Description of Tools
Chapter - II
DESCRIPTION OF TOOLS

In the preceding chapter the introduction to different variables under study, the review of related literature, objectives and hypothesis were discussed. The present chapter deals with the description of tools.

For the present investigation following tools were used:

2.1 Mastery Learning instructional packages.

2.2 Formative unit test.

2.3 Summative criterion test.

2.4 Achievement test

2.5 Self-Esteem Inventory (Coopersmith - 1981).

2.1 MASTERY LEARNING INSTRUCTIONAL PACKAGES

2.1.1 Preparation of Mastery Learning Packages

Phase - I Instruction:

2.1 1(a) Content - (For English)

- Names of things.
- This/That is+Noun, This/That is his/her+Noun.
- This/That is my/your+Noun, 's (Apostrophe-s)
- My/our/his/her name is+Noun, name+is+my/your/his/her+Noun (Relationship)
- Use a/an: to indicate a specimen of the class of things by the noun, use of it! as a sequence single.
- Adjectives of colour and size: attributive use.
- Use of 'not'.
- I am/you are/he is/she is+Noun.
- Use of here/there, use of and (linking two sentence)
- Prepositional Phrases within in (in side) and on contact with surface.
2.1.1 (b) **Method:** Cooperative learning in Bloom’s mastery teaching

2.1.1 (c) **Evaluation:** Unit criterion tests and achievement test (summative test)

2.1.1 (d) **Student:**
- Performance as cognitive and affective entry characteristics.
- Factors, such as student’s age, gender, socio economic status.

2.1.1 (e) **Teacher:**
- Role of the investigator was defined in terms of developing instructional packages according to Bloom’s plan.
• Role of the Assamese, Hindi and English teacher's of class Vth was to teach the control group.

2.1.1 (f) Class:
• Class size - 50 to 55 students.
• Class room of government schools of Non-tribal area were more spacious than government schools of tribal area.

2.1.1 (g) School:
• It was planned to take four secondary school affiliated to Assam Secondary Board.
• No other criterion was fixed for selecting the schools except their positive attitude towards research and their willingness to cooperate and provide necessary facilities.

2.1.2 Phase II: Planning of Mastery Learning Instructional Packages:

(Instructional Objectives)
Mastery learning instructional packages were developed for English, Hindi and Assamese language. Ten units each for the three languages were designed after mastery learning strategy. Unit wise learning outcomes have been listed below separately for English, Hindi and Assamese.

2.1.2 (a) Instructional Objectives for English: After the instructions are over, the learners have gone through the enrichment materials, they will be able to:

Unit - I
1. Write the meaning of the given list of words (e.g. a dog, a cat)
2. Match the given alphabets with the given pictures (e.g. c for cat, d for dog)
3. Write the names of articles shown in the given pictures (e.g. book, pen, toy).
4. Fill up the given blanks with correct letters (e.g. Ki_g, Bo_k, P_n, Do_, Ca_)
5. Write Five words from unit 1 which are related with their daily life.

Unit - II
1. Translate in to Assamese from the given English sentences.
2. Put a letter in the given gaps to make a name: (e.g. R__m, Bim__I, Ra__ha)
3. Fill up the given blanks by using this, that.
4. Differentiate between his and her.
5. Write the given names correctly by using capital and small letters (e.g. - atul, dilip).

6. Identify and write his/her in the given blanks. (e.g. - This is latif. That is _______ (his/her) bag).

7. Differentiate this and that.

8. Use the words this and that.

Unit-III
1. Translate in to Assamese from the given English sentences.
2. Write five sentences from the given table.
3. Select and write correct words (She/her) from the given brackets.
4. Make sentences from the given list of words (e.g. book, pen, is, dog, pencil).
5. Fill up the given gaps by using your, his her.
6. Differentiate my and your.
7. Write two words by using 'S (Apostroph s)

Unit-IV
1. Translate in to Assamese from the given English sentences.
2. Fill up the given blanks by using relations.
3. Write five sentences from the given table.
4. Make sentences from the given list of words. (e.g. name, my).
5. Differentiate (a) brother and sister (b) Father and mother (c) husband & wife.
6. Draw their own family tree and write the relationship among them.

Unit-V
1. Translate into Assamese from the given English sentences.
2. Put 'a' or 'an' in the given gaps.
3. Make sentences from the given list of words. (e.g. aeroplane, inkpot, my, your, what).
4. Write five sentences from the given table.
5. Fill up the given blanks by using my/his/That is/That is.
6. Write two sentences using 'a' and 'an'.
7. Differentiate 'a' and 'an'.
Unit-VI
1. Translate into Assamese from the given English sentences.
2. Fill up the given blanks with some adjective (e.g. thin, fat, big, yellow, green).
3. Make sentences from the given list of words.
4. Make sentences from the given table.
5. Identify adjectives of colour from the given sentences.
6. Differentiate thin and fat.

Unit-VII
1. Translate into Assamese from the given English sentences.
2. Fill up the given gaps by using 'not' and noun.
3. Write five sentences from the given table.
4. Make sentences from the given list of words.
5. Rearrange the given groups of words in to sentence.
   (e.g.- Shirt is white a this)
6. Write two sentences by using 'not'

Unit-VIII
1. Translate into Assamese from the given English sentences.
2. Make sentences from the given table.
3. Fill up the given blanks-as:a. (e.g. My name is Kamal. I am kamal)
4. Match the given colours 'A' with 'B' stating Vocation of different people.
5. Identify and write correct words (is/am/are) from the given brackets.
6. Differentiate is and are.
7. Differentiate is and am.

Unit-IX
1. Translate into Assamese from the given English sentences.
2. Make sentences from the given list of words.
3. Write five sentences from the given table.
4. Fill up the given gaps by using here and there.
5. Join the given sentences of column 'A' with column 'B' by using 'and'.
6. Differentiate 'here'and 'there'.
Unit-X

1. Translate into Assamese from the given English sentences.
2. Make sentences from the given list of words.
3. Identify and write the correct words (in/on) from the given brackets.
4. Write five sentences from the given table.
5. Fill up the given blanks by using in/on.
6. Differentiate 'in' and 'on'.

2.1.2 (b) Entry behaviour (English)

Preassessment/Entry behaviour test:

Measuring of entry behaviour is equally important as measuring of terminal behaviour (De Ceco-1977). As learning builds learning in the way success builds on success. When the foundation blocks are missing future construction if possible at all, is a very precarious affair. Entry behaviour describes the behaviours, the students must have acquired before he can acquire particular new terminal behaviours. 'More simply, entry behaviour describes the present status of the students knowledge and skills in reference to a future status, the teacher wants him to attain. This consists of the two main operations.

