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A Study of the Significance and Interrelation of Data Gathered by the Bell Adjustment Inventory and a Teacher Rating Scale with Other Academic and Demographic Data for Guidance Purposes

Adeline Klamm Vanhove

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**A STUDY OF THE SIGNIFICANCE AND INTERRELATION
OF DATA GATHERED BY THE BELL ADJUSTMENT INVENTORY
AND A TEACHER RATING SCALE WITH OTHER ACADEMIC AND
DEMOGRAPHIC DATA FOR GUIDANCE PURPOSES**

BY

ADELINE KLAMM VANHOVE

**A thesis submitted
in partial fulfillment of the requirements for
the Degree Master of Science, Major
in Education, South Dakota State
University**

1966

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CHAPTER I

INTRODUCTION

Need for the study. "Because a dynamic society demands an educational environment and a program which affords all boys and girls the opportunity to develop to their optimum,"¹ it is necessary to implement guidance services to the best ability of the staff. The Ramona High School in 1965-1966 had an enrollment of 77 students in grades 9 through 12. Though there had been some effort to supply the students with vocational and educational information, there had been very little else in the way of guidance services available. Some of this was due to lack of time on the part of the instructors to whom guidance details were assigned and partly due to lack of space suitable for individual counseling. There were two instructors who had at least 20 semester hours in graduate work in the field of counseling and guidance but due to the lack of any formal organization on the part of the administration to provide time or facilities, little other than interpretation of Iowa Tests of Educational Development profiles, a short interview with seniors about educational and vocational plans, and the use of the General Aptitude Test Battery and its interpretation

¹Franklin R. Zeran and Anthony C. Riccio, Organization and Administration of Guidance Services. Chicago: Rand McNally & Company, 1962, p. 1.

by the South Dakota Employment Service personnel was done. As a beginning to offering more in the guidance area, the cumulative records needed an enlargement. The records showed only the cumulative grades and the Iowa Tests of Educational Development scores that the youngsters had achieved. There was no information that offered any clarification of individual learning problems or needs. If the school was to systematically assist its children and youths in developing intellectual, social, and vocational competencies, detailed knowledge about the physiological and psychological development of boys and girls was essential. There was a need to identify the students who were mature enough mentally or sufficiently ready emotionally to tackle the various mental tasks demanded of them. Developmental levels intellectually and levels of adjustment of each boy and girl needed to be ascertained in order to know what each was ready to accomplish at a particular time if individualization of instruction were to enable each child to develop his potentials to the optimum. Each child would have to be analyzed so that he could be helped to use his abilities without undue difficulty due to factors that could be adjusted through a thorough guidance program. Cumulative data permit both a longitudinal and cross-sectional study of the individual as he develops. The individual's highest personal development cannot take place or be

planned for without knowledge of his characteristics. Since the information needed to counsel a student at anytime may concern his health (physical, mental or emotional) educational achievement, attitudes, aptitudes, interests, abilities, family relationships, hobbies, work experiences, or other pertinent characteristics, it is essential that these data be cumulatively recorded and available for use. The individual boy or girl cannot be understood unless he is known. Anecdotal records, case records, case conference reports, student self-reporting forms, and home-visit reports are essential data to be included. These data should be kept up to date so that a "trial balance" may be struck at any time the pupil needs assistance.

The cumulative record folders were so bleak and blank in the Ramona High School files, a quick reliable means for gaining insight into understanding the individual student and his problems was needed. If a self-reporting form assessing the student's adjustment or maladjustment and his need for help in this area could be used and relied upon, it would add to the effectiveness of the cumulative record and the understanding of the student by the counselor.

Knowing that inventories yield quantitative data that would be useful in helping the student to understand himself but that they lack in exactness because they reveal only what the individual is willing to reveal about himself,

there was the problem of selecting an inventory which would be most capable of yielding useful information that the part-time counselors could use. The personal rating scale can provide a wealth of information that can be used as the basis of individual counseling sessions. It might be that several students would indicate a common area of problems that could be handled in group guidance sessions or in group guidance courses based upon the special needs of the students, and thereby increase the effectiveness of the time allotted to the counselors for guidance purposes.

One main problem of accumulating information about the individual was to find an instrument which would yield the clearest most valid picture of the individual which could also be interpreted under limited circumstances so that the individual might obtain help with his problems. Validating a self-report form or inventory became one of the major factors in obtaining the information that would go into the cumulative records that would be kept in the counseling file. Many studies have been made in the validation of some of the self-report personality and adjustment instruments. Teacher ratings have often been used as a criterion with which to compare the scores of the inventories. The whole problem of obtaining careful, thoughtful and accurate ratings of the student by the teacher then had to be studied. The field of teacher rating on a psychometric

basis had to be explored from earliest rating scales up to the present practices. A study of Buros' Fifth Mental Measurements Yearbook² gave indication that for a worthwhile self-report which would discriminate those needing immediate help from those with less serious adjustment problems, the Bell Adjustment Inventory, Student Form, could be very useful. It was highly recommended as a basis for counseling sessions, and a 1962 revision updated the inventory so that it would be meaningful to a present day school population. In lieu of developing a rating scale to be used by the teachers as a criterion of the validity of the Bell Adjustment Inventory for the Ramona High School student population, it was determined that the Science Research Associates authors Gwen Andrew, Samuel W. Hartwell, Max L. Hutt, and Ralph E. Walton had developed a Rating Scale for Pupil Adjustment that purported to be a measurement of the same area or areas as the Bell Adjustment Inventory. This scale also had the advantage of being scored with a single total score so that the two instruments could be compared and correlated. It had the disadvantage of being prepared for grades 3 through 9 but with teacher instruction and some adaptation, it could be used for grades 9 through 12 as a validation

²Oscar K. Buros, The Fifth Mental Measurement Yearbook. Highland Park, N.J.: Gryphon Press, 1959.

criterion. could be made for grades 9 and 11 with the Call-

form. Of what concrete worth would this information be that would be gained from the Bell Adjustment Inventory providing that this instrument appeared to be valid for this particular school situation? The self inventory could prove to be the basis of counseling sessions, the development of group sessions and group courses in mental hygiene, the adaptation of procedures and methods of instruction in courses to help facilitate adjustment and progress rather than allowing gross maladjustment to go untreated and a resulting loss in educational achievement to accrue. to the cumulative record

of . The connection of degrees of maladjustment with educational achievement presented another area that needed investigation. Due to the Department of Public Instruction's state-wide program of Iowa Tests of Educational Development being administered each year to grades 9 and 11, a relative measure of educational achievement on the school, state, and national level was available. The question arose, considering ability, would there be a positive relationship between good adjustment as shown by the Bell Adjustment Inventory and percentile rankings on the Iowa Tests of Educational Development? Would scholastic grades in subjects now being taken be related in anyway to adjustment? With the information available an analysis of the Bell Adjustment Inventory scores and the Iowa Tests of Educational Development

percentiles could be made for grades 9 and 11 with the California Test of Mental Maturity serving as the criterion of ability. Grades and ability with adjustment as a third factor could be studied in all grades in which California Tests of Mental Maturity Intelligence Quotients would be available. As Ramona did not participate in the California Test for the fall of 1962, the senior class did not have an ability score to use in comparisons.

As a note of caution in possible future accumulation of data, it should be noted that although it is very important to add significant information to the cumulative record of an individual, it is equally important to delete information that is no longer useful. "To keep information that is no longer valid or useful in a cumulative record is unfair to the individual student. It denies him the right to change."³ It is unfair to have a score which may be regarded by some persons in authority as detrimental i.e. maladjusted plagues a child and possibly prejudices his teachers for the remainder of his school career. Young people do change quickly, do adapt themselves as their needs dictate to the new situations in which they find themselves so there is the question of how the Bell Adjustment Inventory scores should be recorded in the cumulative record and

³Zeran and Riccio, op. cit., p. 18.

when they should be replaced or deleted if they are not replaced. There is also the question of who should have access to these scores and how they should be used to help the individual. This concerns the area of confidentiality of information and the question of the training of the counseling staff. The purpose of obtaining the Bell Adjustment scores and the teachers' ratings was not to obtain an immutable score for the cumulative record but to obtain information which would form the basis of a study of whether these scores indicated a need for help on the part of the student.

The nature of the problem. The main problem of this study is the determining of a means of collecting worthwhile and meaningful data as to adjustment difficulties of high school students early in the school year so that the material may be added to the cumulative records of the students in order to add another dimension to the material already entered there. This total information would then be used to offer help and insight to the students most in need of immediate counseling.

Some of the main points in determining the collection of data that would be useful are:

1. The determination of the kind of data to be selected.

- A. Because most cumulative records reveal the

last administered IQ score and the grades as well as achievement scores, the most needed information would indicate personal adjustment as to how the student regards his total situation.

2. The selection of a valid instrument that can be used to collect such data.

A. The Bell Adjustment Inventory was selected as a possible choice of instrument due to its wide use, its accepted format, its ease of administration and scoring, and the large number of studies done with the inventory proving its worth in various situations.

3. Will the instrument selected, the Bell Adjustment Inventory, really indicate personal adjustment or maladjustment of high school populations? The instrument will have to be validated for the population on which it will be used by correlating its scores with some other criterion of adjustment.

A. Teachers' ratings were selected as one criterion to be used in validating the Bell Adjustment Inventory scores as obtained on the total high school population in this small high school of 77 students in grades 9 through 12.

4. Obtaining teachers' ratings that would be meaningful and as objective as possible presented an additional problem.

A. There was the need of selecting and adapting a rating scale that would give the truest possible assessment of the student.

(1). Preparation of complete instruction in the use of the rating scale must be done.

(2). The selection of a prepared rating scale resulted in the use of the Science Research Associates instrument, Rating Scale for Pupil Adjustment, in which the rating can be reduced to a single numerical score which could be manipulated in statistical techniques.

(3). Would the same facets of behavior be measured in both the Adjustment Inventory and the rating scale? This question also had to be answered.

5. If it is determined that the Bell Adjustment scores were significant, how would this knowledge be used and would it have any practical ramifications? A study of the ability of the student and his educational achievement in relation to his adjustment scores might underline the importance of apropos counseling.

6. If the scores of the Bell Adjustment Inventory were significant and indicated common areas of maladjustment, what practical suggestions could be made for introducing courses which would promote better adjustment?

A. What course or courses could be introduced?

B. What changes should be made in courses already

in existence? Adjustment Inventory does discriminate between those who

C. What changes in scheduling and teaching should be made?

Importance of the study. When a guidance counselor comes into a new school situation with little cumulative record material to guide him, how is he going to be able to reach students who may drop out of school for reasons of personal adjustment before he is able to discover who these people are? The answer to this question indicates the tremendous importance of this study. There have been many studies of the Bell Adjustment Inventory made and it is an accepted instrument, but is it going to prove useful in the above described situation?

This study, as a point in starting an organized guidance program, in updating and completing cumulative records for the students to be counseled, and as serving as an introduction to counseling sessions, should have a good deal of importance. Even if there is no correlation among the variables that are being studied, the Bell Adjustment scores, teachers' ratings, Iowa Tests of Educational Development percentiles, first six-weeks grades, and California Tests of Mental Maturity intelligence quotients, the study may discover other needs of the pupils that can be met by the counseling program and progress can be made in these areas. If the correlations prove high and it is discovered

that the Bell Adjustment Inventory does discriminate between those who need adjustment counseling and those who do not, a great deal of progress will have been made. The Bell Adjustment Inventory will be recommended as a continuing test (once a year) for the students of the high school to help ascertain those students whose adjustment is such that it is interfering with their progress, academic or social.

Limitations of the study. This study is limited to the comparison of scores on the Bell Adjustment Inventory and teachers' ratings of student adjustment involving 77 students in grades 9 through 12. Additional studies were made with the scores and the ratings in relation to ability and average six week's grade achievement and ability and Iowa Tests of Educational Development composite percentile ranks for these 77 students. The findings were limited to the data available for these particular students.

Adjustment as measured by the Bell Adjustment Inventory is defined by Hugh M. Bell, the author, as a process, "The developing self is a kind of central exchange station between the demands of the organism on the one hand and the influence of the physical and social environment on the other."⁴ Another definition of adjustment as studied is

⁴Hugh M. Bell, Ph.D., Manual for Revised 1962 Student Form Bell Adjustment Inventory. Palo Alto: Consulting Psychologists Press, Inc., 1962, p. 3.

given by William M. Cruickshank as follows: "Adjustment is defined as a tension reducing process in the satisfaction of life needs of accomplishment, recognition or aspiration."⁵

The Bell Adjustment Inventory is considered by several reviewers as a well-constructed instrument capable of designating the lowest 15% of the students in adjustment. It was built on items that discriminated between the upper 15% and the lower 15% of persons described as adjusted and maladjusted. Self-rating reflects what the person chooses to reveal about himself.

