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By- Diamond, William J.; And Others

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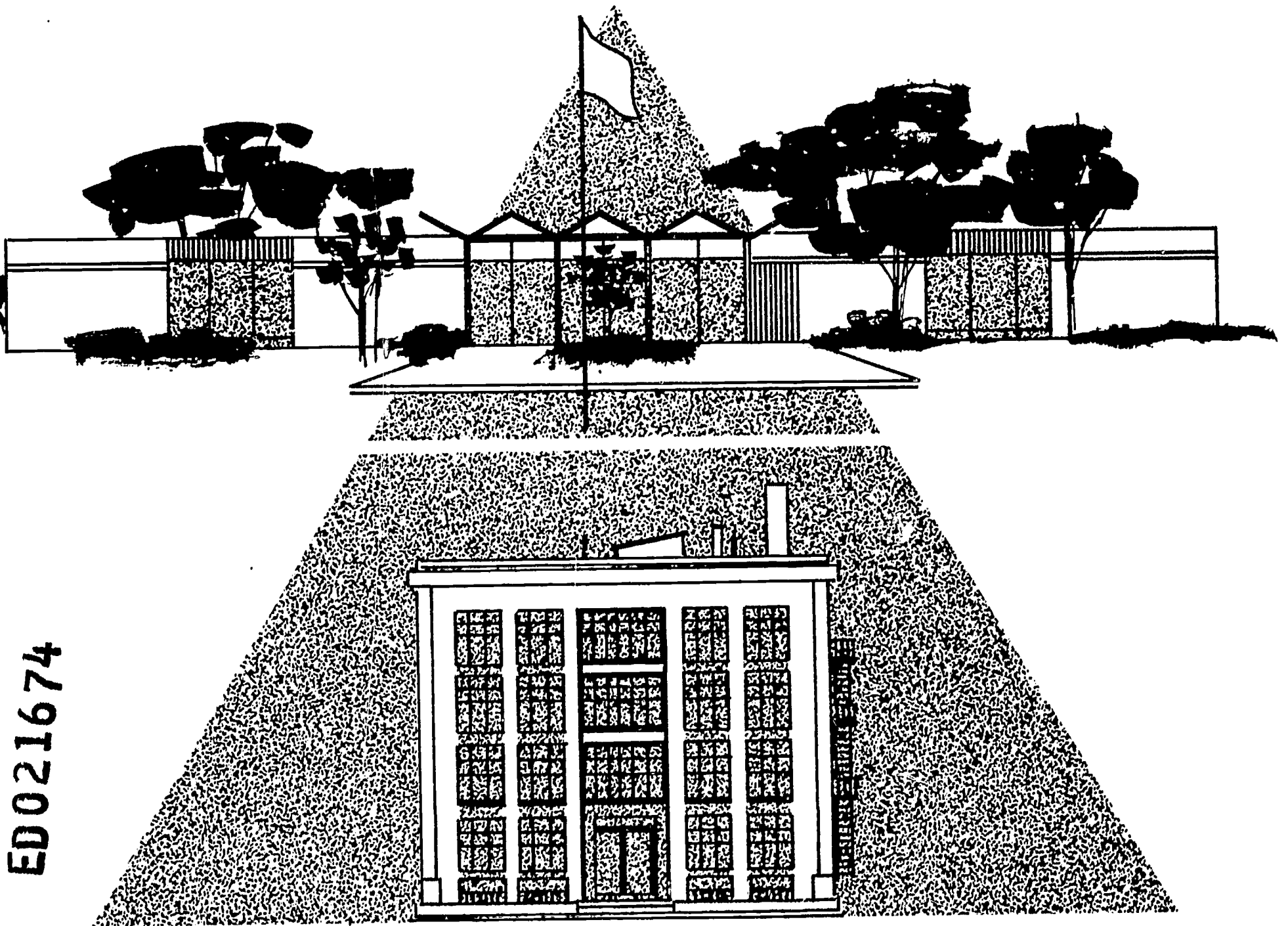
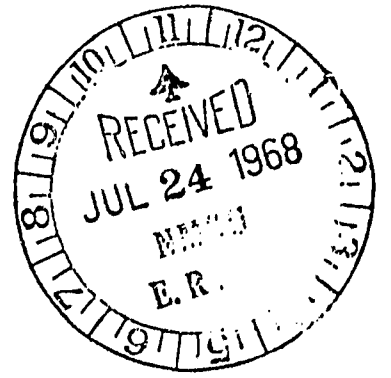
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A cost-benefit and system-analysis approach was utilized in an effort to study the quality of education in the State of Kentucky. This first report of that 2-year study relates: background information problems of measuring quality; methodology employed; rankings of the 197 school districts; and the input, output, and process variables. Two different rankings are presented, one on the basis of all 19 variables examined, and the other on the basis of the 5 output variables considered. Conclusions and interpretations are drawn from profile analyses of each of the 197 school districts. The appendix contains a literature survey of other studies pertaining to quality education in Kentucky. A list of references concludes the document. (SW)