- Specifying the assumptions about the learners.
- Determining the prerequisite skills acquired by the learners.

Specifying Assumptions About the Learners

- The instructional units were designed for the Vth class students both boys and girls.
- The average age of students was 11 Years.
- The students were studying in the schools affiliated to Secondary Education Board (Assam).
- Their medium of instruction was English & Assamese.
- The students belonged to Tribal (Kokrajhar) and Non-tribal (Dhubri) area only.
- Half of the students belonged to Educated and another half students belonged to uneducated family background.

Prerequisite Skills of the Learners

Before taking the instruction material, the learners were required to:
**Description of Tools**

- Differentiate between numbers and alphabet from a given list.
- Recognise alphabets from a given pictures of alphabets.
- Relate alphabets with their own names.
- Match a column I of given letter with column II of their suitable matching words.
- Write English alphabet in capital.
- Write English alphabet in small.
- Distinguish between capital and small letters from a given list.
- Fill up the given list of blanks to complete alphabetical order.
- Write number names up to ten (10).
- Speak out numbers up to hundred (100).

**2.1.3 Phase III: Planning Mastery Learning Instructional packages in Hindi**

**2.1.3 a Instructional Objectives (Hindi):** Unit wise objectives were derived from the statements of goals and have been placed in the following paragraphs:

After the instructions are over learners in their own words should be able to:

**Unit-I**

1. Write five words by combining from given alphabets.
2. Make words by adding letters from the given list.
3. Write the meaning of the given words.
4. Fill up the given gaps by using appropriate letters.
5. Write the symbol of given vowels.

**Unit-II**

1. Translate the given Hindi sentences into Assamese.
2. Translate the given Assamese sentences into Hindi.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using यह/यहाँ.
5. Write the given sentences correctly.
6. What is the difference between यह and यहाँ?

**Unit-III**

1. Translate the given Hindi sentences into Assamese.
2. Translate the given Assamese sentences into Hindi.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using appropriate object and preposition in the sentences.
5. Select and write the correct words (तालुका/तालुकी) from the given brackets.
6. Re-write the given incorrect sentences correctly.
7. What is the meaning of ते and नहीं?

Unit-IV
1. Translate into Assamese from the given Hindi sentences.
2. Translate into Hindi from the given Assamese sentences
3. Make sentences from the given list of words.
4. Fill up the given gaps by selecting appropriate subject and preposition in the sentences.
5. Select and write the correct words from given brackets and fill up the given gaps.
6. What is the difference between क्या और कहाँ?

Unit-V
1. Translate the given Hindi sentences into Assamese.
2. Translate into Hindi from the given Assamese sentences.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using ।
5. Identify and write correct words । from the given brackets.
6. What is the difference between इंटर और इट?
7. Use correctly ।

Unit-VI
1. Translate into Assamese from the given Hindi sentences.
2. Translate into Hindi from the given Assamese sentences.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using ।
5. Select and write the correct words यहाँ/यहां/यहाँ from the given brackets.
6. What is the difference between यहाँ and यहां?
Unit-VII
1. Translate into Assamese from the given Hindi sentences.
2. Translate into Hindi from the given Assamese sentences.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using (पढ़ा/पढ़े/खेलते/खेलता).
5. Select and write the correct words (पढ़ा, पढ़े, है, हें) from given brackets.
6. What is the difference between है and हें?
7. पढ़ा और पढ़ती का कहीं कहीं व्यवहार होता है?

Unit-VIII
1. Translate into Assamese from the given Hindi sentences.
2. Translate into Hindi from the given Assamese sentences.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using आओ, जाओ, इधरा।
5. Identify and write correct words (आओ, जाओ)।
6. Rearrange the given words into correct sentences.
7. What is the difference between "आओ" and "आइये"?

Unit-IX
1. Translate into Assamese from the given Hindi sentences.
2. Translate into Assamese from the given Hindi sentences.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using तैर, खेलते, खेलता।
5. Identify and write the correct words (करता, करते, कितना, कितनी) from given brackets.
6. कितना और कितनी का कहीं कहीं व्यवहार होता है?

Unit-X
1. Write Hindi number up to Ten (10)
2. Write the names of Hindi numbers up to Ten in Hindi words.
3. Make sentences from the given list of words.
4. Fill up the given gaps by using रे, सीन, बात।
5. Write the poetry (हेता आओ मिनति करें) Eight lines from beginning by heart.
2.1.3 (b) Entry behaviour (Hindi)

- Preassessment/Entry behaviour test

  Measuring of entry behaviour is equally important as measuring of terminal behaviour (De Cecco, 1977). As learning builds learning in the way success builds on success. When the foundation blocks are missing, construction if possible, at all, is a very precarious affair.

  Entry behaviour describes the behaviours, the students must have acquired before he can acquire particular new terminal behaviours. More simply, entry behaviour describes the present status of the student's knowledge and skills in reference to a future status, the teacher wants him to attain. This consists of the two main operations:
  
  - Specifying the assumptions about the learners.
  - Determining the prerequisite skills acquired by the learners.

- Assumptions about the learners

  - The instructional units were designed for the Vth class students, both boys and girls.
  - The average age of students was 11 (eleven).
  - The students were studying in the schools affiliated to Secondary Education Board (Assam).
  - Their medium of instruction was Hindi & Assamese.
  - The students belonged to educated and uneducated family background.
  - The students prevailed from Tribal and Non-tribal class.

- Prerequisite skills of the learners

  Before taking the instructional material, the learners were required to:
  
  - Write अ ए ऐ एल
  - Write Hindi letters
  - Write Hindi number 1 to 10
  - Fill up the given gaps (according to alphabetical orders)
  - Match the given letters (column I) with words (column II) (like अ for अभिला)
2.1.4 Phase IV: Planning of Mastery Learning Instructional Packages in Assamese:

2.1.4 (a) Instructional Objectives (Assamese): After the instruction are over, learners in their own words should be able to:

Unit - I

1. ইশু কবিতাটো প্রথম পর্যন্ত ১০ শব্দ মুখ্য লিখা।
2. দিয়া শব্দ সমূহ পর্যন্ত বাক্য সড়ক নিয়ে।
3. কল্লূ ঠোঁট পুনর্নুম্রন কর।
4. দিয়া শব্দ সমূহ অর্থ লিখ।
5. কবিতাটোর লিখে জনব নাম কি?