Teachers' ratings when made under controlled conditions with a well-prepared scale with clear descriptions of traits, a forced-choice method of rating, and trained raters making judgments of persons they know well, are accepted as significant data about an individual.

The Iowa Tests of Educational Development are based on the concept that every pupil at certain levels should have come in contact with certain bodies of material and should have retained a certain amount of this material. National norms of retention of the material are given. School norms are more useful if there is a large discrepancy in the average ranking of the school's students on a section of the test and the national norms if these norms are to be used

⁵William M. Cruickshank, and G. Orville Johnson, Education of Exceptional Children and Youth. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1958, p. 612.

in comparison with adjustment factors.

It cannot be expected that the test scores and correlations with other available data will be absolute guide lines upon which may be based counseling schedules and sessions. There are so many factors involved in adjustment, ratings, and achievement that cannot be controlled and yet which weight all of the scores. The findings of this study will be applicable only to the group to which the study has been applied and should be replicated for any system which feels that a similar study would be useful to it.

Organization of the study. The study to validate the Bell Adjustment Inventory, student form, 1962 edition, for Ramona High School necessitated a survey of the needs of the counselor for more information about the individual and how he functioned in regard to adjustment situations that might cast light upon his achievement or lack of achievement in comparison with his ability. After reviewing the historical background of the Bell Adjustment Inventory and the number of practical applications that have been made of this instrument, it was decided to use this inventory to gather adjustment data about the students. How to determine whether or not this inventory actually measured "adjustment" as understood by the teachers working with the students seemed necessary, in order to determine whether the scores would be meaningful to the counselor and through his interpretation

to the teachers and the individual students. To have a comparable scale that could be expressed in one numerical score which could be correlated with the Bell Adjustment Inventory scores presented another problem. The teachers would need an instrument that was as precise as possible with which to rate the student. This rating would then be compared with the student's scores which he had obtained on the Bell Adjustment Inventory. The Rating Scale for Pupil Adjustment prepared by the Science Research Associates was selected on the basis of the criticisms given in the 1959 edition of the Buros' Mental Measurements Yearbook. The scale was designed particularly for use with grades 3 through 9. With careful instruction, the rating scale was expanded for use with grades 9 through 12. It was used by two teachers individually rating each of the students. Two ratings were thereby obtained for each student of the 77 enrolled.

The ratings of the two teachers were correlated to find the extent of the agreement as to the adjustment of the students. The ratings of the two judges were then averaged and correlated with the scores obtained by the students on the Bell Adjustment Inventory. Correlations were also run on the ability scores and achievement that were available for two classes with adjustment as a third factor. Achievement was measured by Iowa Tests of Educational Development

composite scores and grade averages for the first six weeks grading period.

It is always useful to compare the results of one study with those of another individual's efforts. The validity studies of the Bell Adjustment Inventory have been reviewed in the survey of the published literature on the use of the Bell Adjustment Inventory and its apparent validity or lack of validity. The need to study the problem of rating and the validity of teacher ratings was felt if the ratings were to be meaningful. Much of the literature showed that unless due care was taken, many ratings were highly misleading.

After studying the data, the correlations between the various factors introduced, the usefulness of added dimensions in the cumulative record, the meaningfulness of the various individual scores obtained, and possible other alternatives to the use of the Bell Adjustment Inventory, it seemed imperative to either recommend the continued use of the Bell Adjustment Inventory as a counseling tool to be used in the guidance program or to advise discontinuance of its use because of its apparent ineffectiveness for this particular program and situation. Many small schools in South Dakota at the present time have very limited facilities for counseling and very poor security measures for safeguarding confidential material which Bell Adjustment scores should be regarded as. These scores could be subject to

improper usages by untrained people, and it is recommended that the counselor keep such information in his own locked files rather than in an accessible cumulative record and destroy it if its storage is no longer feasible or if the counselor changes his position. As teen-agers change quite rapidly and the Bell Adjustment Inventory could be given and scored quite easily if found useful, the inventory could be given whenever the counselor would feel that such information about a student would be valuable and useful in the counseling situation.

Perceval Symonds and Claude E. Jackson¹, 1935, in an attempt to measure and diagnose the personality adjustments of high school pupils, used three instruments, an Adjustment Questionnaire, an Identification Sheet, and a Scale of Adjustment Statements. They found that these instruments were useful for survey purposes; extreme scores helped to identify pupils who "had high probability of becoming problems later in the year."² They also found that as a whole their tools did not assist to any great extent in the diagnosis of students as to the causes of problem behavior. They found slight correlation of adjustment with age, sex, grade, intelligence, school achievement, and socio-economic

¹Perceval N. Symonds and Claude E. Jackson, "Measurement of Personality Adjustment of High School Pupils," Teachers College Record, 37:232-3, December, 1935.

²Ibid., p. 232.

CHAPTER II

RELATED REVIEW OF THE LITERATURE

Studies done with the Bell Adjustment Inventory. Since the inception of testing, it has been recognized by many teachers and counselors that personality adjustments are an important responsibility of the educational process. Some of the uses of the Bell Adjustment Inventory in evaluating situations and the conclusions made based on the findings are listed below.

Percival Symonds and Claude E. Jackson¹, 1935, in an attempt to measure and diagnose the personality adjustments of high school pupils, used three instruments, an Adjustment Questionnaire, an Identification Sheet, and a Scale of Adjustment Statements. They found that these instruments were useful for survey purposes; extreme scores helped to identify pupils who "had high probability of becoming problems later in the year."² They also found that as a whole their tools did not assist to any great extent in the diagnosis of students as to the causes of problem behavior. They found slight correlation of adjustment with age, sex, grade, intelligence, school achievement, and socio-economic

¹Percival M. Symonds and Claude E. Jackson, "Measurement of Personality Adjustment of High School Pupils," Teachers College Record, 37:232-3, December, 1935.

²Ibid., p. 232.

status. As far as teacher ratings were concerned, they found "there is a slight but real tendency for teachers to be influenced by undesirable behavior in assigning marks lower than justified by the real relationship between achievement and conduct."³

E. R. Bartlett and D. B. Harris⁴, 1936, used the Bell Adjustment Inventory in a study to discover the factors in a boy's make-up and in his environment that might have specific bearing upon his anti-social behavior. There were 119 delinquent boys from the Indiana Boys' School and 122 in the control group from Greencastle High School, Greencastle, Indiana. They found that the delinquents' scores on the Bell showed them to be much more maladjusted in their relations with other members of the family than were non-delinquents. The range for both groups was from 0-27. The average of the delinquents was 11.51 points, and for the non-delinquents 6.66 points, the lower score showing less maladjustment. In health or general social adjustment no significant differences were found to exist between the groups. Marked differences appeared in the degree of emotional adjustment; the range being 0-44 (high scores indicate maladjustment). The delinquent boys made an average

³Symonds and Jackson, op. cit., p. 233.

⁴E. R. Bartlett and D. B. Harris, "Personality Factors in Delinquency," School and Society, 43:653-6, 1936.

of 17.76 points as compared with the non-delinquent boys' average of 10.21 points indicating greater emotional instability in the delinquent boys. Age, intelligence, or socio-economic status of the boys studied did not seem to bear a direct relationship to any of the types of adjustment. The delinquents tended to reveal greater emotional instability, more difficulty in maintaining home and family relationships, greater difficulty in school adjustment "(46% were truants before committal)"⁵, more frequent participation in socially undesirable leisure-time activities, and a greater tendency to cheat on classroom tests than was true of the non-delinquents.

A. H. Turney and M. Fee⁶, 1936, conducted a study to determine the usefulness of the Bell Adjustment Inventory as an instrument for diagnosing pupil adjustment because they felt there was a need to determine the social, emotional, and health adjustment of high school pupils for guidance purposes. They found reliability coefficients, by test and six-months later retest, of .741 to .851 on the various portions of the test, and a .823 coefficient of correlation on the total test. "Where there was a variation

⁵Bartlett and Harris, op. cit., p. 654.

⁶A. H. Turney and M. Fee, "An Attempt to use the Bell Adjustment Inventory for High School Guidance," School Review, 44:193-198, 1936.

as great as 20 points, it is also reasonable to suppose there had been at least some actual change in the degree of adjustment. These coefficients of correlation indicate a satisfactory degree of reliability for this instrument."⁷ To establish a validity rating of the Bell Adjustment Inventory, criterion-ratings of pupils by teachers and supervisors as to home, health, social, and emotional adjustments were used. Fifteen raters were used and each rater was asked to make a rating for pupils whom he had had in class for a semester, with whom he had worked in extra-curricular activities, or whom he had known intimately or socially out of school. Each phase was rated on a 7-point scale listing the following graduated amounts of adjustment. "Perfectly adjusted," "Very well adjusted," "Well adjusted," "Fairly well adjusted," "Poorly adjusted," "Very poorly adjusted," and "Seriously maladjusted." The raters had no knowledge of the results on the Bell Adjustment Inventory and no advance knowledge of the fact they were to make two judgments, the second rating 30 days after the first. The correlations of the two teacher ratings (reliability coefficients) ranged from .377 to 1.00. "When it is considered that the traits judged are not necessarily constant and that, after having rated the pupils, the judges would likely be more observant

⁷Turney and Fee, op. cit., p. 194.

of the pupils' adjustment and might be better able to judge them a second time,"⁸ these coefficients are understandably less than 1.00. Turney and Fee assumed the ratings were valid. They correlated averages of the ratings with the Bell Inventory scores. The correlations were low, .178 to .416. If the ratings were assumed to be highly valid, then it followed that the Bell Adjustment Inventory lacked validity. They made the following conclusions regarding their study:

1. Teachers too often show a tendency to consider their judgments as certain.
2. Unless the Bell Adjustment Inventory has proved validity it can be of little use in guidance.
3. Teachers need better training in guidance.
4. There is a need for more objective instruments for measuring adjustment or maladjustment.⁹

Hugh M. Bell¹⁰, 1936, studied the necessity of adapting the teaching program to the needs and interests of the student on the freshman college level. He concluded that the teacher's attention must be directed to the child. The child's "intelligence, his emotions, his social attitudes,

⁸Turney and Fee, op. cit., p. 195.

⁹Ibid., p. 198.

¹⁰Hugh M. Bell, "College Students' Interest in Personal Development," Journal of Educational Research, 29:518-23, March, 1936.

his social responses, in brief, his whole personality must become the object of thoughtful consideration."¹¹ Other conclusions included:

1. Personal and social relations are of great interest and importance to college freshmen.
2. Fundamental desires of greatest importance include personality, health, home, and a vocation; religion, money, scientific achievement, and artistic accomplishment are of less importance.¹²

A book review by Charlotte Smith Kimball¹³, 1937, of The Theory and Practice of Student Counseling by Hugh M. Bell concisely reveals the high points of the first edition of this book. Bell developed the Adjustment Inventory as an improved technique to provide information concerning home, health, social, and emotional adjustments of students of high school and college age. There are 140 questions in the pre-1962 Inventory (91 contributed by the author, 49 from other sources) which represent a 5 year boiling down from an original 411 questions, as the author and his associates tested their value in action. The pre-1962 Inventory was practically self-administering, taken in 25 minutes, and scored in 3 minutes by the unweighted system and was

¹¹Bell, op. cit., p. 522.

¹²Ibid., p. 522.

¹³Charlotte Smith Kimball, "The Theory and Practice of Student Counseling by Hugh M. Bell," Journal of Abnormal and Social Psychology, 32:254-5, July, 1937.

sufficiently non-technical to be shown to the student after scoring and discussed with him. Over a period of 3 years, the Adjustment Inventory was given to hundreds of high school and college students and delinquents in California and in part to schools in Hasbrouck Heights, New Jersey, to determine its reliability, validity, and usefulness in counseling.

Joseph Zubin¹⁴, 1937, studied response patterns in personality adjustment inventories and made the following conclusions:

Patterns exist in responses of normal and abnormal subjects to personality inventories.

Scoring of tests by patterns is possible.

Normal individuals possess more integration as revealed by a greater number of patterns revealed.¹⁵

Zubin also found two major sources of error:

1. Acceptance of responses to the inventory at face value.
2. Every item is weighted, many different personality trait sets = same score.¹⁶

Zubin, however, felt that the self-appraisal method yielded fundamental knowledge about the individual, which if

¹⁴Joseph Zubin, "The Determination of Response Patterns in Personality Adjustment Inventories," The Journal of Educational Psychology, 28:401-13, September, 1937.