Quality Rankings Of Kentucky School Districts

by William J. Diamond • Charles F. Martin, Sr. • Richard I. Miller



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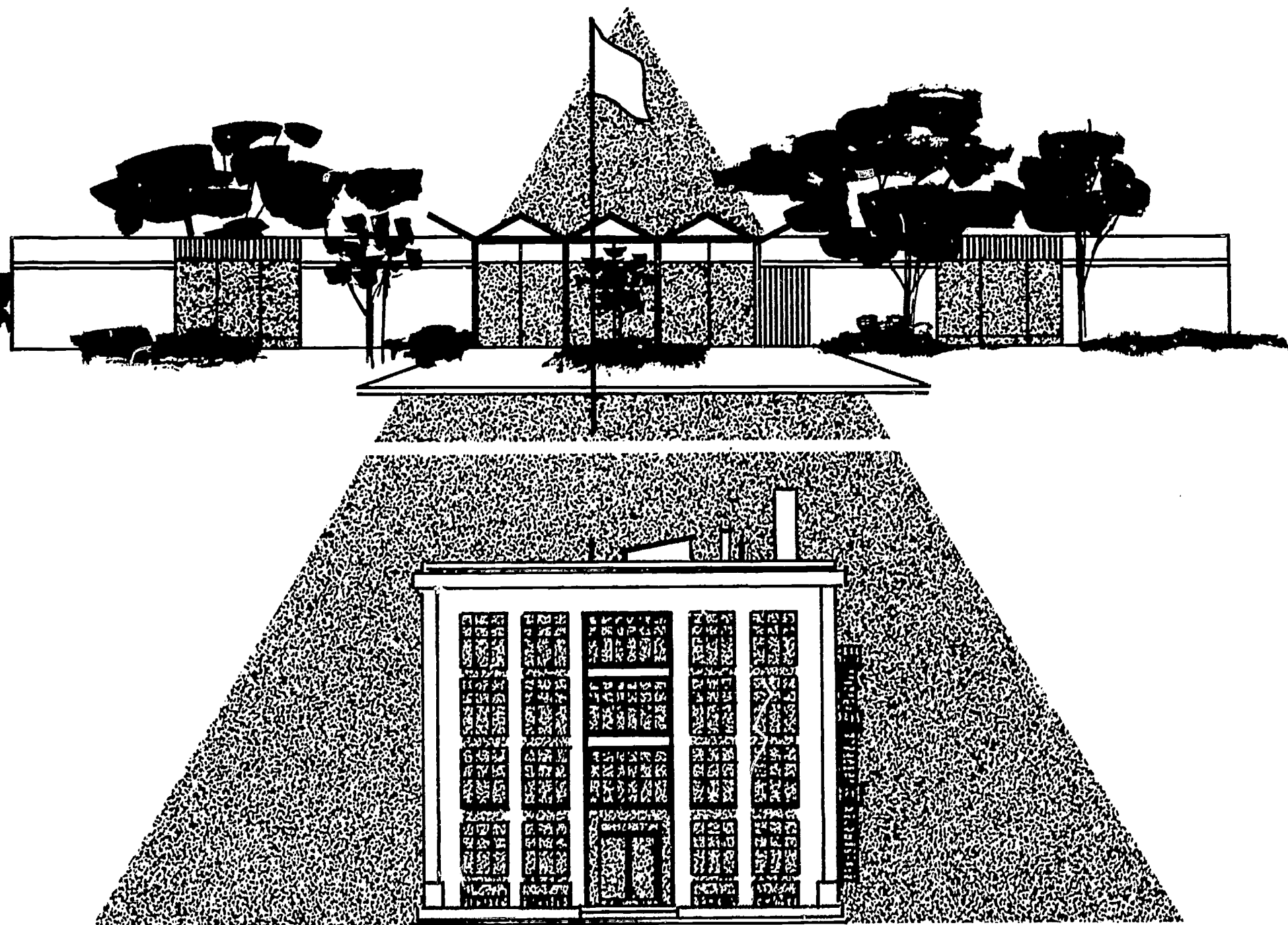
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Quality Rankings of Kentucky School Districts

INTRODUCTION

This is the first report of a two-year study of the quality of education in the State of Kentucky. Believing that the "calibrated eyeball" approach was too gross, and sole reliance upon test scores was too confining, the study team utilized a cost-benefit and system-analysis approach.

