

Educational Assessment and Evaluation

BISHWA NATH MUKHERJEE

Ambasana, Anil Dhirajlal. 1989. **Construction and standardisation of an art judgement test.** Ph.D., Edu. *Saurashtra Univ.*

Problem: It attempts to study the construction and standardisation of an art judgement test.

Objectives: (i) To construct a test to assess the art judgement ability of students of Grades VIII to XII in secondary and higher secondary schools, (ii) to standardise the test on the population of school chosen by random method, (iii) to test whether there is any significant sex difference in students so far as art judgement ability is concerned, (iv) to check whether age difference has any considerable effect on art judgement ability, (v) to investigate whether there is any relation between art judgement ability and art environment, (vi) to test whether there is any significant difference in art judgement ability among art and non-art students, and (vii) to check how far representational and non-representational art influence art judgement ability.

Methodology: According to the basic principles of graphic art, 110 picture pairs were prepared in the initial stage. The final test was administered to 4,253 students from Grade VIII to XII of Gujarat State. Among the sample, 2,101 were boys while 2,152 were girls. With reference to independent variables, mean and SD were calculated and significance of the differences between two related groups were checked with 't' test.

Major Findings: (1) Norms were presented as percentiles and stanines in two sub-groups — art students and non-art students, and boys and girls. (2) Reliability of the test was measured with split-half method, test-retest method and the method of rational equivalence. (3) Content, concurrent and construct validity were tested. (4) The art judgement ability of the boys was superior to that of the girls. (5) The students of higher grades scored more than the students of lower grades. (6) As far as age was concerned, the art judgement ability increased till the age of 15-16 years. (7) Art environment did not show any significant impact upon students' art judgement ability. (8) Former art experience and training in art had a considerable positive effect upon art judgement ability. (9) Content of the non-representational art was found to be more tough to judge so far as the art judgement process was concerned. [DAU 0014]

Ashai, Yasmeen and Mohite, P. 1989. **Establishing norms for the teacher's rating scale.** *Indian Educational Review*, Vol. 24 (4): 60-67.

Problem: The present study is undertaken as the next step towards standardisation and it aims at establishing norms for the teacher's rating scale and identification of children with learning difficulties.

Objectives: (i) To establish norms for the

teacher's rating scale over the three variables of socio-economic status (high, middle and low), sex (boys and girls) and Grades I, II, III and IV, and (ii) to identify children with learning difficulties in reading and writing, identification of specific dimensions of learning, difficulties in reading and writing.

Methodology: A sample of 720 children was selected through stratified random sampling from Gujarati-medium schools from high, middle and low socio-economic strata. The modified form of Kuppaswamy's Socio-economic Scale was used.

Major Findings: (1) Norms were prepared using percentile ranks for the teacher's rating scale. (2) 15.4 % of children were facing learning difficulties. (3) Higher number of children belonging to the low SES were facing learning difficulties when compared to their high and middle class counterparts. (4) A higher percentage of girls tended to face learning difficulties in comparison to boys. (5) An equal number of children tended to face learning difficulties in the first two grades and a higher percentage of children in the third and fourth grades faced difficulties in reading and writing. (6) Incidence of learning difficulties of children belonging to the above four grades was studied with regard to six major behaviour areas. A higher number of children tended to face learning difficulties in the area of personal-social behaviour and a few in the area of memory. Children belonging to the second and third grades generally faced learning difficulties in the area of spoken language. Most of the fourth grade seemed to face difficulties in the area of motor coordination. (7) A higher proportion of both boys and girls tended to face learning difficulties in the area of spoken language than in the area of memory. No sex difference was found in the above results. [SPr 1452]

Barua, A.P. 1989. **Causes of failure in Higher Secondary Leaving Certificate Examination.** Independent study. Assam: State Council of Educational Research and Training.

Problem: Large-scale failure in the HSLC examination is a regular phenomenon in the state. Thus, a focus on the factors responsible for the failure syndrome has become imperative. The study assumes a special significance from this angle. Hence the study is undertaken.

Objective: To make a proper diagnosis of the problem of large-scale failure in the HSLC final examination and to grade the causes in order of priority.

Methodology: The sample comprised teachers of primary, middle, secondary, higher secondary and college levels, students at the +2 stage and degree classes, students who had failed in the HSLC examination, parents and the general public. The relevant data were collected using an opinionnaire.

Major Findings: (1) Various teacher factors that cause failure in the HSLC examination included inadequate number of teachers, a large number of teachers who did not teach well, dedicated teachers not reinforced with incentives, inadequate school inspection, and attaching more importance to private tuitions. (2) Various student factors included no specific time for study at home irregular attendance, getting promotion with grace marks, and various sources of distraction among students leading to disinterest in studies. (3) The parents factor included their negligence towards their children once they were admitted to schools. [PKB 1612]

Behera, N. 1990. **Standardisation of adjustment projective inventory.** M.Phil., Psy. Utkal Univ.

Problem: It is an attempt to standardise an adjustment projective inventory.

Objective: To establish norms for the inventory for comparison of individual scores with the norm.

Methodology: A total of 500 students chosen randomly from the post-graduation and graduation level (250 males and 250 females) belonging to the age-group of 19-26 years served

as the sample. Adjustment projective inventory was used as a tool to collect data for the study. Results were analysed using mean, standard deviation, percentiles and biserial correlations.

Major Findings: (1) The newly developed adjustment projective inventory was found to be a very reliable inventory. The reliability coefficients were found to be 0.69, 0.70, 0.61, 0.74 and 0.87 for health, home, social, emotional and adjustment projective inventory, respectively. Correlation coefficients were indicated and computed by applying Kuder-Richardson formula and it was found that reliability coefficient for these adjustment areas were 0.61, 0.65, 0.71, 0.69 and 0.60, respectively. These two types of reliabilities suggested that this newly developed test of adjustment was highly reliable. (2) The validity coefficients for these adjustment areas were found to be 0.69, 0.81, 0.75, 0.82 and 0.85, respectively. (3) This study found the percentile points from 5% to 95% with an interval of 5% for different subscales and for total scale of adjustment projective inventory. [KCP 0426]

Chauhan, Radha. 1988. **Construction and standardisation of an academic alienation scale and its relationship to demographic variables.** Ph.D., Edu. Himachal Pradesh Univ.

Problem: It attempts to study the relationship between the construction and standardisation of an academic alienation scale and study, its relationship with demographic variables among the university students of H.P. University.

Objectives: (i) To construct and standardise the academic alienation scale, (ii) to study and compare the academic alienation between the students of high and low socio-economic status, (iii) to study and compare the academic alienation between the students of rural and urban family backgrounds, (iv) to work out differences in alienation between hostellers and day-scholars, (v) to examine differences in academic alienation between males and females, (vi) to find out the academic alienation among the students having

affiliation with student organisations, students having affiliation directly with political parties, (vii) to study differential pattern of academic alienation among the students of various faculties, and (viii) to work out inter-correlations among the components of academic alienation.

Methodology: Six hundred students were randomly selected for the present study from different faculties in the Himachal Pradesh University. The tools used to collect data included Academic Alienation Scale constructed by the investigator, personal information sheet prepared by the investigator and Socio-economic Scale questionnaire by Jalota, Pandey, Kapoor and Singh. The collected data were treated with 't' test, inter-correlations and analysis of variance.

Major Findings: (1) There were no differences in academic alienation along with its indicators taken separately between groups belonging to high and low socio-economic status. (2) There were no differences between the students coming from rural and urban family backgrounds in total academic alienation as well as in its indicators, namely, academic estrangement and academic inefficacy. There was, however, difference in academic cynicism between the students of rural and urban family backgrounds. (3) Day-scholars and hostellers exhibited no significant differences in total academic alienation as well as in its indicators taken separately, except in academic cynicism. (4) There were no significant differences between males and females in academic estrangement and academic inefficacy. However, there were differences between males and females in academic cynicism and total academic alienation. (5) There were significant differences among the students affiliated to different political parties and neutral students in academic cynicism, academic inefficacy and total academic alienation. There were, however, no differences in academic estrangement between the students affiliated to student organisations, students affiliated to political parties and neutral students. (6) There were significant differences in total academic alienation as well as in its indicators

taken separately among the students of various faculties, i.e. 'Science and Education', 'Arts and Education', 'Commerce and Education' and 'Law and Education'. The students of science and arts faculties differed considerably in academic cynicism. The students of arts and commerce faculties differed in academic estrangement and academic cynicism. The students of commerce and law faculties differed in academic estrangement only. There were no differences in total academic alienation as well as in its components between the students of science and commerce, between science and law and arts and law faculties. The students of science and arts faculties did not differ in academic estrangement, academic inefficacy and total academic alienation. There were differences between the students of commerce and law faculties in academic cynicism, academic inefficacy and total academic alienation. (7) There were positive significant correlations between the different components of academic alienation in all the faculties, taken together, and within each faculty. [LK 0238]

Chawla, Swarn. 1988. **Construction of a multiple-choice reading comprehension test.** *Indian Educational Review*, Vol. 23 (4): 1-17.

Problem: In a developing country like India, the usefulness of the multiple-choice testing technique has been recognised for some time both by teachers and examiners alike. Collection of test passages with accompanying questions are being published, courses are being furnished with multiple-choice test material, but the method of selection of such passages, choice of items, and provision of credible distractors drawn from the test passages or outside is yet to be improved substantially. The author has suggested a few steps for the construction of a valid and reliable comprehension test based on multiple-choice items.

Objective: To specify the steps involved in construction of a valid and reliable comprehension test.

Major Findings: Various suggestions offered by the author include: (1) A paper-setter would do well by selecting brief test passages so that samples of various kinds of material in one comprehension test can be included, thereby enabling the examiner to test most of the abilities required for such a test. (2) The passage should not deal with information that is universally known, for in this case the candidates may be able to answer the questions correctly without paying much attention to the passages. A paragraph dealing in a general way with a widely known historical event or a personage would constitute an unreliable test of reading comprehension. (3) Reading tests should generally include materials of various types and styles, though all should possess reasonable merit as pieces of writing. Paragraphs can be suitably chosen by a paper-setter which (a) deals chronologically with a series of events, (b) compares or contrasts two or more people, objects or events; and (c) presents author's individualistic opinions on a familiar subject. (4) The simplification of a reading passage must be intelligently controlled lest the test be made so easy that it fails to discriminate between students having various levels of proficiency. (5) The vocabulary and syntax of the items should be kept as simple as possible. The 'stem' of the item should preferably establish the problem. (6) For standardisation of the multiple-choice reading comprehension tests the following steps are essential: (a) pre-testing of material on matched groups; (b) analysing the pre-test results of item analysis. [SKB 1415]

Chawla, Swarn. 1992. **Standardisation of a multiple-choice vocabulary test: Pre-test and analysis.** *Indian Educational Review*, Vol. 27 (3): 49-68.

Problem: Almost all tests of the English language being constructed in Indian universities, professional institutes and recruitment bodies are ad-hoc tests. Standardised English language tests, therefore, need to be introduced on a large scale in our

educational bodies too. An attempt has been made here to discuss elaborately and critically the process of standardising a multiple-choice vocabulary test.

Objective: To develop a multiple-choice vocabulary test in English which can be standardised on a large scale.

Methodology: The students on whom the above test has been pre-tested were 45. Out of them, eight were MBA students, 10 belonged to B.Com. (Hons.) and 27 belonged to B.A. (Pass) course of the University of Delhi. The same test was administered as a pre-test. It consisted of 30 multiple-choice items. Item analysis, reliability, and validity coefficients were calculated.

Major Findings: (1) Only 26 items were found suitable for testing their discrimination power. Four items were found to be unsatisfactory because these were answered correctly by at least 92% of the respondents and considered too easy and two items which were answered by only 30% of the respondents were considered difficult. These were also eliminated from the final set. (2) The highest and the lowest 25% (of the 54 students who completed the test) groups of upper (proficient) and lower (deficient) respondents were separated. Discriminatory power of each of the 26 vocabulary items was determined. Four items were again discarded as they showed low power of discrimination. Thus 22 items were finally retained for the test. (3) Out of the 22 items (left after the determination of item discrimination), 11 more items needed either to be discarded or revised for pre-testing. Thus, 11 items in all were satisfactory (standard) items. (4) The standard deviations of scores and time taken in the present test were found to be 5.56 marks and 8.70 minutes, respectively. (5) The mean (average) time taken by a respondent to complete the test was 21.37 minutes. [SKB 1539]

Chitnis, S. and Velaskar, P. 1988. **Education in Maharashtra: Strengths and weaknesses.**

Independent study. *Bombay: Tata Institute of Social Sciences.* [World Bank Funded]

Problem: This research addresses the problem of obtaining an overview of the educational situation in Maharashtra with a view to drawing lessons for other states of the country.

Objectives: (i) To describe and examine the quantitative and qualitative aspects of the educational situation in Maharashtra, and (ii) to critically evaluate the educational performance with a view to identifying its major strengths and weaknesses.

Methodology: Relevant data were pooled with the help of secondary data, field observation and interviews.

Major Findings: (1) Despite the quantitative advance, Maharashtra harbours serious regional, gender and caste imbalances in education. However, the database of education was too inadequate and unreliable to give a complete picture. (2) The State had a rich and long tradition of learning and of innovative educational experiments which had unfortunately remained isolated and fragmented and had been eroded. (3) The imaginative innovations carried out by the State Department of Education were also in danger of erosion due to the apathy and authoritarianism of a rigid bureaucracy and lack of rigour in evaluation. (4) There were sharp qualitative differences between schools catering to different social strata in urban and rural areas. Failure, drop-out and poor learning levels were conspicuous features of schools meant for the poor. At the same time, the formal uniformity imposed by the government made for a content of education that was rigid and irrelevant to learning for those from poor background. (5) There was an all-round erosion in the quality of education. The state authorities had failed miserably in controlling the standard and relevance of Indian education. Further, political interference and interests had made the Zilla Parishad sponsored education totally counter-productive. There appeared an extensive

incidence of misappropriation and fraud of all kinds and at all levels. [RJ 0219]

Choudhari, V.M. 1990. **A comparative study of malpractices in examinations during 1984-88 in the Nagpur University.** M.Phil., Edu. Nagpur Univ.

Problem: This study is an attempt to search for certain measures to control the malpractices in the examinations which not only affects the results of intelligent students but also proves to be a botheration to the university administration. These measures would not only be helpful in reducing the number of malpractices but also help in bringing changes in the examination system.