¹⁵Ibid., p. 412.

¹⁶Ibid., p. 413.

interpreted properly, could be of service to the research worker or clinician.

John G. Darley¹⁷, 1937, in a study of scholastic achievement in relation to measured maladjustment made the following conclusion:

It is impossible to state that measured maladjustment and radicalism lead to student mortality (dropout) since the University of Minnesota General College students are not dropped under uniform standards of deficient work. It does appear that measured maladjustment or radicalism may depress achievement below the level to be expected from ability, unless affected by some counter stimulant. Furthermore, since measured maladjustment alone is being considered, clinically isolated problems not also isolated by available attitude and adjustment tests may logically be expected to operate in a similar fashion to upset an expected relation between ability and achievement.¹⁸

Noel Keyes and Margaret S. Guilford¹⁹, 1937, in a study of the validity of the Bell Adjustment Inventory and home-room teacher ratings on the Haggerty-Olson-Wickman Behavior Rating Scale found very low correlations between the Bell scores and the teacher ratings ranging from .001 to .24. Some of their conclusions included:

1. For no test or inventory are the correlations

¹⁷John G. Darley, "Scholastic Achievement and Measured Maladjustment," Journal of Applied Psychology, 21:485-93, October, 1937.

¹⁸Ibid., p. 493.

¹⁹Noel Keyes and Margaret S. Guilford, "The Validity of Certain Adjustment Inventories in Predicting Problem Behavior," The Journal of Educational Psychology, 28:641-55, December, 1937.

sufficient for accurate prediction of the behavior of individual pupils. Scores must be regarded as suggestive only.

2. The highest prediction is afforded by the Home Adjustment section of the Bell Inventory with an average correlation of .20 before and .34 after correction for attenuation.²⁰

Health adjustments were found significantly related to problem behavior as rated by administrators and counselors, but not by homeroom teachers. Social and emotional adjustment as measured by the Bell Adjustment Inventory showed very slight relation to disciplinary conduct.

Neal E. Drought²¹, 1938, analyzed eight measures of personality and adjustment in relation to scholastic achievement under the assumption that discrepancies between predicted and achieved grades implied by correlations were to be accounted for in some measure by social and emotional factors. He tested 750 entering freshmen at the University of Wisconsin in 1935 with the Bell Adjustment Inventory and the Wisconsin Scale of Personality Traits. He found that correlations between grade point discrepancies and scores on each of the subdivisions of the Bell Adjustment Inventory were of low order $-.01$ to $+.15$, and in no case was there a

²⁰Keyes and Guilford, op. cit., p. 654.

²¹Neal E. Drought, "An Analysis of Eight Measures of Personality and Adjustment in Relation to Relative Scholastic Achievement," Journal of Applied Psychology, 22:597-606, December, 1938.

suggestion of reliable relationship. He further concluded:

It is apparent that the tests do not differentiate between students who will obtain grades above prediction and those who will fall markedly below. There is no relationship between adjustment as measured and relative performance in college.²²

Hugh M. Bell²³, 1939, in his revised book on counseling discusses the need for standardized measures in counseling. He felt that "the goal of counseling is facilitation of student adjustment through personal contact between counselor and student. The counselor needs meaningful data concerning the behavior characteristics of the student."²⁴ The adjustment problems that face a student concern his home, social situation, emotional feelings, health, school, vocational and occupational choice, health problems, motor and mechanical adjustment, and religion. The counselor also should have three types of information concerning the student's school adjustment:

1. His general scholastic aptitude and mental ability.
2. His subject aptitude and achievement.
3. His reaction to the administrative and instructional organization of the school.²⁵

²²Drought, op. cit., p. 605.

²³Hugh M. Bell, The Theory and Practice of Personal Counseling. Stanford University, California; Stanford University Press, 1939, p. 1-108.

²⁴Ibid., p. 1.

²⁵Ibid., p. 3.

Bell felt that one of the most successful methods yet devised to measure personal and social adjustment was the questionnaire. All group measures of personal maladjustment date from the pioneer work of a committee headed by Dr. Woodworth. Subsequent revisions of Woodworth's Personal Data Sheet were made by Johnson 1920, Mathew 1923, Cady 1923, Laird 1925, House 1927, Thurstone 1929, Bernreuter 1931, Symonds and Block, and Loofbourow and Keyes 1933. The Bell Adjustment Inventory grew out of the Thurstone Personality Schedule of 223 questions plus 188 new ones. "The maladjusted answer to each question was determined by the writer with the assistance of Dr. C. Gilbert Wrenn of Stanford University."²⁶ Items were retained in the test which differentiated clearly between the upper 15% of the scores and the lower 15% of the scores in the distribution of each category. Also, only those items which were checked by at least 25% of a control maladjusted group were retained. The tests were given to high school and college students over a period of three years.

Some questions were eliminated as a result of observations of embarrassment regarding questions dealing with sexual development, moral implications, some wordings gave difficulty, and those questions eliciting frequent inquiries.²⁷

²⁶Bell, op. cit., p. 24.

²⁷Ibid., p. 26.

In scoring and interpretation of the test Bell stated:

In a measure such as this it is impossible to put one's finger on the exact point where good adjustment ends and maladjustment begins. In each division of the Inventory there are 35 questions upon which a student may give maladjusted responses. Therefore, the more maladjusted responses a given individual accumulates, the more definite his indication of personality disturbance.²⁸

Bell went on to say that if a student had made a very unsatisfactory score on the Bell Adjustment Inventory, he should not be made to feel abnormal or different. He should face the fact that he is not well adjusted and should be encouraged to think through and plan a program that will bring about a better life adjustment. In his summary and conclusions Bell felt that:

Counseling, if it is to be effective, needs reliable and meaningful measures of student behavior. Such behavior can be most meaningfully described in terms of the adjustment of the student to his personal and social environment. Valid measures are needed in the following areas: school, health, social, vocational, emotional, home, motor, mechanical, and religious. In some areas satisfactory tests are now available, while in others the measures are still in the experimental stage and cannot be relied upon. There is a need for improved techniques for determining student adjustment.²⁹

Ruth A. Pederson³⁰, 1940, studied the validity of the

²⁸Bell, op. cit., p. 35.

²⁹Ibid., p. 108.

³⁰Ruth A. Pederson, "A Validity of the Bell Adjustment Inventory When Applied to College Women," Journal of Psychology, 9:227-36, January, 1940.

Bell Adjustment Inventory in regard to college women. Her criteria consisted of an autobiography written before entering college, the dean's files of the personal records of the students during their freshman year, the ratings of the social advisor as to social adjustment, and the women's director of physical education rating of health. Pederson found that the Bell Adjustment Inventory is valid in measuring home adjustment as indicated in the applicant's autobiography (another self-report device). A high score on the Bell Adjustment Inventory health section indicated poor health when correlated with the autobiography, the personal records, and the ratings of the director of physical education. Further, individuals rated as maladjusted as to health tend to have significantly higher scores on the emotional section of the Bell Adjustment Inventory than do other individuals. Individuals who were rated socially maladjusted by the social advisor tended to have higher scores on the social section of the Bell Adjustment Inventory than did other individual subjects. Subjects who were rated maladjusted socially by other criteria did not, on the whole, have higher scores than the remaining individuals, but the numbers were so small the results were inconclusive. There was no real difference between the emotional scores of the individuals rated emotionally maladjusted and other individuals. According to Pederson the Bell Adjustment

Inventory did have some significant use for discriminating those in need of health, home, and social adjustment.

A. E. Traxler³¹, 1941, studied the reliability of the Bell Adjustment Inventory and the correlation with teacher judgment. Traxler administered the Bell Adjustment Inventory to 43 high school students who were a fair sampling of the population in the school studied. The teacher rating scale consisted of a 9-point scale. Mimeographed sheets containing the scale, definitions of terms, and careful instructions for procedure in rating were distributed to the raters of whom 3 to 8 would rate each individual student. Traxler found a split-half reliability coefficient for the Bell Adjustment Inventory at .80 or above. The correlation between Bell Adjustment Inventory scores and the teacher ratings ranged from .00 to .638. The home and emotional ratings were not significant. Traxler concluded that there was evidence of satisfactory reliability. The low correlation between the two methods of determining adjustment, the Bell Adjustment Inventory and the ratings, might be, according to Traxler, due to the ratings.

A much more defensible criterion against which to validate inventories of this type could be set up through the use of anecdotal records or a behavior

³¹A. E. Traxler, "The Reliability of the Bell Inventories and their Correlation with Teacher Judgment," Journal of Applied Psychology, 25:672-8, 1941.

description technique. This is suggested as a fruitful line of investigation for a comprehensive study covering a period of weeks or perhaps a month.³²

Rudolph D. Alfinson³³, 1941, used the Bell Adjustment Inventory in a study of school promotion and pupil adjustment. A comparison was made of certain personality characteristics of two matched groups of pupils of junior high school age. One group had normal school progress; the other was composed of individuals who had experienced non-promotion in one or more semesters in four junior high schools in Minneapolis. A critical ratio of 1.13 for the Bell School Inventory showed that the difference between the means of the two groups was not statistically significant; neither were the groups significantly different in variability. The conclusion was made that the results of the study indicated that in these groups maladjustment was not directly associated with non-promotion or even with double non-promotion to such an extent that non-promotion may be regarded as the essential factor in future maladjustment.

Charles J. Marsh³⁴, 1943, studied the diagnostic value

³²Traxler, op. cit., p. 677.

³³Rudolph D. Alfinson, "School Progress and Pupil Adjustment," Elementary School Journal, 40:507-14, March, 1941.

³⁴Charles J. Marsh, "The Diagnostic Value of the Bell Adjustment Inventory for College Women," Journal of Social Psychology, 17:103-9, February, 1943.

of the Bell Adjustment Inventory in discovering maladjusted women in college. The Bell Adjustment Inventory was administered to 1000 Stephens College freshmen and sophomore women in 1939 and 1940. Those rated as maladjusted were referred to the Guidance Committee. Seventy-three were referred as maladjusted. Of these 17 were found to be "seriously maladjusted" by the committee, 5 "critically maladjusted," and the others normal. Marsh was encouraged by these results in anticipating maladjustment in college women by paper and pencil items. His conclusions included:

- (a) The home adjustment scale of the Bell Adjustment Inventory is more useful in predicting social and emotional maladjustment in college women than the social and emotional scales.
- (b) The Bell home adjustment scale is not particularly sensitive to cases of maladjustment until they are so bad as to be considered "critical."
- (c) A group of 14 of the 35 home adjustment items seem to be carrying the greater part of the load in diagnosing maladjustment in college women.³⁵

Daniel Brower and Harry Sands³⁶, 1948, studied the relation of reaction time and personal adjustment as measured by the Bell Adjustment Inventory. They used 50 subjects, 25 female and 25 male, and correlated their reaction time to

³⁵Marsh, op cit., p. 108.

³⁶Daniel Brower and Harry Sands, "Relations Between Reaction Time and Personal Adjustment as Measured by the Bell Adjustment Inventory," Journal of General Psychology, 38:229-33, April, 1948.

their Bell scores with no significant results. They concluded that the male trend cancels or counteracts the female trend in the statistical operations thus nullifying the findings. They also suggested that studies involving reaction time take adequate account of the wide sex differences in association time as related to the individual's state of personal adjustment and to his reaction to emotionally-toned words which may be used in the experiment.

Margaret Powell³⁷, 1950, used the Bell Adjustment Inventory to study relationships between adjustment traits of college women and to discover adjustment patterns of the individuals. Powell quotes Tiegs as stating that the questionnaire personality inventory is the best device yet devised for measuring and evaluating personality by quickly and easily obtaining reliable and useful data. The Bell Adjustment Inventory was administered to entering freshman women at Sam Houston State Teachers College the first week of the 1945-6 session. Powell found that intercorrelations between the categories of the Bell Adjustment Inventory in home adjustment, social adjustment, and emotional adjustment were all above .70 and were highly significant. Social adjustment could be employed as a criterion of normal

³⁷Margaret Powell, "Relationships Existent Between Adjustment Traits of College Freshman Women as Measured by the Bell Adjustment Inventory," Journal of Social Psychology, 31:145-9, February, 1950.

expectations in emotional adjustment or vice versa; and home adjustment, social adjustment, or emotional adjustment could be predicted with some degree of accuracy if any one of the three categories was determined. Health adjustment could not be used as a measure of prediction of individual behavior in the areas of home, social, and emotional adjustment nor be predicted from these areas.