Unit - II

1. মব বা আবেষ কাক কয়?
2. কথামালা কেই প্রকাব?
3. অববর্ণ কাক কয়?
4. ব্যাঙ্ননন কাক কয়?
5. অববর্ণ আক ব্যাঞ্জন বক্ষ ব্যাহাগ।
6. দুটি অব রবর্ন আক দুটি ব্যাঙ্জন বক্ষ লিখ।
7. মব বর্ণ আক ব্যাঞ্জন ববর মাজব পার্বক।

Unit - III

1. চত্র জীবন্ত বৃতি নাম পাঠেলের সাবাসে লিখ।
2. মহোদী গন্ধী চপি পবিত্র দিয়া।
3. পাকা বাচানা কবিব পর।
4. শব্দ অর্থ লিখ।
5. পাঠেলের নাম মতে লিখে জনব নাম লিখ।
6. বিশ্ববিদ্যাল শিক্ষ লিখা — (ক) ভাল (খ) হইঠাং।

Unit - IV

1. যুকুলখন কাক কয়?
2. যুকুলখন ব্যাহাগ বক্ষ ও ট শব্দ লিখ।
3. আবেষ রোগ কবি যুকুলখন বর্ণ।
4. যুকুলখন ভবি লেখ।
5. আবেষ আক যুকুলখন বর্ণ উলিখ।
6. বিশ্ববিদ্যাল শিক্ষ লিখা — (জানি ভবি)।
Unit - V
(1) देखा काउंबी अक्र टिपटी चबाई (१) नामब पाठेट्रा साधारण लिखा।
(2) काउंबी अक्र टिपटी चबाइव असरब साप्तक कि?
(3) लिखबेख चुमु पशाचौ।
(4) बाया संज्ञा।
(5) टिपटी चबाइव दर अष तिनिटा चबाइव नाम।

Unit - VI
(1) पाठेट्रा साधारण लिखा।
(2) काउंबीये छेतिया साप्तब ओबबत पानी रुखिजिल छेतिया साप्तब कि उबब दियी?
(3) महे कि उबब दिया छेतिया काउंबीये तेजऱब शिया रुखिजिल?
(4) उबबुके कि दिया छेतिया काउंबीये महे मालितैल दिया?
(5) बाया संज्ञा।

Unit - VII
(1) यहा पाठेट्रा मूलभार लिखा।
(2) छेतिया काउंबीये गाईब ओबबत गायबी रुखिजिल गाइतीनीये कि उबब दियी?
(3) गाइजीनीये कि दिया, छेतिया काउंबीये अलड़ बुढ़ी रुखिजिल?
(4) बाया बचना करा।
(5) शब्द अर्थ लिखा।
(6) बिनव्यौत शब्द लिखा।

Unit - VIII
(1) वर्ण बिनायस करक करा?
(2) शब्द पदार्थ बिनायस करा।
(3) आयंग रेगा करी शब्द काढ़ने करा।
(4) पाठटा शब्द लिखा विष शब्द शेखर 'आ' उच्चारण हया।
(5) पाठटा शब्द लिखा विष शब्द युतकाचबर विषेष 'आ' उच्चारण हया।

Unit - IX
(1) कविताटेह ग्रंथब परचा ८ शब्दी मुखित लिखा।
(2) बाया बचना करा।
(3) शब्द अर्थ लिखा।
(4) बिनव्यौत शब्द लिखा।
(5) कविता 'नबव अदन' करक बैब्रे लिखा।

Unit - X
(1) कविताटेह प्रवनब परचा ८ शब्दी मुखित लिखा।
(2) बाया बचना करा।
(3) शब्द अर्थ लिखा।
(4) बिनव्यौत शब्द लिखा।
(5) बालिभै पूनन करा।
(6) कवितये कि बब आइटएक तिथिया बुलि। कैब्रे?
(7) कवितये करक सुबी बुलि कैब्रे?
2.1.4(b) Entry Behaviour (Assamese)

Pre-assessment/Entry behaviour test:

Measuring of entry behaviour is equally important as measuring of terminal behaviour (De Ceco - 1977). As learning builds learning in the way success builds on success. When the foundation blocks are missing, future construction if possible at all is a very precarious affair.

Entry behaviour describes the behaviours, the student must have acquired before he can acquire particular new terminal behaviours. More simply, entry behaviour describes the present status of the students knowledge and skills in reference to a future status, the teacher wants him to attain. This consists of the two main operations:

- Specifying the assumptions about the learners
- Determining the prerequisite skills acquired by the learners.

Assumptions about the learners:

- The instructional units were designed for the Vth class students, both boys and girls.
- The average age of students was 11 years.
- The students were studying in the schools affiliated to Secondary Education Board (Assam).
- Their medium of instruction was English & Assamese.
- The students were belonged to Tribal (Kokrajhar) and Non-tribal (Dhubri) area only.
- Half of the students belonged to Educated and another half students belonged to uneducate family background.

Prerequisite skills of the learners

Before taking the instructional material, the learners were required to:

(1) অনুমিতা পাঠ পড়া (এই পাঠ পড়া তুমি শিক্ষক পড়ন অনুদারী নিদ)।
(2) বাতা সহজা - (ক) জন্মহুন (খ) ক্লাস (গ) বাজপাট (ঘ) মজলাব (ঙ) বিলত।
(3) তোমাব, তোমাব দেউতাকাক আক তোমাব গাঠবন্ধ নাম লিখব।
(4) অধিব লিখা - (ক) এধানি (খ) দয়ালু (গ) উৎকৃষ্ট (ঘ) পাচিনে (ঙ) মেদিন।
(5) জায়মতি, হজত মহম্মদ আক শতব তেরব বিষয় চমুকে লিখব।
2.1.5 Phase V: Lesson Plans (Bloom's Mastery Learning Strategy)

Bloom's mastery learning strategy is group paced and teacher-based mastery learning strategy. So, rule of the teacher in this strategy is, sequencing the learning units, designing the instructional material and other alternate material, and presenting it in such a form that the participation of students is maximum (Block, 1974).

The ten lessons for each subject viz. English, Hindi and Assamese were developed by the investigator, consisting of a variety of instructional events according to the nature of desired learning. Each of the lessons were designed on the basis of instructional design through co-operative learning. The initial teaching in all the lessons was done according to Bloom's group learning mode followed by co-operative learning situation wherein the whole class was divided into small teams of 4-5 children. The investigator reshuffled these teams after every unit to ensure that each team has an 'early master' who could help his fellow friends to attain mastery. This pattern was followed uniformly for all the three languages for each lesson.

