C H A P T E R II

REVIEW OF LITERATURE ON LISTENING COMPREHENSION

Introduction

In the area of listening comprehension, as has been already pointed out, researches available are few. Those available have been reviewed in this chapter. They have been categorised as follows:

A: Studies on Listening Comprehension

Literature and studies have been reviewed in relation to:

1. The Effects of Training in Listening.
2. Conditions Affecting Listening Comprehension: (a) Content of material, (b) Method of presentation, (c) Rate of presentation, (d) Hearing acuity, (e) Socio-economic background, and (f) Sex differences.
3. Listening Comprehension and Intelligence.

4. Listening Comprehension and Reading Comprehension.

5. Listening Comprehension and School Achievement.

6. Miscellaneous Studies.

B. Tests available in listening comprehension - Standardized as well as non-standardized - have been summarised.

C. At the end some studies done in India though very few have been summarized.

Each of the above mentioned sections, will be dealt with one by one.

A. Studies on Listening Comprehension

1. The Effect of Training in Listening

A number of studies and expository articles concern themselves with the teaching or training of listening at all levels - from preschool stages to adult education. There is general agreement that the teaching of listening skills are important for effective communication and that these skills can be taught and measured. The assumption once made that everybody inherently knows how to listen as they grow, has been repudiated. Nichols R.G. (99) has very rightly put it thus, "Many of the

skills, habits and motives operative in listening comprehension appear readily amenable to training and improvement". A few of the investigations carried out at different age levels in this connection are described below.

Studies with Children

In 1956, Pratt (106), to evaluate differences between control group and experimental group on the various listening skills, tested, a selected sample of 250 cases for each group. He designed an experiment to develop certain specific skills in the listening process, planned a programme of instruction of five lessons (training) on listening. The first lesson was designed to improve accuracy in observing details, that is, listening to paragraphs of varying length. The second lesson was concerned with listening clues. The selections presented contained words that were strange to most of the children, but they contained strong contextual clues to the meanings of words. The third was designed to develop ability to follow oral directions, here the pupils were asked to do computational arithmetic work through directions. The fourth lesson was concerned with developing ability to see relation between main ideas and supporting ideas. The fifth lesson included material designed to develop the ability to make justifiable inferences and also material for review of

all listening skills developed in the experimental programme. The instruction was given, introducing new skills each week for five weeks. Two forms of a test - newly devised - for pre- and post- testing were prepared. The experiment was conducted on twenty classes of sixth grade children. The findings of Pratt were in favour of instruction (training). The difference between the adjusted means of the two groups on the final test of listening ability was significant beyond one per cent level of confidence.

In 1961, Edgar K.F. (41), to find out whether listening ability is improveable or not, decided to experiment with four methods. He matched five groups of fortyseven pupils of grades fourth, fifth and sixth on I.Q. and scores on listening tests. The five groups consisted of one control group and four experimental groups. The experimental groups listened to four types of contents, viz. expositions, stories, vocabulary and analogies presented for half an hour. The control group had no treatment of any kind. The content was similar for all the lessons, but subjects were unaware of it. The research findings suggested that, the listening ability of pupils of grades fourth, fifth and sixth could be improved by any of these four methods, however, out of the four methods analogies and word series were more influencing childrens' performance.

In 1964, Lundsteen (88) devised a training programme of eighteen lessons to teach critical listening for fifth and sixth grade pupils. The lessons were of forty minutes duration; these were given twice a week to 300 pupils. During the first three weeks, lessons consisted of detection of a speakers' purpose, wherein pupils were led to analyse and to discover standards efor judging a speakers' main purpose as humerous, factual or persuasive. Growing out of the speakers' persuasive purpose, the next three weeks dealt with propaganda. Pupils made individual and class investigations to test the hypothesis that "advertisers use many tricks of propaganda to sell their products, but present few facts". During the last three weeks the lessons dealt with an analysis and judgment of strong and weak arguments. Fallacies, such as using false cause, misusing expert opinion and appealing to ignorance, was discovered. Finally, in order to point out the complexities rather than the dichotomy of most topics, a debate was held. This activity involved taped discussions and switching sides. The test was administered on tape by the teacher as a pre- and post- test. The findings were: (1) The lessons were effective in improving listening abilities. (2) The data showed that critical listening scores for the sixth grade surpassed, significantly, the fifth grade. (3) By factor analysis, four components were identified; they were labelled

as (a) General Analysis and Inference, (b) Value Judgment in Regard to Propaganda, (c) Factual Judgment in Regard to Arguments, and (d) Reasons for Fallacies in Arguments. The factors gave further assurance of a critical listening process and abilities. The fact that critical listening can be developed at the lower age group should lead educationists to give its due place in curriculum at all levels.

In 1964, Fawcett (47), to know the effect of training on listening gave twentyfive minutes duration lessons to 638 pupils thrice a week for fourteen weeks. The listening exercises pertained to developing the skills of listening. The experimental group of 322 pupils of fourth, fifth and sixth grade was given instruction (training). The control group of 316 pupils was not given any instruction. The exercises were prepared by the investigator; these were given twice by the teacher and once on the tape. He found significant improvement in the experimental group. Hence, he concluded that listening skills could be improved.

Evans (44) in 1966 got interested in studying whether auditory discrimination could be developed through listening. He equated two groups of third grade pupils on sex, age and I.Q. The exercises of Durrell's Building Word Power Programme consisting of word recognition skills as well as spelling skills were given

to the experimental group. The exercises were divided into forty segments of fifteen minutes duration. All exercises were taped and delivered to the experimental group of 118 third grade pupils for eight weeks. The control group of 118 pupils was not given any exercises. The study indicated that auditory discrimination could be increased in third grade pupils. It also indicated that as auditory discrimination improved word recognition skills also improved, while spelling skills did not show any improvement. The study rather emphasises that spelling skills are visual skills rather than oral ones.

Winter (140) in 1966, conducted a study to find out how well the children of fourth and sixth grade listened and also to find out to what extent comprehension increased between fourth, fifth and sixth grade pupils. To study this, Listening Test Form 4A of Sequential Test of Educational Progress (STEP) with SRA test and California Test of Mental Maturity were administered. The scores of STEP Listening Test were correlated with the other two. It was concluded that youngsters were found to listen well above the average. The difference in achievement between fourth and sixth was significant at .01 level.

In 1967, Desouza (35) to find out the effect of training on the listening ability of seventh grade

pupils divided, randomly, 273 pupils in three groups. Experimental group was given twentythree lessons during four weeks, on specific skills of listening with purposes and cues emphasised. The lessons were on three major skills areas, viz.,(a) listening to significant details, (b) listening to main ideas, (c) listening for following directions. The other isolated group was given twenty lessons on literature, mainly on Thematic Unit and Scholastic Unit. No systematic attention was given to listening skills. The third one - control group - received no treatment. The STEP Listening Tests Form 4A and 4B were administered as pre-test and post-tests. The findings were: (a) Listening was amenable to instruction at seventh grade; (b) Purposive instruction gave significant improvement, (c) Efficacious results were found for the group with instruction in three basic skills.

In 1967, Kellog's (75) purpose was to design and analyse the first grade instructional programme upon achievement in listening and reading. The hypothesis was that the experimental programme would cause a significant gain in achievement in listening comprehension and, as a side effect, significantly effect reading achievement. Three levels of listening, viz., auditory acuity, discrimination and comprehension, were included in the instructional programme. Eight hundred and twentytwo first grade

pupils were tested. Two similar two treatment post-test research studies were conducted concurrently, involving listening treatment differentiation in two different language art methodologies — the traditional method and the experience approach. A structured and unstructured literature listening programme was tested within each language arts methodology. The structured listening programme was the experimental programme, the unstructured listening programme became the control programme. Chronological age and Pintner Intelligence scores were balanced in computing measures of dependent variables - listening skill, listening vocabulary, listening total, word meaning, paragraph meaning, total reading, reading vocabulary and word study skills. Dependent variables were measured by the Wright Listening Comprehension Test and the Stanford Reading Test. Findings were: (a) All significant differences in achievement in all treatment groups were in favour of the structured literature listening programme. (b) Boys in the traditional method of experimental group made significantly higher achievement in all the three measures of listening; and all the five measures of reading over boys in traditional method unstructured literature listening programme. No significant differences in achievement for girls were found in similar comparisons in the traditional method except in listening vocabulary. Boys

made significantly greater achievement in word study skills in the experience approach comparisons.

In 1967 Hedrick Dona (66) made a developmental investigation of primary grade pupils from Kindergarten to third grade. The aim was to note the effect of responses to competing messages, varied in intensity and content. It was found that: (a) the accuracy of children's performance in the selective listening task increased with age in this study. (2) The accuracy of younger children (K.G. and first graders) was affected by unwanted messages.

In 1968 Purdon (112) made an analysis of listening skills development of fourth grade pupils with the help of Midwest Programme on Airborne Television Instruction (MPATI). He found that listening ability was an ability which could be improved through a systematic programme of instruction and that MAPTI was an effective means of improving listening ability.

In 1970, Childers (31), with the sample of 111 intermediate grade level students tried to find out the effect of training on listening.The class was divided into high intelligence and low intelligence group on the basis of scores on Kuhtman-Finch-Test. Listening abilities were determined by administering the listening section of the Durrell Analysis of Reading Difficulty.

Each group was pre- and post- tested. It was found that pupils receiving instruction in listening skills (development) scored significantly higher than a comparable low intelligence group not receiving such instruction; they were not found to score significantly lower than a group of high intelligence pupils not receiving instruction in listening skills development. Childers concluded from the data that listening was a modifiable skill which was less a function of intelligence and more a function of learning. The modifiability of listening skills further showed a tendency to improve as children moved through the middle elementary levels. It was also concluded that children benefited more from a systematic application of materials and instruction designed to improve listening ability.

It will be observed from the foregoing pages that at primary level instruction in listening has invariably affected the scores favourably on listening comprehension.

Studies with High School Students Available

A very few studies with high school students are available for the level under discussion.

In 1964 Hollingworth (67) equated three groups of 535 eighth grade pupils on a mental ability test. One experimental group was given a modified programme of training of Modified Educational Developmental

Laboratories Listening Programme. The second experimental group was given a modified programme of Medified Science Research Associates Listening Skill Builders Programme. No training was given to the control group. The lessons to the first and second experimental groups were given by tape-recorder, at the rate of one lesson per week. The study indicated the lack of effect of training on listening comprehension in contrast to the findings noted above for the primary level. It may be due to the different nature of the programmes used for or the method or the level of pupils.

In 1965 Skiffington (122) with an objective to find out effect of auding and training on reading achievement of average eighth grade pupils, equated two groups on auding achievement, reading achievement and intelligence tests. After training of twentysix pre-taped auding exercises to the experimental group at the rate of three per week for nine weeks, the conclusions were: (a) There was a significant difference in the amount of gain in auding achievement of subjects who received auding training and those who did not, with those receiving the training making greater gain. (b) In regard to total reading achievement there was a significance difference in the amount gain in reading achievement of the subjects who received auding training. They made greater gains. (c) The coefficients of correla-

tion, calculated between reading achievement and auding achievement, and between reading achievement and intelligence, were in the same substantial relationship range as those reported in the literature.

A coefficient of correlation in the same range was calculated between auding achievement and intelligence and this also was in agreement with the majority, although not all, of the coefficients previously reported between these two variables.

Studies with College Students

More researches to study the effect of training in listening at college level are available than those at high school level.

The aim of Tezza (128) in 1962, was to find out effects of listening training on audio-lingual learning. After administering Brown Carlson Listening Comprehension Test form BM to Russian language students, he randomly assigned them into six sections, each of 40 students. Three experimental groups were given three different treatments, viz. (a) listening, (b) reading, and (c) audio-lingual training. The treatment in listening consisted of word drill of thirty analogies and thirty similarities. The lessons were taped. The subjects were asked to listen to the stem for analogy and then to answer. Again the subjects were to listen to the stem for

similarity and then to find out synonyms, antonyms or unrelated words. The training was for twentyfive minutes duration every week for ten weeks. The Reading group read the material of 2,000 words. The third group remained in the class and developed classroom skills. The criterion measures were scores on Brown Carlson Listening Comprehension Test form BM and specially constructed aural comprehension test on Russian language. The results were: (a) Entire listening group gained significantly on listening comprehension. (b) The group with listening training did not score more on Russian listening comprehension test than the other two. (c) The students with lower initial listening scores showed significantly greater improvement in listening ability then students who scored higher on the initial tests. (d) The differences in listening effected by treatment did not depend upon the listening levels established at the inception on the study. (e) The differences in aural comprehension effected by treatments did not depend upon listening levels established at the inception of the study.

In answer to the question, can listening instruction in basic speech course lead to significant improvement of listening comprehension, Whitefield (136) in 1964, selected 130 university students. Out of two groups made for investigation, the experimental group had a training for six weeks of eighteen consecutive class

meetings. There were no significantly different improvement in the performance of the two groups. However, in a subsequent test the difference between the mean scores of the two groups was large enough to be significant.

Colwell (32) in 1967 experimented with different kinds of subjects. He selected 24 counsellor trainees. Two tests were used, viz., Brown-Carlson Listening Comprehension Test and Counsellor Listening Behaviour Scales to equate two groups. Ten ½ lectures were delivered to the experimental group for one hour duration for three and a half weeks. The sessions comprised of instructions, discussion and practice on the theme of listening with emphasis on the general improvement of listening skills and development of listening behaviour for counselling. It was concluded that the listening skills of the counsellor trainees in the experimental group improved by means of a short term instructional unit on listening.