M. V. Taylor and Dora F. Capwell³⁸, 1950, felt there was a need to set up high school norms for the Bell Adjustment Inventory, student form, because "it is often the principal and only instrument employed for evaluating the adjustment of adolescents."³⁹ They felt that a table of norms based on 1000 high school students using the student form, would help prevent misinterpretation of obtained scores on the Inventory. The manner in which the tables of percentile scores were prepared was considered to increase the assurance that the results are applicable to a high school student population in urban, industrial areas. They took into consideration sex, race, education, and who had tested the students from 1944 to 1948, grades 9 through to age 20 or to 10B.

³⁸M. V. Taylor, Jr. and Dora F. Capwell, "High School Norms on the Bell Adjustment Inventory, Student Form," Occupations, 28:376-80, March, 1950.

³⁹Ibid., p. 376.

Martha Ann Pratt⁴⁰, 1951, studied the relationship of the student responses on the Bell School Inventory and Mental Alertness, Lee Thorpe Occupational Inventory, Kuder Preference Test: Personal, SRA Youth Inventory, Sims Scale of Socio-Economic Status, Bell's Adjustment Inventory, Roger's Adjustment Inventory, the Illinois Inventory of Parent Opinion, Academic Competence-grades, and such miscellaneous data as age, sex, occupation of parent, education of parent and civil status of parents. Pratt felt that the Bell Adjustment Inventory was validated by its upper and lower 15% differentiation potential and the difference in means when administered to 71 "well-adjusted" and 59 "poorly-adjusted" students so designated by teacher report. The "well-adjusted" mean was 14.82 and the "poorly-adjusted" mean was 32.25. With other statistical measures she felt there was significant agreement between the judgment of the teachers and the results of the Bell Adjustment Inventory. She found that:

Good adjustment at school as measured by Bell's School Inventory is correlated with good adjustment as measured by the several categories of Bell's Adjustment Inventory. In general, the correlations between scores on these two inventories substantiates the hypothesis that students who are well adjusted to the school are more likely than those who are poorly adjusted to their school to have fewer problems with home, health, social,

⁴⁰ Martha Ann Pratt, The Predictive Significance of Scores on Bell's School Inventory. Unpublished Master's Thesis. Athens, Georgia: University of Georgia, 1951, p. 1-50.

and emotional adjustment. It is noted that the correlation for both boys and girls at Hoke Smith High School were all reliable at the .05 level or higher. Among Henry Grady High School girls, good school adjustment is positively and reliably related to each of the subcategories of the Adjustment Inventory, with the exception of social adjustment. Among Henry Grady boys, school adjustment scores are positively and reliably related to home adjustment, social adjustment, and total adjustment. The "r's" vary in magnitude from .14 (Health adjustment among Henry Grady boys) to .48 (Emotional adjustment and total adjustment among Hoke Smith girls).⁴¹

Travis R. Osborne, James E. Greene, and Wilma B. Sanders⁴², 1952, tried to ascertain urban-rural differences in personality of college students as measured by an adjustment inventory, Bell Adjustment Inventory, adult form. They felt available evidence on urban-rural differences in personality were inconclusive and contradictory. This group studied 373 men and 210 women of the 1950 University of Georgia freshman class. In their 24 correlations and comparisons they found only two significant findings:

1. Men students of mixed urban-rural backgrounds are more submissive and retiring in social contacts than are men students with city backgrounds.
2. Rural women students are better adjusted to their home surroundings than are women students with urban backgrounds.⁴³

⁴¹Pratt, op. cit., p. 50.

⁴²Travis R. Osborne, James E. Greene, and Wilma B. Sanders, "Urban-Rural Differences in Personality of College Students as Measured by an Adjustment Inventory," Rural Sociology, 17:61-2, March, 1952.

⁴³Ibid., p. 62.

This group felt, that on the basis of their findings, the view that rural residence is markedly conducive to wholesome personality adjustment was not consistently supported. Osborne, Greene, and Sanders also felt "rurbanization" was attenuating any differences between urban or rural personality patterns.

Mother Marie Elaine Sandra M.C.S.A.⁴⁴, 1953, made a comparative study of the scores obtained by girls in an institution on the Bell Adjustment Inventory and the P.-F. Test. The study consisted of two groups of institutional dependent girls of 30 and 27 subjects. The Bell was administered before the P.-F. in one session, and the P.-F. before the Bell in the second section. Standardized instructions were used and good rapport was established with both groups. According to prediction it turned out that the General Conformity Rating on the P.-F. Test was inversely correlated with all aspects of the Bell Inventory, indicating high scores on (GCR), this P.-F. category to be associated with satisfactory adjustment. This trend was in the expected direction, for conformity presupposes active acceptance of group standards and as such some degree of

⁴⁴Mother Marie Elaine Sandra M.C.S.A., A Comparative Study of the Scores Obtained by Institutional Adolescent Girls on the Bell Adjustment Inventory and the P.-F. Test. Unpublished Master's Thesis. New York: Fordham University, 1954.

adjustment. Sandra also states:

Statistical analysis of the data supports the proposed hypothesis that both of the psychometric instruments under discussion may be used in the assessment of personality from the standpoint of adjustment. In no instance did the Bell scores fail to follow the differentiation pattern traced by the P.-F. components. The results indicate that both tests are functionally related not only in measuring adjustment but also in differentiating between the upper and lower extremes in the distribution of scores.⁴⁵

She felt the greatest usefulness of both the Bell Adjustment Inventory and the P.-F. Test would be as guides to interview and as parts of a battery of personality tests. Her main conclusion suggested that the projective P.-F. Test yielded information about adjustment which is generally consistent with theoretical expectancy and with the results of the more objective Bell Adjustment Inventory.

Verner M. Sims⁴⁶, 1954, studied the relation between the social class identification and personality adjustment of high school and college students. Sims used the r , ρ , and chi-square to test the relationship between social class identification and the aspects of personality as measured by the Bell Adjustment Inventory. He found that social class identification is an important positive correlate of what

⁴⁵Sandra, op. cit., p. 40.

⁴⁶Verner M. Sims, "Relations Between the Social Class Identification and Personality Adjustment of a Group of High School and College Students," Journal of Social Psychology, 40:323-7, November, 1954.

Bell measures as social adjustment. The same relationship existed to a lesser degree between the Social Class Identification Occupational Rating Scale and home adjustment on the Bell. The health and emotional adjustment with Social Class was contradictory, but total personality adjustment was positively related to class identification. Sims felt that the validity of the inventory may vary with class affiliation, but the problem needs more investigation.

Jane Loevinger⁴⁷, 1954, surveyed personality measurement techniques and proposed the following five principles for the measurement of personality traits.

1. The structure principle is that the greater the degree of test structure, the more exact is the comparison between individual and group, but the less exact is the relation between test response and the trait of the individual.
2. The disguise principle is that the less disguised the question, the more disguised the answer. A consequence of the disguise principle is that highly valid tests of personality traits are likely to be low in homogeneity.
3. The principle of least stress is that measurement should involve as little stress as possible; or perhaps, that the less stress, the more valid the measurement.
4. The principle of the dynamic continuum is that which items are measures of a common trait, and what are the extremes of the trait, should be determined empirically. This principle implies

⁴⁷Jane Loevinger, "Some Principles of Personality Measurement," Educational and Psychological Measurement, 15:3-17, Spring, 1955.

of the that a method for constructing statistically homogeneous tests appropriate to low correlation data, should be used.

5. The principle of emotional limitation is that taboos and hostilities of those constructing personality tests are likely to vitiate measurement.⁴⁸

Louis J. Cantoni⁴⁹, 1955, did a continuing study of emotional adjustment with the student form of the Bell Adjustment Inventory to high school students, and then 13 years later he administered the adult form to the same subjects. The Bell Adjustment Inventory, Student Form, was administered to ninth graders, then again when these ninth graders were twelfth graders. The Bell Adjustment Inventory, Adult Form, was administered to the same group nine years later. The correlation between the ninth grade scores and the twelfth grade scores was .51. The correlation between the twelfth grade scores and follow-up scores was .48. Because Cantoni felt that the reliability coefficients for the Bell are much higher than those found there, these three coefficients might be regarded as indices of change in emotional adjustment. The means and the spread of scores remained relatively consistent for the three administrations

⁴⁸Loevinger, op. cit., p. 17.

⁴⁹Louis J. Cantoni, "A Study in Emotional Adjustment: The Correlation of Student and Adult Forms of the Bell Adjustment Inventory Over a Period of 13 years," Educational and Psychological Measurement, 15:137-143, Summer, 1955.

of the test. Three major conclusions arrived at by Cantoni were:

1. Although there is a definite core of stability in the emotional adjustment of young men and women during high school and during the nine years immediately after graduation from high school, there is also much instability, or susceptibility to change.
2. In this study, change in the four-year high school period and change in the nine-year post-high school period remained comparatively equal. From this standpoint, it appears that the individual is more amenable to change during high school than in later years.
3. A planned program of counseling and guidance is likely to give direction and meaning to the change which occurs in the emotional adjustment of high school students.⁵⁰

Cantoni also found that high school tests and measurements as predictors of occupational status revealed that the high school grade point average and the ninth grade administration of the Bell Adjustment Inventory had an r of .457 in predicting occupational status.

Margaret A. Jessen⁵¹, 1955, used the Bell Adjustment Inventory, Adult Form and Student Form, to discover factors in parents' prediction of adolescent responses to selected items of the Bell Adjustment Inventory. Sixty-four parents

⁵⁰Cantoni, op. cit., p. 143.

⁵¹Margaret A. Jessen, "Factors in Parents' Prediction of Adolescent Responses to Selected Items on the Bell Adjustment Inventory," American Psychologist, 10:365, August, 1955.

of 50 adolescent children were asked to answer the questions as they felt their child would. Thirty-eight items had been selected by four independent judges as being important in intra-family relationships. The reliability coefficient among the 4 ratings was .97. It was found that parents tended to overestimate the child in 13 of the 38 questions by answering "no"; and to underestimate the child in 25 of the items by answering "yes." This was especially true of questions involving personal relationships between the student and parent. The parents who predicted most accurately what their child had answered on the item showed the best social and emotional adjustment as measured by their own scores on the adult form of the Bell Adjustment Inventory. The criterion which most definitely determines the degree of parental understanding as reflected by the parent's ability to predict for his child on the Bell would seem to be his own emotional score.

John J. Wittich⁵², 1955, studied the ability of acquaintances to predict the responses of an individual on the Bell Adjustment Inventory. Wittich sought to test generality of prediction, or understanding, tasks; to reexamine with a new design the relation between adjustment and

⁵²John J. Wittich, "The Generality of the Prediction of Self Reports," Journal of Consulting Psychology, 19:445-8, December, 1955.

understanding, and to investigate the relation between adjustment and the capacity to be understood. Wittich found a .42 average correlation between test scores and predictions. He made the following conclusions on the basis of his findings:

1. The ability to predict the responses of others may be regarded as a trait.
2. The capacity to be predicted by others may be regarded as a trait.
3. There is a positive relationship between the adjustment of a subject and the success with which others understand him.⁵³

Fredrick L. McGuire⁵⁴, 1961, used the Bell Adjustment Inventory to test the ability of the Kuder Preference Record: Personal to discriminate between "psychiatric" and "normal" military personnel of the Marine Corps. He administered both the Kuder Preference Record: Personal and the Bell Adjustment Inventory to 50 psychiatric discharges and to 38 marines with at least 5 years of service who had demonstrated their ability to adjust to military life. The correlations between the two instruments were: .06, .06, .09, .02, .04 none of which was statistically significant. McGuire concluded that the Kuder Preference Record: Personal

⁵³Wittich, op. cit., p. 448.

⁵⁴Fredrick L. McGuire, "The Kuder Preference Record-- Personal as a Measure of Personal Adjustment," Journal of Clinical Psychology, 17:41-2, January, 1961.

did not measure in the same manner what is measured by the Bell Adjustment Inventory. The Kuder Preference Record: Personal did not differentiate between the two groups, psychiatric and normal. McGuire did not elaborate on the discriminatory ability of the Bell Adjustment Inventory.

From the above studies it is gathered that many of the authors put a great deal of confidence in the Bell Adjustment Inventory as an instrument measuring what it purports to measure, namely adjustment in various life areas. There is no conclusive evidence that the instrument is truly valid, but there is a general feeling that it is most useful, easy to administer, easy to score, and easy to interpret. As a basis for discrimination of the lower 15% adjustment problems, it is not questioned. As a counseling and guidance instrument it is fully accepted.

Work in the field of rating scales. To broaden this study to include a background for teacher ratings that could be relied upon as being valid, it was necessary to trace the development in the field of ratings and rating scales.