These findings are the result of an initial inquiry into the important question: How can one determine whether a school district is receiving a reasonably effective educational return for the dollars spent?

The results of the study should be of aid to the Kentucky Legislature and State Department of Education in identifying those districts that need attention and thus pinpoint what help is needed. Furthermore, when used with the information in the system-analysis study, * it will make it possible to calculate how much improvement can be expected from the various alternatives proposed.

We believe our statewide study to be only a first step. In five years considerably more information and more effective procedures should be available. We are pleased to be as far along as we are, but dissatisfied in terms of how much remains to be done.

Part of our satisfaction as the study developed resulted from working with many individuals involved, chief among whom are: Arthur Cotterill, Bureau of School Service, University of Kentucky; John Graham, Major, U. S. Army Reserve Corps; Charles Haggard, Assistant Professor of Mathematics, Transylvania College; George Mallow, Psychologist, International Business Machines, Lexington; Buford Reisner, Superintendent of Bath County Schools, Owingsville, Kentucky, and John Terry Ginn, graduate student, who prepared the profiles.

We are grateful to the Staff of the University of Kentucky Computer Center for their assistance, to the Kentucky Research Foundation for a small initial grant, and to the International Business Machines Corporation, Lexington for use of their computer facilities and for making available Mr. Diamond's special skills in design of experiments and statistical analysis.

--Charles F. Martin, Sr.
Richard I. Miller

*A second volume of this study will present procedures for calculating improvements.

CHAPTER I

BACKGROUND

Quality public education has never been more vigorously espoused and sought after than at present. The increasing complexities of occupational developments, decreasing numbers of desirable positions available without additional education requisites, greater knowledge required for effective living, and a continuing international challenge combine to place education second only to military defense in national expenditures.

Education accounts for a major portion of the ever-climbing local and state taxes. While most communities have voted increases regularly, citizens are asking with growing persistence about relationships between cost of education and its effectiveness. In other words, they want to know whether they are receiving a reasonable return in terms of good education for tax dollars spent.

Educators are ambivalent about applying cost-benefit procedures to education, and this view is justified if such measures are applied without adequate comprehension of the present weaknesses inherent in this approach. For example, present evaluative procedures for measuring academic achievement are inadequate and measurement devices are not available to evaluate some of the more intangible objectives of education.

Recognizing these and other limitations of cost-benefit studies, one is still faced with the problem of formulating procedures for determining whether a school system is actually receiving educational returns commensurate with educational expenditures. This study is an effort in this direction.

Problems of Measuring Quality

It would seem that any school or school district or state school system should be able to determine the relative quality of its education. Furthermore, it would seem that an inferior school could upgrade itself by studying the attributes of a good school and making appropriate changes.

Additional consideration, however, and a review of the literature on quality education

reveal the problem's complexity and the impossibility of finding any simple method of attaining quality education. In fact, most quality education studies are of little direct value to federal, state, or local school officials interested in upgrading school quality for five reasons:

1. The samples used in most national and state studies of quality education have consisted of regional school systems or selected districts within a state and therefore have been of limited scale. Emphasis has generally been placed on the individual student or local school system.
2. School systems in some states have been studied exhaustively, whereas almost nothing has been done with others; this also applies to individual schools within districts.
3. Measurement of quality in education varies from study to study. Some investigators have oversimplified and used a single criterion of quality such as holding power, truancy rate, or a test score. Some have simplified even further by equating quality with expenditure. Others have gone to the opposite extreme and measured quality by a complicated array of measurements. It is not possible to compare for example, one school district in Kentucky where a study was made with quality defined as lack of truancy, with another school district in Kentucky where a study used pupil-teacher ratio, or some other variable as the measurement of quality.
4. The purposes of quality education studies are varied. One study might be designed to probe for changes to be made in a state department of education while another study might be directed toward new school legislation or a district's operational procedure. Studies made with one objective in mind are of value to those schools in that study and should not

be compared with data on another sample of schools studied with some other objective in mind.