Other investigators such as Bird (1953), Irvin (1953), Brown (1954), Erickson (1954) and Nichols (1949), as it has been reported by Spearritt (123), found that experimental groups of all college freshman who received systematic training in listening had, in almost all cases, obtained significantly higher scores on listening comprehension tests than the control group who had not received such training. The training generally comprised of some instruction on how to listen..

It will be seen from the foregoing pages that researches cited above noted favourable results for training in listening at college level.

Though researches at all levels showed a trend in favour of training, the investigations differed in: (a) time allotted for instruction as well as for lessons, (b) contents of instructional listening lesson, (c) presentation of material, (d) age-group dealt with, and (e) size of the sample.

The time for lessons ranged from one minute to one hours duration. The training duration ranged from one week to fourteen weeks. The contents of instructions were words, lectures, talks about nature and development of listening skills, stories, directions to follow, or some already prepared or standardized tests or programmes etc. Most of the researchers devised their own programmes suitable to the age group. The presentation of material was either by the class teacher or on tape-recorder. The age group dealt with were from KG to college level. These researches have been conducted with greater care and sophistication. Researches at almost all levels showed superiority of training in listening.

2. Conditions Affecting Performance on Listening Comprehension Test

(a) Listening and Content of Material

In one study Witty and Sizemore (142) observed: "Differences in the efficacy of learning, it was discovered, could be traced, not to the particular type of presentation such as visual or aural, but instead of factors such as the nature of the task to be mastered, the type of material to be dealt with, the age of subjects, and the influence exerted by interest or past experience".

It has already been presented in the earlier section on Effect of Training in Listening that with age the efficiency of one method over another does change. In the present section a few researches on listening with particular reference to content will be cited. The content can be of three types: (a) easy or difficult material, (b) varieties in material, and (iii) organized or disorganized.

In 1934 Carver (30) made an attempt to study whether the advantage of a given mode of presentation varies with the difficulty level of the material. The subjects were thirty male adult undergraduates and fifty-two adults having no college education. The materials were presented visually in booklet form and auditorily

by radio. It consisted of paired samples of connected meaningful passages together with sets of directions. The contents of passages were of a narrative, descriptive, abstract, and explanatory type, It was concluded that the difficulty level of the material was an important variable. The easier the material in listening, the greater the likelihood that auditory presentation would be more effective than visual. Materials of average difficulty tended to give equivocal results; whereas, in general, material that was intrinsically difficult was better comprehended if presented to the eye. It was also observed that the advantage of the mode of presentation seemed to depend upon the educational status attained by the subjects. College students responded better to increasingly difficult material, auditorily (upto a certain point), than the population at large. In the scale of difficulty, beyond a certain stage, the general population would do better to read the material. Even with a college population, however, a point is reached where the factor of difficulty in the material outweighs the relative advantage of auditory presentation.

In another study, Larsen and Feder (80) determined whether or not certain psychological abilities differentiated between the processes involved in reading and listening comprehension. Hundred and fiftyone freshmen speech students were chosen and a series of tests

were administered. They were tested for reading comprehension, reading memory, hearing memory, phonics, complex speech sound discrimination and oral reading accuracy. The material presented orally and visually increased usual difficulty levels - easy, moderate and difficult. The students were also grouped into those with high and low scholastic achievement, on Iowa Qualifying Examinations. The investigator used Nelson-Denny Reading Test for reading and the same form was used for listening. Larsen and Feder reported: "The superiority of performance in reading comprehension over that in hearing comprehension was found to be dependent upon the level of difficulty of the material. The superiority was slight for those low in scholastic aptitude and reading ability, but quite marked for those high in ability." They also added, "Those low in scholastic aptitude showed a definite superiority in reading comprehension". From these two investigations one can infer that difficulty level does have an effect on listening comprehension.

Beighly (12), in 1952, tried to find out the effect of four speech variables on listening comprehension. Out of four, two are relevant here, viz., (i) difficulty of material presented and (ii) organization of the material presented. Two speeches of about 3,500 words,

which dealt with foreign policy in relation to peace and war were presented to students of a public speaking course. Two speeches rated according to Dale Formula as 9-10th grade level and 13-15th grade level. Both were tape-recorded by two skilled male readers and two unskilled male readers. Some of these speeches were made up in a disorganized form. Out of two speeches one was easy and the other was difficult. It was concluded from the study that higher comprehension test scores were achieved on the easy material than on the hard by the listener except that in a few of the comparisons the differences of means were not statistically significant. Secondly, it was concluded from the study that organization of speech showed statistical superiority for comprehension over the kind of disorganized speech.

In 1955, Hampleman (63) compared listening and reading comprehension ability of fourth and sixth grade pupils. Three hundred and four pupils were tested using ten passages from the paragraph comprehension section of the Durrell Sullivan Reading Achievement Test of interesting story material, varying from 100 to 700 words in length and were compared with reading of easy and difficult material. Two groups were made by dividing them randomly into half. One group heard those passages and the other read by themselves. It was concluded that

easy material was more readily comprehended than difficult material by fourth and sixth grade pupils by both, boys and girls. Secondly, it was also concluded that for both grade pupils, listening comprehension showed a greater superiority over reading comprehension with easy than with hard material.

Spiker (124), in 1963, chose 88 pupils of whom 44 were intellectually retarded, having an I.Q.between 67-80; the other group of 44 were normally with an I.Q. between 99-110. Spiker selected narrative passages from SRA tests. According to reading ability, the passages suitable to third, fifth and ninth grades were considered to be easy, medium and difficult, respectively. After pretesting on a listening comprehension test, passages were presented orally and the listening comprehension test was administered second time. It was found that: (a) there was no significant difference between normal and retarded children on easy and medium passages. Both passages were significantly better comprehended than the difficult passage. (b) The medium passage was retained significantly better by both normals and the retarded than the easy or difficult passage. However, comprehension losses on the medium passage were significantly greater for the normal subjects than for the retarded. Since investigation has shown that the retarded learns and retains hard materials as well as better than ?

normals of similar mental age, it would appear that listening instruction should be added to instructional programmes in schools.

In 1962, Calway (27) used narrative and factual material or combination of the two for the improvement of listening ability. He selected 348 pupils of fourth standard and 325 pupils of sixth standard for the experiment. He devised two alternate forms, with two parts; part one was with narrative material, part two was with factual material. These forms were recorded on tapes and were played for twenty minutes, thrice a week, for eight weeks, to three groups. In one presentation he combined the two materials mentioned above. It was concluded that no significant difference was found on the narrative segment as a result of instruction. Significant difference was found on the factorial segments of pretest and post-test for sixth grade pupils. The significant difference was apparent in achievement of factual segements of the tests.The difference was more with those who had instruction in factual segement. No significant difference was found in narrative material and combined material.

Hedrick (66), in 1967, attempted to find out the effect of different types of content material on listening comprehension. The content consisted of (i) unwanted

messages and (ii) distraction of messages. It was observed that the content which affected the accuracy of younger children, viz. KG and first graders, was unwanted message and for third graders that which affected the accuracy was distraction of message.

It has been reported by Spearritt (123, p.7) that the amount of material in a listening test would depend upon its content. He cited one example, "This has been found to be true in a recent experiment with sixth grade children in Britain; as a result it was suggested that a number of short passages on a variety of topics would provide a more valid assessment of listening comprehension than would one longer passage (King, 1959)".

To sum up, the findings of the studies reviewed in this section, one finds a few but interesting and useful observations. They are: (a) Oral presentation is more effective with easy material and visual presentation is more effective with difficult material. (b) The differences in content may be an influencing factor on the achievement of pupils in listening comprehension. (c) Interest may be an effective factor. Further research is needed in this aspect.

(b) Listening and Method of Presentation

A few methods which were considered for investigations were: (a) material presented by loud speaker or presented by a speaker; (b) material presented through programmed text with listening assistance and without assistance; (c) material presented through lecture, with and without practice; (d) on taperecorder with and without practice; (e) material presented with one voice or variety of voices; and (f) material presented through direct and indirect method of improving skills.

In 1937 Lodger (86) aimed at finding whether learning and retention of factual material presented over the loud speaker was more as compared to the learning and retention of factual material presented directly by the speaker. He selected four lessons of 30 minutes duration and these were delivered to 449 eighth grade pupils with the speaker present and then on a loud speaker, the speaker personally not present. Two groups listened to the talks (lessons). The first talk covered basic concepts about narcotics, the second and third factual material concerning alcohol and tobacco, respectively and the fourth facts concerning narcotics other than alcohol and tobacco. After the completion of the talks, the groups were immediately tested on true-false items. The types of presentation rotated between the two groups

in a balanced design so that all pupils heard half the material by each method, alteration taking place throughout. It was concluded that on the immediate retention tests, the mean differences between the amounts learned by the two types of presentation were significant in favour of the direct type of presentation, that is, having material presented to the pupils, the speaker being present except on the last two types of materials, viz. alcohol and narcotics.

Spearritt (123) has quoted researches of Caffney (1955), Goyer (1954) and Loder (1937) comparing various types of presentation and suggested that the speaker in person, was more effective than recording presented by tape. He also quoted Stodola and Coffman (1959) who carried out an experiment with college students, showed no significant differences in listening comprehension between three groups, the first of which listened to a teacher in person, the second watching and listening to the same administration on closed circuit television and the third listening only to the sound from his administration.

Geiger (52), in 1967, investigated three methods of teaching vocabulary at a junior high school level to find out superiority of any amongst the three. The three methods were: (a) Programmed text, (2) Programmed text

augmented by listening assistance, (c) Programmed text augmented by a work analysis supplement. The teaching was done, per day, for fifteen minutes during six weeks. It was concluded that listening assistance was an effective means of reinforcement for programmed instruction in development of vocabulary and comprehension and that listening assistance contributed to retention which used to augment a programmed text.

Tabour (127), in 1967, used methods different from those of the earlier researchers. He used four different methods for four groups as mentioned below. The aim was to find out which method was suitable to college level. Four groups each of forty - twenty above median and twenty below median on the basis of listening comprehension test (pretest) were formed. The first group was instructed through ten minutes lecture with practice; the second group was instructed through ten minutes lecture without practice; the third group was given instruction on tape-recorder with practice and the fourth group received the same type of instruction, as third one but without practice. Themes of these lectures were: (a) importance of listening, (b) listening for information, (c) listening for enjoyment and (d) critical listening. The conclusions arrived at were: (a) No significant difference was found between any two methods of instruction, yet it was observed that scores of subjects in the

lecture method group were higher. (b) Practice following the two methods - lecture and tape-recorded one - produced significant difference. (c) Significant increase was noted in mean gain in post-test over pre-test on listening comprehension test. From the above mentioned study it is implied that listening is a communicative skill which must be taught at all the educational levels and also that methods of instruction should provide opportunities for practice.

In 1968, Purdon (112) analysing the skills of listening of fourth grade children, found that Midwest Programme on Airborne Television Instruction was an effective means of improving skills of listening among fourth grade children.

In 1967, Bowdidge (17) to find out the influence of listening lessons on 615 high school students, utilized three methods, viz. (i) lessons with one voice, (ii) lessons with variety of voices, (iii) one minute tape-recorded listening motivation bulletins. In all the three methods sixteen tape-recorded listening lessons were utilized. On the post-test, the difference between the scores of total experimental group and total control group was significant favouring experimental group. The voice variety experimental group scored significantly higher than the corresponding control group. It was

concluded that not all listening methods are equally effective; the utilization of variety of voices appeared to increase the effectiveness of listening training and effective listening training seemed to demand something more than mere admonitions.

Grasity (56), in 1969, studied with an aim to find the effect of direct and indirect method of presentation of material on 192 college freshmen on their listening and also to find out the transfer of one to the other, if any. He selected two lectures and were taped. College freshman were divided into two groups - experimental and control. The experimental group was given twenty lessons which were designed to teach pupils how to listen through guided practice. The group knew the design of the programme. The control group took lessons on improvement of speaking skills, which indirectly improved listening skills. It was found that both the methods appeared to be equally effective, because both the groups gained significantly. The questions of transfer did not arise as listening skills were effective for a short period of time.

Wenger (134) made an attempt in 1967 to determine the effect on listening comprehension scores of repeating both passages and questions when administering listening tests. The subjects were 148 children of

fourth and sixth grades. Out of which 86 were boys and 62 were girls. The test administered to subjects were Durrell-Sullivan Reading Achievement Test. The Durrell-Sullivan Reading Capacity Test; and the STEP Listening Test. Both the capacity test and the STEP test were administered in the conventional manner followed by a second reading of both text and questions. The following conclusions seem justified: (a) A second hearing of a listening test of the types used in the study does not affect the intelligence-listening relationship significantly. (b) A second hearing of certain types of story or expository materials and questions result in a significant increase in mean scores over the initial hearing for a large heterogeneous group and specific age and intelligence groups. (c) The second hearing of a Word Meaning Test has no significant effect on mean test scores.

It can be observed from the foregoing researches employing various kinds of methods of presentations that: (a) materials presented by speaker in person, were better comprehended than when the speaker was not present. (b) Most of the methods were found to be equally effective on listening comprehension.

(c) Researches with Normal and Handicapped Children with Varying Rates of Presentation of Material

As the title of the section suggests, researches noted in this section are about the presentation of material at different rates, namely, from 100 words per minute (wpm) to 380 wpm.

Harwood's (65) purpose, in 1955, was to test the comprehension level of the subjects at different speeds. He selected seven stories each of 300 words with different contents. Those materials were rewritten to conform with seven stages of difficulty in readability, and then were tape-recorded for reproduction at the rates of 125, 150, 175 and 200 words per minute. Four hundred and eighty-seven of tenth graders listened to these stories in groups of about 35 each. From this Harwood concluded: "In general, as has been found by Goldstein and Nelson, listening ability decreased with increase in rate of presentation. However, mean listenability at each of the four rates of presentation did not differ significantly". He also observed that at 150 wpm rate the comprehension level was highest.

