, have not yet been identified. Indian culture certainly needs life skills that act as determinants of an ideal life, prosperous future, growth and development of Indian children. Research Literature reveals that very little has been done for the implementation of such life skills in school education system in India. However, quality instruction is one of the vehicles that can lead us on the path of life skills development, which prepares a child for life long challenges.

The research literature also effects upon some trends which indicate that such preparation for life should not be the responsibility of school only. This has been realized globally that development of a child should be integrated life skills training and there must be a definite and purposive role of Home and Community both. Home is the first teacher for a child where seeds of qualitative development of child begins. Parents at home are the best source of inspirations for a child. The literature authenticates very strongly that Parental Involvement plays a vital role in the development of child. More than hundred ways have been identified through various researches, which are important indices of involvement of parents.

Also, Parental Involvement in academics of a child has shown positive results in most of these research studies. But parents have been found to impact many more life skills through their interaction with the child. But most of these researches have been conducted on foreign soils.

After research review, it was realized that some work should be designed where parents as well as school in collaborative effort plan and implement life skills activities to boost child’s integrated development since it is a common goal of parents and schools. It was also observed that studies have been done on different cultures but on Indian culture there are barely few studies related with home school collaboration on various aspects of child development. Parental Involvement being a vast subject, with various dimensions, should be studied taking into mind rather few dimensions of Parental Involvement that have a major impact on child’s achievement, development of his attitudes and skills.
Hence, it is a humble attempt of the investigator to study & explore two main variables related with child i.e. Parental Involvement, Home Based Remediation in Quality Instruction and their impact on life skills. And also to determine that life skills should be a vital learning outcome of our educational system, through to Quality Education.

STATEMENT OF THE PROBLEM

IMPACT OF QUALITY INSTRUCTION WITH HOME BASED REMEDIATION AND PARENTAL INVOLVEMENT ON LIFE SKILLS OF FIFTH GRADERS

DELIMITATION OF THE STUDY

• The study has been delimited to the students studying in the schools of District SOLAN, (H.P.), affiliated to C.B.S.E only.
• The sample was of 150 students, both boys and girls of class V.
• The Quality Instruction was imparted in the subject of science only.
• The study was limited to only four types of life skills i.e. acquiring knowledge, problem solving, creative thinking, communication skills

OBJECTIVES OF THE STUDY

The study has been designed to attain the following objectives:
1. To study the impact of Quality Instruction (Instructional Strategy with and without Home based remediation as against Conventional learning) on the selected life skills of primary school children.

• Acquiring knowledge
• Problem solving
• Creative thinking
• Communication skills
• Interpersonal relationships
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2. To study the impact of parental involvement on the selected life skills of primary school children.
3. To study the interactive effect of parental involvement and Quality Instruction on the selected life skills of fifth graders.

HYPOTHESES OF STUDY

H.1 Fifth grade students belonging to High and Low Parental Involvement groups will not be different on gain scores for the skill of Acquiring Knowledge.

H.2 There will be no significant differences between fifth grade students studying with Quality Instruction (with and without Home Based Remediation) as against Conventional group learning for the skill of Acquiring Knowledge.

H.3 There will be no significant differences on the interaction effect of Parental Involvement and Instructional Strategy on the gain scores for the skill of Acquiring Knowledge.

H.4 Fifth grade students belonging to High and Low Parental Involvement will not be different on gain scores for the skill of Problem Solving.

H.5 There will be no significant difference between gain means of fifth grade students studying with Quality Instruction (with and without Home Based Remediation) as against Conventional Group Learning for the skill of Problem Solving.

H.6 There will be no significant interaction effect of Parental Involvement and Instructional Strategy on the gain scores for the skill of Problem Solving.

H.7 Fifth grade students belonging to High and Low Parental Involvement groups will not be different on gain scores for the Communication Skills.

H.8 There will be no significant difference between fifth grade students studying with Quality Instruction (with and without Home Based Remediation) as against Conventional group learning for the Communication Skills.
scores for the Communication Skills.

**H.9** There will be no significant interaction effect of Parental Involvement and Instructional Strategy on the gain scores for the Communication Skills.

**H.10** Fifth grade students belonging to High and Low Parental Involvement groups will not be different on gain scores for the skill of Creative Thinking.