5. Many cause-and-effect relationships can exist between various measures of quality education and the socioeconomic community factors. But most studies use only a few causative factors, most of which differ from those used in other studies which might be equivalent to each other in quality factors. Too many studies try to explain quality education in terms of some single cause--a highly questionable effort in view of present-day educational and social complexities.

In addition to the paucity of usable studies on quality education, other circumstances complicate the local picture. Notable among these are the increasing costs of facilities, staff and services, increasing crime and de-

linquency, and racial problems. In special local areas the problem is still further accentuated by high levels of unemployment, numerous welfare recipients, and lack of industry.

What has been stated in general applies to Kentucky specifically. A few studies have been conducted on quality education in Kentucky; none have been extensive in scope. (See Appendix A for a summary of these studies.) Yet Kentucky would appear to need such studies since most national evaluations of per pupil expenditures, as well as educational achievement, rank Kentucky very near the bottom.

One must be careful, however, when making interpretations from these studies because there is no valid study which indicates how to correct the situation in a systematic and economical manner. It was to assist in ameliorating this deficiency that the Kentucky Quality Education Study was initiated.

CHAPTER II

METHODOLOGY

The Kentucky Quality Education Study is a system analysis of 197 Kentucky public school districts based on their socio-economic and educational characteristics. Using multiple regression analysis and computer technology, these studies examine relationships that exist in Kentucky among (a) community socio-economic factors, (b) instructional factors, and (c) several measures of student achievement.

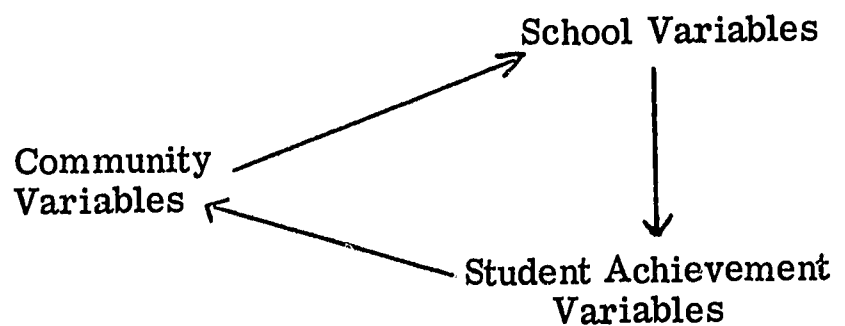
Data for the studies were obtained from various Kentucky State Department of Education publications, from U. S. Census Reports, and from other sources. The data represent the 1964-65 school year.

The major purpose of this initial presentation is to enable the administrators and school board members of a Kentucky school district to determine how their district ranks in comparison with the other 196 districts of Kentucky pertinent to quality education. A profile of each district is presented. (By referring to the second volume--the total system study--it may be determined which socio-economic or school factors might be modified to improve the quality at minimum cost.)

Input, Process, and Output Variables

Over 300 factors have been identified in various studies as possibly influencing quality education. These factors have been categorized by most educational researchers into three groups: community variables, school variables, and student variables. These groups can also be logically titled input variables, process variables, and output variables.

For purposes of this study, the community variables are considered antecedent to school variables and these, in turn, precede student achievement variables. In reality, however, it is more of a closed circuit in that the present values of community variables resulted from student variables of the last generation and future values of community variables will be a function of present values of student variables.



Student achievement and holding power variables are used in this study as measures of quality education. These yardsticks are in contrast to some which presume that quality education automatically flows from excellent school facilities. While some positive relationships usually exist, it is possible to have quality education with poor facilities or poor education with excellent facilities.

The three criteria used for selection of the 19 factors in this study are: (a) their prevalence and reliability in other studies of quality education, (b) their applicability to Kentucky schools based upon the state's economic, social, geographic, and educational conditions, and (c) the availability of data.

Community Variables

The Kentucky Quality Education Study uses two factors that provide excellent indices of the educational support level of the community. They are:

1. Median Grade Attainment is defined by the U. S. Census Bureau as the median level of schooling achieved for all citizens of a census unit who are 25 years old or older. The state's median grade level is 8.4; the lowest district median grade level is 6.7, and the highest district median grade level is 12.1. The range between the state's highest and lowest district is 5.4.
2. Median Family Income* is defined by the U. S. Census Bureau as the me-

*For reasons of uniformity, availability, and as a basis for comparison, the county school district is used as the basic income unit. Some independent districts have an estimated median family income of \$12,000 or more, while the state's highest ranked county district has a median family income of only \$5,932. This contradiction would also hold true in other instances involving first, second, and third class cities.

dian income earned by all persons 14 years old or older of a census unit who reported income either individually or as members of families. The state's median family income level is \$3,320; the lowest median family income level is \$1,324, and the state's highest family income level is \$5,932. The range between the state's highest and lowest district is \$4,608.