Fairbanks, Guttman and Miron (45) attempted to find out the effects of time compression upon the comprehension of connected speech. They presented the material at different rates upto 300 wpm and found that rate of

presentation could be increased without significant loss in comprehension. They computed efficiency index based upon number of comprehension test items answered correctly per unit time. They found the optimum rate for auditory presentation to be 280 wpm. The rate was twice as fast as original recording and was considerably faster than every day speech.

In 1962, Spearritt (123, p.9) reviewed researches on rate of presentation thus: "The rate at which spoken material is presented affects performance on listening comprehension tests. While it has been demonstrated that the rate of presentation can be increased by mechanical means to about 300 wpm without significant loss in comprehension (Fairbanks, et al., 1957), the level of comprehension is greatest when material is presented at the average rate of speech, about 150 wpm (Goodman-Malmuth, 1957; Harwood, 1955b)." However, other researches differ in this regard.

In 1963, Spiker (124) tried to observe the relationship between listening comprehension and retention of intellectually normal and retarded children as function of speaking rate and passage difficulty. The sample consisted of 44 retarded and 44 normal children. It was found that materials hand at the rate of 125 and 175 wpm were better comprehended and retained by normals

and retarders than materials read at the rate of about 225 and 275 wpm.

As it has been quoted by Jester and Travers (72) in 1966, Goldstein presented meaningful material from 100 wpm to 322 wpm rate and found linear loss in listening comprehension as the speed increased. It was found that auditory presentation of material resulted in higher comprehension than visual presentation, at low speeds, but as speed increased visual comprehension equalled auditory comprehension. Goldstein reported that one could not find optimum rate by straight forward interpretation of linear relationship.

Jester and Travers (72) with three modes of presentation - audio, visual and audio-visual and five speeds 150, 200, 250, 300 and 350 wpm (i.e. in a 3 x 5 factorial design) experimented on 220 students of first year psychology. He concluded that: (a) there was an almost linear loss in comprehension as the speed increased; (2) at speeds of 150, 200 and 250 wpm, the three modes were equal in comprehension but after an increase in speed audio-visual mode was found to be superior; (c) audio presentation was superior to the visual presentation at lower speeds; and (d) visual was superior to the audio presentation for higher speed.

They also noted that the shape of auditory

efficiency graph they obtained and those of all other researches in the field were the same which indicated that there was indeed an optimum speed for auditory material, the point of efficiency was different due to the difficulty value of the material used, testing material used and the way in which tests were recorded. Efficiency scores appeared to attain a peak of efficiency at 300 wpm both for the visual and the audio-visual presentations.

In 1967, Rathgaber (114) compared listening ability of blind students and sighted students in intermediate grades. The sample consisted of 304 pupils consisting of equal number of both the categories and within each category also equal number of boys and girls. He found no difference in achievement between sighted and blind with regard to rate of presentation. It was found that the score on the presentation at rate of 175 wpm was higher than the score on the accelerated speed presentation of 225 wpm, in case of both kinds of pupils.

Jackson (71) with basal rate of 175 wpm compressed the speed by 20 per cent, 40 per cent and 60 per cent; the resulting speaking rates were approximately 210, 245 and 280 wpm. The sample consisted of 38 visually limited pupils of fourth, fifth and sixth grades (C.A. between

y. m y. m
8 - 6 to 14 - 6). The other group consisted of the same number of normally sighted children of the same age range. Out of the 38 children in each group fourteen were retarded. Four sentences of twentythree phonetic syllables were recorded at 175 wpm. The recordingsw were compressed and then presented to the pupils. Each subject was then presented with two blocks of three trials of each sentence. After each block, subjects were tested for recall. After two days, recall was measured again and three relearning trials (block three) were conducted. The second recall test was administered two weeks after the first recall test was given. The criterion of measurement for recall was the number of phonetic syllables recalled. The results were: (a) The rate of 210 wpm yielded best results in acquisition and retention. (b) At the rate of 280 no acquisition took place. (c) The two rates of 175 wpm and 245 wpm did not differ significantly in acquisition and retention; but the scores were significantly lower than for the rate of 210 wpm. (d) The pupils with visually limited sight scored lower than normal ones on 175-245 wpm rate but no significant difference was found on 210 wpm rate. (e) Mentally retarded children scored significantly lower on acquisition and retention at all the rates. (f) No interaction were found between intelligence level and level of visual limitation.

In 1968, Langford (78) investigated into the effects of acceleration of pre-recorded material on the listening comprehension of high school students. The sample was of 288 boys and girls, in equal number and with normal sight. The form 2A of Sequential Test of Educational Progress Test (STEP Listening Test) was recorded on tape. The pupils were divided into six treatment groups. Each group consisted of equal numbers of male and female students and equal number of students from three educational tracks (ability achievement groupings) at that grade level. The first treatment group received orally presented test material at the normal speed of 175 wpm; the second treatment group received prerecorded material at the normal speed of 175 wpm. The remaining four groups received prerecorded compressed material at 225, 275, 325 and 375 wpm accelerated play-back speed. The results were: (a) Students with higher intelligence or better academic performances did consistantly better than those of lesser ability. (b) Whether material was accelerated or not also significantly affected listening comprehension. (c) The major finding was that these students can learn without a significant loss of comprehension when listening to the compressed material at a wpm rate between 275 and 325. These findings point out the need for further study of extended time periods and other type of presentations of material.

Blind students

Gore (54),in 1968, compared accelerated versus compressed methods of increasing the speed of recorded speech and normal versus speeded methods. He hypothesized that subjects will comprehend and recall more with the compressed method of presentation than the accelerated method (hypotheses one and two). He also hypothesized that the subjects will comprehend and recall more with normal recorded speed than with the speeded methods (hypotheses three and four). The theory underlying the hypotheses (that the subjects will compressed and recall more with the compressed method than with accelerated method) was that, a discard interval of 30.92 would increase the listenability or goodness of signal output of recorded speech compressed to 63.6 per cent yielding 57 per cent increase in material output. For rest of hypotheses (the subjects will comprehend and recall more with normal speed presentation than with speeded methods) were based on the theory that the perceptual and cognitive processes of interpretation, encoding, storage and retrieval would be inhibited when presented with a 57 per cent increase in recorded material output. The subjects were thirtytwo blind students of senior high school. Sixteen subjects were used to test accelerated versus compressed methods and sixteen subjects were used to test normal versus speeded methods, accelerated and compressed. A counter-balance procedure, using

equivalent listening tests, equalized the independent variables of age, sex, grade and intelligence. The subjects heard the recorded material through earphones and marked their answers in Braille and large print answer booklets. Recall scores were derived from answers subjects gave to the questions which they answered one week after having heard the original selection. The results were: (a) The results of analysis showed the differences of the means for comprehension and recall were significant in favour of compressed speech. Thus, the hypotheses one and two were accepted. (b) The results of normal speed presentation versus the speeded speech presentation were significant in favour of the normal rate for comprehension, but not for recall. (c) The performances within the groups showed significant results for the normal rate over the accelerated for both comprehension and recall. However, there were no significant results for the normal over compressed for either comprehension or recall. The mean difference between compressed speech and the normal speed for recall was in favour of compressed method. Thus, it can be said that compressed method is 57 per cent more efficient than the normal rate.

Gropper (59) worked with 72 fourth grade pupils to find out the comprehension of narrative passages as a function of listening rate and eleven predictor values,

viz., Peaboy Picture Vocabulary Test, Otis Intelligence Test, Metropolitan Achievement Test (Reading), Digit Span, Clerical Speed, Perceptual Speed, Auditory Vocal Sequence and C.A. The speeds were 126, 190, 252, 312, 380 wpm. Five passages were delivered at the above mentioned rates. On the basis of the correlation coefficients obtained, MAT, PPVT, Digit Span and Listening Comprehension were selected to constitute the battery of tests for use as a predictor of performance at all speeds. Performance curve based on the criterion score showed that as speed increased, performance decreased.

An examination of the efficiency curve showed that the rate of 252 wpm was the most efficient, followed in order by 190, 312, 380 and 126 wpm. Analysis of variance showed that mean differences across these rates were significant.

The above mentioned data indicated that a slower than normal speed resulted in greater comprehension, in terms of efficient use of time. However, a speed somewhat faster than normal (about 25 per cent) was the best.

In 1972, Murray's (95) purpose of study was to determine the relative effectiveness of oral and visual material presented simultaneously at different rates of speed, upon listening and reading comprehension. The

material consisted of twenty stories of seventh grade level and were presented at 125, 200 and 275 wpm. The 120 pupils of the sample were divided to four groups on Durrell Listening-Reading Series. Group one was high in listening and reading; group two was high in listening and low in reading; group three was low in listening and high in reading and group four was low both in listening and reading. These four groups were further subdivided into three groups in order that the material could be presented to each sub-group at a particular rate of presentation each. The findings were: (a) There was no statistical difference between the rates of 125, 200, 275 wpm either on listening or reading comprehension. Though there was no statistical difference among three rates, the rate of 225 wpm tended to be the most effective in all of the subtests - except for listening. (b) There was no statistical difference between the experimental and the control group.

To summarize, most of the investigations found that (a) listening comprehension decreased with increase in speed. (b) However, a few investigators found higher speeds more effective than lesser speeds. Jackson, 1967; Langford, 1968; and Murray, 1972 did not find any statistical difference in comprehending material. (c) In contrast to the popular conception, those found to be handicapped were not found to be better compensators on

listening comprehension presented at different rates.

(d) Hearing Acuity and Listening Comprehension

In an experiment on measurement of listening at college level BLewett (16) in 1957 observed that his study did not produce conclusive evidence as to the relationship between listening comprehension and hearing acuity. Three subjects out of 150 had hearing loss sufficiently serious to receive clinical attention. Yet the mean score of those three subjects on the listening was 44.33, as compared to the mean score of 40.10 for entire group. This might suggest that hearing acuity does not significantly influence listening comprehension, provided the oral presentation is adequately audible to the listener.

Nichols (99), in 1948, made an attempt to find out factors in listening comprehension. He prepared a test and gave it to 200 college freshmen.He noted factors which did not significantly influence the listening comprehension of the subjects and one of those factors was hearing acuity.

To sum up, it is difficult to generalize the findings of only two researches reviewed here. However, it may be noted that if the discourse to be presented can be made audible the person with partial hearing

defect would comprehend the material provided he has the ability to comprehend.

(e) Socio-Economic Background

In 1964, Ross Raman (119) with the objective to find out relationship between listening ability and socio-economic status concluded that good listeners tended to come from middle and upper-middle class homes, while poor listeners came from lower and lower-middle class homes. The correlation between listening scores on STEP Listening Test and socio-economic status was 0.48. This finding supports the popular view that higher achievers are from better homes.

Condon (33) in 1965 analysed the differences between good and poor listeners. He stratified subjects on various variables. Out of which socio-economic status was one of them. He found significant difference between listening scores of students from families of "high" socio-economic status and those from families of "low" socio-economic status in two grades in one community. He concluded that probably listening is correlated with socio-economic status.

Bowdige (17), in 1967, in his investigation to study the influence of tape-recorded listening lessons and Listening Motivation Bulletins on listening ability

of high school students also tried to find the influence of socio-economic status on listening comprehension. The difference among the socio-economic groups on pretest were significant, except for high and high-middle groups. Higher means tended to belong to higher socio-economic groups. The higher means tended to belong to the higher grade-level groups. However, the lowest of the grade-level means was that for eleventh-grade group. The explanation for this possibility lies in the fact that this group had a far greater per cent of low socio-economic subjects than did the other grade-level groups.

Valkenburg (132), in 1968, in an experiment on learning through listening and its impact on reading, correlated scores of listening test with socio-economic status. It was noted from the results that the students from low socio-economic status gained more from the listening training than those from high socio-economic status. The data revealed that the lessons in listening comprehension were effective in increasing the listening comprehension for all.

Hall (61) had different results in this regard. He investigated the problem of listening comprehension and reading achievement in first and second grade of selected social class and intellectual levels. The selected classes were: (i) culturally deprived and (ii)

culturally not deprived. In all 240 pupils were included into twelve groups on the bases of C.A., Socio-economic status, slow learners, normal intelligence and educable mentally retarded. The hypothesis was that a relationship did exist between cultural deprivation and listening comprehension; and also between cultural deprivation and reading comprehension. The analysis of data did not provide support for any hypothesis. It was concluded that significant difference did not exist between culturally deprived and non-culturally deprived for the first and second graders of the same I.Q. range regarding either listening comprehension achievement or reading comprehension achievement.

It is very difficult to find any definite trend from the few results obtained. Yet it can be said that better homes prepare better listeners than poor homes or culturally deprived homes. The different result found may be due to varied age-groups of subjects, the difficulty level of the material to be listened and such other factors.