**H.11** There will be no significant difference between fifth grade students studying with Quality Instruction (with and without Home Based Remediation) as against Conventional group learning for the skill of Creative Thinking.

**H.12** There will be no significant difference on the interactive effect of Parental Involvement and Instructional Strategy on the gain scores for the skill of Creative Thinking.

**H.13** There is no difference in gain scores for the life skill of Acquiring Knowledge, of V graders belonging to different levels of Behaviour Involvement of Parents.

**H.14** There is no difference in gain scores for the life skill of Acquiring Knowledge of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

**H.15** Gain scores for the life skill of Acquiring Knowledge of V graders are not different with regard to their Behaviour Involvement and Instructional Treatment.

**H.16** There is no difference in gain scores on the life skill of Acquiring Knowledge, of V graders coming from different levels of Personal Involvement.

**H.17** There is no difference in gain scores on the life skill of Acquiring Knowledge of V graders learning through Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.
Gain scores for the life skill of Acquiring Knowledge of V graders are not different with regard to their Personal Involvement and Instructional Treatment.

There is no difference in gain means on the life skill of Acquiring Knowledge, of V graders coming from different levels of Cognitive Stimulation.

There is no difference in gain means on the life skill of Acquiring Knowledge of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

Gain means on the life skill of Acquiring Knowledge of V graders are not different with regard to their Cognitive Stimulation and Instructional Treatment.

There is no difference in gain means for the life skill of Problem Solving, of V graders coming from different levels of Behaviour Involvement.

There is no difference in gain means for the life skill of Problem Solving of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

Gain means for the life skill of Problem Solving V graders are not different with regard to their Behaviour Involvement and Instructional Treatment.

There is no difference in gain means on the life skill of Problem Solving, of V graders coming from different levels of Personal Involvement.

There is no difference in gain means on the life skill of Problem Solving of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

Gain means on the life skill of Problem Solving of V graders are not different with regard to their Personal Involvement and Instructional Treatment.

There is no difference in gain means on the life skill of Problem Solving, of V graders coming from different levels of Cognitive Stimulation.
H.29 There is no difference in gain means on the life skill of Problem Solving of V graders getting Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

H.30 Gain means on the life skill of Problem Solving of V graders are not different with regard to their Cognitive Stimulation and Instructional Treatment.

H.31 There is no difference in gain scores for Communication Skills, of V graders coming from different levels of Behaviour Involvement.

H.32 There is no difference in gain scores for Communication Skills of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

H.33 Gain scores for Communication Skills of V graders are not different with regard to their Behaviour Involvement and Instructional Treatment.

H.34 There is no difference in gain means on for the life skill of Communication Skills, of V graders coming from different levels of Personal Involvement.

H.35 There is no difference in gain mean for the life skill of Communication Skills of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

H.36 Gain means on Communication Skills of V graders are not different with regard to their Personal Involvement and Instructional strategies.

H.37 There is no difference in gain scores for Communication Skills, of V graders coming from different levels of Cognitive Stimulation.

H.38 There is no difference in gain scores for the life skill of Communication Skills of V graders bearing from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

H.39 Gain scores for Communication Skills of V graders are not different with regard to their Cognitive Stimulation and Instructional Treatment.
H.40 There is no difference in gain means on the life skill of Creative Thinking, of V graders coming from different levels of Behaviour Involvement.

H.41 There is no difference in gain means on the life skill of Creative Thinking of V graders getting Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

H.42 Gain means on the life skill of Creative Thinking of V graders are not different with regard to their Behaviour Involvement and Instructional Treatment.

H.43 There is no difference in gain means on the life skill of Creative Thinking, of V graders coming from different levels of Personal Involvement.

H.44 There is no difference in gain means on life skill of Creative Thinking of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation and Quality Instruction without HBR.

H.45 Gain means on the life skill of Creative Thinking of V graders are not different with regard to their Personal Involvement and Instructional strategies.

H.46 There is no difference in gain means on the life skill of Creative Thinking, of V graders coming from different levels of Cognitive Stimulation.

H.47 There is no difference in gain means on the life skill of Creative Thinking of V graders learning from Quality Instruction with Home Based Remediation and Quality Instruction without Home Based Remediation.

H.48 Gain means on skill of Creative Thinking of V graders are not different with regard to their Cognitive Stimulation and Instructional strategies.