P. J. Oosthuizen⁵⁵, 1931, set up several criteria for judging rating scales in a study of the Vineland Adjustment Score Card for measuring social behavior. He concluded a

⁵⁵P. J. Oosthuizen, "Efficiency of the Vineland Adjustment Score Card for Measuring Social Behavior," Journal of Educational Research, 23:280-7, April, 1931.

rating instrument must:

1. Be free from subjective opinions.
2. Must not be an intelligence test.
3. Must be valid in that it measures what it purports to measure.
4. It must be reliable.

D. B. Ellis and L. W. Miller⁵⁶, 1936, used E. K. Wickman's scale to study teachers' attitudes and child behavior problems. The teachers who were doing the rating were to ask themselves about each problem, "How serious, or how undesirable, is this behavior in any child?", and "To what extent does it make him a difficult child?". Each problem was to be rated on a scale varying from "of no consequence" to "an extremely grave problem." Particular emphasis was on instructions to teachers. The raters were to make ratings as rapidly as possible in order to secure first immediate reactions. Wickman reported that his teachers and the mental hygienists did not agree. There was some agreement in a Denver study between teachers and mental hygienists, .49, when the teachers were given more time for rating. Women teachers tended to rate problems more serious than men teachers.

⁵⁶D. B. Ellis and L. W. Miller, "Teachers' Attitudes and Child Behavior Problems," The Journal of Educational Psychology, 27:501-11, October, 1936.

H. Max Houtchens⁵⁷, 1936, found that teachers identify those children whose behavior is aggressive and disturbing and fail to recognize as problems those children whose behavior is of a withdrawing, evasive sort.

George A. Dale⁵⁸, 1941, made a comparison of two groups of elementary school children classified for school adjustment on the basis of teacher rating. The teachers were to sort the children into groups of adjustment--don't know, desirable, and undesirable. Dale trained the teachers in rating procedures during faculty meetings by using the Wickman Schedule B-3 and other means concerning shyness, fear, daydreaming and less overt behavior as evidence of possible maladjustment. Significant differences between the desirable and undesirable groups included such factors as mental ability, school achievement, school marks, and attendance suggested that a "halo effect" may have operated in the teachers' classification of children as adjusted or maladjusted. "Adjusted" pupils were above average in IQ and school achievement but average in knowledge of social standards and favored girls. Dale concluded that the groups

⁵⁷H. Max Houtchens, "Teachers' Judgments of Pupil Adjustment," The Journal of Educational Psychology, 27:672-6, December, 1936.

⁵⁸George A. Dale, "A Comparison of Two Groups of Elementary School Children Classified for School Adjustment on a Basis of Teacher Rating," The Journal of Educational Research, 35:241-50, December, 1941.

selected by the teachers as representing extremes of adjustment and maladjustment differed more in characteristics directly related to school success than in general personality traits.

James M. Lynch⁵⁹, 1944, studied the psychology of the rating scale and found that one of the major problems in the construction of rating scales involved defining the traits or qualities to be evaluated. Only those qualities which are subject to direct observation should be included in the scale. Lynch felt trait definitions should describe the performance so that the judge could observe the behavior concretely described. There should be training in regarding the individual as a doer. This recording of observed behavior would reduce rating to objectively measuring observable responses. One ability at a time should be rated to obtain a more objective rating on this ability and would help to guard against a general halo effect.

M. Amatora Tschechtelin⁶⁰, 1952, hoped to develop a personality scale that could be used for self-rating and rating by associates that would lessen the inherent

⁵⁹James M. Lynch, "The Psychology of the Rating Scale," Educational Administration and Supervision, 30:497-501, November, 1944.

⁶⁰M. Amatora Tschechtelin, "Reliability of a Personality Scale," Educational and Psychological Measurement, 12:132-6, Number 1, 1952.

subjectivity in all personality measurement. The personality score of the individual, according to this author, should reflect his personality as he exhibits it to others.

Harl H. Young, Wayne H. Holtzman, and Norman D. Bryant⁶¹, 1954, studied the factors involved in using rating scales. Two of the factors that are little understood are the "Context of the items within which a given item is embedded, and the order of presentation of a particular item in the series."⁶² Item adequacy was judged according to the following criteria:

- (a) The lack of ambiguity, or the preciseness of the item should be evident.
- (b) The vocabulary should be no higher than eighth grade level.
- (c) The item should be as simple as possible, containing only one trait.
- (d) The item should be stated in such a way that the trait is either overtly observable or directly and immediately inferable.⁶³

These authors recommended a 5-point rating scale to permit both frequency and degree judgments, and precautions should be taken that every rater knows well the individual he is

⁶¹Harl H. Young, Wayne H. Holtzman, and Norman D. Bryant, "Effects of Item Context and Order on Personality Ratings," Educational and Psychological Measurement, 14:499-517, Number 3, 1954.

⁶²Ibid., p. 500.

⁶³Ibid., p. 504.

rating. They found that order of an item did not seriously affect the rating, responses may be significantly affected by the context within which the items are imbedded, and items descriptive of undesirable personality traits are significantly more susceptible to response shifts with changes in item context than are items referring to desirable traits.

A. W. Bendig⁶⁴, 1957, made a study to check findings that reliability and validity of ratings might be affected by "Judgmental demoralization and fatigue" due to the size of or complexity of the rating task. He was unable to answer the question of fatigue effects when there were greater or lesser numbers of judgments required. As far as food-preference ratings were concerned, judgmental fatigue and judgmental demoralization had no effect upon the reliability of the ratings.

Charles A. Ullmann⁶⁵, 1957, used teachers, peers, and tests as predictors of adjustment and found that ratings appear to be better predictors of that aspect of maladjustment which had to do with society's reaction to acted-out

⁶⁴A. W. Bendig, "Rater Reliability and Judgmental Demoralization," The Journal of Applied Psychology, 41:142-4, January, 1957.

⁶⁵Charles A. Ullmann, "Teachers, Peers and Tests as Predictors of Adjustment," The Journal of Educational Psychology, 48:257-67, May, 1957.

behavior. Self description data appeared to be a better predictor of what the person himself would choose to do. Ullmann used a forced-choice test for teacher and peer ratings on pupils. He summarized his important findings as:

Ninth grade teachers' forced-choice test ratings of children's amenability to school goals are generally superior for this purpose to self-descriptive personality tests. Self-descriptive personality test scores appear to be relatively useful supplements to forced-choice test ratings by teachers for predicting withdrawal from school by girls.⁶⁶

Ullmann felt that it would be possible to discover which children would be readily amenable to the simple provision of therapeutic help and which children might require more aggressive case-work techniques through carefully formulated questions to teachers or through experimentally derived keys for self-descriptive tests.

F. J. Ryan⁶⁷, 1958, reviewed trait ratings of high school students by teachers. He found one of the greatest problems in rating was the "halo effect." Reliability by rerating produced higher reliability than agreement among raters. Validity is a greater problem because ratings generally fail to correlate well with objective test scores. Ryan felt that as there was ample evidence that trait

⁶⁶Ullmann, op. cit., p. 266.

⁶⁷F. J. Ryan, "Trait Ratings of High School Students by Teachers," The Journal of Educational Psychology, 49:101-6, March, 1958.

ratings correlate highly with grades at all educational levels it might be that ratings represent little more than imperfect reflections of academic performance. Yet, maybe trait rating might tap personality variables that do affect academic achievement.

Donald N. Buckner⁶⁸, 1959, studied interrater agreement. If ratings are used, it is due to the lack of more ultimate measures so it is necessary to accept the ratings as valid or to seek indirect indications of their validity. Reliability is shown by agreement among scores assigned the same ratee by different raters. Another indicator of validity is the extent to which the ratings correlate with measures to which they should be related according to the research done on the problem. Differences in ratings appear because most rater behavior in most performance rating situations is not entirely consistent from one time to the next with respect to particular traits. So to be valid the ratings must reflect these inconsistencies: "...raters use different criteria in rating the same trait. The ratee satisfies the demands of various superiors by behaving in different ways."⁶⁹ Buckner draws the conclusion that high agreement

⁶⁸Donald N. Buckner, "The Predictability of Ratings as a Function of Interrater Agreement," The Journal of Applied Psychology, 43:60-4, January, 1959.

⁶⁹Ibid., p. 63.

among ratings could imply a poor sampling of observations of ratee behavior by raters, a poor sampling of raters, or it could indicate validity of the ratings.

Victor B. Cline⁷⁰, 1961, found that, in comparing, individual rating was inferior to group ratings. He also suggested that the least accurate ratings are least likely to be obtained from unselected individuals. In terms of time, money, and procedure the pooling of several individual judges' ratings appeared to be the most satisfactory procedure if there were no trained groups available to do the rating.

Robert Lord and David Cole⁷¹, 1961, studied the rating of teachers by their principals as to their success. They wished to see if data from personality tests were useful in the prediction of success in teaching. They ran into difficulty when success in teaching was defined in terms of principal ratings. Employing a forced-choice method for rating by the principals produced a more normal distribution. Lord and Cole found prediction of success from personality data was more accurate than from more conventional academic data.

⁷⁰Victor B. Cline, and James M. Richards, "A Comparison of Individuals Versus Groups in Judging Personality." The Journal of Applied Psychology, 45:150-5, No. 3, 1961.

⁷¹Robert Lord and David Cole, "Principal Bias in Rating Teachers," The Journal of Educational Research, 55:33-5, September, 1961.

distinguishable from low adjustment. The high adjustment student was described in terms of high environmental contact, efficiency in organization, and stability of mood.

Llewellyn Wiley and William S. Jenkins⁷⁵, 1964, worked to discover how to select competent raters. They used a 5-point rating scale, individual raters and a consensus key with the following results:

The findings are evidence that a rater's correlation with a consensus key can be used to predict both his self-consistency and his agreement with consensus keys on later testing. . . . These findings are limited to ratings on the qualifications estimated to be required of abstract persons who are to perform jobs. It would be interesting to learn whether parallel consistencies over time can be demonstrated in raters who rate real people.⁷⁶

In the use of ratings and rating scales the following points seem to be of high importance:

1. Select a well-prepared scale with clear descriptions of traits.
2. Use a forced-choice method of rating.
3. Select persons who know the ratees and train them in rating procedures.

⁷⁵Llewellyn Wiley, and William S. Jenkins, "Selecting Competent Raters," The Journal of Applied Psychology, 48:215-7, August, 1964.

⁷⁶Ibid., p. 217.

CHAPTER III

PROCEDURES AND DESCRIPTION OF DATA

Selection of the tools for gathering data. The need for more complete data on each individual student was recognized. After a careful study of the types of personality and adjustment scales that were available had been made, it was decided to use the Bell Adjustment Inventory as a data gathering instrument for this study. The value of the data from this instrument would be studied, and the value of the tool in counseling would be assessed.

The teacher rating scale was selected after careful perusal of materials available in the Buros' Mental Measurements Yearbook, the catalogues of the American Psychological Corporation, the Houghton Mifflin Company test catalogues, the Consulting Psychologists Press catalogue, and the Science Research Associates catalogue.

Since the scores of the Iowa Tests of Educational Development would be used in some of the study, this test was also evaluated.

Description and evaluation of data collecting instruments. The Bell Adjustment Inventory was authored by Hugh M. Bell in 1934 and revised in 1962 with the help of numerous consultants named on the back of the table of contents in the manual for the 1962 revised Bell Adjustment Inventory,

student form. The inventory is published by Consulting Psychologists Press of Palo Alto, California. There are two forms of the test; the student form for grades 9 through 16 and the adult form for older groups. The inventory may be purchased in a regular edition which may be marked right on the test blank or separate answer sheets may be purchased for either hand scoring or IBM scoring. The inventory is classified as a self-report, non-projective personality adjustment measuring device. The cost of the reusable test booklets is 25 for \$3.25, 100 for \$11 or 500 for \$50. IBM answer sheets with profiles included are 50 for \$3.75, 250 for \$17, and 500 for \$30. Scoring stencils, either for hand or machine use, are \$2 and the manual costs \$1.25. The time required to administer the inventory is 35 minutes or less. The inventory provides six measures of personal and social adjustment in 200 items which may be answered yes, no, or ?. The author selected the items for the inventory by including those items which differentiated between the upper 15% and the lower 15% of students in adjustment consistently. The directions are adequate and simple so that the inventory is considered self-administering. A trained background in counseling and guidance would be necessary to interpret the inventory adequately and usefully to students or adults who take the inventory. The six areas of adjustment which were measured by the inventory are: home adjustment, health

adjustment, submissiveness, emotionality, hostility, and masculinity-femininity which facilitates location of specific adjustment difficulties. Validity of the inventory has been established through cross-validation procedures by having high school and college counselors nominate students who they considered would exemplify the opposite extremes of each variable from descriptions prepared by the author. Correlation coefficients with other scales of personality reveal the following construct validity: Allport A/S and Submissiveness (men) .72, Allport A/S and Submissiveness (women) .81, Bernreuter B4-D and Submissiveness .90, Thurstone and Emotionality .93, Cook hostility scale for the Minnesota Multiphasic Personality Inventory and Hostility .83, Guilford-Zimmerman Hostility and Hostility (men) .80, Guilford-Zimmerman Hostility and Hostility (women) .73, MMPI MF Scale and Masculinity-Femininity (men) -.13, MMPI -MF Scale and Masculinity-Femininity (women) -.38. Other measures of validation were:

1. Item validation through internal consistency.
2. Checked for validity during interviews with 400 college students.
3. Comparisons with judgments of school administrators.
4. Inventory does differentiate between good and bad adjustment of groups of students selected for good and bad adjustment.