(f) Sex Differences in Listening Comprehension

Normally, differences between the sexes are often explained by referring to the differences in cultural bringing up of boys and girls in different

cultures. These differences may vary from one subject to the other. They may also vary for specific abilities and skills for specific interests and attitudes. Several studies have attempted to throw light on the phenomenon of sex differences. Specific differences have been noted in some aspects; physical strength, clerical work, etc. but nothing conclusive has been observed about the sex differences in scholastic achievement and intelligence. With listening comprehension it is still a moot question. While going through literature, it was interesting to find that most of the researches referring to sex differences are doing as incidental study. In other words, there are no researches in specifically undertaken to study relationship between listening comprehension and sex differences. A few studies are reported below:

Spearritt (123) reviewed several researches which showed sex differences in performance on listening comprehension tests. He wrote: "Males usually obtained slightly higher mean scores on these tests than females, though the difference between means was not always large enough to be statistically significant.(Dow, 1953); Hampleman (1955); Hollow (1955). Male superiority has been noted at grade 4 (Hampleman, 1955), grade 5 (Hollow, 1955), grade 6 (Hampleman, 1955; King, 1959), Grades 9 to 12 (Caffrey, 1955a), and at college freshman level (Dow, 1953, Irvin, 1954; Nichols, 1948). This pattern was not

confirmed in Haberland's study of college freshman, but the number of cases available for comparison in this study were relatively small (Haberland, 1959). Caffrey demonstrated that the superiority among his high school students group could not be attributed to differences in chronological age, mental age or sex bias in item content".

Here sixteen studies most of them being comparatively recent studies, have been cited. Three found boys' superiority over girls'; three others found girls' superiority over boys and nine studies found no significant differences between the two.

In 1948, Nichols (99) attempted to find out factors in listening comprehension. He found several factors influencing listeners and also found some evidences to suggest the factors which influenced listening comprehension. In the latter category he mentioned the factor of sex. He tested 132 males and 68 females. He found males to be better listeners. The significance ratio of difference of these two mean score performance was 2.1.

In 1955 with 304 fourth and sixth graders, Hampleman (63) found boys superior to girls in comprehending material.

Murphy (96) in 1962, with 317 high school

seniors, attempted to find the relationship between listening ability and high school grades and found that boys were better listeners than girls.

The three studies, which found girls to be superior are cited below:

Lundsteen (88), in 1964, in her project, taught critical listening to 300 pupils of fifth and sixth graders and evaluated using a test specially prepared for the purpose. She found girls to be slightly better critical listeners than boys. A significant difference was found at the .05 level.

Lodger (86) in his study on learning through aural methods of presentation of material with our without speaker present, found girls to be slightly superior in learning by the loud speaker presentation.

Winter (140) while studying how well the children of fourth, fifth and sixth graders listened, concluded that girls were slightly better listeners than boys.

The remaining nine studies found no significant differences, as mentioned above. Those are cited below:

In 1940, Larsen and Feder (80) did not find statistically significant differences between mean scores of males and females on the listening test. The mean score

for males was 24; that for females was 22.6.

Farrow (46), in 1963, in an experimental study of listening attention at intermediate grade levels, found no significant differences within grade levels (four to six) with respect to listening attention test scores of boys and girls.

In the same year as above, Laurent (81) gave training to fifth and sixth graders and evaluated the achievement of pupils of both the sexes. He found no significant differences between the two.

Condon (33) in 1966 analysed the differences of good and poor listeners in grade nine, eleven and thirteen. He observed: "Whether boys listen better than girls is still a moot question as far as the evidence in this study shows".

Legge (82), in 1967, compared listening abilities of intermediate grade pupils. He categorized them according to intelligence, achievement and sex. It was concluded that no significant differences were found between the listening abilities of boys and girls at the three grade levels tested.

Hoop Wieste de (68) studied main effects and interaction effects of speaking rate, visual limitation

and intelligence level on aural acquisition and retention of sentences. He concluded that sex difference was yet a moot question.

Fawcett (47) studied the effect of training in listening and found no significant differences between the sexes at fifth and sixth grade levels.

Langford (78) attempted to find out the effect of time compressed speech on listening comprehension. Six rates were utilized for the experiment. He found no significant differences between the achievement of boys and girls at any rate of presentation.

Butler (25), in 1970, compared the listening abilities of good and poor listeners of sixth grade. No significant differences were observed between boys and girls in listening ability.

3. Listening Comprehension and Intelligence

Listening activity is a basic behaviour which leads to human progress, which may be the expression of intelligence. Consequently, one can easily imagine vital relationship between intelligence and listening. In view of this, a separate section is devoted to review researches relevant to this assumed relationship.

Nichols (99), in 1948, was perhaps the first person to construct a test of listening comprehension for

identifying as many related factors as possible. The test was administered to 200 college freshmen. Scores on the test referred to were correlated with intelligence test (A.C.E. examination test) scores and correlation was found to be .54, from which it was concluded that intelligence was one of the factors which influenced listening comprehension.

Still Dona (125), in 1955, tried to examine the kind of relationship that existed between listening ability and school subjects. She included 314 pupils of grades nine to twelve and divided them into three groups - first with I.Qs. within the first quartile, second with I.Qs. between the second and the third quartiles and third of cases with I.Qs. above the third quartile. They showed correlations of .56, .50 and .42 respectively. These findings also are in line with other researchers' findings.

In an evaluation of carefully designed pregramme for improvement of listening, Pratt (109) in 1955, found the correlation between listening ability and intelligence to be positive upto .66. The result supports the popular hypothesis.

As mentioned earlier, Spiker (124) in 1963, investigated into the problem of relationship between the retention of intellectually normal and retarded

children and their achievement on listening comprehension test. The study indicated overall listening comprehension (immediate recall) and comprehension loss scores of intellectually normal and retarded children did not differ significantly. It was also found that overall percentage of gain in retention of the retarded was significantly better than that of the normals. Since the study indicates that retardates learn and retain more from heard material, it makes strong case for training in listening comprehension.

Thomson (129) in his longitudinal study of auditory discrimination correlated scores of auditory discrimination with intelligence scores. They were found to be highly correlated. how much?

In 1964, Ross (119) investigated the relationships between listening ability and other measures, of which intelligence was one. Listening showed a correlation of .76 with verbal intelligence, .28 with nonverbal and .51 with total scores of intelligence. The results were very significant indicating that there is much in common between verbal intelligence and listening, which could be the verbal factor or written language factor.

In an investigation carried out in 1964, similar results were found out by Lundsteen (88). With a project of teaching and testing critical listening in 300 fifth and sixth grade pupils, a programme of

critical listening instruction was devised. A critical listening test with seventynine objective type test items was constructed. The correlation between scores of Lundsteen Test of Critical Listening (LTCL) and California Test of Mental Maturity (CTMM) (Form E) verbal, nonverbal

CTMM	LTCL
Total: Verbal and nonverbal	.39
Verbal	.43
Nonverbal	.26

It can be observed from the results that it has positive correlation with intelligence but not that high a correlation as has been reported by other investigators. It is almost same as the correlation got by Ross Raman (119) regarding nonverbal test scores.

In 1966, Winter (140) with an objective to find out how much learning takes place through listening, administered form 4A of STEP Listening Test and California Mental Maturity Test to 536 pupils of grades four to six. He correlated the scores and found highly significant but moderate (e.g.) relation between listening and intelligence. The study implies that many factors other than intelligence need to be taken into consideration while examining skills in listening.

Legge (82)in 1966, with a purpose to ascertain whether there were significant differences in listening ability between groups of children at each of the fourth, fifth and sixth grade levels who had been grouped as: (a) high intelligent versus low intelligent; (b) high achieving versus low achieving; (c) overachieving versus underachieving; and (d) on the basis of sex differences. High intelligent subjects and low intelligent subjects were top and bottom twentyfive per cent respectively of the total population at each grade level. On the same line high achievers and low achievers were chosen on standardized achievement test scores. Overachievers were those whose achievement levels were as much as or more than one-half of one year above their mental age grade placements. Underachievers were those whose achievement levels were one half of one year or more below their mental grade placement scores. The conclusions were quite interesting. Significant differences beyond five per cent level were found between the listening abilities of the upper and lower twentyfive per cent of the groups as categorized on the basis of intelligence test measures and between the listening abilities of the upper and lower twentyfive per cent of the groups based on achievement test scores. No sex difference was found.

In a comparative study of listening ability of blind students with the listening ability of sighted

students, Rathgaber (114) also compared achievement and intelligence of 304 children of fourth, fifth and sixth grades of both the sexes. Positive relationship was found between I.Q. and listening ability for both the groups.

In studying the effect of listening test scores with the change in method of presentation, Wenger (134), in 1967, tried to find out the relationship between intelligence and listening test scores. The analysis of data in terms of intelligence indicated correlations among listening and intelligence from .05 to .57. No difference of significance was found in the relationship between total intelligence and listening among the three groups based on age. He then concluded that the wide range of correlation coefficients between intelligence and listening test scores among the age and intelligence groups seem to indicate that the reliability of this relationship at any given testing is apt to be affected by the factors of age and/or intelligence of the children being tested.

Adams (1), in 1968, tried to evaluate a programme designed to develop awareness of propaganda techniques where it was also attempted to find the correlation between the scores of test of awareness of propaganda technique and intelligence. The correlation was found to be moderately high (.55).

Butler (25), in 1970, compared good and poor listener pupils of sixth grade in listening ability. He also compared the two types of pupils regarding listening scores and intelligence. It was found that good listeners tended to be higher in intelligence than poor listeners.

All the investigations reported here have shown positive correlation between intelligence test scores and listening comprehension test scores. It ranges from .39 (Lundsteen) and .75 (Ross) and .76 (Ross) for verbal intelligence tests. The correlation with nonverbal intelligence scores and listening comprehension has been reported by two investigators and are .26 (Lundsteen) and .28 (Ross Roman). The varying levels of correlation reported are likely to be due to differences in the type of tests used in various investigations and differences in size and age of the sample.

4. Listening Comprehension and Reading Comprehension

Since reading and listening are receptive skills, it is reasonable to expect that they would be based in part, at least on common skills and therefore would be closely related. Greene, Gorgenson and Gerberich quote following common objectives, situations and skills in details: They are:

I. Objectives in Reading and Listening:

A. Typical life situations which lead children and

adults to read or listen.

1. To find out what is going on.
2. To find out one's way about.
3. To understand directions and assignments.
4. To verify spelling, pronunciations, meanings, use of words.
5. To secure answers to specific questions.
6. To gather information for fuller understanding, or for informing or convincing others.
7. To learn how to act in new situations.
8. To work out complicated problems.
9. To reach conclusions as to guiding principles, relative value, or cause-effect relationships.
10. To identify and resolve propaganda.
11. To search for and discover the truth.

B. Typical recreational situations which lead children and adults to read or listen:

1. To relieve everyday experiences.
2. To have fun or sheer enjoyment.
3. To escape from real life.
4. To satisfy curiosities about strange time and places, human nature and motives.
5. To enjoy readymade emotional reactions through hearing or reading romantic tales sentimental verses, mystery stories.

6. To enjoy sensory imagery.

7. To enjoy sentiments and ideals expressed by others.

8. To enjoy rhythm and quality of expression in both prose-poetry.

II. Basic Reading and Listening Knowledges, Attitudes, and Skills:

A. Responding to the motive, problem, or purpose of a statement.

B. Directing attention to the meaning of what is read or heard.

C. Developing fluent, accurate perception of word forms.

D. Recognizing and using new words and meanings.

E. Securing an adequate understanding of what is read or heard.

1. To grasp meanings of words appropriate to the context.

2. To fuse word meanings into a chain of related ideas.

3. To recognize the relationship and importance of ideas.

4. To handle unusual word order, complex sentence structure, abstract ideas.

5. To interpret meaning in the light of the total setting; the authors or the speakers tone and intention.

6. To supplement the specific meanings by reading between the lines, drawing inferences, seeing implications.

F. Reacting critically to what is heard or read:

1. To realize the significance of the ideas presented.

2. To judge the validity of the ideas presented.

3. To evaluate the soundness, accuracy or completeness of the author's or speaker's conclusions, and the accurancy of his reasoning.

G. Blending the ideas acquired with previous experience:

1. To acquire new insights.

2. To reaffirm or modify previous understandings.

3. To solve critical problems.

4. To acquire rational attitudes.

5. To modify behaviour.

6. To broaden interest.

Devine (36) in his study: "Reading and Listening" conducted in 1968 made some observations about relationship between reading and listening notes some of the matters to which both apparently seemed to be related, viz. (i) both as intake processes are complexes of related skill components; both have same higher mental processes; (ii) the correlation between reading and listening tests scores are high; (iii) the teaching of one seems to affect the other. Dawson and others (38), Strickland (126) and Anderson (7) and such other writers of teaching language arts in schools note certain similarities between the two skills which coincide with those noted above. There are several researches which reveal high correlations between listening

comprehension and reading comprehension test scores. All their researches seem to emphasize the similarities between the two.

In a study in 1948, Nicholas (99) found a correlation of 0.46 between listening comprehension test scores and reading comprehension test scores. Experimenting with 150 college students Blewett (16) found correlation of 0.39 between listening comprehension and reading comprehension. He tried to explain the low correlation thus: "The relatively low correlation between scores on the listening test and those on reading test seemingly indicates that despite some overlapping, these two tests measures dissimilar skills".

In 1955, Hampleman (63), with an objective of comparing the listening and reading comprehension ability of fourth and sixth grade pupils, gave ten selected passages from Durrell-Sullivan Reading Achievement Test. He randomly assigned 304 pupils into two groups. One group listened those ten passages varying from 100 to 700 words in length. Multiple choice questions were employed for testing. Hampleman's study indicated that: (a) sixth grade pupils were significantly superior to fourth grade pupils in both listening and reading comprehension. (b) Listening comprehension was significantly superior to reading comprehension for fourth grade and sixth graders, boys and girls. (c) Listerning

comprehension was superior to reading comprehension with difficult material.

In a study of improvement in listening with 5 weeks training programme, Pratt (109) found a correlation of 0.64 between scores on listening ability and Iowa Silent Reading Test. The sample was of sixth grade pupils.