Objectives: To study comparatively: (i) the number of students appearing in examinations and the number of them attempting malpractices in every faculty in Nagpur University during 1984-88, (ii) to study the extent of malpractices in each faculty in every year in different subjects, and (iii) the punishments given by the university as a remedial measure against malpractices.

Methodology: The total number of malpractice cases in all the faculties, i.e. 4,631, formed the sample. These occurred in 149 colleges under the administration of Nagpur University. The information regarding the cases of malpractices was collected with the help of a proforma prepared by the researcher which consisted of six questions. Faculty-wise, subject-wise, year-wise and level-wise charts were prepared. The totals of the cases occurred and the number of the cases punished were sought and percentages calculated thereafter to draw inferences.

Major Findings: (1) The maximum cases of malpractices were found occurring in arts and social sciences faculty, followed by commerce and then by science faculties. (2) Such cases were meagre in the faculty of education, medicine, pharmacy, *ayurveda*, engineering and technology, and law. (3) No cases of malpractice

have occurred in the home science faculty. (4) No information regarding the malpractices in pre- and post-examination periods was available from the university. (5) The maximum number of cases occurred on the date and day of the examination. (6) Students were found to be debarred from the exams for one or two successive years as punishment by the university. [GPK 1601]

Cruise, Robert J. 1988. **Research consideration in setting effect size.** *Indian Educational Review*, Vol. 23 (1): 1-6.

Problem: This study addresses the problem of setting effect size without any subjective consideration as to its desired value and predetermination of alpha, sample size and power at the expense of effect size determination.

Objectives: (i) To act upon the suggestion of Brewer in respect of effect size, and (ii) to give guidelines in the selection of a defensible effect size level that can be made by even a relatively naive researcher.

Methodology: It is a theoretical study advocating various considerations and implications for research.

Major Findings: (1) In setting effect size, research implications, experimental precision, theoretical research and empirical and intuitive considerations need special attention. (2) The effect size is related to the meaningfulness of the true difference, whereas the alpha level is related to the status of the observed differences. [SPBa 1922]

Dave, Meeta. 1992. **An investigation into reading comprehension of the pupils of Grade VII by using the standardised tests in Gujarati.** Ph.D., Edu. Gujarat Univ.

Problem: This study is concerned with an investigation into reading comprehension of the pupils of Grade VII by using the standardised tests in Gujarati.

Objective: To study the reading comprehension of pupils of Grade VII in relation to various effects and interaction of sex, socio-economic status, intelligence, reading speed, vocabulary, achievement motivation, study habits and scholastic achievement. By permutation and combination, the investigator has put forth a list of 38 objectives using the above quoted variables.

Methodology: The total number of pupils selected for the sample was 1,000 (500 boys and 500 girls) of age-group 11 to 13 years, from 35 Gujarati-medium schools selected by incidental sampling method. The actual sample consisted of 995 pupils as five pupils did not appear in the annual examination. The tools used to collect data included Reading Ability Test of Patel and Vora, SES Scale developed by Patel and Vora, Mini Intelligence Test of J.H. Shah, Achievement Motivation Inventory standardised by Prayag Mehta, and Study Habits Inventory of B.V. Patel. To analyse the collected data, mean, SD, percentiles, ANOVA and multiple regression were used.

Major Findings: (1) The level of reading comprehension of the pupils was not very high since the majority (80%) of pupils obtained less than 70% scores. (2) There were seven main effects of each of the independent variables, 21 two-way interaction effects and 35 three-way interaction effects from the results obtained. (3) Sex, SES, intelligence, vocabulary, reading speed, achievement motivation and study habits produced significant influence on reading comprehension of pupils. (4) The interaction between sex x SES, sex x intelligence, sex x vocabulary, sex x achievement motivation, and sex x study habits did not produce significant influence on reading comprehension of the pupils while SES x intelligence, SES x vocabulary, SES x achievement motivation and SES x study habits produced significant influence on reading comprehension of pupils. (5) Intelligence x vocabulary, intelligence x reading speed, intelligence x achievement motivation, intelligence x study habits did not have any significant effect

on the reading comprehension of pupils. (6) Reading speed x vocabulary, reading speed x achievement motivation and reading speed x study habits did not have significant influence on the reading comprehension of pupils. (7) Also, vocabulary x study habits did not produce significant influence on the reading comprehension of pupils. (8) Achievement motivation x study habits did not have significant influence on the reading comprehension of pupils. (9) Three-way interactions between sex, SES, intelligence, vocabulary, study habits and achievement motivation did not produce any significant influence on the reading comprehension of pupils, but interactions among reading speed, vocabulary, achievement motivation and study habits, produced significant effects on the reading comprehension of pupils. (10) Intelligence x vocabulary x study habits, intelligence x achievement motivation x study habits and vocabulary x achievement motivation x study habits produced significant influence on the reading comprehension of the pupils of Standard VII. [JHS 0723]

Jyoti, Nirmala M. 1992. **An evaluation of the non-detention system.** Ph.D., Edu. Sri Venkateswara Univ.

Problem: The study was designed to evaluate the non-detention system on different aspects like its effect on achievement of students, percentage of passes, rate of drop-outs, and attitude of teachers, students and administrators.

Objectives: (i) To make a comparative study of (a) the achievement of students, (b) percentage of passes, and (c) rate of drop-outs in the detention and non-detention system, (ii) to assess the attitude of pupils, teachers and administrators towards the non-detention system, and (iii) to suggest remedies for the defects, if any, in the system.

Methodology: The sample comprised 7,740 students of Class X, of whom, 2,714 belonged to the detention system, while 5,026 belonged to

the non-detention system. The sample was selected by a multi-stage stratified random sampling procedure. For analysing the rate of drop-outs, the sample size of students was 37,964. For analysing the attitude towards the new system of evaluation, data were collected from 510 teachers, 1,080 students and 40 administrators. Marks obtained in Class X public examination and attitude scores as measured by an attitude scale were the major data for the study. Analysis of variance, 't' test, and chi-square test were used to analyse the data.

Major Findings: (1) Achievement of students in Telugu was significantly better in the non-detention system as compared to the detention system. There was no significant difference between urban and semi-urban children. Similar results were obtained for all subjects without any exception, except that the F values were not significant for sex in the case of Hindi and English. All other F values were significant. (2) The percentage of passes was higher under the non-detention system than in the detention system. This was true for all sub-groups of students—boys, girls, etc. (3) Rate of drop-outs was lower in the non-detention system than in the detention system. This was also true for all sub-groups—boys, girls, etc. (4) The students had a significantly negative attitude towards the new system. This was true for all sub-groups of children—boys, girls, urban, rural, etc. (5) Girls had a stronger negative attitude towards the system than boys. (6) Urban and rural students obtained significantly lower attitude scores than semi-urban students. (7) There was no significant difference between the attitude of OCs and SCs/STs. (8) Teachers had a negative attitude towards the system. This was true for all sub-groups of teachers—B.Eds, secondary grades, men and women, etc. (9) Women teachers had a far more negative attitude towards the system than male teachers. (10) The attitude scores of semi-urban and rural teachers were significantly less than that of urban teachers. (11) Teachers who had comparatively less experience (1-15 years) had a

far more negative attitude than those who had more experience. (12) Administrators also had a negative attitude towards the new system. (13) The mean attitude score of students was significantly higher than that of teachers. The mean score of administrators did not differ significantly from that of teachers or students. [AVRR 1306]

Khan, Yusuf. 1989. **Construction and standardisation of diagnostic tests in English for Standard VIII with regard to structures.** Ph.D., Edu. Nagpur Univ.

Problem: This study aims at preparing two diagnostic tests for the pupils of Standard VIII with regard to structures—the most important aspect of English-learning.

Objectives: (i) To find out weaker areas of structures in learning the English language, and (ii) to provide a remedial programme according to the mistakes committed by the students.

Methodology: The sample comprised 1,000 students of Standard VIII from 20 secondary schools from Akola and Buldhana, covering 299 students from rural areas and 701 students from urban areas using simple random sampling technique. The syllabus of English for Standard VIII, prescribed by the Education Department of Government of Maharashtra, *The English Reader, Handbook for Teachers, Workbook for Students*, discussion with English teachers of Standard VIII (individually as well as in the workshop) and method-masters and answer-books of the students of Standard VIII were used as tools. Mean, median, mode, standard deviation and quartile deviation for the scores of both the tests were calculated. Percentiles and raw scores of diagnostic tests were sought and then scores in each stanine scale was calculated and standard scores were achieved. Coefficients of reliability and validity were worked out. The percentage score for every structure was worked out.

Major Findings: (1) It was observed that the

students of urban schools had better scores in responding to both diagnostic tests, general performance being of simple type in both the tests. (2) The boys showed comparatively better results than girls. (3) The most mistakes committed by the students were found in wrong word order, wrong tenses, wrong auxiliary verbs, omitting structure, etc. [GPK 1699]

Khire, Usha. 1989. **Construction of a battery of tests based on Guilford's SOI model.** Independent study. Pune: Jnana Prabodhini Institute of Psychology. (ERJC Funded)

Problem: In spite of assembling a wide variety of intelligence tests, many individual abilities remain outside the scope of measurement and many intelligence tests are not based on strong theoretical foundations. Hence, Guilford's SOI Model giving wider concept of intelligence and specifying the nature of tests for minute intellectual functions was selected for test construction.

Objective: To construct 90 tests for measuring 90 factors from figural, symbolic and semantic areas in Guilford's SOI Model and to standardise for three high school levels, viz. Standards VIII, IX and X.

Methodology: In the pilot study, 37 tests were administered to 45 adults from five occupational groups which yielded significantly different occupational profiles. In the main study, using the Latin Square design, representative samples of boys and girls were drawn from Grades VIII through X from 21 different rural zones. Around 4,322 subjects were considered for item analysis study and 15,411 were considered for the normative study. Effective sample size for each test ranged from 48 to 151 in item analysis study and 248 to 512 for the development of final versions. The ICL 1904 S system was used for the computerisation of the data and for most statistical analyses. Various statistical techniques used included point bi-serial correlation, pass percentages, G index of agreement, 'd' score,

ANOVA and 't' test. The statistical analysis for internal consistency included split-half and rational equivalence. Further, the factor analysis by principal component method and varimax rotation were also used on 196 students of Grade IX boys from two schools.

Major Findings: (1) The indices of internal consistency and homogeneity were mostly satisfactory. (2) Test-retest correlations ranged widely, were lower for tests of memory and higher for those of symbolic and semantic content and cognition. (3) Test-retest correlations for composite score from a single content-operation category were higher than those for individual product tests. (4) The sex difference was not always consistent and significant. Though urban-rural difference was observed very often, it was not always in favour of the urban group. (5) Metropolitan-urban difference was greater than urban-rural difference. The group means generally increased with grades but there were some reversals. The more striking observation was that our students were not acquainted with many processes of thinking involved in SOI tests. (6) The independence of factors was evidenced in the product-wise analyses. It was more so across the content. The content-wise and operation-wise analyses yielded some higher order factors common to products in the same content-operation category. Thus the results suggested greater possibility of distinction between contents and operations than between products. [Author 1159]

Kohler, Elizabeth S. 1991. **Occupational therapy—educational standards in India: A case and field study.** *Indian Educational Review*, Vol. 26 (2): 1-9.

Problem: This study deals with extensive ethnographic and field analysis which included information from a currently World Federation of Occupational Therapy (WFOT) accredited educational programme and identification of agencies directly affecting the education and service of occupational therapy in India.

Objectives: (i) To identify the factors which affect the capability of India to develop additional WFOT accredited schools, and (ii) to find out the variables which affect quality of care delivered to patients by professional occupational therapists in India.

Methodology: The study applied non-experimental ethnographic research method. The organisations considered for the study included World Health Organization (WHO), Indian Medical Council (IMC), Indian Rehabilitation Council (IRC), World Federation of Occupational Therapy (WFOT), All India Occupational Therapy Association (AIOTA), Health Ministries of India, agencies and political officials affecting the services and education of occupational therapists. The relevant data were collected using on-site interviews, observation, programme analysis and document analysis. A multi-faceted approach to the analysis of AIOTA's Minimum Educational Standards was compared to Federation's Standard. A written evaluation tool combining the official WFOT standards and a Self Study Check-list (SSCL) model was designed and applied for quantitative and qualitative investigation of programme practice and discrepancies.

Major Findings: (1) The Minimum Educational Standards of AIOTA exceeded WFOT's standards in the area of academic degree by offering a Bachelor of Science in occupational therapy. (2) Lack of legal authority of Occupational Therapy (OT) association within the medical and educational systems has caused it to remain only a 'representative body' of occupational therapists in India. (3) Problems of financial instability, disunity regarding ethical issues, and membership beliefs of biased representation had been major issues in the lack of development of AIOTA. (4) Weaknesses were evident in the syllabi in the areas of work study, social-industrial legislation, development and management of OT programme. (5) WFOT has been unable to provide effective educational consultation services of OT in India because of financial limitations and multiple

social system variables. Occupational therapy as a profession is still in its infancy in India. (6) There is no system to monitor therapists in India. The quality of care delivered to patients by occupational therapists in India is not up to the mark. [MPR 1496]

Koul, Lokesh and Bhadwal, Satish Chand. 1989. **Achievement motivation and test anxiety: Effect of unit tests.** *Indian Educational Review*, Vol. 24 (1): 59-71.

Problem: In order to raise the level of academic achievement, there is a need to devise sudden strategies for classroom teaching which may increase achievement-motivation and decrease test anxiety in students. The use of unit tests during instruction may be a strategy to serve this purpose. A unit test refers to a set of post-instructional questions given to students uniformly by the teacher in a classroom situation at the end of a specified learning sequence. The administration of unit tests during instruction provides the learners an organised review of the material learned originally which in turn helps in the better acquisition and retention of subject-matter by the students.

Objectives: (i) To study the effect of unit tests on achievement-motivation of high school students, and (ii) to study the effect of unit tests on the test anxiety of high school students.

Methodology: The sample of the study was drawn from 65 Grade VII students studying in Government High Schools in Mandi District of Himachal Pradesh. The tools used included four unit tests, Achievement Values and Anxiety Inventory (AVAI), by Prayag Mehta, a Hindi version of Sarason's Test Anxiety Scale for Children by Nijhawan and the Group General Mental Ability Test (Hindi version) by Jalota. The collected data were treated using analysis of covariance.

Major Findings: (1) The experimental and control groups, on an average, exhibited the same level of achievement-motivation at the end of instruction as well as 20 days after the completion

of instruction. (2) The experimental and control groups, on an average, exhibited the same level of test anxiety at the end of instruction as well as 20 days after the completion of instruction. [VKJ 1516]

Kulkar, K.R. 1989. **Construction and standardisation of unit tests in the subject of Marathi for pupils of Standard VIII.** Ph.D., Edu. Shivaji Univ.