The initial instruction was designed according to Bloom's specifications in a group learning situation.

Description of Lessons

Format of lessons have been written under same heads and follows a similar sequence: Topic, objectives of the lesson, entry behaviours, content outline and media, instructional events, formative test/unit criterion test, alternative learning material.

The main theme of content unit was taken as the topic of the lesson. Instructional objectives pertaining to a unit were specified and made part of each lesson. Objectives were orally presented to the students to give them guidelines or directions.

The statement of entry behaviour for each lesson was a set of gradually advanced statements which made a link between the preceding lesson and the following lesson. The lessons were sequenced in such a way that most of the aspects of the entry behaviours of a lesson were taught in its preceding unit. Instructional events were organised by linking content, events of the instruction and evaluation. Media used for teaching was chalk board (with coloured chalk). Formative tests or unit criterion test were prepared for each unit. Mode of correction used for mastery learning strategy was monitorial, co-operative group learning and visual aids.
The description of the ten lessons thus prepared, has been given in the following Table 2.1.

**Table 2.1**

**Description of the Lesson for Mastery learning for English**

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Topic</th>
<th>Number of Lesson's Objectives</th>
<th>Number of items of formative test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Name of things</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>This/ That is + Noun</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>This / that is his/her + Noun</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>4</td>
<td>My / your / his / her name is + Noun</td>
<td>6</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>Relationship Use a/an, use of it</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>6</td>
<td>Adjectives of colour and size attributive use</td>
<td>6</td>
<td>29</td>
</tr>
<tr>
<td>7</td>
<td>Use of ‘not’</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>8</td>
<td>I am / you are / he is / she is + Noun</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>9</td>
<td>Use of here / there use of and (linking two sentence)</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>Propositional phrases with in and on contact with surface</td>
<td>6</td>
<td>25</td>
</tr>
</tbody>
</table>

Ten lesson plans for English have been enclosed in Appendix 2.A under the heading of "Bloom's mastery learning instructional packages— English".

**Table-2.2**

**Description of lessons for Mastery learning strategy for Hindi.**

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Topic</th>
<th>Number of Lesson's Objectives</th>
<th>Number of items of formative test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>पढ़ो और पढ़चानों, अपनों की निसानियत,बारह ख्याती</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>यह है, यह है</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>है, नहीं</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>नहीं है—कहाँ है</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>5</td>
<td>में हूँ – तुम हो</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>6</td>
<td>पहि है – वहाँ है</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>7</td>
<td>पड़ता है – पढ़ते हैं</td>
<td>7</td>
<td>27</td>
</tr>
<tr>
<td>8</td>
<td>तुम आओ – आए आइये</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>9</td>
<td>कितना – कितनी</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>10</td>
<td>आओ मिनम करें (कविता)</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>
Ten lesson plans for Hindi have been enclosed in Appendix 2.B under the heading of Bloom's mastery learning instructional packages of Hindi.

Table - 2.3

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>Number of Lesson’s objectives</th>
<th>Number of items of Formative test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>इतिहास (क्षेत्रीय)</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>वर्ण प्रबंधन</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>ध्वनि तथा रुचि</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>भाषा विवेक</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>टोबकाउडी अक चिपकी चराई (१)</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>टोबकाउडी अक चिपकी चराई (२)</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>टोबकाउडी अक चिपकी चराई (३)</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>वर्ण बिनास</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>9</td>
<td>कार समान ति नाई (१)</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>कार समान ति नाई (२)</td>
<td>6</td>
<td>21</td>
</tr>
</tbody>
</table>

Ten lesson plans for Assamese have been enclosed in Appendix 2.C under the heading of Bloom's mastery learning instructional packages for "Assamese"

2.2 FORMATIVE ASSESSMENT

Two types of criterion reference tests were developed, one developed on the content of each unit for the purpose of formative evaluation. The other developed on the entire content of ten units used for the purpose of summative evaluation. Summative evaluation is done at the end of the instruction. So, it does not help to guide the teaching learning process. For this purpose some kind of evaluation which can provide immediate and continuous information regarding a student's progress during instruction is required. Here formative evaluation has been found to be most useful (Airasian, 1969). Regarding the importance of formative evaluation it was said, "Unless you know where you are going, you may end up somewhere else" (Tessmer, 1993). Since, a formative instruction is administered at the close of a unit, therefore, provides an in-depth picture of what skills each students has or has not mastered (Block, 1971). Consequently, it suggests in what ways his original instruction must be supplemented if he is to complete his learning before proceeding to a new instructional unit.

For each of the ten units, 10 separate formative tests were prepared, which were for 15 to 20 minutes duration each. Seven types of items were generated
Description of Tools
  viz. translation, fill in the blanks, multiple choice, word meaning, make sentence, matching and short answer type. The number of items ranged between 23 to 29.

Type wise distribution of items per unit has been tabulated below in Table 2.4.

### Table - 2.4

<table>
<thead>
<tr>
<th>Unit</th>
<th>Translation</th>
<th>Fill in the Blank</th>
<th>Multiple choice</th>
<th>Word meaning</th>
<th>Matching</th>
<th>Make sentence</th>
<th>Short Answer</th>
<th>Total marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>5</td>
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<td>11</td>
<td>4</td>
<td>-</td>
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<td>6</td>
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</tr>
<tr>
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<td>4</td>
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<td>-</td>
<td>10</td>
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<td>4</td>
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<td>-</td>
<td>5</td>
<td>10</td>
<td>1</td>
<td>25</td>
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</tbody>
</table>

### Table-2.5

Description of type and number of items of Hindi Formative Test

<table>
<thead>
<tr>
<th>Unit</th>
<th>Word meaning</th>
<th>Translation</th>
<th>Fill in the Blank</th>
<th>Multiple choice</th>
<th>Make sentence</th>
<th>Make word</th>
<th>Write symbol</th>
<th>Write combine letters</th>
<th>Sentece correction</th>
<th>Short Answer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>-</td>
<td>5</td>
<td>5</td>
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<td>26</td>
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<td>5</td>
<td>5</td>
<td>-</td>
<td>-</td>
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</tr>
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<td>7</td>
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<td></td>
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</tr>
<tr>
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</tr>
</tbody>
</table>

### Table-2.6

Description of type and numbers of items of Assamese Formative Test

<table>
<thead>
<tr>
<th>Unit</th>
<th>Word meaning</th>
<th>Make sentence</th>
<th>Fill in the blanks</th>
<th>Opposite word</th>
<th>Short Ans</th>
<th>Make word</th>
<th>Break word</th>
<th>Identification</th>
<th>Total</th>
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</tr>
<tr>
<td>2</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
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</tr>
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<td>5</td>
<td>-</td>
<td>3</td>
<td>-</td>
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<td>15</td>
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<td>-</td>
<td>21</td>
<td>21</td>
<td></td>
</tr>
</tbody>
</table>

... Description of Tools...
Description of Tools

A copy of each of the formative test for each unit in English, Hindi and Assamese have been enclosed in appendices-2.D,2E and 2F respectively.