In an experimental investigation into the relative merits of listening and reading comprehension for boys and girls of primary school age King (76) divided the sample on the basis of intelligence scores, into groups A and B, having approximately equal number of pupils with same mean and range of intelligence. King selected ten passages (a to j) of hundred words. Group A listened to passages a to c in oral form and read passages f to j in visual form. For group B, the order was reversed, that is, a to e were read (visual form) and f to j were listened to. It was found that T- factor viz., method of response, auditory or visual, was significant at .05 level.

In 1964, Ross (119) in his investigation on finding relationship between reading and other factors found a substantially high correlation of 0.74 between listening and reading; and 0.76 between listening and intelligence. He reflected on the findings stating: "The

high relationship between reading and verbal intelligence, and the comparatively low relationship between reading and listening when verbal intelligence partialled out, suggest that the relationships between reading and listening were spurious, since both appeared to emanate from the relationship with verbal intelligence".

To determine the dependence of these variables, the coefficient of alienation was computed for reading, listening and intelligence. The coefficient of alienation for listening and reading with intelligence partialled out was .88. The result indicated that there was little dependence of one on the other. The coefficient of alienation between listening and intelligence was .46. The result suggests that about a half of the listening ability of these pupils could be traced to something other than intelligence.

In 1966 with the objectives to find out a relationship between listening, reading comprehension and vocabulary as measured by achievement tests, Winter (140) found the correlation between listening and reading to be 0.53, for all grades (fourth, fifth and sixth), 0.51 between listening and reading vocabulary, 0.54 between total reading and listening skills. It was also observed that to a moderate degree the child who is a good listener will also be a good reader.

Hoop-Wieste de (68), in 1966, found positive correlation between listening and reading

Vineyard and Bailey (133) and Brown (18) reported results of correlational studies and established a meaningful relationship between reading and listening, even when other factors, such as intelligence and school achievement were held constant. All these researches showed positive correlation between the two.

It is often assumed that the teaching of reading skills tends to improve listening skills and that instruction in listening tends to improve reading. The assumption is supported by a few of the studies, but its validity remains somewhat, a controversial question. The studies that are relevant in this regard are cited below.

Skiffington (122) in order to find out the effect of improvement in auding ability on reading achievement of average eighth grade pupils equated two groups on reading achievement and intelligence. Twentysix pretaped lessons were administered to only the experimental group, at the rate of three per week for a period of nine weeks. He found significant change in reading achievement of those who had auding training. He also found significant difference in paragraph comprehension and ability to alphabetize of those who received the auding training and those who did not, with the former

making a greater gain.

Valkenburg (132), with the help of two programmes of listening, found that the programme were effective in increasing listening as well as reading comprehension.

Ballanger (9), in order to note the effect of a planned daily programme of listening on the development of reading achievement of first grade pupils, gave twentytwo weeks training to two groups. The study indicated that the achievement in reading scores of students of different ethnic groups was affected by concentrated listening programme used in this study. Seymour (121) found that college freshmen who were enrolled in one semester course in listening showed a significant increase in reading ability. These studies support the assumption that training in one skill does affect the other. However, a few investigators note quite contrary results.

Lewis (83), in 1963, tried to observe the effect of instruction in auding on 167 freshmen students, along with the instruction in reading improvement. The two groups - experimental and controlled -were initially equated on reading, listening and intelligence tests. The nature of instruction was a weekly lecture related to auding and exercises in auding. His observations

were:

1. The experimental treatment was insufficient to effect any increased performance in reading. That was significantly different from that of control group with instruction confined to reading improvement.

2. Low correlation was found between the pronounced increases in reading improvement and slight changes in listening performance among students in both groups.

3. Experimental students were not penalized in reading improvement as in control group.

4. No significant differences in listening performance were found between the two groups at the end of the experimental period.

Hollingworth (67), conducted a study to compare the effect of two listening programmes on reading achievement and listening comprehension on 535 eighth grade pupils, equated on intelligence. The lessons on listening were given at the rate of one lesson per week for ten weeks. No improvement was found in childrens' reading performance after training.

Reeves (115), to determine the effect of training in listening on listening achievement and reading achievement, gave training to the experimental group of 228 pupils. Thirty tape-recorded lessons of fifteen minutes were given to fourth grade pupils for fifteen weeks. He concluded that no significant difference was found between the mean gain listening and reading scores of the two groups after experimental treatment.

In short, the studies undertaken do not seem to give a clear picture about utility of training in listening for reading. Whenever correlations between listening and reading comprehension were found out they were positive and, on an average, moderately high.

5. Listening Comprehension and School Achievement

A few studies are available to show a generally strong positive relationship between listening ability and scholastic achievement. Seymour (121) reports a number of studies which show significant correlations with listening at the college freshman level. A few are cited below in brief:

Nichols (99), in search of factors in listening, correlated scores of listening comprehension test and scholastic achievement (high school rank) and found a correlation of 0.28. Though positive, it was, perhaps, low.

Still, Dona (125), in 1955, attempted to find out the relationship between listening comprehension and school achievement. Brown Carlsen Test of Listening Comprehension was administered to 312 students of nine to twelve grades. The correlation between listening comprehension and school grades for the total population was 0.76; for grades 9 to 12, they were 0.65, 0.71, 0.62 and 0.68 respectively; for boys, it was 0.65 and 0.71 for girls. Thus all correlations were positive and high.

Blewett (16), in 1951, found a correlation of 0.37 between scores on listening test and scholastic achievement (grade point average) and he suggested that school marks and listening comprehension were not significantly related.

Murphy (96), in 1962, conducted a study to find out relationships between listening ability and school grades in four major subjects, Science, Mathematics, English and Social Studies. The sample consisted of 317 high school seniors; 165 boys and 152 girls. The average of grades which were achieved in nineth, tenth and eleventh were calculated. They were correlated with Brown Carlsen Listening Comprehension Test scores. The correlations found were as follows:

Subject	Boys	Girls	Total
English	.61	.55	.53
Social Studies	.52	.38	.41
Science	.57	.55	.52
Mathematics	.57	.47	.49

The correlations are positive but moderate.

In 1965, Hoop Wieste de (68) tried to examine the effect of a few variables on the aural acquisition and retention of sentences. As a part of the study, scores on the listening test were correlated and it was found that listening was positively related to reading, English and all school subjects.

Butler (25), in 1970, found a correlation of 0.46 between listening and school achievement in case of good and poor listeners taken together and 0.32 in case of only poor listeners.

Winter (140), in 1966, found a highly significant correlation of 0.57 between listening comprehension scores and arithmetic skills - reasoning computations and understanding of basic concepts.

Legge (82), in 1967, compared listening scores with intermediate grade pupils who were categorized according to intelligence, total achievement and sex.

Significant differences beyond the five per cent level were found between the listening abilities of the upper and lower twentyfive per cent of the groups made on achievement test results. The great differences in listening ability between high achieving and low achieving pupils at all levels tested suggest that listening plays a significant role in school achievement. On the basis of the data as collected, listening ability was found to be highly related to scholastic achievement, to a greater extent than it was to intelligence. The result also indicate the need for developing listening ability to the greatest possible degree in all children.

Condon (33), in 1965, tried to determine the significance of difference between good and poor listeners in ninth, eleventh and thirteenth when they are stratified according to eleven predictors like age, sex, socio- economic status, marks in school, yearly grade point average, yearly English grade point average scores on standardized ability test, etc. He found coefficients of correlation for English grade point average, listening and total grade point average and listening and intellectual and scholastic aptitude test from 0.51 to 0.86. So it was concluded that listening is positively related to intellectual ability, grade point average in English and grade point average in all school subjects.

It can be observed from the foregoing findings that the correlations of total school achievement and listening comprehension range from .28 (Nichols) to .76 (Still Dona). Except these two extremes others have found moderate relationship between school grades and listening comprehension test scores. Other researches also indicate that listening mode or listening as a learning media is more suitable than the other media for poor listeners, under and low achievers and also for culturally deprived children. They score high when material is presented orally. The findings also suggest that listening plays a significant role in school achievement.

6, Miscellaneous Studies

A few studies in this area do not fall under any of the heads described above, but these, being relevant, have been summarized below.

Furbay (49),in a descriptive study, attempted to find out the influence of physical arrangement of the audience upon response to a speech. Speakers are advised to utilize the psychological characteristics of crowd relationship for easier communication processes. With those mechanisms together with their homogeneous, emotional and irrational responses appear to operate more completely when arrangement of the audience

provides closer contact in a group. Furbay tried to observe the responses in both scattered and compact sitting arrangements. In this study, psychological mechanisms of collective behaviour and rhetorical principles of public speaking in terms of sitting arrangements were also studied. The content of the speech was against the Nuclear Testing. It was a recorded speech. Wood Word Type Shift-of-Opinion Scale was used. Retention was tested on multiple choice questions. The findings were: (a) No measurable significant difference was found regarding following matters: (i) likes and dislikes of audience regarding the speech, (ii) likes and dislikes regarding speaker as a person, if any, (iii) estimation of audience regarding the effectiveness of the speech, (iv) retention - the degree to which they indicated an awareness of how other listeners were responding to the speech. There was a significant difference at the 5 per cent level of confidence in shifts of opinion between scattered and compact audiences, with the compact audiences showing the lower ratio of opinion change. Judged by this standard alone, the speech was less effective when presented to a compact audience. The compact audiences also tended to be more "hostile" before hearing the speech, in that their opinions were more nearly conformed to present national policy. This difference in initial attitudes (significant only at ten per cent level) seemed to be influenced most by the initially hostile subjects in

compact audiences, who showed the least inclination to register favourable shifts of opinion. Furthermore, women contributed more to the difference between experimental group than did the men, though the difference was significant only at 10 per cent level.

A comparison of recall scores revealed a highly significant gain (at one per cent level) in factual information from hearing the speech over the scores of a control group who did not hear the speech and there was no significant difference between experimental group in this respect. If shifts of opinion were based on intellectual responses to factual content, it may be that heightening of crowd responses in the compact audience inhibited rational responses and developed a homogeneity of inaction. Whereas a person tends to be more emotional in a crowd, his critical, evaluative capacities are theoretically more acute when he is in comparative isolation.

Paulson (108) undertook a study: (a) to determine whether or not a college audience registers a greater shift of opinion and higher retention when argument on both sides of a controversial issue are stated by the speaker than when only arguments on the side he advocates are given; (b) to determine whether or not college audience registers a greater shift of

opinion and higher retention when listening to a speaker with high prestige than when listening to a speaker with low prestige; (c) to determine whether the shift in opinion and accuracy of retention in the above situations are related to sex, initial attitudes, intelligence or amount of education of the members of the audience. The sample consisted of 579 men and 379 women of speech and communication classes. Before the speech which was in favour of decreasing the age for voting was delivered, the opinion was secured by Wood Word Shift Opinion Ballot, on which they indicated whether they are in favour, undecided or against the speakers thesis. After that approximately on half of the sample listened to the recorded speech in favour of decreasing the age for voting. The other half of them listened to the pre-recorded speech with arguments for both the sides. The speaker was once introduced to the audience as a "sophomore". The next time, the speaker was introduced as a "professor" of political science of Chicago University and as a writer and former president of Political Science Association. Opinion ballot sheet was given again and a retention test consisting of fifty multiple choice items was administered. The results were: (a) The speech presenting arguments for both sides did not secure greater shift of opinion than did the one-sided speech. (b) The retention scores of males on both side speech were significantly higher than those on one-sided

speech. No difference in womens' scores between both types of speech retention test was found. (c) Men who listened to the "professor", shifted significantly than men who listened to the "student". In this case the difference between women's scores on the two speeches was not significant. This indicates that men gave more importance to prestige than women. (d) There was no significant difference between the retention scores for men and women who heard the "student" and those who heard the "professor". (e) Those initially undecided members shifted the most, those initially favourable for the speech shifted next most and those initially unfavourable members of the audience shifted the least, differences in each case been significant. (f) Those initially favourable to the speaker's thesis had significantly higher retention score. (g) Women shifted significally more than men; men retained significantly more than did the women. (h) Those who shifted in opinion had significantly higher mean scores in retention than those who did not shift.

Condon (33) tried to determine the differences between good and poor listener in grade nine, eleven and thirteen when they are stratified according to age, sex, socio-economic status, extra-curricular activities, choice of favourite subject, and such other variables. Brown-Carlsen Listening Comprehension Test (BCLCT) was

tap-recorded to hold constant the factors of time and examiner influence. The size of the sample was of 770 of boys and girls. The 25 per cent of the top and 25 per cent of the bottom of BCLCT were used for comparisons of good and poor listeners respectively. Findings: (a) No significant difference was found between: (i) mean listening scores of those who chose a Language Arts subject as their favourite and those who chose some other course as their favourite. (ii) mean listening scores of boys and girls in top 25 per cent, nor between boys and girls in bottom 25 per cent in two grades in one community, (iii) mean listening scores of male and female students in the three grades. (b) The significant difference was found between: (i) mean listening scores of "good" and "poor" readers; (ii) ability test scores of those of upper and lower quartiles of BCLCT, (iii) There was a significant difference between the mean listening scores of students from families of 'high' socio-economic status and those from families of "low" socio-economic status in two grades in one community. (iv) mean listening scores of students who were 'active' participants in 'extra' curricular activities and those who were "non-active" participants. It was concluded that socio-economic status and amount of extra-curricular activities are probably correlates of listening. Since the mean listening scores of both poor and good listeners

increase as advance through grades is led to believe that students do perform better on a standardized listening test as they mature.