Problem: The study addresses the construction and standardisation of five unit tests in the subject of Marathi for pupils of Standard VIII of Marathi-medium secondary schools.

Objectives: (i) To construct five unit tests in Marathi for measuring the achievement of pupils of Standard VIII, and (ii) to standardise five unit tests in Marathi for Standard VIII by establishing norms for the Marathi-medium secondary schools from the Kolhapur municipal corporation area.

Methodology: A random sample of 651 Standard VIII pupils, (14% of the total population) from 16 secondary schools of Kolhapur formed the sample for the try-out. The final tests were administered to 5,355 pupils from 23 secondary schools (50% of the total secondary schools in Kolhapur). The tools used to collect the data included five unit tests prepared by the researcher from a Marathi textbook on the basis of only five lessons, a proforma for criticising the test items/questions, interviews, observations and visits. A test manual was prepared for the interpretation of scores.

Major Findings: (1) The five unit tests in Marathi for Standard VIII of Marathi-medium secondary schools were standardised systematically using the standardisation procedure. (2) The number of items in five different unit tests included 40, 39, 35, 22 and 20 items respectively. (3) The item difficulty ranged from 0.29 to 0.40. (4) The reliability was calculated using KR 21 formula and as regards validity, content and criterion-related validity

were calculated. (5) As regards norms, percentiles, stanines and standard scores covering Z and T scores were developed. (6) A test manual was prepared with directions for administration of the tests and suggestions given for interpretation of scores. [CMY 0893]

Kumar, Anil. 1990. **Construction and standardisation of performance test of general mental ability for illiterate adults in the age-group 15-35 years.** Ph.D., Edu. Kurukshetra Univ.

Problem: It attempts to study the construction and standardisation of performance test of general mental ability for illiterate adults in the age-group 15-35 years.

Objectives: (i) To construct a performance test of general mental ability for illiterate adults in the age-group 15-35 years, (ii) to standardise this test by determining norms, viz. occupation norms, percentile norms, linear derived scores and T-score norms (for different categories of occupational groups), reliability and validity for the above population for use in adult education centres, and (iii) to study the distribution of general mental-ability scores.

Methodology: After preparing five sub-tests, e.g. Block Design, Pass-along (coloured) Test, Pattern (Black and White) Drawing Test, Memory (Black and White) Drawing Test and Picture Construction (coloured) Test, they were tried out in a preliminary try-out over a sample size of 20 (twelve males and eight females) adults of different categories of occupations. Time limit for each item was recorded. Items were arranged in the increasing order of difficulty based on individual observations. Out of 76 items, 19 items were for Block Design, 12 for Pass-along, 12 for Pattern Drawing, 19 for Memory Drawing and 14 for Picture Construction Test. For try-out of the test, a sample size of 370 illiterate adults (225 males and 145 females) belonging to different categories of occupations was taken from Balasore District of Orissa. Total time for

administering a full test was 2 hours 40 minutes. After item analysis, 12 items were selected for Block Design, nine items for Pass-along test, 10 for Pattern Drawing test, 12 for Memory Drawing Test and seven for Picture Construction Test. The final administration of the tests was done on 1,020 illiterate adults (704 males and 316 females) in the age-group of 15-35 years. Subjects were selected from 12 districts of Orissa on the basis of stratified random sampling method.

Major Findings: (1) The total number of items for the test was 48 out of which 12 items were for Block Design Test, eight items were for Pass-along Test, 10 items for Pattern Drawing Test, 12 items for Memory Drawing Test and six items for Picture Construction Test. One item from Pass-along Test and Picture Construction Test were kept as a practice item. (2) Norms of the present study were reported in terms of occupation, percentile and T-scores. (3) The test-retest reliability coefficients of each sub-test and of the total battery of tests were found to be 0.81, 0.83, 0.88, 0.76 and 0.93 for Block Design Test, Pass-along Test, Pattern Drawing Test, Memory Drawing Test and Picture Construction Test, respectively. Moreover, the split-half reliability coefficients for all these five sub-tests were found to be 0.93, 0.79, 0.71, 0.87 and 0.83, respectively. However, for the whole test, the reliability coefficient was 0.89. (4) The internal validity (construct validity) of all these five tests was found to range from 0.25 to 0.91, 0.26 to 0.92, 0.25 to 0.64, 0.25 to 0.90 and 0.25 to 0.77. Finally, all the sub-tests to total test correlation coefficients were found to be significant. Moreover, as regards the validity ('g' saturations) of the present battery of tests, the same inter sub-tests correlation coefficients were found to range from 0.94 to 0.99. [CLK 0334]

Kumar, S. 1991. **Comparative reliability of grading and marking.** Independent study. *The Maharaja Sayajirao Univ. of Baroda.*

Problem: This study focuses on the problem

of evaluating, i.e. scaling student's achievement at the university stage.

Objectives: (i) To study the consistency in grades when a student's achievement is graded by several examiners, and (ii) to study the comparative reliability of grading and marking.

Methodology: For studying the consistency in grading, a purposive sample of 30 teacher-trainees were selected. To study comparative reliability of grading and marking, 55 answer-sheets of B.Ed. students were taken as a sample. These answer-sheets were xeroxed and four sets were prepared. These sets were examined by the same examiner, one after another, for marking, remarking, grading and regrading. Achievement tests were used as main tools to collect data. Correlation coefficients were calculated between marking, remarking, and grading and regrading.

Major Findings: (1) The consistency in grading was found to be low. (2) The coefficient of correlation between grading and regrading was found to be 0.74, whereas in the case of marking and remarking, it was found to be 0.77. It indicated that the marking system was more consistent than the grading system although the difference was insignificant. [MSY 0900]

Lodhi, P.H. 1991. **Analysing relationship among multiple data sets for a single sample: A methodological appraisal.** *Indian Educational Review*, Vol. 26 (4):118-23.

Problem: It attempts to analyse the relationship between two or more sets of measures on the same individuals.

Objective: To study various statistical procedures to find the relationship between two or more sets of measures on the same individuals.

Methodology: It is a theoretical study.

Major Findings: (1) The problems of studying the relationship between two or more sets of variables can be efficiently tackled through factor analysis approach, and many factor analytic

procedures which have not been used so far for the above may now be put to use. (2) There is no dearth of exploratory methods to study the relationships between two or more data sets. The current research, therefore, needs to be focused on developing methods to evaluate the hypothesis of relationship between two or more data sets. [VKJ 1918]

Malhotra, M.M., Anand, Y.K. and Bedi, S.P. 1990. **Design of a system of student evaluation incorporating multi-point entry and credit system.** Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: This report takes cognizance of the findings of the earlier studies with regard to the problems and issues confronting the system of student evaluation. It also aims to design a system which will not only help grading and certifying the students' performance but also provide necessary information to all stakeholders in the system for improving the teaching-learning and managing the instructional processes.

Objective: To design a system of students' evaluation that incorporates multi-point entry system of students coming from different streams.

Methodology: The report is prepared after studying multi-point entry and credit system existing in some of the institutions like Indian Institute of Technologies, Birla Institute of Technology and Science, Pilani, etc. In preparing the design, the authors have freely used the contents of the Manual for Implementation of Multi-point entry and Credit System in Gujarat Polytechnics, prepared by the Department of Technical Education, Gujarat, in collaboration with Technical Teachers' Training Institute, Bhopal and the reports on Strengthening the Board of Technical Education, Punjab and the Scheme for Internal Assessment of Students in the Polytechnics of Haryana, prepared by the TTTI, Chandigarh.

Major Findings: (1) Classification of the

courses of study under the categories of 'Humanities Courses', 'Basic Science and Basic Skill Courses', 'Engineering Science and Engineering Skill Courses' and 'Technology Courses', and specifies the number of credits to be earned for each category. (2) Credit-based design of the scheme of study with each course of study assigned specific number of credit hours and the students from different streams such as 10+, 10+2, 10+2 vocational etc. allowed to enter the programme with exceptions granted for courses on the basis of their background. (3) Flexibility in terms of earning maximum or minimum number of credits in a term to satisfy learner's pace of learning; sequence in which the learner can take up courses; specialisation within the broad field of engineering, earning credits depending on previous background and experience and lastly for auditing courses. (4) Autonomy in terms of course offerings, curriculum prescriptions, modes of instructional delivery and certification was also highlighted. (5) It also emphasised on the design for making evaluation of student's performance in course-work and end-term examination more valid and reliable. [MMM 0998]

Malhotra, M.M., Bedi, S.P. and Tulsi, P.K. 1990. **Content analysis of question papers set in the Board Examination of Haryana polytechnics.** Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: The study centres round the problem of quality of question papers set in the Board Examination of Haryana Polytechnics.

Objectives: (i) To analyse question papers for assessing coverage of syllabus as well as the weightages assigned to assessing different levels of cognitive abilities, (ii) to examine sequencing and appropriateness of test items used in the question papers, (iii) to study adequacy of time allotted for attempting the question papers, and (iv) to study the adequacy of instructions given in the question papers.

Methodology: Question papers of study set in three consecutive examinations in respect of the subject from each semester of the diploma programme in civil, mechanical and electrical engineering and one subject from each of the first two semesters, common to the above programmes, were selected randomly for content analysis. Content analysis of these question papers was done by subject experts and education faculty.

Major Findings: (1) Question papers in general did not fully cover the prescribed content. (2) The percentage weightage assigned to different ability levels did not seem to be appropriate. It was proportionately high for comprehension level and quite low for application level in a good number of the question papers analysed. (3) External choice was provided in the question papers which encouraged students for selective study. (4) Grammatical mistakes and/or ambiguity existed in some of the questions set in most of the question papers. (5) Instructions provided for answering questions were not complete in 50% of the subjects. (6) Sequencing of questions in the question papers did not follow the pattern 'easy to difficult'. [MMM 0999]

Malhotra, M.M.; Menon, P.N.; Bedi, S.P. and Tulsi, P.K. 1989. **Status study of internal assessment of students in the polytechnics of Haryana.** Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: The study focuses on the problems of practices followed in assessing course work of students in the polytechnics of Haryana.

Objective: To assess the existing system of internal assessment of students in polytechnics of Haryana.

Methodology: The sample consisted of 35 teachers teaching different subjects and 146 students from various disciplines selected from three polytechnics. Data were collected through a questionnaire for students and an interview

schedule for teachers, apart from an Attitude Scale on Internal Assessment for Teachers.

Major Findings: (1) Students were informed about the criterion of assessment of their course work in the beginning of the semester. However, no guidelines were available to the teachers for the course work assessment. (2) No uniform pattern with regard to the elements of course work assessment existed for the same category of subject taught by the teachers. However, the most commonly used elements for assessment were class tests, homework and classwork in the case of theory subjects and laboratory/workshops, field exercises, practical notebook, oral tests and attendance in the case of practical work in laboratories/workshops. The above elements were used in various combinations and different weightages were assigned to each of these elements by different teachers. (3) The techniques used for assessing course work in respect of cognitive abilities, practical skills and attitudes were found to lack validity. These were also not found to be helpful to students in their progressive learning. Methods used for assessing practical skills in laboratory/workshop did not ensure assessment of the various sub-component skills, attitudes and behavioural aspects as the instruments of measurement employed included only the oral test assessment of journals and observations. Students expressed dissatisfaction with the techniques used for assessment. According to them, the assessment lacked objectivity, copying in homework, assignments and class tests and no opportunity for improvement. (4) Report-back of students' performance was limited only to students. It was neither timely nor it provided information about their weaknesses and suggestions for improvement. [MMM 1000]

Malhotra, M.M. and Tulsi, P.K. 1990. **Scheme for internal assessment of students in the polytechnics of Haryana.** Independent study. Chandigarh: Technical Teachers' Training Institute.

Problem: This study designs a scheme to monitor the internal progress of students in the polytechnics of Haryana.

Objectives: (i) To assist and monitor students' progress in learning to assess their performance objectively, and (ii) to provide feedback to them and other stakeholders for improving the teaching-learning process.

Methodology: The problems/issues relating to the internal assessment of students, as identified in the study conducted on 'status study of internal assessment of students in polytechnics of Haryana', were taken into consideration to design an improved system of internal assessment of students. This developmental study was taken up by the members of the Faculty of Education at Technical Teachers' Training Institute, Chandigarh. The design of a system thus prepared was put forth before a group of experts from polytechnics and Directorate of Technical Education, Haryana. The opinions of each member of this group were ascertained on each of the design aspects of the system. The design of the system of internal assessment was finalised after incorporating the modifications suggested by the group.

Major Findings: (1) The proposed design for internal assessment of students' performance took into consideration the capabilities like basic knowledge and skills, generic skills relating to problem-solving, creativity etc., that need to be acquired by the students. This requires a variety of assessment techniques consistent with the type of capabilities. (2) In the scheme, it was suggested that assessment of students' performance in theory subjects can be done through class tests (open or closed book) and home assignments or term papers. For assessment of performance in practical work, it was suggested that assessment should be through observation of performance of tasks/jobs (process evaluation), judging the quality of product (product evaluation), observing general behaviour and conducting viva-voce. The components that should contribute towards

internal assessment of students' performance in laboratory work, workshop practice, drawing work, field work and project work were also described. (3) The scheme also discussed the guidelines for designing tools for various components of assessment and criterion for assessing students in theory and practical subjects. Further, it described the system for monitoring students' progress, use of feedback of assessment results to teachers, curriculum planners and administrators. Steps for implementing the scheme were also suggested in the design. [MMM 0996]

Manjula, R. 1991. **Construction and standardisation of a reading-readiness test in English for pre-school children.** Ph.D., Edu. Bangalore Univ.

Problem: The researcher has constructed and standardised reading-readiness test in English for pre-school children.

Objectives: (i) To construct and standardise a reading readiness test in English, (ii) to provide norms to facilitate the interpretation of test scores, (iii) to prepare profiles for the use of teachers in assessing the reading-readiness abilities of the pupils, (iv) to prepare a manual with detailed directions to administer the test along with technical information like validity and reliability, and (v) to study whether there is any significant difference in readiness between boys and girls.

Methodology: The sample consisted of 208 students selected from five schools of Bangalore City. The final test included 140 items, having 20 items in each subject. The final sample for standardising the test included 2,000 students to be admitted to Standard I in the schools of Bangalore City. After reviewing the related literature, a methodology was sought out to plan, construct and standardise the reading-readiness test for pre-school children. Based upon the review, four areas—auditory, visual, language and quantitative—were selected by the investigator.