There is only one form of reliability for the inventory and

the odd-even reliability coefficients are all above .80.

Conclusions made in the Buros' 1940 Yearbook of Mental

Measurements were:

The validity is apparently as good as any of the paper and pencil adjustment inventories and better established than most of them..... The subtests furnish valuable data concerning adjustment in four areas. It has proved to be a valuable instrument in research, in schools, and in clinical work. There is no indication in the literature that it can be depended upon to pick out of a group all "maladjusted" individuals nor that all "maladjusted" according to the score are actually maladjusted. Its greatest usefulness would appear to be as a guide to interviews and an aid in better understanding the individual.¹

The Rating Scale for Pupil Adjustment is authored by Gwen Andrew, Samuel W. Hartwell, Max L. Hutt, and Ralph E. Walton; and published by Science Research Associates in one form. It is of a general type of teacher rating scale covering pupil adjustment in 11 areas. The date of publication is 1950 with a cost of \$1.20 per 20 scales and 10¢ per rating manual. It is estimated to take about 10 minutes per rating. The mental functions or traits represented by each score are: overall emotional adjustment, social maturity, tendency toward depression, tendency toward aggressive behavior, extroversion-introversion, emotional security, motor control, impulsiveness, emotional irritability, school achievement, and school conduct.

¹O. K. Buros, The 1940 Mental Measurement Yearbook. Highland Park, New Jersey: Gryphon Press, 1953, p. 29.

A reliability coefficient on test-retest procedures of .84 was obtained on the scale. It is recommended that 25% to 33% of the lower scoring individuals be referred to counseling. William E. Henry, Associate Professor of Human Development and Psychology at the University of Chicago said the usefulness of the scale depends on the training of the rater and that it was a well conceived instrument. Morris Krugman, Assistant Superintendent in Charge of Guidance, New York Public Schools stated:

If used with appropriate safeguards, this scale can have value for the improvement of child referral procedures. It should not be used alone for personality evaluation. A carefully designed scale.²

The Iowa Tests of Educational Development were constructed under the direction of E. F. Lindquist and published by Science Research Associates in two forms. The form used by the school studied was the rented form with IBM answer sheets scored by SRA. This is an achievement battery which requires 329 minutes in 2 days for the class period version of the test. The battery gives ten scores on nine subtests; the understanding of basic social concepts, general background in the natural sciences, correctness and appropriateness of expression, ability to do quantitative thinking, ability to interpret reading materials in natural

²0. K. Buros, The Fifth Mental Measurement Yearbook. Highland Park, New Jersey: Gryphon Press, 1959, p. 100.

sciences, ability to interpret literary materials, general vocabulary, subtotal, and use of sources of information. The authors developed the tests as a means of keeping track of educational development through the upper grades and indicating what a student can do rather than what he knows. Reliability coefficients from split-half procedures are from .86 to .94 which was considered low for the length of the test. The tests have good predictive validity of probable college success. J. Murray Lee, Professor of Elementary Education and Chairman of the Department, Southern University, Carbondale, Illinois says of the Iowa Tests:

Careful construction and standardization of the tests, the completeness of statistical data and reports of studies of the test, the completeness of the analysis of the results made available to the school and the individual pupil are exceptional. The tests measure some of the important objectives which all high schools are attempting to obtain. A major use of the tests is to reveal the pattern of the individual student's development from year to year. This information would provide a basis for adapting instruction and guidance to meet the measured needs of each individual. A second major use is to provide the faculty with a more dependable and objective basis for evaluating important phases of the total educational offering of the school.³

The group studied. The entire student body of the Ramona High School was studied. This group consisted of 77 students in grades 9 through 12; 18 seniors, 20 juniors, 23 sophomores, and 16 freshmen. There were 39 girls and 38

³O. K. Buros, The Fifth Mental Measurement Yearbook. Highland Park, New Jersey: Gryphon Press, 1959, p. 38.

boys in the group. Of these students 19 were from the small town of Ramona with a population of approximately 220 people. The others all lived on farms; 44 of whom were from farms owned by their families and 14 from homes of tenant farmers. This community is located in Lake County, South Dakota, and in 1964 the average retail purchasing power per family amounted to \$5,966⁴ per family in Lake County. The median income of Lake County residents for 1964 was \$4,000-6,999 which is above the \$3,000 poverty figure used by the federal poverty program as an inadequate income. The economy of the area studied is primarily rural with farming the main producing activity with some farm product processing plants and the persons and firms who supply the goods and services needed by the inhabitants of this type of economy. In the county seat, located 11 miles from Ramona, is located a small college which has added some diversity to the general culture of the county and offers educational opportunity to the youth of the area.

The ages of the students on the data inventoried ranged from 13 years to 17 years at the time of testing. All were fully qualified high school students as there were no special students enrolled at this time and all were taking at least four credit subjects at the time inventoried.

⁴Madison Daily Leader, July 13, 1965, p. 1.

Collection of the data. The Bell Adjustment Inventory was scheduled for the first Tuesday of the second six-weeks period. This time was arrived at in order to obtain the inventory information on the students early in the school year and yet give them ample time to have adjusted to the school situation. This date was October 12, 1965. The ratings of the teachers were done during the week of October 11-15 in order to make their estimates of adjustment comparable to the self-reports. One class a day was rated by each teacher to reduce rating fatigue and to facilitate mind-set for one age group of students. The Iowa Tests of Educational Development were administered October 19 and 20. The first six-weeks period ended October 6 with grades being distributed October 13. The California Test of Mental Maturity was administered to the freshman class November 9. It was felt that if the obtained scores, ratings, grades, ranks, and IQ's could be obtained within a short time, they would be more comparable measures of the student for that particular time.

It was necessary to select teachers to do the rating of the students on the Rating Scale for Pupil Adjustment. The two teachers selected for the ratings were designated on the basis of:

1. At least two years of teaching in the school system.
2. Having had all of the students in at least one class

during that time.

3. Being in contact with all of the students in some capacity this year i.e. activities, classes, or study halls.

The music - social studies teacher was selected because she was starting her third year in the school and had all of the students in some capacity or other. She was highly regarded by the students as demonstrated by participation of the students in her classes.

The coach - science teacher was selected because he was starting his fourth year in the system and had had or had all of the students to be rated in his science classes or in his coaching activities.

After a thorough perusal of the manual for the Rating Scale for Pupil Adjustment and a discussion of the "halo effect" in rating as well as other difficulties, the raters were given a typed reminder card on how to use the scale and reminded to read it before starting a new group of ratings. Two ratings were thus obtained on each student.

The Tuesday morning homeroom groups were administered the Bell Adjustment Inventory with each teacher reading the directions before the students started marking. Each teacher was encouraged to regard the inventory as a useful tool and to administer it with the attitude that it was worthwhile. All teachers reported fine cooperation on the part

of the students with all working to complete the inventory without any discussion of any part of the inventory among the students.

Treatment of the data collected.

1. All of the available data for each class was collected on a table with each individual's information on a single line.

2. A Frequency table of the responses on the Bell Adjustment Inventory for boys and girls separately was prepared.

3. A correlation between the two teachers' ratings on the total group was made. Then a correlation for the ratings of the girls and the boys was made separately. The formula used was

$$r = \frac{\sum x'y' - cx cy}{\sigma_x \sigma_y}$$

4. A table showing the frequency of ratings for boys and girls was made to check the sex factor in rating.

5. A table showing the frequency of ratings for boys and girls for each rater was made.

6. A distribution table for the total group in frequency of average teacher ratings was made with the mean and standard deviation figured to discover rater bias.

7. The average teacher rating of pupil adjustment was correlated with each of the six areas of adjustment of the

Bell Adjustment Inventory for boys and girls to discover if there was any agreement between the self reports and the ratings. California Test of Mental Maturity (not available

8. Figures showing the adjustment in the six areas of the Bell Adjustment Inventory and the average teacher rating in relation to grades and ability were made for the freshman, sophomore, and junior classes. There were no complete records of ability scores for the senior class. boys' and girls'

9. Figures showing the adjustment in the six areas of the Bell Adjustment Inventory and the average teacher rating in relation to Iowa Tests of Educational Development and ability were made.

10. Correlations were made between ability and grade averages for the first six weeks for the freshman, sophomore and junior classes.

11. Correlations were made between ability and composite percentile ranks on the Iowa Tests of Educational Development for the freshman and junior classes. These were the only classes who took the Iowa Tests of Educational Development this year.

On pages 68, 69, 70 and 71 will be found tables showing the data collected for the freshman, sophomore, junior, and senior classes. The tables identify the student by number, give his age, sex, Bell Adjustment categories, average teacher rating in letter grades ("A" indicating Excellent;

"B", Good; "C", Average; "D", Poor; and "F", Unsatisfactory), grade averages for the first six-weeks period, IQ scores from the California Test of Mental Maturity (not available for seniors), and Iowa Tests of Educational Development composite percentile ranks for the freshman and junior classes.

On the next six pages will be found information in tabulated form on the distribution of the boys' and girls' scores on the six Bell Adjustment Inventory areas, and the teacher ratings in table form.

TABLE I
DATA COLLECTED ON FRESHMAN STUDENTS

Student	Age	Sex	(Bell Adjustment Scores)						Teacher Rating	Grade Av.	IQ	ITED Percentile
			a	b	c	d	e	f				
1	13	F	Ex.	Gd.	Av.	Av.	Fr.	Av.	A	130	98	
2	14	F	Gd.	Av.	Av.	Av.	Av.	Av.	B	110	89	
3	14	M	Av.	Av.	Av.	Av.	Fr.	S.F.	C	103	29	
4	14	M	Gd.	Av.	Av.	Gd.	Fr.	Mas.	B	98	78	
5	14	M	Gd.	Ex.	As.	Av.	Fr.	Fem.	D	98	29	
6	15	F	Un.	Av.	V.S.	Av.	Av.	Av.	C	101	35	
7	15	F	Av.	Av.	Av.	Ex.	Av.	S.M.	C	93	42	
8	14	M	Gd.	Av.	Av.	Pr.	Av.	Mas.	B	108	55	
9	14	F	Un.	Av.	Av.	Un.	SD	Mas.	B	108	89	
10	14	F	Av.	Pr.	Sb.	Pr.	Av.	Av.	B	106	82	
11	15	M	Av.	Av.	Av.	Av.	Fr.	Av.	C	98	48	
12	14	M	Av.	Av.	Av.	Av.	Av.	Fem.	C	85	42	
13	14	F	Av.	Av.	VS	Av.	Fr.	Av.	B	120	94	
14	14	M	Av.	Av.	Sb.	Av.	Fr.	Av.	C	98	29	
15	14	F	Ex.	Av.	As.	Gd.	Fr.	Fem.	B	94	55	
16	14	M	Av.	Av.	Sb.	Av.	Av.	Av.	B	109	68	