Alarkgraf (4) made a survey of listening pedagogy in American teacher training institutions. The purpose of the survey was to find: (a) whether listening was being taught in teachers' training institutions; (b) whether the materials concerning the teaching of listening was being taught in teachers training institutions; and (c) whether prospective teachers had opportunities to observe the teaching of listening and were given opportunity to teach listening; (d) what was the current attitude concerning the teaching of listening. The findings were: (i) Out of 670 institutions, 406 had special methods of teaching speech and English; (ii) out of 406 institutions, 44.5 per cent (298) taught a unit on methods of teaching listening. Out of 298, three institutions gave specialized courses in listening. (iii) Out of 670 institutions, in 134 (i.e. 33 per cent) institutions, listening was taught as a separate course and 300 institutions taught listening as an integral part of the course rather than as a separate unit. (iv) Twentyseven institutions (6.7 per cent) had a language laboratory. (v) Two hundred and fiftynine institutions provided opportunities for observation of teaching listening. (vi) Two hundred and sixtynine

institutions (40 per cent) provided teaching of listening for practising teachers.

In 1959, Campbell (28) tried to find out differences, if any, in audience's retention and comprehension of poetry, resulting from silent reading and from oral interpretation; also, to decide how far retention and comprehension of poetry were attributable to the two methods. He formed three groups of pupils of speech and English course. Group A received training in oral interpretation. Group B received training in silent reading. Group C received neither of the above two. Poems were read loudly (not on tape-recorder). Findings were: (a) Oral interpretation was superior to silent reading neither in retention nor in comprehension and is, in fact, significantly inferior in terms of retention. (b) Audience trained in oral interpretation comprehend better than the audience with training in neither oral interpretation nor silent reading, but not better than the audience trained in silent reading, and (c) audiences trained in silent reading retain more than audience with training in neither oral interpretation nor silent reading, but not more than audiences trained in oral interpretations.

Anderson and Fairbanks (6) studied the relationship between the abilities to understand words, read and

heard. Inglis Test of English Vocabulary Form C was used for testing reading vocabulary. Form B of the test mentioned above was used only for testing hearing vocabulary. It was recorded phonographically. An unselected sample of fifty words were taken; they were read by a trained speaker. After an interval of three seconds the reading was repeated, substituting the comparison word for the italicized word. Then, after an interval of five seconds, the original expression was read again, followed in three seconds, by the same expression with the second comparison word substituted. After another interval of five seconds, this procedure was repeated for the third comparison word and so on for all the five words. Fifty items separated by five seconds intervals were recorded in this way. After hearing each pair of sentences or expression in each item, subjects recorded 'S' for the same in meaning and 'D' for difference in meaning. The correlation of reading vocabulary was high. The relationship between reading vocabulary and reading ability is significantly more accurate than between hearing vocabulary and reading ability. Reading ability is more closely related to intelligence than hearing to intelligence. Yet the difference was not significant. As the correlation between the two tests was very high, it was concluded that vocabulary ability was a centrally determined function, operating on the average, independent of the mode of presentation of material.

In order to find an answer to the question "do students differ in their ability to answer objective type questions read to them as compared with the ability to answer similar questions read by themselves?" Westover (135) gave eight listening and reading tests to 198 students of college level. In tests which were on two chapter of psychology, consisted of 40 objective type questions (multiple choice and true-false type). Two forms with 20 questions in each were developed. After the discussion on the two chapters the subjects were required to fill out self-tests. One form of each test on two chapters was administered by instructor's reading the questions aloud twice, while the students listened and wrote the letters of the answers on an answer sheet. The other form was memeographed and was read silently and then answered. The forms of the test and methods of administration were altered. Students liked the presentation of tape-recorder because of clearness and greater volume. He concluded that "it appears that there are no group differences among college students in performance on tests administered by listening and by reading; (b) that students preference for listening and reading tests has almost no relation to their performance; (c) that, although more students prefer reading tests to listening tests, experience with both types of testing reduces the preference for reading mode of testing; and (d) that, listening tests are about

equally as fair as reading tests to students of high and low scholarship and high and low mental ability. (e) Finally, as far as testing technique is concerned, the finding suggests that the teachers might well vary the method of presenting objective tests to their students.

Wingarden (137) surveyed the four parts in the State of Washington to find out whether there was a directed, planned listening instruction in the intermediate grades. Three methods of teaching listening were arbitrarily defined and designated as: (a) direct, planned instruction; (b) teaching listening as a part of reading programme; and (c) incidental instruction. The sample was of 300 teachers of fourth, fifth and sixth grades. The teachers spent on an average, 22 hours per month in teaching listening. The median percentage of time for using the direct planned approach and incidental were 21 per cent and 36 per cent respectively. The median percentage of time for using the direct, planned approach for fourthm, fifth and sixth grade teachers were 23, 21 and 11 hours per month respectively. For female teachers, the time was 23.6 hours per month and for males, it was 19.4. Teachers were very diverse in their estimates of the amount they teach listening. They tended to use incidental approach more than direct, planned approach. Listening instructional practices seemed to be affected very little by the amount of

training and experience of the teachers or size of class, school or district.

Aufricht Hedda (8), in 1959, attempted to find out certain factors of auditory functioning in oral language in a group of children with functional articulations problem, with matched group of normal speaking children. It was assumed that self-perception was necessary in acquiring listening skills. Self perception was defined as the child's ability to detect defects in his own speech when comparing it with the speech of others. Seven listening tests were prepared, viz.,(a) Auditory Pattern Matching Test, (b) Paired Word Discrimination Test, (c) Word Building Test, (d) Live Voice Self Percept Test, (e) Live Voice Self Percept Test (Tape-recorded), (f) Imitation Test, and (g) Sound Seeking Test, Self-evaluative questionnaire was prepared. It was concluded that: (a) no significant difference was found between boys and girls as well as between age. But significant difference was found between normal and defectives. (b) Though defectives were equal in evaluating speech of others, they were inferior in evaluating own speech. (c) Defective speakers were inferior to the normal speakers in their imitative abilities.

In fine, it is very difficult to generalize from the studies noted in this section, each research provide variable and interesting information for teachers and

guidelines for further research.

B. Tests Available on Listening Comprehension

Standardized tests for the measurement of the comprehension of orally presented material in English at all school levels are few; and there is none in India. However, there are a few studies which have provided the basic material for construction and compilation of the test of listening comprehension. In this section the four available standardized tests (from U.S.A.); studies leading to construction of tests and the tests constructed for training in listening are summarised here.

Four standardized tests for measuring listening comprehension available in U.S.A. are:-

1. Brown - Carlsen Listening Comprehension Test - 1955 (24)*

(2) Sequential Test of Educational Progress Listening Comprehension Test - 1956 (42).

(3) Orr-Graham Listening Test - 1968 (102).

(4) Assessment of Children's Language Comprehension - 1969 (48).

Tests under the process of standardization at the

* The number in paranthesis indicates the serial number in the Bibliography at the end.

time of reviewing are:

5. Oracy Research Listening Comprehension Test (for CSE Examination) - 1971 (137).

6. Oracy Research Listening Comprehension Test (for 11-17 age group) - 1971 (137).

7. Primary Listening Ability Test - 1971 (93).

A few other tests have been constructed (though not systematically standardized) for studying the nature of listening comprehension or for training in listening or for knowing its relation to other factors. The tests which have been either compiled or constructed for studying the nature of listening through factor-analysis are:

8. Factoral Analysis of Auditory Function - Karlin (73).

9. Speech Perception - Hanley (64).

10. Listening Comprehension - A Factorial Analysis - Spearritt D. (123).

11. Lundsteen Critical Listening Test - Lundsteen (88).

The tests constructed for training listening comprehension and studying its relation to other

factors are:

12. Factors in Listening Comprehension - Nichols (99).

13. The Construction of Diagnostic Test of Listening Comprehension - Brown (21).

14. The Construction of a Test of Listening Comprehension for Second, Third and Fourth Grades - Wright (143).

15. The Development of Listening Comprehension Tests for Michigan State College Freshman - Dow C.W. (37).

16. Listening Experiments - Blewett (16).

17. Experimental Evaluation of a Programme for Improvement of Listening - Pratt (109).

Each of the above tests is introduced very briefly in the pages that follow:

1. Brown Carlsen Listening Comprehension Test

This test constructed in 1965 was the first standardized test for measuring listening comprehension of high school students and college freshmen. The sample for standardization consisted of 1367 students in all. It has two forms - Form AM and Form BM. Each of the

forms of the test calls for pupils' reactions to seventy-six test items divided into five parts:

Part A - Immediate Recall (17 items).

Part B - Following Directions (20 items).

Part C - Recognition of Transitions (10 items).

Part D - Recognizing Word Meanings (21 items).

Part E - Lecture Comprehension (8 items).

The sample for establishing the norms for grades 9-12 involved a total number of 25 schools; the college norms were based on a sample of 300 freshmen. Usual standardization procedure was followed to have two equivalent forms, viz., (a) administering an untried test (form BMP of 96 items to a random half of the sample, the other half of which took form AM; (b) discarding 20 items from the experimental test on the basis of item analysis data so as to match the remaining 76 items in form BM as closely as possible with the 76 items in form AM with respect to difficulty and validity, (c) rescoring the retained items for the same sample, and using the data from this sample to establish equivalent tables or norms for forms AM and BM within grades reliability on the basis of Spearman-Brown Formula estimates was about 0.86, and on a between-forms basis it was about 0.78. The test

material was presented orally - was read by a local examiner. Mean validity indices were for 28.4 for form AM and 34.0 for form BM. The correlations between the Brown-Carlsen Listening Comprehension Test and several mental abilities ranged, in the case of high school students, from .67 to .78 and for college freshman, from .22 to .55. Listening comprehension scores showed low correlation, .31 to .38, with a variety of reading measures for college students and .47 to .66 for high school students and adults.

2. Sequential Test of Educational Progress Listening Comprehension Test (STEP)

The STEP listening tests were designed in 1957, to measure a student's skill in understanding, interpreting, applying and evaluating what he listens to. The items in each form of STEP Listening Comprehension Test were divided into the three major aspects of listening skill in the following proportion; approximately:

Plain Sense Comprehension	35 per cent
Interpretation	40 per cent
Evaluation and Application	25 per cent

STEP listening at each level is consisted of twelve to thirteen passages (from 25 seconds to over 3 minutes) with questions, on each passage. The listening material - passages, were read by the examiner. The

passages were carefully chosen to be typical of the things that might actually be spoken to students in school situations. As far as possible, the language used was the language a student listens to rather than the one he generally reads in a book. Each listening test included material of each of the following types: (a) Directions and simple explanation. (b) Exposition, (c) Narration (simple and figurative), (d) Argument and persuation, (e) Aesthetic material (prose and poetry). The test was constructed for four levels; from 4th grader to college freshman. Each level test consisted of two forms - A and B; the number of items included in each form was either 72 or 80 test forms for the same levels had equal number of items. All items were objective type questions mainly multiple choice. The tests were item analyzed and normed. Within the grades correlation with intelligence (SCAT-V) averaged around .75.

Test	Reliability
Form 1 A, Grade 13	.90
Form 2 A, Grade 11	.88
Form 3 A, Grade 8	.89
Form 4 A, Grade 5	.93

3. Orr-Graham Listening Test (OGLT)

This was the third test to be constructed, in 1968, in the area of listening comprehension. It was

designed to be specially appropriate for disadvantaged eighth grade boys. It had two forms, A and B. The announcer on tape read both the question and the options twice. The tape-recorded material for the test consisted of topics like spies, baseball players, and cowboys. The test was developed to elicit motivation through increased interest and provide a test instrument which was not dependent upon reading programme and to identify college potential among the disadvantaged. Alternate-form realiability was reported to be .74. This correlation was used "to estimate the reliability of both the forms given together. After applying the Spearman-Brown formula, the authors derived a resulting reliability of .85 for the two forms together. The concurrent validity in the form of correlation between OGLT and STEP listening was .69.

4. Assessment of Children's Language Comprehension (ACLC)

The test is the auditory part of the conventional reading comprehension test. It was constructed in 1968 by three scholars (48). It was meant for the age group two to six. A series of short paragraphs was presented by tape-recorder; and after each paragraph was presented (by tape-recorder) a number of multiple choice items. Two forms were available, each containing 43 multiple choice items. (Content for the paragraphs was suggested by the interviews with

20 Negro children in a low income neighbourhood in Washington, D.C.). Most of the stories concerned sports, adventure stories and natural love. No data on reliability and norms were given. Comparisons of mean scores in different cultural and racial groups were made.

5. Oracy Research Listening Comprehension (for CSE Examination)

This test, prepared by Oracy Research Unit in the University of Birmingham, was first reported by Wilkinson (137) in 1970. It was designed from the linguistic rather than the psychological standpoint, and attempted to avoid the defects of previous tests, viz. (a) Large number of workers in the field, while constructing listening comprehension tests have used written material spoken. It took as the basis of its material, the spoken language. For instance, spontaneous recorded conversation made up one test; and included linguistic concepts such as register and style. The subtests were: content, detail, transitions, word meanings; listening for meaning; register and style. (b) Brown-Carlsen Listening Comprehension Test and other similar tests were meant to be the material read aloud, and good and poor reading ability can among other things, make a significant difference to the scores the candidates obtain. The test under discussion at present used tape-recorder for the presentation of test material and questions. The evaluation was done by

multiple choice answers of the subjects on answer sheet provided to them. Thus, complete objectivity was achieved. The total running time was 39 minutes. The test is meant for CSE examination.

6. Oracy Research Listening Comprehension Test (for 11-17 Age Group)

Oracy Research Unit in the University of Birmingham constructed measures of listening comprehension for the secondary school age range of 11-17 years. The description of the test is given by Wilkinson (137) in 1970. The total test battery consisted of:

1. Oracy Research Listening Comprehension Test.
2. AH_4 Verbal and Nonverbal (N.F.E.R. - 1968).
3. Bate Secondary Reading Test.
4. Eysenk Junior Personality Inventory.