Major Findings: (1) The researcher developed a reading-readiness test (with multiple choice items). (2) The researcher covered four areas covering auditory, visual, language and quantitative with seven sub-tests in the battery. (3) The researcher established content validity and predictive validity. (4) Reliability was established using split half, KR 21, and Fangan method. (5) Percentile and stanine norms were prepared. [MKh 0324]

Modi, D.J. 1989. **Question bank for Standard X in Gujarati subject.** Independent study. *Bhavnagar Univ.* (ERIC Funded).

Problem: The project is concerned with the problem of setting up an item bank (IB) in Gujarati language for use of Standard X students.

Objectives: (i) To prepare a pool of 200 test items in the subject of Gujarati for Standard X, and (ii) to prepare test items based on various objectives and various types of questions.

Methodology: The geographical area covered under the project was Bhavnagar City only. The test was administered in 22 schools of Bhavnagar City. The total number of students in these schools was found to be 3,340. The try-out of each set of the test was done on about 130 students selected proportionately and randomly from each division of all the schools. Test-items were developed and used in the project. Facility Value (FV) and Discrimination Index (DI) for the objective and short-answer type questions were calculated. Distractor analysis was also done.

Major Findings: (1) The project report presented objective-wise and questions format-wise satisfactory, non-satisfactory items of prose, poetry and grammar. (2) The report gave general split-up of the total number of selected 416 items objective-wise, content-wise and question-type wise. (3) Out of the 416 items, 50 were essay type questions, 110 short-answer type questions and 256 were objective type questions. [MSG 1170]

Mukherjee, D.P. 1991. **Testing reading comprehension: A comparative analysis of cloze test and multiple choice test.** *Indian Educational Review*, Vol. 26 (1): 44-68.

Problem: To make an analysis of the various skills involved in reading comprehension and the problems of objectively testing children's ability to read with comprehension.

Objective: To make a comparative analysis of the achievement of a group of children by cloze test and multiple choice test.

Methodology: The sample for cloze test comprised 511 boys and girls of Class VIII from 12 districts of West Bengal. These schools were located in urban, rural and rural-urban co-educational setting. Out of 511 students, the number of boys and girls were 246 and 265, respectively. The Ss were also classified in terms of rural and urban groups. The sample for multiple choice test consisted of 200 boys and girls selected by purposive sampling from five schools. Cloze test and 40 items in the form of multiple choice test were used as tools. Significance of difference between the means and coefficient of correlation were worked out.

Major Findings: (1) The difference between the boys group and the total group and for that matter, for each of the other groups with the total group were not significant at any level of confidence. (2) The coefficient of correlation between the two sets of data was found to be significant. (3) There was a significant relationship between the students' achievement in the two types of tests used in the study. [PD 1906]

Natarajan, V. 1980. **Monograph on moderation of examination results.** Independent study. *New Delhi: Association of Indian Universities.*

Problem: Most public examining bodies assess a candidate's performance by assigning a mark to his answer script. This mark given by

an examiner is a 'raw' mark subject to several uncertainties and needs moderation. Also, an adjustment of marks is desirable in borderline cases. The existing pattern of moderation and the award of grace marks are arbitrary, ad hoc and unscientific. Hence, the present attempt.

Objectives: (i) To highlight some fundamental difficulties in moderation of results and the criterion to decide pass or fail, (ii) to study different procedures in which the results are moderated in various universities and to detail out the current position of the moderation procedures, and (iii) to provide a rational and scientific design for the same in order to bring it within the framework of explicitly stated rules and regulations with the consideration of passing probability.

Methodology: With a view to collecting information about the existing pattern of moderation procedures for the examination results in the university/institute, a questionnaire was prepared and circulated. Only 45 of the universities replied.

Major Findings: (1) Most of the universities were unaware of the scientific system of moderation. Moderation procedures followed by various universities were arbitrary, ad hoc and unscientific. (2) Most of the universities had not framed any rules or procedures for moderation of examination results. Usually, they were based on the recommendation of the Chairman, Board of Examiners and Head Examiners, etc. (3) Moderation had to be based on a consideration of passing probabilities to attain objectivity and conviction. The computer programme carried in the book could be used to find passing probabilities of examinees based on marks in various subjects and examinations. [AA 0020]

Natarajan, V. 1983. **Monograph on revaluation of answer scripts**. Independent study. New Delhi: Association of Indian Universities.

Problem: In a system of external examinations

there are bound to be disparities, misjudgements and downright serious errors in evaluation of answer scripts arising out of biased sampling of topics, abilities and also arbitrary time limit set for answers. Dissatisfaction with the mode of evaluation has become very pronounced. Some mechanism has to be devised to correct these errors. Re-checking was there in almost every university but revaluation is a comparatively new phenomenon and the two are not exactly comparable. The present study is an attempt in addressing the above.

Objectives: (i) To detail out the errors in marking, various reasons ascribed to that and giving rise to the need for revaluation, (ii) to give details of the revaluation procedures adopted by different universities in terms of certain issues like the criterion for eligibility, number of re-examiners, variation of marks, time limit for applying for revaluation and for the university to declare the results and the fee charged for it, and (iii) to suggest some methods/procedures for adoption in the area of revaluation and to justify them.

Methodology: The issue of revaluation was taken up at the annual general meeting of the Association of Indian Universities in 1982 and 117 Vice-Chancellors/Directors were requested to send details of procedures adopted in the matter of revaluation of examining answer scripts in their universities/institutes and they were requested to participate in the discussion. Out of them 63 universities responded.

Major Findings: (1) Revaluation was sought by students in different universities as a result of their dissatisfaction over the marking of the examiners. The whole concept of revaluation centres round the concept of error in marking due to subjectivity, biased sampling of topics and abilities, arbitrary time limits and indifferent evaluation/victimisation. (2) Different universities followed different procedures which included issues related to fee, nature and decision of revaluation, but all universities were keen to give

the benefit of doubt to the students and they did not think of punishing the examiner. (3) Going through the procedures adopted by the different universities for revaluation, one can easily see that there is quite a bit of consensus coming up on issues like application for revaluation, situations where revaluation is not permitted, revaluation fee, the people who are to examine the answer scripts for revaluation, etc. [AA 0019]

Natarajan, V. and Arora, Asha. 1989. **Unfair means in university examinations: A study.** Independent study. *New Delhi: Association of Indian Universities.*

Problem: Use of unfair means in university examinations has today acquired alarming proportions. The study attempts to gauge the magnitude of the malady in its various ramifications and to look at various components and stages of the conduct of university examinations and the system of punishment for use of unfair means in selected universities.

Objectives: (i) To study the status of the use of unfair means in university examinations, (ii) to solicit factual information regarding examination centres, inspection team/flying squads, their constitution, responsibilities and expenses, type and nature of unfair means, procedures and punishment for various offences, etc., (iii) to assess the situation in respect of unfair means in order that viable suggestions/specific recommendations can be made to minimise instances of unfair means, certain administrative and academic measures to deal with the situation, and (iv) to be only selective and not exhaustive so that trends can be perceived and precautions can be taken in terms of careful generalisations.

Methodology: The types of universities selected in the sample were 20 affiliating universities, 12 unitary universities and three deemed universities. Since the information sought from the questionnaire was of a factual nature, like examination centres, inspection

teams/flying squads, their constitutions, responsibilities, procedures and punishment for various offences of unfair means, the identity of the universities has been revealed. For the pre-prepared interview schedule with officials (like Vice-Chancellors, Registrars, Controllers of Examination) concerned with mass conducted examinations, students and faculty, only five selected universities were taken and absolute anonymity was promised to encourage forthright replies.

Major Findings: (1) Unfair means have become a part of our educational culture. The reasons may be attributed to excessive competition and psychological frustrations and succumbing to temptations, a natural human weakness. (2) Large cases of unfair means are observed in affiliating universities and less are being observed in technical universities. (3) Visits to examination centres for inspection are made almost every day but generally the flying squad comprised senior officials and faculty. No junior teacher was found in these squads. (4) Generally the punishment for various malpractices—which is almost common in all universities and centres—is debarring from examination for a few years. Only a few universities have committees to deal with unfair means. (5) Better control may be exercised by keeping the number of students (taking examinations) at a centre low, restructuring the question paper, bringing in incentive and motivation in the job of invigilation, reducing the overriding importance of external end-of-the-year examination, strictly adhering to the state laws governing such unfair means and malpractices, etc. [AA 0023]

Natarajan, V. and Gunasekaran, K. 1985. **Scaling techniques: What, why and how?** Independent study. *New Delhi: Association of Indian Universities.*

Problem: The marking system with 0 to 100, implying a 101-point scale, has been a singular factor contributing to the misconception and misinterpretation of the absoluteness of marks.

Marks are only relative measures but they do not indicate any measure of absolute merit or ability. Also, the addition of marks in different subjects has been creating problems of credibility of examination scores. The ignorance of need to adopt some scaling techniques in a system of marking for addition or comparison of different sets of marks and their reporting, and of techniques of scaling ranging from simple to complex and the situations in which the scaling is to be applied, are the important problems in the field of evaluation and examinations.

Objectives: (i) To establish a need for scaling, (ii) to identify situations in which scaling is to be applied, (iii) to survey the technique of scaling adopted in India and abroad, and theoretical details of such techniques, (iv) to establish the need of equating marks as against scaling, and (v) to spell out the possible scaling methods that can be adopted in various situations and to suggest the necessary computer software.

Methodology: Various universities in India were sent a questionnaire to assess the status of scaling techniques being adopted and the collected information were qualitatively analysed.

Major Findings: (1) The question-paper pattern containing 10 to 12 questions with an option to answer five or six questions in three hours' time suffers from severe drawbacks. The questions are not strictly equivalent on the basis of content, making comparison of students a spurious process. (2) In spite of all exercises to bring in objectivity of marking, there are bound to be variations among the examiners in marking the scripts as the expectations of the examiners vary. (3) Most of the examining agencies hardly use the responses of the examinees in a meaningful way. (4) A scaled mark, whatever its intrinsic uncertainty, is clearly a just and more appropriate estimate of the performance of a candidate than a raw-mark. Results that are based on scaled marks have a higher degree of validity. (5) Scaling techniques will have to be introduced whenever and wherever the situation

warrants. If different sets of marks are to be added/compared, they need to be scaled to a common standard where such a standard is lacking. (6) Methods of scaling with the help of digital computers can be conveniently applied to mass conducted public examinations whose results matter to thousands of students. (7) Seven situations have been identified that warrant adoption of scaling techniques and six scaling methods such as Taylor's Method, Dandekar's Method, Harper's Method, ETS Method, Natarajan's Method and Lete's Method are suggested. [AA 0022]

Natarajan, V. and Kulshrestha, S.P. 1983. **Assessment of non-scholastic aspects of learners' behaviour.** Independent study. New Delhi: Association of Indian Universities.

Problem: In their function to certify students on their achievement, universities emphasise only on their scholastic and intellectual abilities in various faculties. It is seldom seen that the system of assessment includes something other than scholastic traits such as regularity, attentiveness, interest, hard work, attitudes, values, etc. This study attempts to review assessment in its perspective, to look at both scholastic and non-scholastic to generate a profile of achievement.

Objectives: (i) To stress the need for a profile of achievement in all aspects of growth, scholastic and non-scholastic, for every student passing through an assessment scheme and the objectives of assessment, (ii) to suggest ways and means for improvement of measurement and testing procedures of non-scholastic aspects within the affective domain, (iii) to survey the tools and techniques to record the evidences in affective/non-scholastic domain and suggest various proforma for assessment, and (iv) to suggest guidelines for preparing reports for interpreting and communicating the results to students, parents and college/university administrators.

Methodology: The present study has been a review study and hence dependent upon the review of related material.

Major Findings: (1) The individual differences on various qualities and abilities are seen and highlighted. (2) Educational institutions confine themselves to the development of scholastic abilities mainly. The affective domain is almost neglected. (3) Assessment of non-scholastic aspects of behaviour are closely associated with the affective/attitudinal aims of education. It is an integral part of the educational system but has been denied its proper place. (4) Teachers do not attempt to assess the non-scholastic abilities for various reasons like they are not clearly observed, they develop slowly and become visible only after a long time, it is difficult to assign quantitative values to them and are not very clearly defined. (5) To collect evidences about non-scholastic aspects of learners' growth, it becomes necessary to use various appropriate tools and techniques from a number of tools and techniques which are available for the purpose. (6) The evidences collected through tools, tests and techniques must be scored and checked and must be analysed to assess and draw logical inferences regarding non-scholastic aspects of learners growth and to be reported to users in a meaningful way. [AA 0021]

Panchal, D.H. 1991. **Adaptation and standardisation of the first half (first twelve) sub-scales of British Ability Scales for the Gujarati population of urban areas.** Ph.D., Edu. Gujarat Univ.

Problem: The study is concerned with the adaptation and standardisation of British Ability Scales (BAS) for Gujarati children of urban areas.

Objectives: (i) To adapt BAS for Gujarati children of Ahmedabad, (ii) to standardise the process of administration, the instructions to be followed, scoring procedure, etc., for Gujarati subjects, (iii) to establish the reliability and

validity of twelve sub-scales of BAS, and (iv) to apply the results obtained from the adapted scale to the Rasch model and thereby check its congruency with the original one.

Methodology: The age of the subjects who were to be administered BAS ranged from three years to seventeen years. As the scale was to be administered individually and it took about three sessions of 45-50 minutes for each subject, it was, therefore, decided to select 40 subjects each from three focal age-groups, five ten and fifteen, thus the total sample of 120 was drawn from three different socio-economic zones of Ahmedabad City. Thus, the final sample was drawn by stratified random sampling method. While adapting the sub-scales for Gujarati subjects, necessary modifications were made in the instructions, certain words biased on English culture, and objects used in the sub-scales. The first try-out was carried out on 20 subjects individually. The second try-out was done with the aim of finding out the suitability of the test items for Gujarati subjects. For the different age-ranges, three boys and three girls were administered the specified sub-scales individually, the total sample being 48. Using the Rasch model, difficulty and ability parameters of each item were computed. The item characteristic curves (ICCs) were drawn to see whether the items could fit the Rasch model.