TABLE III

DATA COLLECTED ON JUNIOR STUDENTS

Student	Age	Sex	(Bell Adjustment Scores)										Teacher Rating	Grade Av.	IQ	ITED Percentile
			a	b	c	d	e	f								
1	16	F	Gd.	Gd.	Sb.	Av.	Fr.	Fr.	Av.	Av.	B	B	106	86		
2	16	F	Av.	Gd.	VA	Av.	Fr.	Fr.	SF	SF	B	B+	105	74		
3	16	M	Ex.	Av.	Av.	Gd.	Fr.	Fr.	Mas.	Mas.	C	D	100	74		
4	16	M	Av.	Av.	Av.	Av.	Av.	Av.	Mas.	Mas.	C	D+	97	47		
5	16	F	Av.	Av.	VS	Un.	Hs.	Hs.	Av.	Av.	C	B-	105	58		
6	17	F	Av.	Av.	VS	Av.	SC	SC	Av.	Av.	C	D+	--	9		
7	16	M	Pr.	Av.	Av.	Av.	Fr.	Fr.	Mas.	Mas.	B	B	119	98		
8	16	F	Av.	Gd.	Av.	Av.	Av.	Av.	Fem.	Fem.	B	B	101	58		
9	16	F	Pr.	Av.	Sb.	Av.	SC	SC	Av.	Av.	B	B	98	41		
10	16	F	Av.	Av.	VS	Un.	SC	SC	Av.	Av.	B	B-	106	47		
11	16	F	Av.	Av.	Av.	Un.	Av.	Av.	Av.	Av.	B	B-	117	74		
12	16	F	Av.	Av.	Sb.	Av.	Av.	Av.	Av.	Av.	B	B-	96	47		
13	16	M	Ex.	Av.	Av.	Av.	Gd.	Fr.	Av.	Av.	A	B	105	63		
14	16	M	Gd.	Gd.	Av.	Av.	Fr.	Fr.	Fem.	Fem.	D	D-	86	19		
15	16	F	Av.	Av.	VS	Av.	Av.	Av.	Av.	Av.	B	B+	105	79		
16	16	M	Av.	Av.	Av.	Av.	Fr.	Fr.	SF	SF	B	B	112	63		
17	16	F	Av.	Av.	Av.	Av.	Av.	Av.	SM	SM	A	B+	104	69		
18	16	M	Av.	Av.	VS	Av.	Av.	Av.	Av.	Av.	B	A	115	74		
19	16	F	Av.	Av.	VS	Un.	SC	SC	Av.	Av.	C	A-	107	63		
20	16	F	Av.	Av.	Av.	Pr.	SC	SC	Fem.	Fem.	C	C	96	24		

TABLE IV
DATA COLLECTED ON SENIOR STUDENTS

Student	Age	Sex	(Bell Adjustment Scores)					Teacher Rating	Grade Av.	IQ	ITED Percentile
			a	b	c	d	e				
1	17	F	Av.	Av.	Av.	Av.	Av.	Av.	B		(Not Available)
2	17	M	Av.	Gd.	Av.	Av.	Av.	Av.	B		
3	17	M	Av.	Av.	Av.	Av.	Av.	Av.	D		
4	17	M	Gd.	Ex.	As.	Gd.	Av.	SM	C		
5	17	F	Gd.	Gd.	Av.	Gd.	Fr.	SF	B		
6	17	M	Un.	Av.	VS	Un.	SC	Mas.	B		
7	17	F	Gd.	Av.	VS	Av.	Av.	Av.	C		
8	17	M	Av.	Gd.	Sb.	Pr.	Av.	Av.	C		
9	17	F	Av.	Av.	Av.	Av.	Av.	Av.	B		
10	17	M	Av.	Av.	Sb.	Pr.	Av.	SF	C		
11	17	F	Ex.	Gd.	Sb.	Gd.	Av.	Av.	B		
12	17	F	Ex.	Av.	VS	Av.	Av.	Av.	B		
13	17	M	Av.	Av.	VS	Av.	Av.	SM	C		
14	18	M	Un.	Pr.	Sb.	Un.	Hs.	SF	B		
15	17	M	Un.	Av.	Av.	Av.	Av.	Mas.	B		
16	17	M	Av.	Av.	Av.	Av.	Av.	Fem.	C		
17	17	M	Av.	Av.	Sb.	Pr.	Hs.	Fem.	D		
18	17	M	Pr.	Av.	VS	Av.	Fr.	Mas.	C		

TABLE V
 FREQUENCY DISTRIBUTION OF BOYS AND GIRLS
 ON BELL ADJUSTMENT AREAS

(a) Home Adjustment

	Boys			Girls		
Excellent	0- 1	3	8%	0- 1	8	21%
Good	2- 4	9	23%	2- 5	5	13%
Average	5-12	20	53%	6-14	21	53%
Poor	13-17	3	8%	15-19	2	5%
Unsatisfactory	17 plus	3	8%	19 plus	3	8%

(b) Health Adjustment

	Boys			Girls		
Excellent	0- 1	2	5%	0- 1	1	3%
Good	2- 3	4	11%	2- 4	8	21%
Average	4- 9	29	76%	5-11	27	68%
Poor	10-14	3	8%	12-15	3	8%
Unsatisfactory	14 plus	0	0%	15 plus	0	0%

(c) Submissiveness-Self-Assertion

	Boys			Girls		
Very Assertive	0- 2	0	0%	0- 2	1	3%
Assertive	3- 5	2	5%	3- 5	3	8%
Average	6-17	25	66%	6-16	16	41%
Submissive	18-21	6	16%	17-21	6	15%
Very Submissive	21 plus	5	13%	21 plus	13	33%

(d) Emotionality

	Boys			Girls		
Excellent	0- 1	0	0%	0- 3	3	8%
Good	2- 4	6	16%	4- 8	3	8%
Average	5-13	24	62%	9-18	22	55%
Poor	14-17	4	11%	19-22	3	8%
Unsatisfactory	17 plus	4	11%	22 plus	8	21%

TABLE V CONTINUED

(e) Hostility-Friendliness

	Boys			Girls		
Very Friendly	0- 3	1	3%	0- 1	0	0%
Friendly	4- 7	12	31%	2- 4	8	21%
Average	8-15	21	56%	5-13	23	59%
Somewhat Critical	16-18	2	5%	14-17	6	15%
Hostile	18 plus	2	5%	17 plus	2	5%

(f) Masculinity-Femininity

	Boys			Girls		
Strongly Feminine	0-13	4	11%	0- 3	3	8%
Feminine	14-16	7	18%	4- 6	7	18%
Average	17-21	16	42%	7-12	26	66%
Masculine	22-25	10	26%	13-15	1	3%
Strongly Masculine	25 plus	1	3%	15 plus	2	5%

Table V shows the frequency distribution and percentages of students scoring within the five categories of adjustment for each of the six Bell Adjustment Inventory scales. The boys and girls are shown separately because the norms of the categories have been established empirically and different score ranges thereby have different meanings for the different sexes.

TABLE VI
 RATINGS BY R AND L INDIVIDUALLY
 TO DISCOVER RATER BIAS

SCORE		<u>R RATINGS</u>		<u>L RATINGS</u>	
		GIRLS	BOYS	GIRLS	BOYS
20				1	1
19	"A"				3
18	Excellent	2	2	4	1
17		7	3	5	1
16	"B"	3		9	3
15	Good	8	9	7	3
14		4	7	4	2
13		7	4	1	4
12	"C"	5	3	2	8
11	Average	1	4	4	5
10		2	2	1	4
9			1	1	1
8	"D"				2
7	Poor		2		
6			1		
Totals		39	38	39	38

"R", the male rater, has rated the girls from 10 to 18 in points of adjustment; the boys' ratings range from 6 to

18. The median for the girls falls at 15 which is a "B" or good rating; the boys' median falls at 14 which is a "B" or good rating.

"L", the female rater, has rated the girls from 9 to 20; the boys from 8 to 20. The median for the girls is 15 or "B" a good rating; the median for the boys falls at 12 or "C" an average rating.

The Manual for the Rating Scale for Social Adjustment
 recommended that the children who were rated in the lowest third of the distribution be referred for counseling. This would involve 13 girls and 13 boys coming from the bottom third.

Olson, Andrew, and Others, Manual for Rating Scale for Social Adjustment. Chicago: Science Research Associates, (1953), p. 10.

TABLE VII
 AVERAGE TEACHER RATINGS OF GIRLS AND BOYS
 TO STUDY RATER BIAS

SCORE	GIRLS	BOYS
20		
19 "A"		1
18 <u>Excellent</u>	4	2
17	5	2
16	9	4
15 "B"	7	4
14 <u>Good</u>	3	4
13	4	6
12	2	7
11 "C"	5	4
10 <u>Average</u>		
9		3
8 "D"		
7 <u>Poor</u>		1
TOTALS	39	38

The Manual for the Rating Scale for Pupil Adjustment⁵ recommended that the children who were rated in the lowest third of the distribution be referred for counseling. This would involve 13 girls and 13 boys counting from the bottom up.

⁵Gwen Andrew, and Others, Manual for Rating Scale for Pupil Adjustment. Chicago: Science Research Associates, Inc., 1953, p. 1.

TABLE VIII

AVERAGE TEACHER RATINGS OF THE TOTAL
NUMBER OF STUDENTS SHOWING THE MEAN AND STANDARD
DEVIATION

SCORE	f	x	fx	fx ²
20				
19 "A"	1	5.3	5.3	28.09
18 <u>Excellent</u>	6	4.3	25.8	110.94
17	7	3.3	23.1	76.23
16	13	2.3	29.9	68.77
15 "B"	11	1.3	14.3	18.59
14 <u>Good</u>	6	.3	1.8	.54
13	11	-.7	-7.7	5.39
12	8	-1.7	-13.6	23.12
11 "C"	10	-2.7	-27.0	72.90
10 <u>Average</u>	0	-3.7	0.0	0.00
9	2	-4.7	-9.4	44.18
8 "D"	1	-5.7	-5.7	32.49
7 <u>Poor</u>	1	-6.7	-6.7	44.89
			Σfx^2	526.13

MEAN = 13.7

$$\sigma = \sqrt{\frac{\Sigma fx^2}{N}}$$

$$\sigma = \sqrt{\frac{526.13}{77}}$$

 $\sigma = 2.614$

The mean of the average teacher ratings for the total group of 77 was 13.7 or a low "B" or good rating. The standard deviation for the group was 2.614. If this were a normal distribution, 68.26% of the students would have ratings between 11.086, a "C" rating to 16.314, a "B" rating. There is indication of a tendency to rate higher than the average "C" by these raters.

CHAPTER IV

FINDINGS

The findings of this study are limited to the four-year high school of Ramona, South Dakota, and involved 77 students; 39 of whom were girls and 38 boys. IQ scores were available for the freshman, sophomore, and junior classes but the seniors had not been given an IQ test upon their entrance to high school. Iowa Tests of Educational Development percentile composite ranks were available for the freshman and junior classes. All classes took the Bell Adjustment Inventory, student form, and were rated on the Rating Scale for Pupil Adjustment by two different raters, independently of each other.

The various scores and ratings were correlated to discover the amount of agreement between the various scores, ratings, grades, and percentile ranks.

On the basis of the foregoing work in correlating the various scores on the Bell Adjustment Inventory with the average rating by teachers, the grades with ability, the ITED percentile ranks with ability, and notation of the various adjustment scores in relation to achievement and ability the following conclusions were made.

1. The correlation between the two ratings of the two teachers for the total number of students (77) was .66 which

shows considerable agreement and is statistically significant at the 1% level.¹

2. The correlation between the two raters on their ratings of the boys was .19 and was not significant at the 5% level for a group of 38.

3. The correlation between the two raters on their ratings of the girls was .68 which showed fairly high agreement between the two raters and is significant at the 1% level.

4. The significant correlations between the two raters indicates considerable agreement on their part as to the outward manifestations of personality adjustment as viewed when they are being rated.

5. The correlations between the girls adjustment scores and the average teacher rating of personality adjustment were as follows:

(a) Home Adjustment and Teacher Rating	.24
(b) Health Adjustment and Teacher Rating	.10
(c) Submissiveness-Self-Assertion and Teacher Rating	-.43
(d) Emotionality and Teacher Rating	.24
(e) Hostility-Friendliness and Teacher Rating	.19
(f) Masculinity-Femininity and Teacher Rating	-.17

¹Harry E. Garrett, Elementary Statistics. New York: David McKay Company, 1962, p. 184.

6. For a group of 39 the $-.43$ correlation between the teachers' average rating of pupil adjustment and submissiveness and self-assertion was significant at the 1% level. The negative correlation was derived because of the arrangement of the material in chart form to figure the correlation. The "very submissive" and "submissive" categories being arranged above the upper left quadrant in which all of the $x' y'$'s are negative.

7. The $.24$ correlation between the teachers' average rating of pupil adjustment and emotionality shows a disagreement between how the girls regard their emotional adjustment and the teachers' rating of adjustment. This r is not significant for a group of 39 at the 5% level.

8. The correlations between the boys' adjustment scores and the average teacher rating of personality adjustment were as follows:

(a) Home Adjustment and Teacher Rating	$-.15$
(b) Health Adjustment and Teacher Rating	$-.23$
(c) Submissiveness-Self-Assertion and Teacher Rating	$-.09$
(d) Emotionality and Teacher Rating	$.11$
(e) Hostility-Friendliness and Teacher Rating	$.08$
(f) Masculinity-Femininity and Teacher Rating	$-.19$

9. None of the correlations between the boys' scores of various kinds of adjustment and the average teachers'

rating were significant for a group of 38.