Prescription (Remediation Procedure):

The instructional programme itself can cause learning problems as:

* The programme objective may not accurately represent the domain of competence.
* The instruction may be of poor quality.
* Method may be inappropriate for the context and students.
* The pre-assessment may not accurately measure students preparation for the programme.
* Students may lack knowledge essential for the programme.

For this substantial remediation procedures were needed. Cooperative learning with early master as the leader of the team were used as the primary mode of corrective instruction. Nature of team leaders was decided as a students from the same class, who has attained the mastery over a particular unit quite in advance than other and was chosen as a leader. The selection of more advanced students as group leaders may add a slight competitive element of the class structure and act as a motivating factor for student to move rapidly through the course in order to merit the position of groups leader. The duty of a team leader primarily includes discussing the material which have not been achieved by his peers. Because of the restricted time, it was not possible to assign more duties to the team leaders. For the second mode of corrective instruction visual aids like models or coloured charts were prepared for each lessons and were provided to each team leaders to use during co-operative learning. Repeating the unit in a team of 4-5 students with masters as team leader, supplemented by presentation of visual aids was found an appropriate corrective instruction in co-operative situation.

2.3 SUMMATIVE CRITERION TESTS

Postassessment: (A criterion test)

In mastery learning the primary purpose of summative evaluation criterion reference test is to grade students according to their achievement of the course intentions. Summative evaluation is ‘final’ and grades assigned on their basis are likely to follow the students throughout their scholastic career (Block, 1971).
A criterion referenced test is used to ascertain an individual's status with respect to a well defined behaviour domain (Popham, 1975). Here a person's performance is referred to a criterion i.e. a well defined class of objectives. So, the essence of criterion reference measurement is that:

i) a well explicated domain of behaviour be delineated and

ii) an individual performance in relationship to this behaviour domain be ascertained.

Following steps were followed in the construction of the criterion test (Popham, 1975).

Step I Domain definitions
Step II Generating items
Step III Improving items
Step IV Reliability and validity.

Step-I :Domain definitions:

It is the most difficult but important step in the construction of a criterion test. Here, the limits of behaviour that the test items would measure and to which all individual performance be referred were determined. The domain definitions were kept brief and at the same time sufficiently circumscribing the class of behaviours under consideration so that they, in fact, measure the behaviour described in that domain. Regarding generation of domain description, two guiding factors were given due consideration viz. i) economy of description and ii) ambiguity reduction. While working on a domain a middle position was taken between the two extremes of:

i) Sufficient detail for complete stimulus homogeneity of resulting test items and

ii) economy of resource investment.

Although a domain did not delimit all possible test items, it markedly reduced ambiguity associated with the class of learner behaviours under consideration. After identification and definition of the learning outcomes from the selected chapter of Assamese, Hindi, and English test book of class Vth, the content was divided into ten units of each subject. The objective on the entire content have been formulate in behavioural terms and have already been presented in the preceding paragraphs of this chapter.

For testing 64 objectives, 256 test items viz. translation fill in the blanks, multiple choice, make sentence, word meaning, matching type and short type answer.
were planned. (For subject English). The distribution of these items over the ten units have been presented in the Table of Specification 2.7.

Table-2.7

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Translation</th>
<th>Make Sentence</th>
<th>Fill in the blanks</th>
<th>Multiple choice</th>
<th>Matching</th>
<th>Word meaning</th>
<th>Short Answer</th>
<th>Diagram</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>5</td>
<td>9</td>
<td>5</td>
<td>5</td>
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<td>24</td>
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<tr>
<td>2</td>
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</table>

For testing 62 objectives, 256 test items viz. Translation, Fill in the blanks, multiple choice, make sentence, word meaning and short answer were planned for subject (Hindi). The distribution of these items have been presented in the Table2.8.

Table 2.8

<table>
<thead>
<tr>
<th>Unit</th>
<th>Word meaning</th>
<th>Translation</th>
<th>Fill up the Blank</th>
<th>Make sentence</th>
<th>Make word</th>
<th>Write symbol</th>
<th>Write combine letters</th>
<th>Multiple choice</th>
<th>Sentence correction</th>
<th>Short Ans</th>
<th>Total</th>
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</thead>
<tbody>
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For testing 52 objectives, 143 test items, viz. word meaning, make sentence, fill in the blanks, short answer, opposite word, make word, break word and identification were planned for subject Assamese. The distribution of these items have been presented in the Table 2.9.
# Description of Tools

## Table-2.9

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Step-II: Generating items:—

A number of items might be constructed for any given objective, even a highly specific objective could have a potential items pool of well over several thousand items (Bormuth 1970, Hively 1970,1973). In terms of feasibility, a survey of the current measure revealed that the usual practice is to use about 1-8 items per objective, this practice, however, does not have any sound foundation in psychometric theory of technology (Klevin and Kosecoff 1976).

Different types of items like translation, fill in the blanks, matching, multiple choice, make sentence, exercise and selection measure different abilities. In the cognitive domain, 44 translation, 54 fill in the blanks, 24 matching, 13 multiple choice, 75 make sentence, 40 exercise and 5 words meaning were generated. As stressed by Grunland (1977), each item was started as a multiple choice item and was switched to another type of items only when the learner outcome or subject matter made it desirable to do so. When there were only two possible alternatives, a shift was made to a true/false item or fill in the blanks item and when there were a large number of similar factor to be related, a shift was made to a matching exercise.