Major Findings: (1) All the newly constructed test items fitted the Rasch model satisfactorily which was decided by drawing ICCs for each new item. (2) The sub-scale of social reasoning was assessed at the four developmental stages. (3) It was found that pupils of 15 years of age did not reach the fourth level of generalisation of social reasoning. (4) Test-retest reliability of the adapted BAS, ranged from 0.63 (Speed of information processing) to 0.95 (Formal operational thinking). (5) The concurrent validity of the BAS with Wechsler Intelligence Scales for Children (WISC) was found to be 0.61 for the scale. [JHS 1048]

Patel, B.V. 1988. **Construction and standardisation of silent reading comprehension tests in Gujarati for pupils of Classes V, VI and VII.** Independent study. *Sardar Patel Univ.* [ERIC Funded]

Problem: It is an attempt at the construction and standardisation of a silent reading comprehension test in Gujarati for pupils of Classes V, VI and VII and study of the effect of practice on improving reading comprehension.

Objective: To construct and standardise a tool for measuring reading comprehension and speed in Gujarati.

Methodology: Six schools from Anand District of Gujarat were selected keeping in view the strength, location and type (boys, girls or mixed schools) of schools. Out of these, three schools were treated as experimental schools and three were treated as control schools. Thus, there were six divisions of each standard, having three divisions as experimental and three as control. A battery of tests was developed and used to collect the data. The collected data were treated using analysis of variance.

Major Findings: (1) The experimental and control groups of all the standards were fully matched on mean and variances of reading comprehension scores at the initial stage of the experiment. (2) The experimental and control group of all the standards were fully matched on mean and variances of rate of reading per minute at the initial stage of the experiment. (3) Impact of reading improvement of pupils of Standards V, VI and VII on reading comprehension were found highly significant, indicating that the treatment of reading comprehension given to the pupils of experimental groups had proved itself significantly more effective than the absence of treatment of reading comprehension given to the pupils of control groups. (4) The impact of reading improvement programme on pupils of Standards V, VI and VII on rate of reading per minute was studied and found that the treatment for increasing the rate of reading per minute had

proved significantly more effective than the lack of treatment given to the students of the control groups. [SRA 1105]

Patel, N.P.; Patel, S.R. and Patel, R.J. 1990. **On statistical analysis of examination pattern.** *Indian Educational Review*, Vol. 25 (4):10-17.

Problem: It attempts to study the efficacy of current examination reforms.

Objective: To study the different aspects of three examination systems, namely annual system, four-point system and 10-point system.

Methodology: The study was conducted in three campuses at Anand, Junagadh and Navsari. Ten per cent of the total students were taken at random for the campus-wise analysis of marks (external and internal) through the years 1973-74 to 1986-87. The marks obtained were collected for various semesters and analysed separately for each campus. The collected data were treated using F test, chi-square test, 't' test, T^2 , Z test, correlation, extended sign test and discriminant functions.

Major Findings: (1) Internal and external marks were highly correlated as revealed by 'r' values which were near one. (2) At Anand campus, the mean for internal marks was higher than the mean for external marks, whereas at Junagadh campus it was more or less the same. (3) The means of different systems differed significantly as revealed by high F value. (4) For classes obtained by students, the values of chi-square were found significant for all the campuses and overall campuses indicating that the class obtained by a student at any campus was not related to any system. The values of extended sign test as well as the comparisons of the standardised mean test by using Hotelling T^2 indicated that the proportion of students getting first, second and third classes under the 10-point system was higher than under other systems. The standardised means of the eight semesters of the 10-point systems were significantly higher

than the four-point system. (5) Amongst the three systems, the 10-point system was the best in all the campuses. The mean of the 10-point system was very high, ranging from 1,399 to 1,513 as compared to other systems (ranging from 689 to 1,095) in all the campuses. (6) The discriminant coefficients associated with the first, third and seventh semesters were negative, whereas for the even semesters beginning after Diwali, they were positive. [KCN 1460]

Patel, R.S. 1989. **An investigation into the disparity of results of examinations of Standards X and XII conducted by the Gujarat State Examination Board.** *Madhyamik Shikshan and Parikshan*, Vol. 12 (7).

Problem: This study is focused upon the investigation into the degree of disparity between the results of examination boards of Standards X and XII in Gujarat.

Objectives: (i) To study the degree of disparity between the results of the examinations of Standards X and XII, conducted by Gujarat State Examination Boards, (ii) to find out the causes of the disparity, and (iii) to study the responses of the pupils as well as parents regarding the wide disparity in total marks obtained at X and XII Standard levels.

Methodology: The sample was purposive. The pupils selected as subjects were those who studied in the same school at X and XII levels in the science stream only and who had demarcated difference in percentages, especially having less percentage at standard XII level. Out of these 100 pupils selected, 20% of the total sample who had the maximum disparity between two results were interviewed along with their parents individually. An interview schedule was developed for the same. The result-sheets of the examinations were availed from three schools of Ahmedabad City. Mean, SD and 't'-test were used to treat the data.

Major Findings: (1) The difference in marks in all the subjects (mathematics, English and general science versus physics, chemistry and

biology) were found to be significant. (2) Out of 100 pupils, in Standard X, 76 got distinction, 18 first class, five second class and one in pass class. The same 100 pupils' result in Standard XII was: nine distinction, 41 first class, 27 second class and 23 pass class. (3) The salient cause put forth by pupils as well as parents for the wide disparity in the results of Grades X and XII, were: (a) there was a wide gap between the syllabi of Standard X and XII, especially in science and mathematics; it lacked continuity and there was no linkage between the two levels; (b) in the investigator's view, the topics at Grade XII were more or less conceptual while those at Grade X could be easily crammed up—even the style of question papers at Grade X encouraged cramming; (c) teachers at Grade XII rushed to complete the course because of lack of time. [JHS 0727]

Patel, S.R. 1991. **Adaptation and standardisation of the second half (other twelve) scales of British Ability Scales for the Gujarati population of urban areas.** Ph.D., Edu. Gujarat Univ.

Problem: The study aims at achieving the adaptation and standardisation of the second half of the British Ability Scales (BAS) for Gujarati children of urban areas.

Objectives: (i) To adapt the test items to Gujarati environment and therefore to modify, improve or coin new test items (particularly language tests) for those having some cultural bias, (ii) to apply principles of Rasch model to all the items of different scales and eliminate those items which did not fit in the Rasch model as per the results of goodness of fit, (iii) to compute ability scores on each item of the scale, and (iv) to estimate the reliability and validity of the scale.

Methodology: The British Ability Scales, being an individual scale, its administration took at least two sessions of one hour each of the appropriate sub-scales. So the sample of 120 subjects distributed among six different

age-groups was selected at random from three different socio-economic areas of Ahmedabad City. The sample was equally divided between the two sexes. Thus, the sample was selected by stratified random sampling method. The original BAS was developed and standardised on the Rasch model put forth by George Rasch in 1960. A computer programme was developed in BASIC for use of easily available IBM PC/XI computer to fit the data to the Rasch model and was applied to the adapted Gujarati sub-scales.

Major Findings: (1) Out of the total of 12 sub-scales adapted in Gujarati, the test of verbal fluency was the only one which was not fitted to the Rasch model. (2) The items of remaining 11 sub-scales were checked for their difficulties, ability and goodness of fit. (3) Item Characteristic Curves (ICCs) were drawn for five items in each sub-scale. The results clearly indicated that all these scales fitted the Rasch model perfectly. That is, the curves fulfilled the prime condition of the Rasch model-unidimensionality. (4) Test-retest reliability of the adopted BAS ranged from 0.58 (immediate visual recall) to 0.93 (recall of designs). (5) It was validated against Shah's adapted S-B Scale in Gujarati version. [JHS 1046]

Patnaik, S.P. 1990. **Development and standardisation of situational tests for selection of elementary school teachers.** Ph.D., Edu. Utkal Univ.

Problem: The study centres round the problem of development and standardisation of situational tests for selection of elementary school teachers.

Objectives: (i) To construct a situational test for measuring teaching aptitude appropriate for elementary level, (ii) to derive norms in relation to teacher competence, general teaching method, teaching skills, teacher behaviour and motivation, remedial teaching and evaluation, relation with home, parents, community, discipline system, attitudinal characteristics and personality and physical organisational ability and total teaching

aptitude score, and (iii) to develop an interview schedule for attaining a systematic procedure to conduct interviews.

Methodology: The sample of the study consisted of 915 teachers working in elementary schools of Orissa and the total sample represented different categories of teachers, i.e. varying in age, sex, marital status, qualification, training status, experience of teaching, varying in background where they work and varying in their effectiveness. The tools used to collect data included Teaching Aptitude Test of situational type, Ahluwalia Teacher Attitude Inventory, Teaching Aptitude Test Battery for Elementary School Teachers by Singh and Sharma and an Interview Schedule developed by the investigator. The data were treated with mean, SD, 't' test and correlation.

Major Findings: (1) A teaching aptitude test of situational type consisting of 54 items based on factors such as teacher competence, general teaching method, teaching skills, teacher behaviour and motivation, remedial teaching, evaluation, relation with home, parents and community and discipline system, attitudinal characteristics and personality and physical and organisational ability was constructed. (2) Percentile norms had been established. (3) An interview schedule covering seven factors was developed and standardised. [KCP 0399]

Rai, V.K. 1989. **Attitude of examiners towards spot evaluation in relation to sex, level and stream.** *Indian Educational Review*, Vol. 24 (4): 125-32.

Problem: The present study is carried out to determine the attitude of examiners towards spot evaluation in relation to sex, level and stream.

Objectives: (i) To study the attitude of examiners towards spot evaluation, (ii) to compare the attitude of male and female examiners, (iii) to make a comparative study of examiners of the science stream with those of the arts stream, (iv) to compare the examiners

who work at intermediate level and those who work at degree level, and (v) to study the interaction effects of sex, level and stream on the attitude of the examiners.

Methodology: The sample consisted of 100 examiners who were appointed by the Intermediate Board, Allahabad, to examine the answer scripts of intermediate students. A Likert-type attitude scale was developed to measure the attitude of the examiners towards spot evaluation. The collected data were treated with mean and analysis of variance.

Major Findings: (1) The examiners did not possess favourable attitude towards the spot evaluation system. (2) Male examiners had more favourable attitude than their female counterparts. (3) The examiners working at the intermediate level had more favourable attitude than those working at degree level. (4) The science stream examiners were more favourably inclined towards the spot evaluation system. (5) There was no interaction effect of sex, level and stream on the attitude of the examiners. [SPr 1457]

Raithaththa, Bhanumati C. 1989. **Development and validation of a criterion referenced test on vowel-coalition (Svarsandhi) in Sanskrit language.** Ph.D., Edu. Bhavnagar Univ.

Problem: In this study, criterion referenced test for Standard VIII in Sanskrit on the topic of vowel-coalition (Svarsandhi) has been developed and validated. Such tests aim at the diagnosis and improvement of teaching-learning processes.

Objectives: (i) To develop a criterion referenced test (CRT) on vowel-coalition (Svarsandhi) in Sanskrit language for Standard VIII, and (ii) to validate the proposed test.

Methodology: The purposive cluster type of sampling method was employed in the study. The total number of selected subjects were 200, out of which 50 boys and 50 girls were selected from secondary high schools of rural and urban areas each of Jamnagar District. The consistency of the

test was found out by logical review of the items employing Item Objective Congruence Index (IOCI) method, calculating Pre-test, Post-test Difference Index (PPDI). 'Kappa' Index was calculated to establish the reliability of CRT scores. The unidimensional indices were calculated for validity of each domain.

Major Findings: (1) For the initial form of the test, a pool of 776 items was generated on the basis of 16 well-defined behavioural domains by following closely the rules regarding item-writing technique. (2) Perfect congruence was found between the item and the objective. After reviewing all the items logically, it was found that the IOCI of each item was +1. (3) Each item's representativeness was high. (4) The PPDI of all the items ranged from 0.15 to 0.69. The instructional sensitivity of each item was quite satisfactory. (5) The item was selected randomly from the pool of the logically and empirically reviewed items. The principle of generalisability was observed after selecting the items randomly. (6) Parallel forms were prepared. Each of the two forms consisted of 212 items. (7) There was perfect content validity in the present test as IOCI of each item was +1. (8) The graph-based unidimensional indices of each behavioural domain of both the parallel forms ranged from 0.07 to 0.70, i.e. all of them were positive and the items of each domain measured their respective construct or domain. (9) The critical ratio of differences of the mean scores of instructed-uninstructed groups of all the behavioural domains of both the parallel forms was significant. (10) The indices of mastery-non-mastery classification decision reliability ranged from 0.79 to 0.90 in both the parallel forms of the test. The present test proved reliable for mastery-non-mastery classification. (11) The cut-off score determined for each of the behavioural domains of both the parallel forms ranged between 1 to 10. The test became capable for mastery-non-mastery classification decision due to the determination of the cut-off score. [DJM 0481]

Rao, R.R.S.P. 1991. **Development and application of a scale for measuring attitudes towards the new pattern of education and empirical validation of its psychometric properties.** Ph.D., Edu. Utkal Univ.

Problem: The study centres around developing an attitude scale and measuring the attitudes towards the new educational pattern.

Objectives: (i) To develop and standardise a Thurstonian Scale of attitudes and establish its psychometric properties and (ii) to measure the attitudes of different groups of people in Orissa towards the various aspects of the new educational system and the system as a whole in relation to certain background variables such as sex, living areas, qualifications, occupations and age.

Methodology: The sample of the study consisted of individuals selected from different walks of life in Orissa drawn randomly from their respective populations. While selecting the sample enough care was taken to include people belonging to various categories classified in terms of sex, living areas, qualifications, occupations and age. The attitude scale was administered randomly and individually to as large as 1,000 individuals belonging to different occupations: students, secondary teachers, teachers in public schools, lecturers, lawyers, business people and administrators. A Thurstone five-point equal appearing interval attitude scale and a corresponding Likert scale were used as tools. The collected data were treated with mean, SD and ANOVA.

Major Findings: (1) There was a significant gender difference in the attitude towards the nature of curriculum, socially useful productive work, methods as also teaching aids, evaluation and examination, science and mathematics, values in the system of education, vocationalisation, philosophical and psychological issues. Females, in general, were significantly more positive than the males in their attitudes. (2) There was a significant living area difference

in the attitude scores. Rural people showed significantly more positive attitudes than urban people. (3) There was a significant difference when qualifications were considered with regard to attitude scores (undergraduates and post-graduates). The higher educational groups appeared quite critical in their expressions of attitudes. (4) There was a significant difference in the attitude scores towards the new pattern of education as indicated by different occupational groups, namely, lecturers, public school teachers, secondary teachers, administrators, lawyers, students and business people. (5) There was significant age differences in the attitude scores towards the new pattern of education. Middle age group (30 to 50 years) generally showed more positive attitudes than the other two groups (below 30 years and more than 50 years). (6) It was found that both Thurstone and Likert scales were sensitive to measure attitudes but Likert scale was more sensitive than Thurstone scale with regard to intensity of attitudes. [KCP 0385]

Rao, R.S. and Bharathi, M. 1989. **Evaluation of continuous evaluation system of examination in Kendriya Vidyalayas.** Independent study. Sambalpur Univ. (ERIC Funded)

Problem: This study addresses the problem of continuous evaluation system as practised in Kendriya Vidyalayas, its effect on subjects of varying content as also the student's final performance. The study also analyses the role of parents in helping the student in facing uncertainty.