10. Several of the correlations between the boys' scores and the teachers' rating were in the negative direction of relationship showing disagreement as to adjustment in home and health areas. The Masculinity-Femininity correlation is negative because of the arrangement of the categories on the correlation chart. "Strongly masculine" and "masculine" were above the upper left quadrant in which all of the x'y' 's were negative.

11. The correlation between the single category, "Overall Emotional Adjustment", on the teacher rating scale and the Bell score of Emotionality for the total group was .09 which is not significant for a group of 77 scores.

12. The correlation between the teachers' average rating and the grade averages for the first six weeks term for the total group of 77 was .65 which is significant at the 1% level. This shows a definite relation between rating and grading on the part of these two raters.

13. The correlation between the average first six weeks' grade and the IQ as obtained by the California Test of Mental Maturity for the freshman class was .21, for the sophomore class .43, and for the junior class .62. There were no available IQ scores for the senior class as they did not take the California Test of Mental Maturity as freshmen.

14. The only person rated with poor adjustment in the

freshman class was a student with an average IQ of 98 and an average grade of "F" for the first six weeks.

15. The freshmen with Bell scores of "unsatisfactory" and "poor" home adjustment in relation to grades and ability were two average ability students with average grades and one average ability student with an "A-" average grade.

16. The two freshman students with Bell scores of "poor" and "unsatisfactory" emotional adjustment were average ability students; the one with average grades, the other with an "A-" average.

17. The freshman student with a Bell score of "somewhat critical" on Hostility-Friendliness was an average ability student with an "A-" average.

18. The critical scores of the freshmen on the Bell Masculinity-Femininity were two girls with "masculine" and "strongly masculine" scores. The girl with the "strongly masculine" score was of low average ability and had a "D" grade average. The "masculine" girl was of average ability with an "A-" average. Three boys attained "feminine" scores. One had very low average ability with a "D" grade average, another had average ability with an "F" grade average, and the other had average ability and a "C-" grade average.

19. The teachers rated only one person below the mean in grade achievement as "good"; the rest were rated as "average," the lowest teacher rating.

20. Three sophomores were designated by Bell scores as having "poor" or "unsatisfactory" health adjustment. One was a low achiever.

21. Five sophomores were classified by Bell scores as being "very submissive". Four were girls, and one was a boy. The boy was an above average achiever with a slightly-under-class average ability.

22. Six sophomores attained Bell scores of "poor" or "unsatisfactory" emotionality adjustment. In the lower ability group there was no relation in regard to grade achievement, but in the higher ability group there was a discrepancy between ability and grade achievement with less achievement realized than was expected.

23. Two sophomores rated on the Bell as "somewhat critical" or "hostile" in the Hostility-Friendliness area of adjustment. One of these was an over-achiever, the other an under-achiever.

24. Three sophomore boys were scored by the Bell as "feminine" in the Masculinity-Femininity area. Two were normal achievers and one an under-achiever. None of the girls were scored as "masculine."

25. The only junior rated as having "poor" personality adjustment by the teachers was a low ability student with a "D-" grade average; showing the close relationship between grading and rating.

26. Two juniors self-reported on the Bell as having "poor" home adjustment. One was an over-achiever; the other an under-achiever.

27. No juniors were self-rated on the Bell as having "poor" or "unsatisfactory" health adjustment, nor did any score themselves as having "excellent" health adjustment.

28. One junior boy self-rated himself on the Bell as "very submissive," and one girl rated herself as "very assertive"; otherwise the others in the "submissive" and "very submissive" category were girls to whom such a personality configuration might not indicate any critical trend.

29. Only one junior was scored as having "unsatisfactory" emotionality adjustment; an average ability student with average grades.

30. If "somewhat critical" and "hostile" are undesirable adjustments, five juniors need counseling in this area. One "poor" adjustment client was an over-achiever; the others are achieving fairly well within their ability.

31. Three juniors self-rated themselves on the Bell into different sex characteristic categories than they were biologically. Two boys rated themselves either as "strongly feminine" or "feminine." Both were achieving grades in relation to their ability. The girl who rated herself "strongly masculine" was achieving above her ability.

32. The average teacher ratings on students attaining

an average composite percentile rank on the Iowa Tests of Educational Development for the freshman students were all "average" adjustment rated, the lowest teacher rating for this group.

33. The correlation between the IQ's of the freshmen and the composite percentile rankings on the Iowa Tests of Educational Development was .73. The correlation between the IQ's of the juniors and their composite percentile rankings on the Iowa Tests of Educational Development was .79. There were no Iowa test scores for this year on the sophomores or on the seniors; therefore, there are no correlations for these classes in this area.

34. Home adjustment as determined by the Bell Adjustment Inventory as "poor" did not appear to affect the percentile rank on the Iowa Tests of Educational Development of the high IQ junior student.

35. The Emotionality scores did not appear to have any relationship to percentile rank on the Iowa Tests of Educational Development and ability.

36. Hostility-Friendliness self-ratings did not appear to account for any deviation of percentile rankings on the Iowa Tests of Educational Development and ability.

37. The manual for the Rating Scale for Pupil Adjustment suggested that the lower 1/3 of the group as rated by the teachers on the rating scale, regardless of the ratings,

be referred for counseling.

38. On the Bell Home Adjustment scale 16% of the boys self-reported themselves as having "poor" or "unsatisfactory" home adjustment. Thirteen percent of the girls so rated themselves.

39. On the Bell Health Adjustment 8% of the boys and 8% of the girls rated themselves as "poor".

40. On the Bell Submissiveness--Self-Assertion 29% of the boys and 48% of the girls rated themselves as "submissive" or "very submissive" with an understandable sex difference. Five percent of the boys and 11% of the girls rated themselves as "very assertive" or "assertive."

41. On the Bell Emotionality 22% of the boys and 29% of the girls self-reported themselves as having "poor" or "unsatisfactory" adjustment.

42. On the Bell Hostility-Friendliness 10% of the boys and 20% of the girls rated themselves as "somewhat critical" or "hostile."

43. On the Bell Masculinity-Femininity 29% of the boys and 8% of the girls rated themselves as "masculine" or "strongly masculine." Twenty-nine percent of the boys and 26% of the girls rated themselves as "strongly feminine" or "feminine."

44. If the lower 1/3 of the group were to be counseled on the basis of teacher rating, 13 girls and 13 boys would

be referred for counseling.

45. The mean for the average teacher rating of the girls was 14.85, and the mean for the boys was 13.39. The girls were rated on the average 1.46 points higher than the boys by the teachers.

46. The mean for the average teacher ratings for the total group was 13.7 with a standard deviation of 2.614. The range in ratings was from 7 to 19 or from "D" to "A."

It appears from the small correlations between average teacher ratings and Bell scores that two different aspects of the child are being measured. The outside or overt behavior being evaluated by the teachers in their ratings, and the inner feelings of the individual as he wished to reveal them on the Bell Adjustment Inventory.

aspects of the student, CHAPTER V
 SUMMARY, DISCUSSION AND RECOMMENDATIONS

Summary. This study was conducted to validate the scores of the Bell Adjustment Inventory with the scores of the Rating Scale for Pupil Adjustment which were derived from averaging the ratings of two teachers made individually for each high school student in the Ramona Public High School. Correlations were figured between the average teacher rating and the six separate category scores of the Bell Adjustment Inventory comprising the scores on home adjustment, health adjustment, submissiveness--self-assertion, emotionality, hostility-friendliness, and masculinity-femininity for the boys and the girls separately. The correlations were figured in this manner because different scores for the different sexes indicated a different level of adjustment. Only one correlation between the average teacher ratings and the Bell scores was significant statistically. This was the correlation between the average teacher rating of adjustment and the girls' Bell scores on submissiveness--self-assertion which was a $-.43$ and significant at the 1% level. The negative correlation was due to the arrangement of submissiveness on the correlation chart.

Since it was discovered that the teacher ratings and the Bell Adjustment Inventory were measuring two different

aspects of the student, the need arose to determine the significance of the self-ratings from the Bell and the teacher ratings from the Rating Scale for Pupil Adjustment in relation to the child's life adjustment in regard to achievement versus ability. Each student's scores were studied individually with all of the data brought to bear on the comparability of achievement and ability. Some explanation for underachievement, overachievement, and expected achievement was gained.

This study was limited to the high school in the Ramona Independent District Number 33 at Ramona, South Dakota. The number of students involved in the study totaled 77 in grades 9 through 12. Bell scores were obtained in 6 areas for each of these students, and 2 teacher ratings were obtained by use of the Rating Scale for Pupil Adjustment for each student. All of the data obtained this year on the students was collected during the October 11 to November 9 period. The freshmen were the only students taking the California Test of Mental Maturity at this time as the sophomores and juniors had taken the test in their freshman years. The freshmen and juniors were administered the Iowa Tests of Educational Development. The average grades used in the study were given out on report cards on October 13.

All of the available data for each class was collected on a table showing the information of each individual as to

age, grade, sex, six Bell Adjustment scores, average teacher rating, grade average for the six weeks, and if possible, the IQ and Iowa Test of Educational Development composite percentile rank on a single line.

Correlations figured between average teacher ratings and grades, IQ's and average grades, and IQ's and Iowa Tests of Educational Development composite percentile ranks were all significant at the 1% level except the correlation between freshman IQ's and average grades.

Discussion. On the basis of the preceding study as to the need for as complete an inventory of the individual student as possible, the following opinions were offered:

1. The data that should be collected for cumulative records should include age, sex, family background, siblings, medical records, school progress records, anecdotal records, teacher ratings and self-ratings, interest test results, IQ scores, achievement test scores, and vocational or educational plans.

2. It was concluded that the Bell Adjustment Inventory was a useful tool to use in inventorying the student's inner feelings about his self-adjustment in the areas of home, health, submissiveness--self-assertion, emotionality, hostility-friendliness, and masculinity-femininity. This inventory is a generally accepted tool in that much confidence is placed in its ability to designate the lowest 15% of the

students in adjustment, and it thereby helps indicate which students need counseling and in which areas.

3. Teachers' ratings are an important item in helping to assess the total individual because these give a picture of the student as he appears to others in various classroom and activity situations.

4. The Rating Scale for Pupil Adjustment met the requirements of a good rating scale in that it had a clear description of traits, used the forced-choice method of rating, and provided a standard for selecting students rated on it in need of counseling.

5. The Bell scores did give a third dimension in the study of grades and ability, and Iowa Tests of Educational Development composite percentiles and IQ's. Where there were unexpected differences in achievement and ability, the scores helped indicate some possible clue to the situation.

6. The significant correlation between average teacher ratings and grade averages (.65) indicates that teacher trait rating and academic performance are related to a significant degree.

7. The low correlations between the average teacher rating and the Bell scores indicate that the two instruments used measured different aspects of the student, and that both are valuable in helping to understand the student.

8. The Ramona High School group was similar to

standardizing groups in that the largest percentage of the students attained an "average" rating in all of the six areas of adjustment.

9. It is very difficult to control the "halo effect" in ratings even with the use of specific instructions. The teachers on the average rated the students higher than the average of "C". The average rating for the students was a "B".

Recommendations. With the findings and discussion of this study as a basis, the following implications for education are promulgated:

1. It is recommended that the guidance program provide for a complete data gathering and recording service so that the fullest possible pattern of the child's abilities and weaknesses may be available. This pattern would be composed of ability scores over a period of years, academic achievement both by standardized tests and by grades received in various subjects over the school years, anecdotal records of observed behavioral incidents, aptitude scores, interest scores, and various personality adjustment ratings and scores.

2. These patterns of the child could then be evaluated in terms of teaching techniques, curriculum building, vocational and educational planning, and special class arrangements.

3. Trained personnel should be in charge of a program of inventorying and interpreting the inventory. Caution should be used in regarding certain scores as static. The information gathered should be given to the child in such a way that it will help him in making life decisions.

4. Teacher ratings involve the teachers in the evaluation of the child and serve as a springboard for in-service training in regard to helping a child realize his highest potentials. This involvement is highly recommended.

5. Every guidance service should evaluate their student inventory data regularly to determine what each facet of the youngster means to his total adjustment to life.

6. Courses dealing with life adjustment should be introduced into the curriculum in order to help the individual understand himself and his problems in the light of acceptance or solution.

7. The requirement of a set curriculum for all students without regard for individual needs and abilities should be discouraged. Courses that are required of all students should be taught in such a way that there is an opportunity for each student to succeed in some way.

8. Class schedules should be examined in the light of the demands on each student and his time rather than for the convenience of the teaching staff.

9. Group counseling sessions should be programmed to help students with problems in similar areas as indicated by Bell scores or teacher ratings.

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