After generating items, they were edited with respect to clarity of language and ambiguity. Thus, each type of items were grouped together, appropriate instruction for subjects to attempt these items were written and finally, the scoring system was developed. Thus the preliminary draft of the criterion test was constructed.
Step-III: Item Analysis (Criterion test):

A measure of items effectiveness, based on instruction effect of the criterion test has been suggested. An index of sensitivity to instructional effect (s) was computed by a formula given by Kryspin and Feldhusen (1974) viz.

$$ S = \frac{RA - RB}{T} $$

Where,
- **RA** = Number of students answering the items correctly after instruction.
- **RB** = Number of students answering the item correctly before instruction.
- **T** = Total number of students answering the item both the times.

Despite a number of limitations, the sensitivity index is a useful means of evaluating the effectiveness of items in a criterion test. Items are of little value in measuring the intended outcomes of instruction unless they are sensitive to instructional effects.

Thus, sensitivity index was calculated for each item of the criterion test after giving pre-test, Post-test intervend by the instructional programme. The values of sensitivity index for each item has been placed in the following Table 2.10

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Table 2.10
Sensitivity Indices of criterion test in Hindi

(Part-I)

(Part-II)
### Description of Tools (Part-III)

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A copy of criterion test in Hindi has been attached vide appendix 2G

### Table-2.11

#### Sensitivity - Indices of criterion test in English

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A copy of final form of criterion test in English has been given vide Appendix 2 H.
Table-2.12
Sensitivity Indices of Criterion Test in Assamese
(Part - I)

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<td>9</td>
<td>.63</td>
<td>6</td>
<td>.76</td>
</tr>
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<td>4</td>
<td>.46</td>
<td>14</td>
<td>.63</td>
<td>10</td>
<td>.66</td>
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<td>.53</td>
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<td>5</td>
<td>.53</td>
<td>2.1</td>
<td>.2</td>
<td>3.1</td>
<td>.33</td>
<td>2</td>
<td>.33</td>
</tr>
<tr>
<td>6</td>
<td>.73</td>
<td>2</td>
<td>.16</td>
<td>2</td>
<td>.23</td>
<td>3</td>
<td>.96</td>
</tr>
<tr>
<td>7</td>
<td>.76</td>
<td>3</td>
<td>.53</td>
<td>3</td>
<td>.66</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>8</td>
<td>.83</td>
<td>4</td>
<td>.56</td>
<td>4</td>
<td>.56</td>
<td>5</td>
<td>1.33</td>
</tr>
<tr>
<td>9</td>
<td>.63</td>
<td>5</td>
<td>.6</td>
<td>5</td>
<td>.56</td>
<td>6</td>
<td>1.46</td>
</tr>
<tr>
<td>10</td>
<td>.93</td>
<td>6</td>
<td>.73</td>
<td>6</td>
<td>.63</td>
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</table>

(Part - II) (Part - III)

<table>
<thead>
<tr>
<th>Item</th>
<th>SI</th>
<th>Item</th>
<th>SI</th>
<th>Item</th>
<th>SI</th>
<th>Item</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.00</td>
<td>7</td>
<td>1.2</td>
<td>1</td>
<td>.56</td>
<td>6.1</td>
<td>.30</td>
</tr>
<tr>
<td>2</td>
<td>4.83</td>
<td>8</td>
<td>.93</td>
<td>2</td>
<td>.53</td>
<td>2</td>
<td>.23</td>
</tr>
<tr>
<td>3</td>
<td>5.7</td>
<td>9</td>
<td>1.00</td>
<td>3</td>
<td>.48</td>
<td>7.1</td>
<td>.36</td>
</tr>
<tr>
<td>4</td>
<td>2.2</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>.53</td>
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<td>2.06</td>
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<td>-</td>
<td>5.1</td>
<td>.8</td>
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<td>-</td>
<td>2</td>
<td>.63</td>
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</tbody>
</table>

A copy of final form of criterion test in Assamese has been attached vide appendix 2 I.

Phase-III Implementing and Monitoring of Mastery learning Instructional packages

The final phase is comprised of the following stages:

Implement instructional programme :-

For the validation of the instructional programme, it was implemented in Jagmohan Bidyapith, Golakganj (Assam).

Conduct Formative evaluation and remedial instruction

For diagnosing the instructional programme, it was assessed through formative evaluation. Formative unit tests have been given in appendices. Cooperative remedial instructions were provided as corrective feedback.

Conduct summative evaluation

At the end, criterion test was administered to produce the evidence of the summed effects of a set of lesson.

Revision of instruction and materials on evaluation data

Based on the data of formative and summative evaluation, the deficiencies exhibited by instruction in the plans of Lessons were identified and the lessons were modified accordingly.
2.4 ACHIEVEMENT TEST

Achievement testing refers to the assessment of the outcomes of formal instruction in cognitive domain (Dwyer, 1982). It can also be thought of as a sample of indicator of a student's knowledge taken at a particular point in time (Ebel, 1979).

Achievement test may mean a sample of behaviour that provides an opportunity for comparison with a performance standard as in criterion referenced testing (Grunland, 1973, Humbleton et al. 1978; Popham, 1978). It aids both the teacher and the student in assessing learning readiness, monitoring learning progress, diagnosing learning difficulties and evaluating learning outcomes (Grunland, 1977).

Strictly speaking, achievement and criterion test differ only with respect to the interpretation of results. Thus, both types of interpretations could be applied to the same test (Grunland, 1977). An achievement test is distinguishable from a criterion test on the basis of the purpose of the test besides its rigorous conditions, in respect of discriminating power and normality condition.

Try out and Evaluation

In the present study, achievement test was developed from those criterion items that exhibited sufficient response variance to measure the performance of the students with two different instructional treatments. For the selection of items of achievement test, discriminating power (D.P.) was computed for all the items.

The test was administered on 50 students at Jagamohan Bidyapith, Golakganj and D.P. value were computed for each item after forming to 27 percent and bottom 27 percent groups from the total subjects as suggested by Kelly, 1939.

Table 2.10, 2.11 & 2.12 shows the Sensitivity Indices of Criterion test items

Table - 2.13

<table>
<thead>
<tr>
<th>Discriminating Power</th>
<th>Frequency</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 and above</td>
<td>82</td>
<td>Very good items</td>
</tr>
<tr>
<td>Between .30 and .39</td>
<td>7</td>
<td>Reasonably good</td>
</tr>
<tr>
<td>Between .20 and .29</td>
<td>9</td>
<td>Needing improvement</td>
</tr>
<tr>
<td>Below .20</td>
<td>4</td>
<td>Poor items</td>
</tr>
</tbody>
</table>

Table of D.P. values of each item has been shown in Appendices 2J, 2K and 2L of English, Hindi and Assamese, respectively. Items with D.P. value equal to 0.2 and below were dropped. Item with D.P. value equal to .30 to .39 were modified and items with .40 to above were retained as such.
Items were rejected, or modified on the basis of D.P.’s and D.V.’s value. Items nos. which were rejected, modified or retained as such have been given in the following table.