Objectives: (i) To study the relationship between performance and the level of uncertainty in different subjects and different schools, (ii) to find out the effect of continuous evaluation system on the final performance of students, and (iii) to study the relationship between parental characteristics and the performance of students in the context of uncertainty.

Methodology: The sample comprised students

of Kendriya Vidyalayas (KVs). (a) From Sambalpur KV data were collected for Class X students of the 1984 batch. In all, 29 students (17 boys and 12 girls) were studied. (b) From Vishakhapatnam KV information was collected from 91 students of which 56 were boys and 45 girls. (c) From JNU Campus KV, information was collected from 99 students of which 45 were boys and 54 girls. Socio-economic data were also collected of both father and mother from all the three schools. Marks of the students of Class IX in five components of the continuous evaluation system in five subjects as per practices in the three sample schools were obtained from school records. Marks of the students in these subjects at the Class X Board Examination were also obtained. Questionnaires too were administered to parents, students and teachers. Statistical techniques used to analyse the data included frequencies, regression analysis and percentages.

Major Findings: (1) Nominal success of the system was observed in Hindi in both Vishakhapatnam and Delhi schools. Partial success was observed in science in the Delhi school and also in social studies in the Visakhapatnam school. Complete success of the system was observed in English in the Delhi school and in mathematics in the Visakhapatnam school. In other words, in Sambalpur, the system was a complete failure. (2) Higher levels of father's education did not necessarily lead to their developing a better perception about the usefulness of the system and of their using the system for the betterment of their children. (3) Education of mothers could become a useful input to some extent in making the system successful. (4) Higher levels of parental income to some extent did necessarily lead to their using the system in training their children in a better way. Thus, income of parents became a useful input to some extent in making the system successful. (5) Discipline and regularity seemed to be the objective which parents appreciated in the continuous evaluation system. Any other objective that made for creativity and analytical

power did not seem to draw their attention. (6) Roughly, 25% of the students in two sample schools, disliked the present system of evaluation. (7) Teachers responded positively to the continuous evaluation system. A substantial majority of the teachers seemed to think that it promoted creativity, analytical ability, regularity and command over the subjects by students. [MSG 1168]

Raviya, D.L. 1990. **Construction and standardisation of reading comprehension test in the subject of Sanskrit for Class VIII students of Saurashtra region.** Ph.D., Edu. Saurashtra Univ.

Problem: It is an attempt to construct and standardise a reading comprehension test for Class VIII students of Saurashtra region so as to establish the norms for Sanskrit reading comprehension.

Objectives: (i) To construct a reading comprehension test in the subject of Sanskrit for Class VIII students of Saurashtra region, (ii) to standardise the reading comprehension test in the subject of Sanskrit for Class VIII students of Saurashtra region, and (iii) to establish the norms for Sanskrit reading comprehension test score of boys and girls, rural and urban and students of different districts.

Methodology: The investigator selected 5,725 sample students (3,441 boys and 2,284 girls) by stratified random sampling technique for standardisation of the test. The investigator constructed the reading comprehension test in Sanskrit for Class VIII students of Saurashtra region.

Major Findings: (1) On the basis of Class VIII students' vocabulary, ten factors of reading comprehension and four forms of literature, a test with five sub-tests was constructed. (2) Test-retest method, split-half method and Kuder Richardson method were used for the establishment of reliability; criterion related validity and

factor analysis were used for the establishment of validity. (3) Norms for raw score were established in terms of percentile rank, Z-score and T-score. (4) Boys were higher in Sanskrit reading comprehension than girls. This was true for urban students in comparison to rural students and for different district strata. [DAU 0011]

Reddy, Venkatarami A. 1989. **An evaluation of the non-detention system from different angles.** Independent study. *Sri Venkateswara Univ.* [ERIC Funded]

Problem: The present study is an attempt at evaluating the non-detention system with respect to some important aspects like its effect on the achievement of students, percentage of pass, rate of drop-outs, and the attitude of students, teachers and administrators towards the non-detention system.

Objectives: (i) To make a comparative study of the achievement of students under the detention and non-detention systems, (ii) to make a comparative study of the percentage of passes in the detention and non-detention systems, (iii) to make a comparative study of the rate of drop-outs in the detention and non-detention systems, (iv) to assess the attitude of pupils, teachers and administrators towards the non-detention system, and (v) to suggest remedies for the defects, if any, in the system.

Methodology: Using multi-stage random sampling procedure, 7,740 students were selected who took the Standard X public examination. For the analysis of drop-out rate from detention and non-detention systems, a total number of 37,764 candidates were considered as the sample. The tools used to collect data included Attitude Scale and scholastic achievement data. The collected data were treated with mean, SD, 't' test and ANOVA.

Major Findings: (1) It was found that the academic performance under non-detention

system was significantly better than that in the detention system. (2) In terms of scholastic performance, other castes significantly differed from SCs/STs, the former scoring significantly higher than the latter. (3) Groups differed significantly in favour of rural children followed by semi-urban and urban groups. (4) An examination of the F ratios obtained for the various two-factor interaction effects on students' achievement showed that all the two-factor interaction effects were significant, i.e. system and sex, system and caste and system and locality. (5) The three-factor interaction between system, sex and caste was significant, indicating that the interaction between any two of the above variables taken at a time was not independent of the level of the third variable. (6) The three-factor interactions among system, locality, sex; system, locality, caste and system, sex and caste were insignificant. (7) The four-factor interaction among system, locality, sex and caste was however significant, indicating that the interaction between any three of the variables taken at a time was not independent of the level of the fourth variable. (8) The percentage of passes in detention and non-detention systems differed significantly in favour of the latter. (9) With regard to the drop-out rate, the detention and non-detention systems differed significantly. The non-detention system had lesser drop-outs as compared to the detention system. (10) It was found that the students held a negative attitude towards the non-detention system. This was true for both boys and girls. Further on, variables such as sex and locality, students did differ significantly. (11) It was found that teachers also held negative attitudes towards non-detention system. Teachers, when compared for their level of teaching experience and sex, were found not to differ significantly. Further, teachers belonging to different localities and having different lengths of service were found to differ significantly. (12) Even among administrators, a negative attitude towards non-detention system was found. [CGVM 1148]

Reddy, Venkata Rami A. and Naidu, Bhaskara G. 1988. **Achievement of students under detention and non-detention systems.** *Indian Educational Review*, Vol. 23 (3): 41-55.

Problem: In order to bring forth better results, satisfaction, faith and positive attitude towards education among students and also to check large scale wastage and stagnation at lower classes in Andhra Pradesh, the state government abolished detentions and introduced non-detention scheme in school pattern in 1971-72. In this system, a student would have to appear in two public examinations, one at the end of upper primary class (Class VII) and the other at secondary stage (Class X), but in all other classes an automatic promotion to further classes in school would be granted. With a view to understand as to how the scheme was run by the government and to what extent the scheme had a positive impact, the present study was conducted.

Objective: To study the effectiveness of the non-detention scheme in terms of students' achievement.

Methodology: The sample for the study was 2,808 students drawn from schools of Chittoor District with two further classifications: a) students who appeared in the examination of Class X (public examination) under detention scheme, and b) students who appeared in the examination of Class X (public examination) under the non-detention scheme based on stratified random sampling. These schools were stratified on the basis of their location in rural (five schools), semi-urban (four schools) and urban areas (two schools) in the districts. The relevant data pooled included marks obtained by the students (under both systems) in the public examinations, recorded from the register maintained in the respective schools, and personal data regarding the sex and social background (castes) of the students recorded from the school admission registers. Valuation of answer scripts for giving marks for the above examination was carried out under the scheme

of spot valuation. The marks obtained by the sample of students in different papers were analysed by ANOVA.

Major Findings: (1) Only 1,158 students who took the Class X examination under the detention system obtained a mean score of 30.48 in Hindi. The mean score of those who studied under the non-detention system was 27.38. This indicated that students who studied under the detention system scored significantly higher than those under the non-detention system. Similar trends of results were seen in all subjects (Telugu, English, etc.) except in the case of mathematics. (2) The mean scores of students classified according to the locality from where they were selected, showed that children belonging to semi-urban localities scored higher than others. Students of forward communities showed better performance than those belonging to backward communities. (3) The mean scores under the detention and non-detention system were 30.48 and 27.38, respectively, the F ratio being significant indicated that students under the two systems the scores in Hindi were significantly better in the detention system. (4) Similar results were obtained in all the subjects, Mathematics being the only exception. In the case of this subject, the mean score obtained in the non-detention system was significantly higher than the mean obtained by the children under the detention system. (5) The F ratios for locality were significant for all the subjects, showing a significant difference. (6) The boys and girls did not differ significantly. [TNSB 1407]

Rozario, L. 1989. **Construction and standardisation of achievement tests in physics, chemistry and biology for Standards VIII and IX for students studying through English medium in suburbs of Bombay with a view to diagnostic analysis and remedial teaching in Standard IX and its appraisal.** Ph.D., Edu, Univ. of Bombay.

Problem: It is an attempt at construction and

standardisation of science achievement tests in English to assess the strengths and weakness of students in order to provide them remedial courses.

Objectives: (i) To construct and standardise achievement tests in physics, chemistry and biology for Standards VIII and IX students, (ii) to evaluate the achievement of students in each of the three branches of science, (iii) to compare boys and girls on their performance in each of the three branches, (iv) to identify low achievers in each of the three branches of science and analyse their specific learning difficulties, (v) to discover the causes of errors made by students to motivate them to adopt self improvement techniques, (vi) to chalk out a remedial programme to help students overcome their weaknesses, and (vii) to evaluate the effectiveness of the remedial programme.

Methodology: On the basis of the prescribed syllabus for physics, chemistry and biology for Standards VIII and IX, achievement tests were constructed and standardised for testing the attainment of the specific objectives of teaching the science subjects. The tests were pilot tested on a small sample group and the difficulty index, discriminative power of the items and the reliability of the test were determined. The validity of the test was established by determining the concurrent validity. Percentiles, stanines and 't' scores were computed for norms.

Major Findings: (1) The study found students, in general, to perform high in physics, chemistry and biology. (2) There was no difference between boys and girls in their achievement in science subjects. (3) The remedial programme drawn up by the researcher was found to be effective as students showed significant improvement over their previous performance after undergoing the programme. (4) The study observed that students lacked scientific conceptualisation, scientific reasoning and did not exhibit an interest in science nor appreciation of the subject. (5) The students were found to be unfamiliar with the

scientific instruments and unable to apply the knowledge of scientific principles to new situations. [GJK 0234]

Shah, J.H. 1989. **Construction and standardisation of self-concept inventory in Gujarati for pupils of Classes IX and X.** *Experiments in Education*, Vol. XVII (2): 31-36.

Problem: This study is concerned with the construction and standardisation of self-concept inventory (SCI) for pupils of Standards IX and X for Gujarati subjects.

Objective: To construct and standardise a new SCI in Gujarati for pupils of Classes IX and X of Bhavnagar City.

Methodology: The sample was drawn by randomised stratified cluster sampling method from the secondary schools of Bhavnagar City. Two boys' schools, two girls' schools and two mixed schools were selected at random after preparing three lists of sex-wise schools. The divisions of each class from the school were also selected randomly. In the beginning Grade VIII was also included, but as the pupils of that grade found difficulty in comprehending the meanings of a few words (adjectives) of the inventory, Grade VIII was deleted. The total sample consisted of 718 pupils (368 boys and 350 girls) on which standardisation was carried out. On the bases of the Personality Word List of Pratibha Deo as well as SCI of Sagar Sharma, a new SCI was developed which consisted of 80 adjectives (40 positive and 40 negative), each one to be tick-marked on a five-point scale as in Likert type. The first try-out was carried out on 47 pupils of Grade IX (open-end self-description). Then, they were provided with a list of 110 words, collected after scrutiny by three experts. The same procedure was repeated on 52 Grade X students. After analysis, 80 words were selected from the total 110 words, the range of scores being from 80 to 400. Means, SD, 't' test, and quartile deviation were used for analysing the data.

Major Findings: (1) There was no significant sex difference at the Grade IX level but difference existed at Grade X level. (2) There was no significant difference between the mean score of the two grades. The distribution was negatively skewed and slightly leptokurtic. [JHS 0719]

Shah, J.H. and Patel, Yashomati. 1989. **Evaluation of B.Ed. vacation course by student teachers.** *Experiments in Education*, Vol. 17 (12): 308-12.

Problem: This study addresses the evaluation of B.Ed. vacation course run at the Department of Education, Gujarat University, during two years, 1986-88.

Objectives: (i) To evaluate the B.Ed. vacation course consisting of four vacations—summer as well as Diwali (winter) in addition to Christmas vacation when stray lessons were arranged at student-teachers' schools and were supervised by the trained seniormost teachers of the same school, and (ii) to get the responses and suggestions of student-teachers for improvement of the course.

Methodology: As this vacation-course was started to do away with the backlog of untrained post-graduate teachers, working in higher secondary schools, who could not do B.Ed. course for one or the other reason up to the academic year 1985-86, only such teachers were admitted in the course. However, the batch of 75 student-teachers was not completed, so supervisors with post-graduate degree in science, working in science laboratories were also admitted. The total sample, thus, consisted of 75 student-teachers who were from different districts of the state of Gujarat. It was a purposive sample. An evaluation sheet was developed by the investigators which was divided into four parts, namely, micro-teaching, teaching of the first three general papers, teaching of content and method of any two subjects offered by student-teachers and general administrative work. Finally, they were

asked their overall impression and suggestions, if any. Percentages, chi-square test and content-analysis of the responses were used for analysing the collected data.