The battery for listening consisted of tests on: content; phonology; register; relationship; and prediction. All the tests were in the form of real or simulated conversation. The tests were not intended merely to be descriptive of listening abilities at various ages, but also to have a "washback" effect in that they draw attention to material which it was thought valuable to listen to. The test material and questions were recorded

on tape. The evaluation was done by multiple choice item. The sample was of 180 pupils. Results of the trial were: (a) Correlation between listening comprehension and I.Q. was .60; between listening and reading it was .75 and between listening comprehension and vocabulary, it was .73. The correlation between listening comprehension and personality was .027. There was nothing in evidence to suggest that subtests were duplicating one another (critical ratio $\neq$ r = .144).

7. The Primary Listening Ability Test

The test constructed by Corol Francis McPaddan (93) was devised for the measurement of listening ability of children in grades one, two and three. A pool of 74 items measuring nineteen skills and three levels of comprehension was devised. The items did not require reading or writing of either numerals or letters. Pictures of familiar items were used as place-finders. The examinee put cross on the picture beside the place-finder which best fit the verbal stimuli except for questions 33 and 34. These two questions were answered by drawing lines between pictures. The verbal stimuli were presented by a tape-recorder. Both on an 3¾ ips tape. The item pool was administered to six randomly selected class, and the results were analysed for difficulty and discriminating power. Thirty items were selected for the test. The test

was administered to another sample of six randomly selected classes. It was found that odd even reliability coefficients for each grade and for the total sample were significant at .01 or below. The analysis of variance of the scores was significant at .01 level. Significant correlations were found between the listening test and intelligence, reading achievement and the achievement of school related skills.

8. Factorial Analysis of Auditory Function

In 1942, Karlin (73), in order to have a factor analysis of auditory function, studied the tests of auditory function factorarily. The tests have been divided into nine sections, viz., (a) Pitch Domain, (b) Loudness Domain, (c)Quality Domain, (d) Time Domain, (e) Rhythm Domain, (f) Marking Domain, (g) Auditory Synthesis, (h) Auditory Memory and (i) Visual Memory.

Two hundred high school students of different ages and intelligence levels were tested on these tests. The centroid method, rotated oblique simple structure was used.

Group factors were identified as pitch,quality, discrimination, loudness, discrimination, auditory integral for perceptual mass, auditory resistance (synthesis and analysis) speed of closure, auditory span

formation; memory span (auditory - visual), memory or incidental closure, and an unidentifiable residual plane.

2. The pitch and quality categories boil down to a single basic process; the loudness tests appear more complex than pitch quality tests and require at least two distinct processes for successful performance; the time tests do not define anytime factor but play an integral part in several of the other auditory factors.

3. Rhythm does not appear to be an auditory factor primarily.

4. The phenomenon of auditory analysis and auditory synthesis are subsumed under a single functional system, a resistance to distortion factor.

5. Both auditory and visual memory functions appear highly specific but overlap in their specificity to produce several central factors independent of sense modelity, notably a general span factor.

6. The conventional auditory acuity tests have little predictive value for auditory behaviour in more complex social situations for normally-hearing subjects.

7. For high school subjects neither age nor intelligence play any important part in most of the auditory functions.

9. Speech Perception

In 1956, Hanley (64) attempted to determine, by method of factor analysis, the underlying common abilities or unities of the area of speech for listeners. Hundred and five university students were given thirtytwo tests. There were: pitch, loudness, time, rhythm, tonal memory, silent intervals, low pass filter, high pass filter, spondee, threshold, limerick masking, reading masking, memory for female voices, memory for male voices, stuttering masking, nonsense threshold, PB threshold, clipped discrimination, clipped PB's, sound discrimination, interrupped discrimination, interrupped vocabulary, interrupted sentences, reverberant PB's, reverberant sentences, vocabulary, anti-phasic masking, 500 cps acuity, 1000 cps acuity, 2000 cps acuity, 4000 cps acuity. The test stimuli were tape-recorded.

The scores of the tests were analysed to determine the factors operating in the areas of speech perception. Eight factors were found and identified tentatively. The factors were:

Factor A The verbal facility factor.

B The threshold of detectibility for tones factor.

C The seashore battery factor.

D The voice memory factor.

Factor E and F Resistance factors.

G The Unpleasant factor.

H The synthesis factor.

On the bases of the data gathered in this experiment, the following conclusions seem warranted:

1. The verbal factor was identified in this study but appeared to be unrelated to speech perception measures.

2. It has been shown that speech threshold texts contain at least two very important sources of variance, a threshold for detection of tones and a synthesizing process. The pure tone threshold tests, on the other hand, seem to contain only one of these sources of variance, namely, the threshold for detection of tones.

3. It is quite probable that three first-order factors determined in this study, on further factoring, would define a more basic (second order) factor. The intercorrelations between factors E, F. H indicate the operation of a source of variance common to all three,

10. Listening Comprehension - A Factorial Analysis

In 1962 a study was undertaken by Spearritt (123) to investigate into the factorial structure of listening comprehension tests. Hypotheses concerning factors likely to be involved in listening comprehension were developed by examining the correlations between listening comprehension tests and other tests, and by considering the differences between the processes of listening and reading. The factors considered for investigation were: Verbal comprehension, reasoning (induction and deduction), attention, auditory resistance, meaningful memory and rote memory. A battery of 34 tests was prepared and assembled to test the various hypotheses. The 34 tests were divided into six main categories, viz.:

(A) Reasoning Tests: (i) Inductive Reasoning: (1) Letter grouping, (2) Letter series, (3) Raven's Progressive Matrices, (ii) Deductive Reasoning: (4) Reasoning, (5) Word Squares, (iii) General Reasoning: (6) Arithmetical reasoning. (B) Verbal Comprehension Tests: (7) Reading vocabulary, (8) Speed of reading; (9) Reading for general significance, (10) Reading to note - details, (11) Reading for inference, (12) Matching words, (C) Attention Tests: (13) Triplet numbers, (14) Letter list, (15) Five letters, (D) Auditory Resistance Tests: (16) Rapid spelling, (17) Singing,

(18) Haphazard speech, (19) Illogical grouping. (E) Memory Tests: (i) Meaningful Memory: (20) Sentence completion, (21) Consequences, (ii) Rote Memory: (22) Word Number recall, (23) Memory for words, (iii) Letter Span: (24) Letter Span I (Visual), (25) Letter Span II (Auditory), (F) Experimental Tests of Listening Comprehension: (26) Listening to vocabulary, (27) Listening for general significance, (28) Listening to note-details, (29) Listening for inference, (30) Listening to short talk, (31) Listening to spontaneous speech, (32) Listening to boy's talk, (33) Listening to girls' talk, (34) STEP Listening Test. (G) School Achievement Variables: (35) School arithmetic , (36) School reading, (37) School composition, (H) Audiometric Screen Test: (38) Modified Spondee Test.

The size of the final sample was 300 - 161 boys and 139 girls of sixth grade. Raw scores on the 34 tests and on school examinations in arithmetic, reading and composition were normalized for each of the two samples and intercorrelations of the 37 variables for each samples were computed. Findings were: (a) The tests included in the battery clearly identified the factors of Induction, Deduction, Verbal Comprehension, Auditory Resistance, Span Memory, Meaningful Memory and Rote Memory. Factor of Attention failed to emerge. Of greatest interest was the identification of a separate "listening comprehension" factor, described in more exact terms as

"comprehension of verbal material presented in spoken form". (b) He found no close relationship between attention and listening. (c) Children who did well on reading and reasoning tests and who could remember long sequences of symbols tended to do well on tests of listening comprehension.

11. Lundsteen Critical Listening Test

In 1962, Lundsteen (88) constructed a test of critical listening for training fifth and sixth graders in listening. The test was administered to about 300 fifth and sixth graders. The test consisted of 79 items. It measured detection of the speaker's purpose, analysis and judgment of propaganda and arguments. They evaluated transfer of the lessons to other in-school and out-of-school activities and the programmed lessons themselves. In the evaluation of the test of critical listening, the ~~evaluation of the~~ test-retest method showed a reliability coefficient of .72. Regarding the test's validity, opinions of judges, item analysis, and factor analysis indicated the test to be a valid instrument. By factor analysis, based upon the intercorrelations of 16 test variables four components were identified within the critical listening test. The factors were: (i) General Analysis and Inference, (ii) Value Judgment in Regard to Propaganda, (iii) Factual Judgement in Regard to

Arguments, and (iv) Reasons for Fallacies in Arguments. The scores on Lundsteen Critical Listening Test were correlated with other experimental variables. These correlations were as follows:

1. With the Pratt Test of General Listening	0.64
2. With the Hendrickson Test of Critical Thinking	0.52
3. With the Stanford Achievement Test, Form N, total reading	0.47
With the California Test of Mental Maturity, Form E	
Total: Verbal and Nonverbal	.39
Verbal	.43
Nonverbal	.26

12. Factors in Listening Comprehension

Nichols (99), with the specific purpose of identifying as many factors as possible, which accounted for differences in the comprehension of expository materials presented orally in a classroom situation, constructed a test with ten-minute excerpts taken from full-period lectures normally given to various freshman classes at the university. To test the comprehension of the sample of 200 college freshman twenty multiple

choice questions were constructed to cover the content of each of the lecture excerpts (total 120). After administering the test battery item analysis was done and 72 items were retained. The test's reliability, using the Kuder-Richardson formula, was found to be 0.802. Correlations of the test scores with those of other tests were:

1.	With Intelligence (A.C.E. Examination)	.54
2.	With Reading Comprehension (Iowa Silent Reading Test)	.46
3.	With Scholastic Achievement (High School Rank)	.28
4.	With Vocabulary (English Cooperative Examination Part Score).	.50

He derived from the study fourteen factors that influenced the listening comprehension. They were: (i) intelligence, (ii) reading comprehension, (iii) recognition of correct English usage, (iv) size of the listeners' vocabulary, (v) ability to make inferences, (vi) ability to structuralize speech, (vii) learning for main ideas as opposed to specific facts, (viii) Use of special technique while listening to improve concentration; (ix) real interest in subject discussed; (x) emotional adjustment to the speaker's thesis, (xi) ability to use significance in the subject discussed, (xii) curiosity about the subject discussed, (xiii) physical fatigue of the listener and (xiv) ability of the speaker.

13. Construction of a Diagnostic Test of Listening Comprehension

Brown (21), in 1949, constructed a diagnostic test of listening comprehension. He selected the factors based on the hypothesis that listening, as reading is a composite of several relatively independent skills. Listening was defined for the testing purposes in terms of both accurate and critical listening.

He divided the tests into two forms testing reception and reflection. Form one was, close to normal classroom lecture situations. After the lecture students were questioned about: (a) the details, (b) the central ideas, (c) inferences, (d) relavancy. The other form was planned to explore the possibility of measuring those skills by less time consuming methods. It measured the ability: (a) to follow a sequence of details, (b) to remember a sequence of details until questioned, (c) to use contextual clues, and (d) to use transitional elements.

As a final check on the probable importance of the factors chosen for measurement, a jury of eleven experts rated them.

The final test consisted of two sections each with several parts:

Section 1

Part 1 Orientation

Part 2 Oral Directions

Part 3 Thinking Back

Part 4 Contextual Clues

Part 5 Transitional Elements

Part 6 Strength Opinion

Section II

Reader's Digest

Part 1 Getting the details

Part 2 Getting Central Ideas

Part 3 Depth of Understanding

Part 4 Judging Relevancy

Correlation between the two sections of the listening test and California Test of Mental Maturity, a test heavily weighted with non-reading type items (.78 and .67), was found to be no higher than that between silent reading tests and intelligence tests, which are heavily weighted with reading type items. Correlations between the two sections of the listening test and an intelligence test such as A.C.E. were .37 and .29. Correlations with Nelson-Denny Test of Silent Reading was .31 and .36 and with scholastic achievement as measured by high school ranks, .28 and .21. Positive

efforts were made to check the validity (a) by definition, (b) by subtest interrelationships and (c) by subtest consistency (varying from .34 and .63). Item analysis was based on the method developed by Flanagan Test reliability was calculated by split-half method and estimated for each full subtest by Spearman-Brown formula (varying from .24 to .89).

14. The Construction of a Test of Listening Comprehension for Second, Third and Fourth Grades

Wright (143) attempted to construct a test of listening comprehension for second, third and fourth standards. The elements of listening ability to be included in the test were selected on the basis of importance and ease of measurement. Items were designed for the following aspects of listening ability - (a) Vocabulary, (b) Attention, (c) Following directions, (d) Recognizing correct English, (e) Recognizing rhymes, (f) Making proper inferences, (g) Using contextual clues, (h) Recognizing illustrative examples, (i) Recognizing relevancy, (j) Identifying the main idea, (k) Differentiating between fact and opinion, Hundred and seventy-seven items were constructed and item analysis was done. Items were designed which would require no reading, no writing, would not be a measure of previously acquired facts, would allow only one possible answer and would

vary in difficulty. The measures for checking the included validity: (a) methods of designing and revising items. (b) Teachers rating of children as good and poor listeners. A reliability coefficient of 0.95 was obtained for the whole test by applying Kuder-Richardson formula.

15. The Development of a Listening Comprehension Test for Michigan State College Freshman

Dow (37) developed a test for listening comprehension suitable to first term freshmen at the college level. Dow chose seven standardized foils as indicative of the major aspects of listening comprehension from a speech text and four reading. Briefly, there were three tests, viz., (A) Those concerned with central idea: (i) quote exact repetition of the central idea; (ii) same central idea but stated in different words, (iii) false, twisted or wrong statement of the central idea. (B) Those concerned with details: (iv) exact repetition of the details, (v) same or similar details but stated in different words, (vi) false, twisted or wrong statement of the details. (C) The one concerned with the central idea and details: (vii) unrelated - not given nor implied in the passage.