<table>
<thead>
<tr>
<th>Languages</th>
<th>Items rejected</th>
<th>Items modified</th>
<th>Items Retained as such</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part I</td>
<td>4.3, 6.2, 6.3</td>
<td>1.1, 1.1, 4.4, 6, 9, 9, 11.</td>
<td>(1) 1, 2, 3, 4, (2) 1, 2, 3, 4 (3) 1, 2, 3, 4 (4) 1, 4, 5, 7, 8, 10, 12, 13, (5) 1, 2, 3, 4 (6) 1, 2</td>
</tr>
<tr>
<td>Part II</td>
<td>8, 9, 1, 2, 3</td>
<td>1, 2, 3, 5, 6, 7, 12, 13, 14</td>
<td>(1) 1, 2, 3, 4 (2) 1, 2, 3, 4</td>
</tr>
<tr>
<td>Part III</td>
<td>1.13, 2.13</td>
<td>1.2, 12, 2.5, 8, 10, 12</td>
<td>(1) 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, (2) 1, 2, 3, 4, 6, 7, 9, 11</td>
</tr>
<tr>
<td><strong>Hindi</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part I</td>
<td>1.1,</td>
<td>1.1,</td>
<td>(1) 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 (2) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15</td>
</tr>
<tr>
<td>Part II</td>
<td>4.1, 4, 5.2, 5.3</td>
<td>2.16, 4.2, 3, 5.4, 14</td>
<td>(1) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 (2) 1, 2, 3, 4, 5 (3) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13</td>
</tr>
<tr>
<td>Part III</td>
<td>2.2, 4, 3.5</td>
<td>4, 12, 1.3, 5, 3, 1.2, 3, 4 (4)</td>
<td>(1) 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13</td>
</tr>
<tr>
<td><strong>Assamese</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part I</td>
<td>3.1, 3</td>
<td></td>
<td>(1) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 (2) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 (3) 2, 4, 5, 6 (4) 5 (5) 6 (7) 1, 2, 3, 4, 5, 6</td>
</tr>
<tr>
<td>Part II</td>
<td>7, 4</td>
<td>1, 2, 3, 4, 5, 6, 8, 9</td>
<td>(1) 2, 3, 4, 5, 6, 8, 9</td>
</tr>
<tr>
<td>Part III</td>
<td>7.1</td>
<td>1, 8, 1, 2, 9.1</td>
<td>2, 3, 4, 5, 6 (7) 2</td>
</tr>
</tbody>
</table>

Items with D.P. value equal to 0.2 and below were dropped. Thus, the items with serial numbers - (Part I), 3.1, 3 (Part - II) 7 and (Part - III) 7.1 were dropped and others i.e. 59 items were retained in the final draft of the test of Assamese.

Thus, the items with serial numbers - (Part I), 4.3, 6.3, (Part III) 8, 9.1, 9.2, 9.3 (Part IV) 1 and 2.13 were dropped and others i.e. 64 items were retained in the final draft of the test of English.

On the same criteria, the items with serial numbers (Part II) 4.1, 4, 5.2.3 were dropped and other 100 items were retained in the final draft of the test of Hindi.
Reliability

Reliability concerns the extent to which measurements are repeated i.e. when different persons make the measurements on different occasions, with supposedly alternative instruments for measuring the same thing (Nunnally, 1982). In other words, measurements were intended to be stable over a variety of conditions in which essentially the same results would be obtained.

For determining reliability of the achievement test, it was administered on 30 students of Jagamohan Bidyapith of Dhubri (Assam). Scoring was done and the reliability coefficient of the achievement test was computed with the help of Kuder Richardson formula 21:

$$\gamma_{11} = \frac{2 \gamma_{1/2} \gamma_{1/11}}{1 + \gamma_{1/2} \gamma_{1/11}}$$

Where, $\gamma_{11}$ = Reliability coefficient

$\gamma_{1/2} \gamma_{1/11}$ = Reliability coefficient of the half-test, found experimentally

Reliability coefficient ($\gamma_{11}$) for Assamese was found to be .81. Hindi .77 & for English .72. Therefore, the achievement test may be considered as a moderately reliable for measurement of the student's achievement.

2.5 SELF-ESTEEM INVENTORY

SEI (Coopersmith, 1967-1981)

'Self-esteem' expresses an attitude of approval or disapproval and indicates the extent to which a person believes him or herself capable, significant, successful, and worthy. In short, a person's self-esteem is a judgement of worthiness that is expressed by the attitudes he or she holds towards the self. It is subjective experience conveyed to others by verbal reports and other overt expressive behaviour. For the present investigation self-esteem inventory developed by Coopersmith (1967, 1981) was used.

2.5.1 Development of the Inventories

2.5.1 (a) The School Form:

To measure self-esteem, a fifty item inventory was developed during an investigation of the antecedents, consequences, and correlates of self-esteem. Most of the items in the inventory were based on items selected from the Rogers and Dymond
(1954) scale; several original items were also included. All of the statements were worded for use with children aged eight to ten. Five psychologists sorted the items into two groups - those indicative of high self-esteem and those indicative of low self-esteem. Items that seemed repetitions or ambiguous, or about which there was disagreement, were eliminated.

The set of items was tested for comprehensibility with a group of thirty children. The final inventory consisted of fifty items related to self-attitudes in four areas: peers, parents, school and personal interest. The subscale titles for each area are respectively, Social Self-peers, Home-parents, School-Academic, and General Self.

The final form of the inventory was administered to two classes (grades 5 and 6; N=87) of both males and females. The scores ranged from 40 to 100 (maximum possible of 100), with a mean of 82.3 and a standard deviation of 11.6. The mean score for the 44 males was 81.3 with a standard deviation of 12.2. The mean score for the 43 females was 83.3 with a standard deviation of 16.7. The difference between the mean scores for male and females was not significant. Distribution was skewed in the direction of high self-esteem (negatively skewed).