Major Findings: (1) Percentages of the general impression about micro-teaching were: excellent 21.6%, good 44.60%, average 29.72%, poor 1.35% and worthless 2.7%. (2) Percentages of benefit gained in developing skills by micro-teaching were: to a great extent 44.60%, ordinary 47.30%, and very little 8.10%. (3) Difficulties put forth by student-teachers were genuine and indicated lack of adequate planning: (a) the micro lessons were conducted in simulated situations (no pupils from schools were available because it was vacation time) and thus there was some artificiality, (b) lack of demonstration lessons, specific information and guidance, consistency among teacher-educators coming from different colleges, adequate response from peer group, etc. (4) As there were two sections in each paper, the student-teachers had to show their overall satisfaction or dissatisfaction for six different sections separately. The range of satisfaction varied from 20.27 to 70.27%, the least value being the special fields (Paper III, Section II) and the highest value being for Psychological Foundations (Paper I, Section II) and techniques of teaching and evaluation of instruction (Paper II, Section I). (5) The range of percentages for dissatisfaction ranged from 33.78 to 0, the highest value being for special fields and zero value for Section I of Paper II. The percentages of non-respondents ranged from 21.61 to 41.90, the former figure being for Paper I, Section I—Philosophical and Sociological Foundations of Education, while the latter one for Paper III, Section II—School Organisation and Administration. (6) The overall picture of teaching the last two papers—method and content—was quite satisfactory. (7) For improving the administration aspect, the student-teachers reacted against some rigidity, lack of separate library, one teacher teaching more than one subject, etc. On the whole, they stated that administration was up to the mark and the

steering committee was always ready to solve the problems of student-teachers. [JHS 0720]

Shah, M.A. and Agarwal, Saroj. 1988. **Construction of four-dimensional risk-taking test.** *Indian Educational Review*, Vol. 23 (2): 1-14.

Problem: In this study a risk-taking test on lines of the Risk-taking Inventory constructed by Jackson and Vidmar (1972) was developed.

Objective: To construct and standardise a four-dimensional risk-taking test covering monetary risk-taking, physical risk-taking, social risk-taking and ethical risk-taking dimensions.

Methodology: The preliminary form of the test was administered to a sample of 100 boys and 100 girls of graduate classes. These subjects were selected randomly from four degree colleges of Agra University. Final form of the test was also administered to a randomly selected sample of 400 (200 male and 200 female) students of undergraduate classes of Agra University. The above test (four-dimensional risk-taking test) was developed and used as a tool in the study. Chi-square techniques, biserial correlation, test-retest reliability and percentile norms were used in the study. Item-internal consistency method and chi-square were used for validation of the test.

Major Findings: (1) The test was developed with 16 items in self-rating scale, 12 semi-projective-type hypothetical lifelike situations in the situational Dilemma Questionnaire and 40 items in Personality-inventory having the test-retest reliability on the different dimensions of the test. (2) The validity of the test as determined by the item internal consistency method and the chi-square techniques ranged from 0.28 to 0.82. (3) The percentile norms were computed for both boys and girls with regard not only to all four dimensions of risk-taking but also the whole test. [TNSB 0145]

Sharma, S.K. 1991. **Development of predictive battery of tests for scientific aptitude for the students of Class XI.** Ph.D., Edu. Univ. of Jammu.

Problem: This study is mostly confined to the standardisation of scientific aptitude test battery which should be functional at the school stage.

Objectives: (i) To provide a cut-off point (discriminant function) to enable the teachers in dichotomising the students into potentially talented and otherwise, (ii) to provide a multiple regression equation to the teacher to know each ability differentially, and (iii) to obtain a simple factor structure of the predictors involved in the study.

Methodology: The sample comprised 1,200 students selected from schools of Jammu City. The scientific aptitude test battery covering items, related to scientific awareness, numerical ability, perceptual ability, mechanical comprehension, reasoning ability, spatial ability and finger dexterity, was put up after a comprehensive content analysis of the relevant literature.

Major Finding: A scientific aptitude test battery was constructed and standardised by the investigator. [SPS 1952]

Siddiqui, Shahjehan. 1988. **Standardisation of a test in creative thinking for Urdu-speaking students at the formal operative stage in Telangana area, Andhra Pradesh State.** Ph.D., Edu. Osmania Univ.

Problem: The study focuses on the standardisation of a test in creative thinking for Urdu-speaking students at formal operative stage in Telangana District.

Objectives: (i) To construct and standardise a test in creative thinking for Urdu-speaking students at formal operative stage in Telangana area, Andhra Pradesh, (ii) to find out the verbal and non-verbal creative thinking abilities of the Urdu-speaking students, and (iii) to find out the differences, if any, in the performance of boys and girls on different factors of creative thinking.

Methodology: The sample comprised 1,000 boys and 1,000 girls of secondary schools in the

age-group of 12-15 years studying in Classes VIII, IX and X of urban and semi-urban areas who were randomly selected. The creative-test battery under standardisation had sub-tests under non-verbal and verbal parts as follows: Picture construction, incomplete figures, repeated figure activity, consequences, novel uses, similarities and product improvement and story title. The factors included were elaboration, fluency, flexibility and originality. The test was subjected to validity, and reliability measures and norms were also established. Establishment of reliability was achieved using split half and parallel methods. Mean, SD, correlation and test of significance of difference were used in the study.

Major Findings: (1) The test has been standardised in creative thinking for Urdu-speaking students at the formal operative stage. (2) The verbal and non-verbal test-items identified their creative thinking abilities. (3) No significant differences were found in the creative thinking abilities of boys and girls. [SSS 0844]

Singh, Narendra. 1988. **Construction of a scale of reading-writing skills of pre-primary children.** Ph.D., Edu. Agra Univ.

Problem: It is an attempt to construct a scale of reading-writing skills of pre-primary education.

Objective: To develop and standardise a reading-writing skills scale for pre-primary school children.

Methodology: The sample of the study comprised 200 students selected by using random sampling technique from the schools located in Delhi. The investigator developed a questionnaire to collect data for the study.

Major Findings: The investigator successfully constructed a scale of reading-writing skills for the pre-primary school children. [SS 0813]

Singh, Pritam. 1988. **Development of criterion referenced tests in environmental studies (science) for the primary stage.** Independent

study. *National Council of Educational Research and Training.* [ERIC Funded]

Problem: The project of criterion referenced tests was undertaken with the purpose of getting an insight into the construction of criterion referenced tests and using them in the classroom in order to find out the extent to which the expected level of mastery is attained by students studying in different types of schools.

Objective: To develop criterion referenced tests for Classes III to V corresponding to the intended learning outcomes.

Methodology: Selection of units and sub-units from the syllabus of Classes III, IV and V of environmental studies (science) textbooks for test construction. Sub-units were analysed to identify various domains. Domains were analysed into the intended learning outcomes. To judge the comprehensibility of the language, length of the test and adequacy of instruction the tests were tried out at three stages; pre-pilot, pilot and field try-out. On the whole 2,538 students of 26 schools of New Delhi served as subjects. To improve the items, the indices of item difficulty and item discrimination calculated based on the classified methods considering the pass score of 75% and above as mastery level. The reliability was calculated using the product-moment correlation and KR formulae. Validation of the content was done by logical analysis.

Major Findings: (1) Although the extent of parallelism of the two forms was not very high, yet most of the tests did indicate a high degree of relationship between the forms, short length (15-25 items) of the test being a limiting factor. (2) The reliability indicated by the KR-21 index varied from 0.68 to 0.88. For classroom tests with an average of 20 items, this reliability was considered as satisfactory. The criterion referenced agreement coefficient estimate for all the tests was between 0.60 to 0.85 which was the acceptable range for classroom tests. (3) Nine out of twenty tests had shown the needed consistency whereas in the remaining ones the

tests reflected inadequate teaching and hence low scores. (4) Reading load and non-comprehension of certain instructions was found to be a serious handicap for students attempting the items. The item-wise difficulty and discrimination indices indicated that about 13 items in each test had a discrimination indices of 0.5 which was quite satisfactory. (5) It was found that out of 2,538 students, there were 20.6% students who were masters and 79.4% non-masters. In the MCD schools, there were 10% masters, in KVS, 3% and 7% in public schools. (6) The mean performance of the masters in the MCD schools was 17.96% and the non-masters 10.54 and in the KVs the masters', mean score was 15.3 and of non-masters was 8.74. (7) The ILO of 'recognition and recall' was achieved by 79% of the masters and 56% of non-masters. (8) The ability to explain was attained by 94% masters and 48% non-masters; the ability to compare was attained by 84% masters and 41% non-masters. (9) The ability to identify relationship, interpret, give examples and classify was attained by 80% masters and 45% non-masters. [SRA 1130]

Sinha, Uma; Yadav, M.S. and Bhasin, P.S.S. 1983. **Development of an interest inventory.** *Indian Educational Review*, Vol. 18 (3): 46-61.

Problem: It is an attempt to develop and standardise an interest inventory in four languages spread over vast geographical regions covering five states and union territories.

Objective : To develop an interest inventory with two forms — junior and senior — for the age-group 15-18 years and 18-25 years, respectively.

Methodology: The above project consisted of four cooperating centres and one coordinating centre at Bihar, Karnataka, Maharashtra, and Uttar Pradesh and Delhi, respectively. The project was carried out in three phases. In the first phase, four item types were decided upon for the purpose of writing the items. They included multiple choice (situational), Like-indifferent-dislike

(statement), paired associate and check-list. In the second phase try-out study was conducted for the form of inventory prepared under phase one. The try-out sample comprised 2,257 persons belonging to different professions in all the four coordinating states. All the items were analysed using chi-square. In all 434 items were finally selected for the two forms. A seven-point scale from +3 to -30 was developed. In the third phase the normative study was conducted for developing norms for the two forms of the inventory, and also for studying certain psychometric properties of the instrument. The sample at this phase included individuals selected from ten occupational groups. However, the samples drawn out for try-out and the normative were drawn independently. The reliability coefficients were computed using Cronbach alpha coefficients. The validity has been established by empirically testing the logic of the procedure adopted for developing this measure. With regard to the norms, standard scores with a mean of 50 and SD of 10 have been provided for all the ten occupational interest areas.

Major Findings: (1) An interest inventory to measure interests in 10 major vocational areas of individuals in four languages spread over vast geographical regions has been achieved. (2) The above inventory has fulfilled the conditions of psychometric properties satisfactorily. (3) The developed inventory is available for use in the junior and senior forms for the purpose of admission, placement, educational and vocational guidance and research. [MSY 0919]

Sujatha, B.N. 1991. **Revaluation in B.E. degree examinations: An analysis of marks.** Independent study. *Univ. of Mysore*.

Problem: This study addresses the problem of revaluation of B.E. degree examinations. An analysis of marks would be helpful for qualitative improvement in the examination system in general and scheme of evaluation in particular.

Objectives: (i) To find out the percentage of undergraduate students who appeared for various semester (engineering) examinations in 1982, 84, 86 and 88, (ii) to study the extent and nature of change in the original marks of the students due to revaluation in different subject groups, (iii) to study the effect of revaluation on the results of students, and (iv) to make intra-group comparison and inter-group comparison with respect to the above-said objectives.

Methodology: The sample comprised all the students who appeared for various semester (engineering) examinations, all students who applied for revaluation, original and revaluation marks of students in different subjects. The data were collected by going through the relevant records of university examinations at the University of Mysore. Cluster sampling technique was followed. The analysis of the data was done by forming categories—failed and already passed, change and no-change in marks, marks increased and decreased cases, change and no change in results—of students for each subject group. The relevant data were treated using percentages.

Major Findings: (1) There was a gradual decrease in the number of students who applied for revaluation from I through VIII semesters. (2) Between the years under study (1982-88), there was an increase in the number of students who applied for revaluation. (3) A relatively high percentage of failed students applied for revaluation than the already-passed students in all the subject groups, semesters and over the years under study. (4) There was no consistent pattern in the percentage of students who applied for revaluation in both the groups and percentage of cases of change in marks. (5) The percentage of cases of change in marks due to revaluation was higher than no-change of marks subject group-wise, semester and year-wise. (6) The percentage of cases of increased marks due to revaluation was higher than decrease in marks. (7) There was an increase in the number of students whose marks increased or decreased by more than 10% over the years. (8) The

percentage of cases with a 'difference score' of five and below was very high in all the subject groups, semesters and years. (9) There was an increase in the number of students whose marks increased by a 'difference score' of more than 20. (10) The percentage of cases of no change in result was far higher than that of change in results. (11) There was no consistent pattern in the percentage of cases of change of results due to revaluation with respect to the different subject groups, semester and years. [BNS 0982]

Thakre, Veena. 1991. **A comparative study of revaluation of answer books in the Nagpur University and Punjabrao Krishi Vidyapeeth, Akola, during 1985-90.** Ph.D., Edu. Nagpur Univ.

Problem: This study attempts at probing into the revaluation of the answer-books of Nagpur University in comparison to the Akola University in the period of five years from 1985 to 1990. It considers the mistakes committed by the valuers and then the changes occurring in the results.

Objectives: (i) To study the summer and winter examinations of Nagpur and Akola University in the period 1985-90, (ii) to study the percentage of original marks and those after revaluation and study the negative and positive results of the same on the results after revaluation, (iii) to study the original revaluation marks level of significance, and (iv) to study the rules of revaluation of agricultural and other universities in Maharashtra, analytically and comparatively.

Methodology: The sample of the study included 2,29,173 cases of revaluation in various faculties of Nagpur University during the period under study (1985-90). In addition to this, 1,638 cases of revaluation were also included during the same period from Punjabrao Krishi Vidyapeeth, Akola. The answer-books of the cases included in the sample from both the universities were used for data collection and so also their original marksheets and marksheets after revaluation. Median, standard deviation,

correlation and percentage were used to analyse the collected data.

Major Findings: (1) The majority of the revaluation applications were done for passing in a particular paper. Consequently, this did not make much difference in their divisions originally awarded to them. (2) The revaluation cases were more in number in English, political science, sociology, economics and supplementary English as compared to other subjects. (3) As compared to other subjects, the maximum revaluation cases were from English, physics, chemistry and mathematics. (4) In the commerce faculty, at graduate as well as post-graduate level, the ratio of the cases of revaluation was more or less the same. (5) In the faculty of medicine, the cases of revaluation were comparatively less. (6) In the faculty of education, the ratio of revaluation cases was the highest and particularly in subjects like educational psychology, sociological and philosophical foundations of education. (7) The highest number of revaluation was being recorded in the faculty of engineering in technical fields and technology. In the agricultural university, the cases were not many in number and the results were negative in nature rather than positive. There were about 150 subjects in forestry, gardening, and agricultural science. In each subject, a minimum two and maximum five cases were found for revaluation. [GPK 1628]

Thangamani, C.C. 1989. **Oral examination as an instrument of diagnostic evaluation.** M.Phil., Edu. *Madurai Kamaraj Univ.*

Problem: The present study addresses itself to studying the preference of secondary school teachers towards oral examination as an instrument of diagnostic evaluation.