The reliability by test-retest method was for test I 0.70, and for test II 0.77 and 0.71 for test three. The validity was found by several ways: (a) The

correlations with the two parts of the Nichols test were 0.50 for test I, 0.51 for test II, 0.81 for test III. (b) Two of the three experts reported favourable inspectorial validity. (c) The correlations with A.C.E. Psychology Test scores were 0.53 for test I, 0.39 for test II and 0.61 for test III.

16. Listening Experiment

Blewett (16) constructed a test of listening comprehension which was composed of two subtests: (a) Test on Content Retention and (b) Test on Drawing Conclusions. The test on content retention attempted to appraise listening at what might be termed the "factual level", that is ability to aurally comprehend and almost immediately recall factual matter, such as names of people, places, streets, buildings, colors, fabrics, etc. This subtest consisted of five sections, each section containing a passage of information. The subtest on drawing conclusions was designed to measure listening on a higher level than that of mere factual retention. It was concerning the ability to draw conclusions from a series of related ideas presented orally, to make inferences, and to identify speaker attitudes. It was composed of six sections. Each section contained a passage of information carefully selected from outstanding speeches and essays.

The coefficient of correlation between scores

on the total test on listening comprehension and scores on various other measured skills and aptitudes were:

1.	Listening and Scholastic Aptitude (A.C.E. Psycho. Exam.)	.51
2.	Listening and A.C.E.$_2$: Reading Comprehension	.39
3.	Listening and Grade Point Averages	.37
4.	Listening and Numerical Abilities	.36
5.	Listening and Verbal Aptitudes	.73
6.	Listening and Size of Vocabulary	.42
7.	Listening and Recognition of Correct English Osage	.32

17. Experimental Evaluation of a Programme for Improvement of Listening - Pratt

In 1966, Pratt (109) constructed a test with two forms. The following listening skills were included for teaching and testing at the sixth grade level:

1. Skills primarily associated with accurancy in listening:

   (a) Ability to keep related details in mind.

   (b) Ability to observe a single detail.

   (c) Ability to remember a series of details.

   (d) Ability to follow oral directions.

2. Skills primarily associated with reflective listening:

(a) Ability to use contextual clues.

(b) Ability to recognize organizational elements.

(c) Ability to select main ideas as opposed to subordinate ideas or details.

(d) Ability to recognize the relation between main ideas and subordinate ideas that support them.

(e) Ability to draw justifiable inferences.

Reliability coefficient for the final test was .86. Correlation between listening ability and intelligence was .66. The median scores on Iowa Silent Reading Test were correlated with the scores on the final test of listenability and the correlation was .64.

C. Indian Studies in the Area of Listening Comprehension

Very few studies have been undertaken in India on listening comprehension as such. They are cited below.

Barve (10) attempted to construct a test on listening comprehension. She selected six passages from the books which were prescribed for seventh and eighth standards. She tried to cover the skills which were described by Brown in Brown-Carlsen Listening Compre-

hension Test. They are: (a) relationship of ideas and identification and recall of details, (b) ability to follow the source of details, (c) ability to listen reflectively for the purpose of identifying the central idea of the statement given orally, (d) ability to draw inferences from the supporting facts presented in the statement, (e) ability to distinguish relevant from irrelevant material, (f) use of contextual clues to word meanings, (g) retention of details long enough to answer questions about them. In all, there were 36 questions. Preliminary try out was conducted on a few students of seventh and eighth standards inviting them at home. The test was then administered to 300 boys and 200 girls in different schools of Nagpur. No significant difference was found between the mean achievements of boys and girls. The reliability coefficient was 0.93 for validity., the test scores were correlated with terminal examination scores and the correlation was of 0.37.

Nagalakshmi (97) in 1963 attempted to construct a test on aural comprehension. A series of 12 tests were constructed. As no specific training was given to group of children chosen for the study, the study were devised on what they learnt i.e.on the syllabuses used widely in India. The test was administered to 23,000 students of P.U.C. and XII grade in the schools and colleges of Hyderabad and Secunderabad. The tests fell into

three groups: (a) Tests one and two were constructed on the basis of expected proficiency, (b) Tests three to eight were constructed to ascertain the actual level of achievement. (c) Tests nine was constructed incorporating points already tried out and tests ten, eleven and twelve were parallel tests.

The tests had several parts, each part being made to meet the requirements of assessing one of the skills involved. The following short summary of tests will clarify it:

Instructions (comprehension) plus quick response.

Questions - (comprehension) plus selection of relevant data.

Puzzles and spelling/word/sentence games: Attentive listening and grasp of significant details.

Short passages - comprehension of selected points of language.

Long passages and stories - integrated skills of oral comprehension, with the ability to recall.

Dictation - to test comprehension as revealed by punctuation marks and the extent to which students could readily associate sound and symbol.

From her point of view, five essential skills involved in aural comprehension were: (a) the ability to listen attentively to the spoken word for some time, (b) the ability to react readily to the spoken word (response, oral or written), (c) to hear, understand, assimilate and organize even while listening, (d) in the case of lectures and speeches, the ability to distinguish the essential from the non-essential, and (e) the ability to recall readily without momorizing the whole.

The tests were administered on tape-recorder. The results were:

Test	Number take the test	Number scoring above 60 per cent	Per cent	Number scoring above 50 per cent	Per cent
Final test	240	184	76.6	-	-
Parallel test 1	230	168	73.0	207	90.0
Parallel test 2	125	92	73.6	108	86.4

It can be observed from the table that the tests were closely parallel.

It was observed that an oral test would be interesting to the students who took it and should be included in School Leaving Examination, which would ultimately increase linguistic efficiency. It was also noted that oral comprehension tests could be arranged internally. One period of a week could be set for listening practice.

In one study, Patel and Shastri (107) attempted to find out whether there was any advantage in learning by one method over the other, among visual, aural and visual-aural combined, Ninety boys and ninety girls were divided into three groups on their intelligence scores they achieved. It was, thus, a 3 x 3 x 2 factorial design. Each cell consisted of 10 subjects. The material used was a list of twelve nonsense Gujarati syllables with almost same associative value. The twelve syllables were presented on a film strip to the visual method group, on tape-recorder to the aural method group and with proper synchronization of both for the combined method group. The subject was to learn the list of twelve syllables by anticipation method. For convenience each syllable was presented at an interval of four seconds. The following results were obtained: (a) F-test showed an overall significant difference between the three levels of intelligence and the three modes of presentations. (b) Tuky gap test revealed that aural

method of presentation was not significantly different from visual method of presentation; visual method of presentation was not significantly different from aural plus visual method of presentation; but aural method of presentation was significantly different from aural plus visual method of presentation. (c) As in all verbal learning, intelligence was found to be an important factor here too. Lack of significant interaction between intelligence and presentation mode and between intelligence played an important role in learning irrespective of mode of presentation or sex. (d) As far as verbal learning was concerned, there were no sex differences.

In another study, Patel and Parlikar (106) undertook to investigate into the relative effectiveness of four methods of presenting learning materials, viz., Visual (V), Auditory (A), Visual plus Auditory (VA) and Visual plus Auditory plus Pictorial (VAP). Subjects of both sexes and different levels of intelligence were taken for the study which enabled the investigators also to study the contributions of these variables as well as their interactions'. Two hundred and forty fifth grade secondary school pupils including 120 boys and 120 girls, were divided into three groups, viz. higher intelligence (I_1), average (I_2) and lower intelligence (I_3) on the basis of a group test of intelligence. Comprehension was tested at the end of short answer test covering both

details and general aspects. Results were:

(a) There was no significant difference between visual (V) and auditory (A) method of presentation.

(b) There was significant difference between visual and visual plus auditory method of presentation.

(c) There was significant difference between visual and visual plus auditory plus pictorial method of presentation.

(d) There was significance difference between auditory and visual plus auditory method of presentation.

(e) There was significant difference between auditory and visual plus auditory plus pictorial method of presentation.

(f) There was no significant difference between visual plus auditory and visual plus pictorial method of presentation.

The foregoing summaries of Indian investigators in the subject reveal that they are either carried on small samples or refined statistical techniques are not employed, so as to get reliable and valid results and yet

those efforts are most welcome.

Though not much work has been done in listening area, related receptive skill viz., reading, has got comparatively due attention for research at M.Ed. and Ph.D. levels. The Directory of Behavioural Science mentions about five researches in reading area. It is not necessary to mention all of them here. Yet it is appropriate to refer to four reading comprehension tests constructed in Gujarati. Those are:

1. Bhagatwala (14) constructed and standardized a silent reading test in Gujarati for secondary schools. It is a Ph.D. thesis submitted to Maharaja Sayajirao University of Baroda. Total fifteen tests were constructed on three factors in reading, viz., (a) speed of reading fluency, (b) amount of meaning vocabulary, and (c) comprehension factors of reading ability. The reliability coefficients of tests based on three factors ranged from .76 to .84 (for VIIIth, IXth and Xth class boys and girls). Reliability was found out by test-retest as well as parallel form and split-half method for validity the test scores were correlated with school subjects and Teachers' Estimate with Gujarati marks etc. The sample was of 3256 boys and 1880 girls.

2. Trivedi and Patel (131) constructed and standardized a test viz. 'Vachan Shaktini Kasoti' for

secondary school pupils in Gujarati. The tests consist of 9 subtests on reading rate, comprehension - prose poetry etc., vocabulary and location of information. The test was standarized on a sample of 1300 pupils; its reliability and validity were 0.89 and 0.91 respectively.

3. Another silent reading test for pupils of eighth standard was constructed and standardized by Maniar (90). It is an unpublished Ph.D. thesis submitted to Saurashtra University. The test consisted of a subtests viz. reading rate, prose comprehension, directed reading, poetry comprehension, paragraph comprehension, word, learning sentence meaning, poverty and idioms, location of information. The reliability coefficients found out by various methods ranged from 0.69 to 0.96. Its validity was 0.54 with Gujarati marks, and Vachan Shaktini Kasoti 0.68.

4. Parekh (104) also constructed and standardized a silent reading comprehension test for pupils of ninth standard of Gujarat. It is also an unpublished Ph.D. thesis submitted to Saurashtra University. The test consisted of 9 subtest same as that Maniar's test. The test was standardized on 4342 boys and 2114 girls; its reliability and validity ranged from .80 to .93 and .62 to .64 respectively.

Other available researches carried on small

samples in this area are cited below:

Menon and Patel (94) in their study in 1951,note: "Reading is no reading if it is without comprehension; reading is a means and comprehension is an end." Their aim was to study how reading is useful, what conditions accelerate or retard the process of comprehension, or whether comprehension bears any relation to the rate of reading. The sample consisted of 70 teachers under training. Three Gujarati reading tests, with three difficulty levels of material in each were administered to these teachers. Results were: (a) Rate of reading was very slow. (b) Fast reader was never poor and good one was never slow. (c) Under present conditions there was no correlation between rate of reading and comprehension.

Patel (105) in his article on visual teaching attempted to describe the principles of visual education with an emphasis on the learner's role in perceptual selection. He pointed out that visual teaching involved not merely physically or physiologically offered visual presentation or projection on the retina. The study stressed mainly the psychological process, taking into account both the adequate utilization of necessary visual aids by the teacher and the personal values of the individual.

Visual aids, it is undoubtedly settled, play an

important role in making maximum contribution towards the optimum expansion of the power of understanding.

Summary

From the researches reviewed especially from those done in the West, it can be said that listening is an essential and fundamental skill to gain knowledge, and that an effective skill of listening is a complex of a number of activities or components to which listening is directed or applied. These components may be summarized thus:

1. Grasps main idea.
2. Notes details.
3. Secures answers to questions.
4. Recognises importance of ideas.
5. Judges validity of ideas or judges accuracy and soundness of ideas.
6. Follows the sequence of details, directions and thread of conversation.
7. Distinguishes relevant from irrelevant.
8. Distinguishes the meaning of words.
9. Organizes into and relates to main and subordinates.

10. Selects information pertinent to a specific topic.

11. Draws (reaches) conclusions by evaluating critically facts and evidences.

12. Predicts future behaviour of or ends of events.

13. Deducts or grasps the meaning of unknown words.

14. Graps the development of an idea or points of an argument.

15. Perceives word forms.

16. Becomes aware of implied meaning of words.

17. Verifies spellings.

18. Makes justifiable inferences from given data.

19. Predicts the future behaviour or ends of events, etc.

20. Recalls, recognizes and retains the sequence of details, word meaning etc.

21. Understands or comprehends in terms of past experiences.

22. Attends to the meaning, information, directions, etc.

23. Retains more in which he has got interest.

24. Uses visual clues to enhance listening comprehension.

25. Evaluates emotional appeal and expressed point of view or fact in relation to previous learning.

26. Interprets speakers' tone and intention.

27. Defects clues that show the speakers' trend of thought.

28. Does critical examination of what is heard.

Further it would be seen from the foregoing discussion that considerable amount of work has been done, in the west, on listening comprehension and related areas; however, in India, very little is studied or published in the area of listening comprehension, except for a few studies in the related aspect of reading comprehension, And, herebefore hardly any test on listening comprehension in regional languages has been made available in our country, although the need is most urgent in view of its importance, particularly, at the initial

level of education. In view of this urgent need, an attempt has been made here by the present investigator to construct and standardize a test of Listening Comprehension in Gujarati Language for pupils of standard VIII, where it is more convenient to begin with. The following chapters are devoted to the description of the present attempt.