The inventory was subsequently administered to 1784 children attending the public schools of Central Connecticut. These children were more diverse in ability, interest, and social background than the initial sample. They were tested in their class rooms under the guidance and supervision of members of the research staff. The mean for the males was 70.1 with standard deviation of 13.8, which was not significantly different from that of the females (mean of 72.2, standard deviation of 12.8). The distribution of scores obtained from this sample was also skewed in the direction of high self-esteem. Test-retest reliability after a three-year interval with a sample of 56 children from this population was .70.

The eight lie Scale items were incorporated into the School Form as an index of defensiveness. The Lie Scale items (for example, "I always do the right things") were worded so that they would be answered negatively ("unlike me") if the student were being honest and forthright in his or her self-appraisal.

2.5.1 (b) The School Short Form:

This form was developed to provide an alternative to the fifty-item School Form when time limitations make it impractical to administer that form. The school short form was developed based on item analysis of the School form and includes the twenty-five School Form items that showed the highest item - total score correlations. The School
Short Form does not allow differentiation by subscale, and the Lie Scale items are not included. The total score correlation of the School Form with the School Short Form is 0.86 (Coopersmith - 1967).

2.5.1 (c) The Adult Form:

This form was adapted from the School Short Form for use with persons over fifteen years of age. The language and situations referred to in the items were modified to make them more meaningful to persons whose lives are not as closely bound to parents and school as are children's. The total score correlation of the School Form with the Adult Form exceeds .80 for three samples of high school and college students (N=647).

2.5.2 Administration and Scoring:

The SEI may be administered to groups or individuals. The School Form is used with children and adolescents aged eight through fifteen; the Adult Form, with persons aged sixteen and above. Administration time rarely exceeds ten minutes.

The School Form includes eight items that constitute the Lie Scale. The Lie Scale items (26, 32, 36, 41, 45, 50, 53 and 58) are always scored separately; that is, responses to these items should never be included in the self-esteem score. To score the Lie Scale, award one point for each Lie Scale item answered "like me".

The four subscales of the School Form may be scored separately. The items corresponding to each subscale are shown on the following page.

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Item</th>
<th>Total possible Raw Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>General self</td>
<td>1,3,4,7,10,12,13,15,18,19,24,25,27,30,31,34,35,38,39,43,47,48,51,55,56,57.</td>
<td>26</td>
</tr>
<tr>
<td>Social Self-Peers</td>
<td>5,8,14,21,28,40,49,20</td>
<td>8</td>
</tr>
<tr>
<td>Home Parents</td>
<td>6,9,11,16,20,22,29,24</td>
<td>8</td>
</tr>
<tr>
<td>School-Academic</td>
<td>2,17,23,33,37,42,46,54</td>
<td>8</td>
</tr>
</tbody>
</table>

To arrive at a Total Self Score, sum the number of self-esteem items answered correctly. For the School Form, multiply the total raw score by two. This results in a maximum possible Total Self Score of 100. For the School Short Form and the Adult Form, multiply the total raw score by four. This also results in a maximum possible Total Self Score of 100 so that results of the different form are readily comparable.

The total score for the Lie Scale (School form only) is obtained by summing the points awarded on the eight items (maximum possible score is 8). A high Lie Scale
Score suggests defensiveness in a student's responses. (Note that the opposite method of scoring the Lie Scale items was used for earlier editions of the SEI. A low Lie Scale Score previously indicated defensiveness. Since that approach is not widely accepted, the scoring was changed).

Scores are entered in the boxes provided inside the School Form booklet. Each box is labelled with an abbreviation of the score to be entered. These abbreviations were used so as not to influence examinees responses. Each abbreviation is defined below:

- Gen = General Self subscale Score
- Soc = Social Self-Peers Subscale Score
- H = Home-Parents Subscale Score
- Sch = School-Academic Subscale Score
- Total = Total Self score (all items except Lie Score)
- L = Lie Scale Score
- Short = Student Short Form Total Self Score

2.5.3 Reliability

• **Internal Consistency:** Spatz and Johnston (1973) administered the SEI to over 600 students in grades 5, 9 and 12 in a rural school district. From each grade, 100 inventories were selected, and Kuder-Richardson reliability estimates (KR 20 s) were calculated. Obtained coefficients are .81 for grade 5, .86 for grade 9 and .80 for grade 12. The coefficients indicate adequate internal consistency for students in all three grades.

• **Alternate Forms Reliability:** Test form reliability, that is, the relationship between one form and another of the same test, was represented by the Study of Battle (1977). Since the Canadian SEI was constructed to approximate the Coopersmith SEI, the two test may reasonably be considered as alternate forms. For 198 children in grades 3 through 6, correlations range from .71 to .81.

2.5.4 Validity

• **Construct Validity:** A study of SEI construct validity was reported by Kokenes (1974, 1978). Her investigations included over 7600 School children in grades 4 through 8 and were designed to observe the comparative importance of the home peers and school to the global self-esteem of preadolescents and adolescents. Her
study "confirmed the construct validity of the subscales proposed by coopersmith as measuring sources of self- esteem".

• **Oncurrent Validity:** Simon and Simon (1975) correlated the SEI and SRA Achievement Series scores of 87 children in grade 4 and obtained a coefficient of .33 (P<.01). The children's SEI scores were also correlated with their scores on the Lorge-Thorndike Intelligence Test. The obtained coefficient was .30. The authors suggest that this data "may be reasonably interpreted as providing concurrent validity for the SEI".

• **Predictive Validity:** Regression analysis of SEI subscale scores on MATGES (Donaldson, 1974) indicated that the SEI is a fair predictor of reading achievement. The Lie Scale is generally the best predictor. Correlations of SEI subscale scores with Reading GES (N=643) scores were as follows: General Self subscale, 35; Lie scale, 39; Lie scale and General self subscale multiplier, 53 (P < .01).

2.5.5 **Factor Analyses:** Kokenes (1973) performed a factor analysis on the SEI responses of 7600 children (grades 4 through 8). Nine factors emerged from a total of eighteen factor analyses conducted by Kokenes. There was little factorial difference from grade level to grade level. There were some differences related to sex.

2.5.6 **Norms:**

The SEI was administered to 643 public school children in grade 3 through 8. The sample consisted primarily of students from the lower and middle upper socio-economic ranges. A considerable number of Spanish-surnamed and Black children were included in the sample. Donaldson found that SEI scores increase slightly and monotonically with grade level. There were no significant or meaningful sex or ethnic differences.

There was no indication of a need for separate norms at each grade level through males did score slightly higher than females.

A copy of the SEI has been attached vide appendix 2 M