Objectives: (i) To find out the preference of the Madurai City higher secondary school teachers to oral/written examination, (ii) to find out whether the sub-groups of the Madurai City higher secondary school teachers, based on sex, grade and experience differ in their preference to

oral examination, (iii) to find out the attitude of the Madurai City higher secondary school teachers towards oral examination as an instrument of diagnostic evaluation, (iv) to find out whether the sub-groups of the Madurai City higher secondary school teachers based on sex, grade, experience and subjects handled by the teachers differ in their attitude towards oral examination as an instrument of diagnostic evaluation.

Methodology: The sample comprised 200 working teachers (B.T. and P.G) of Madurai City higher secondary schools. The tools used to collect data included Teachers' Examination Preference Questionnaire and Attitude Scale for Oral Diagnostic Evaluation. Mean, standard deviation, 't' test and percentages were used to analyse the data.

Major Findings: (1) The teachers working in Madurai City higher secondary schools showed positive attitude towards oral examination as a diagnostic evaluation device. (2) The different sub-groups of teachers classified on the basis of sex, grade, experience and subjects handled by the teachers did not differ significantly in their attitude towards oral examination as a diagnostic evaluation device for the component provision of remedial measures. [GSP 0564]

Vaghela, Vrajlal K. 1992. **Development and validation of a criterion referenced test in social studies for Standard VII.** Ph.D., Edu. *Bhavnagar Univ.*

Problem: In this study, criterion referenced test for Standard VII in social studies on the topic of 'Delhi Sultanat' (A.D.1206-1526) has been developed and validated. The test aims at diagnosing the weaknesses in the learning of the topic and improving of the teaching-learning process in history; it also aims at finding masters and non-masters in learning the topic.

Objectives: (i) To develop criterion referenced test (CRT) on the topic 'Reign of Delhi' in history

for Standard VII, and (ii) to validate the proposed test.

Methodology: The sample comprised 560 pupils of Standard VII who were selected by cluster sampling method. Out of these 280 were girls and 280 were boys of Standard VII of a private school and a municipal school of Bhavnagar City. A Criterion Referenced Test (CRT) was developed by the investigator. The consistency of test was found out: (i) by logical review of items employing Item Objective Congruence Index (IOCI) method, (ii) by calculating Pre-test-Post-test Difference Index (PPDI). 'Kappa' Index was calculated to establish reliability of CRT score. The unidimensional indices were calculated for validity of each domain. Criterion reference was calculated to find out significance of difference between instructed and uninstructed groups. SEM of examinee's estimated domain score of each domain was calculated. Cut-off score was determined by Berks empirical method.

Major Findings: (1) A total of 76 items were generated on the basis of 12 well-defined behavioural domains by following closely the rules regarding mapping sentence technique. (2) The perfect congruence was found between item and objective. After reviewing all the items logically, it was found that the IOCI of each item was +1. (3) Each item was representative of its objective and the degree of representativeness was considered to be high by the experts. (4) The empirical review of the item was done. The PPDI of all the items ranged from 0.12 to 0.73. Thus the instructional sensitivity of each item was quite satisfactory. (5) All the items were retained, because they had the required characteristics to be included in the test. (6) The test had perfect content validity as IOCI was +1. (7) The graph-based unidimensional indices (for validity) of each behavioural domain ranged from 0.18 to 0.59. All were positive. (8) The CR of differences of mean scores of instructed-uninstructed groups of all the behavioural domains was significant. (9) The

indices of mastery-non-mastery classification decision reliability ranged from 0.91 to 0.96 which was quite satisfactory. The present test proved reliable for mastery-non-mastery classification. (10) The cut-off score was determined for each behavioural domain which ranged from 3.00 to 9.00. [DJM 0460]

Veerkar, P. 1989. **Preparation of a criterion scale for rating the B.Ed. colleges in Maharashtra state.** Independent study. Pune: Maharashtra State Council of Educational Research and Training.

Problem: According to the New Educational Policy, Maharashtra Government intended upgrading the education colleges in the state. For this task no pertinent rating instrument existed. With this in view, the present study centres upon preparing the same.

Objectives: (i) To develop a criterion scale for rating the colleges of education, and (ii) to survey the present status of the colleges of education in Maharashtra with the help of the newly developed rating instrument.

Methodology: The sample comprised 70 colleges of education established before 1980, out of which 47 were grant-in-aid colleges and 23 were on non-grant basis. Each one of these was affiliated to either of the seven universities in Maharashtra. A questionnaire was developed by the researcher to collect the data. A stanine scale was developed for rating the colleges on the basis of the scores obtained in the questionnaire. Further the stanine scale was converted to a five-point scale and for which corresponding percentiles were established.

Major Findings: (1) None of the colleges fell into Category A (best). (2) Six per cent colleges fell into Category B (good). (3) Seventy-two per cent colleges fell into Category C (satisfactory). (4) Twenty-two per cent colleges fell into Category D (non-satisfactory). (5) None of the colleges fell into Category E (poor). [HP 0371]

Vyas, Sharad G. 1988. **Construction and standardisation of the Hindi language ability test for the entrants to the Standard XI (general stream) of higher secondary schools of Saurashtra region.** Ph.D., Edu. Bhavnagar Univ.

Problem: In this study, the language ability test of Hindi for the pupils of Standard XI of Saurashtra region has been developed and validated, which aims to provide a valid and reliable achievement test (norm-referenced test) for pupils of Standard XI of Hindi language.

Objectives: (i) To construct and validate Hindi ability test for the pupils of Standard XI of Saurashtra Region, (ii) to investigate the differences, if any, among the abilities of Hindi language of boys and girls of Standard XI, (iii) to study the differences, if any, in the Hindi language abilities of boys and girls of urban and rural areas, (iv) to prepare norms of the test, and (v) to study the relationship of Hindi language ability of subjects to different variables.

Methodology: The sample comprised 1,677 students, out of which 993 were boys and 684 were girls, covering urban and rural locales. The schools were randomly selected from rural and urban areas. One class was randomly selected from the selected schools. Thus, the sample selection was done according to stratified random cluster procedure. In this study, Language Ability Test (Gujarati), Hindi Language Silent Reading Test and information sheet were utilised. Frequency distribution, mean, median, quartile deviation, standard deviation, skewness, kurtosis, chi-square test and CR were used. 't' scores and percentile rank were also calculated.

Major Findings: (1) There was a significant difference between the Hindi language ability of boys and girls. (2) There was no significant difference between the Hindi language ability of respondents from rural and urban areas. (3) There was no significant relationship between the Hindi language ability and different variables like social status, educational levels of parents

and their profession, number of siblings, order of birth, field of interest, listening to radio and television watching. There was a significant relationship between the language ability and the economic status of the pupils. (4) The reliability coefficient was estimated by various methods which ranged from 0.91 to 0.99. Validity was established with various criteria which ranged between 0.79 to 0.88. [DJM 0163]

Yadav, M.S.; Govinda, R. and Thomas, K.T. 1976. **Some psychometric studies in attitude scale construction.** Independent study. *The Maharaja Sayajirao Univ. of Baroda.*

Problem: The study addresses itself to certain psychometric problems involved in the construction of attitude scale.

Objectives: (i) To find out the number of judges required to obtain reliable scale values for the statements, (ii) to find out differences, if any, between the scale values of statements obtained from groups of judges with different characteristics, (iii) to study the consistency in the rating of the judges when the fineness of the scale is increased, (iv) to study the spread of scale values of statements endorsed by the respondents, and (v) to study the differences in scale positions of respondents when no restriction is placed on the number of statements to be endorsed and when number of statements to be endorsed is restricted to three.

Methodology: In order to determine the number of judges required to obtain reliable scale values, 11 samples of different sizes such as 20, 30, 40, 50, 60, 70, 80, 90, 100, 120 and 130 were drawn using random numbers table from the population of 136 judges. To study the effect of the characteristics of judges, four samples of different sizes, i.e. 18, 19, 48 and 51 were drawn. A sample of 32 judges was taken to rate statements of four different scales, i.e. 11 points, 9 points, 7 points and 5 points. In addition to this, the scale was administered to 33 respondents to endorse the statements with free

choice as well as for restricted choice and out of them 30 responded.

Major Findings: (1) It was found that reliable scale values could be obtained from smaller number of judges (group size 20) but more stabilised scale values were obtained with larger number of judges (group-size 90 and above). (2) The ratings by different groups of judges had

high positive correlations ranging from 0.91 to 0.99. (3) When the fineness of the scale was increased from 5 points to 7, 9 and 11 points, the correlations indicated an overall consistency. (4) Placing restrictions on the number of statements to be endorsed by the respondent made a difference in scale position of the respondents. [MSY 0907]

Also See

- Acharya, K.P. 1990. **Error analysis: A case study in Kannada.** Independent study. *Mysore: Central Institute of Indian Languages.* [BNS 0975] (See in Chapter 1.)
- Ahuja, G.C. and Ahuja, Pramila. 1988. **Reading comprehension tests (with cloze and multiple choice items for Classes VIII, IX and X).** Independent study. *Mysore: Central Institute of Indian Languages.* [BNS 0977] (See in Chapter 1.)
- Anand, S.P. 1988. **RCE mental health scale.** *Indian Educational Review*, Vol. 23(1): 41-47. [CGVM 1926] (See in Chapter 7.)
- Arularam, I. 1990. **Evaluation of UGC's countrywide educational television 1990.** M.Phil., Edu. *Madurai Kamaraj Univ.* [GSP 0563] (See in Chapter 23.)
- Baskaran, Herbert S. 1989. **The impact of remedial teaching programmes on the common errors committed by the students of Standard XII in written English.** M.Phil., Edu. *Alagappa Univ.* [SM 1735] (See in Chapter 1.)
- Bhatnagar, T.N.S. 1988. **A report on the study of development of tools for supervision and evaluation of student teaching and other practical work in college.** Independent study. *National Council of Educational Research and Training.* [ERIC Funded]. [Author 1110] (See in Chapter 25.)
- Bhushan, Vidya. 1992. **Factor content of the Minnesota Teacher Attitude Inventory in Hindi.** *Indian Educational Review*, Vol. 27(3): 111-16. [SPR 1543] (See in Chapter 25.)
- Das, R. 1991. **A comparative study of the evaluative procedures of the secondary teacher training institutions in Gujarat state.** M.Phil., Edu. *The Maharaja Sayajirao Univ. of Baroda.* [MSY 0935] (See in Chapter 25.)
- Das, R.C. 1991. **A study of the methods adopted by selected secondary schools in India for development of moral and ethical values and measurement of value judgement of students of Class IX of these schools.** Independent study. *Bhubaneswar: Regional College of Education.* (ERIC Funded). [Author 1198] (See in Chapter 22.)
- Das, T. 1989. **Effectiveness of non-formal education in the district of Puri.** M.Phil., Edu. *Utkal Univ.* [KCP 0492] (See in Chapter 29.)
- Debi, Meena Kumari. 1989. **Developing and testing the effectiveness of the programmed learning material in the syllabus of principles of education in B.T. course of Gauhati University.** Ph.D., Phil. *Gauhati Univ.* [RD 0137] (See in Chapter 23.)
- Desai, D.B.; Yadav, M.S.; Govinda, R. and Lakshmi, T.K.S. 1982. **Evaluation of the national adult education programme in seven Districts of Gujarat — 1978-80.**

- Independent study. *The Maharaja Sayajirao Univ. of Baroda*. (Funded by the Ministry of Education and Culture, Government of India). [MSY 0903] (See in Chapter 29.)
- Deshpande, Shashikala. 1991. **Evaluation of teaching: A multidimensional approach**. Independent study. *Karnatak Univ.* (UGC Funded) [KR 0581] (See in Chapter 25.)
- Devi, Laxmi. 1988. **Evaluation of the teacher education programme of Agra University**. Ph.D., Edu. *Agra Univ.* [SS 0827] (See in Chapter 25.)
- Dubey, K.K. 1992. **A study of the scientific temper and its measurement**. Ph.D., Edu. *Rani Durgawati Vishwavidyalaya*. [NNS 0741] (See in Chapter 19.)
- Govinda, R. and Varghese, N.V. 1991. **The quality of basic education services in India: A case study of primary schooling in Madhya Pradesh**. Independent study. *National Institute of Educational Planning and Administration*. [NS 1040] (See in Chapter 15.)
- Gurusamy, S. 1990. **A diagnostic study of the errors committed by students of Standard IX in solving problems in geometry**. M.Phil., Edu. *Alagappa Univ.* [SM 1740] (See in Chapter 20.)
- Jain, Ambika. 1991. **Analysis and evaluation of the animators training camps for the education and empowerment of rural women conducted by the Indian Institute of Education, 1988-89**. Independent study. *Univ. of Poona*. (Funded by MHRD, GOI) [ASB 0058] (See in Chapter 31.)
- Javlekar, V.D. 1988. **An investigation into the problem of evaluation of the educational importance of exhibits of Nehru Science Centre, Bombay and its effectiveness in making children of Standard VIII understand scientific concepts**. Ph.D., Edu. *Univ. of Bombay*. [GJK 0227] (See in Chapter 19.)
- Jha, Murli Kant. 1992. **An evaluative study of non-formal education programme in Bihar**. Ph.D., Edu. *Patna Univ.* [RPSi 0666] (See in Chapter 29.)
- Kaur, Sawarnjit. 1991. **Evaluation of guidance services in high/higher secondary schools of Punjab and Chandigarh**. Ph.D., Edu. *Punjab Univ.* [JNJ 0259] (See in Chapter 12.)
- Kumari, Nanda P. 1992. **A diagnostic study of errors in written Hindi of secondary students of central schools in the Madras region**. Ph.D., Edu. *Univ. of Calicut*. [KSP 1636] (See in Chapter 1.)
- Malhotra, V.K. 1988. **A critical study of the existing facilities of science teaching and construction of evaluation instruments for its supervision in different types of secondary schools in Delhi**. Ph.D., Edu. *Univ. of Delhi*. [RDM 0348] (See in Chapter 19.)
- Manavalane, R. 1990. **An evaluation of the adult education programme implemented by the Annamalai University in the Keerappalayam Panchayat Union in Chidambaram Taluka**. M.Phil., Edu. *Annamalai Univ.* [MDa 1392] (See in Chapter 29.)
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