In the total system study it was found, not unexpectedly, that these two variables are highly correlated. On the average, the higher the educational level of the community, the higher the family income. Both variables are included, however, since it was shown that each one influences different parts of the school system and student achievement.

Process Variables

The process or educational system variables included in the study are:

3. Per Pupil Expenditure is the amount of money spent per year, per pupil for all current expenses--including administration, instruction, attendance and health services, pupil transportation, operation and maintenance of plants, fixed charges, community services, debt services, outgoing transfers and refunds and capital outlays. The state's mean per pupil expenditure is \$273.71; the lowest district per pupil expenditure is \$214.30, and the highest district per pupil expenditure is \$436.73. The range between the state's highest and lowest district is \$222.43.

(Per pupil expenditure might also be considered as a community variable since it is the amount of money raised for the school system by the community plus state and federal aid.)

4. Elementary Teacher's Salary is calculated by adding all the elementary teachers' salaries in a district and dividing by the number of teachers. The state's average elementary teacher's salary is \$4,409; the lowest district elementary teacher's salary is \$3,553, and the highest district elementary teacher's salary is \$6,435. The range between the highest and

lowest district is \$2,882.

5. Secondary Teacher's Salary is calculated by summing all the secondary teachers' salaries in a district and dividing by the number of teachers. The state's average secondary teacher's salary is \$4,789; the lowest district secondary teacher's salary is \$4,264, and the highest district secondary teacher's salary is \$6,580. The range between the state's highest and lowest district is \$2,316.
6. Percent Rank I Elementary Teachers is the percent of elementary teachers in a district who have a master's degree and at least 30 additional hours. (Rank II and III teachers were not used in the study.) The average number of Rank I elementary teachers per district is 1.50 percent. Fifty percent of Kentucky school districts have no Rank I elementary teachers; the highest district's percentage of elementary teachers in Rank I is 14.3. The range between the highest and lowest district is 14.3 percent.
7. Percent Rank IV Elementary Teachers is the percent of elementary teachers in a district who do not have a baccalaureate degree and are classified as "emergency teachers" in Kentucky. The state's mean percentage of Rank IV elementary teachers is 12.46. The lowest district percentage is zero--41 districts have no Rank IV elementary teachers, and the highest percentage of Rank IV elementary teachers is 50. Of a total of 197 Kentucky school districts, 156 have some Rank IV elementary teachers.
8. Percent Rank I Secondary Teachers is the percent of secondary teachers in a district who have a master's degree and at least 30 additional hours. (Rank II and III teachers were not used in the study.) The state's mean percentage of Rank I secondary teachers is 4.43; 44 districts in the state have no Rank I secondary teachers, and the highest percentage of Rank I teachers in the state is 21.1. The range between the highest and lowest district is 21.1 percent.

9. Percent Rank IV Secondary Teachers is the percent of secondary teachers in a district who do not have a baccalaureate degree and are classified as "emergency teachers" in Kentucky. The state's average number of Rank IV secondary teachers per district is 1.13 percent; 141 state school districts have no Rank IV secondary teachers, and the highest percentage of Rank IV secondary teachers is 30. Fifty-six state school districts out of 197 have some Rank IV secondary teachers.
10. Elementary Library Expenditure is the amount spent per pupil per year for library books, equipment and related materials. The state's mean elementary library expenditure per pupil is \$1.39; the lowest district elementary library expenditure is \$0.15, and the highest district elementary expenditure is \$4.00. The range between the highest and lowest district is \$3.85.
11. Secondary Library Expenditure is the amount spent per pupil per year for library books, equipment and related materials. The state's mean secondary library expenditure per pupil in Kentucky is \$1.99; the lowest secondary library expenditure is \$0.50, and the highest secondary library expenditure in the state is \$9.35. The range between the lowest and highest district secondary expenditure is \$8.85.
12. Enrichment Expenditure is the amount spent per pupil per year for audio-visual materials, tests, supplementary books, teaching supplies, and instructional travel. The state's mean enrichment expenditure is \$5.26 per pupil; the lowest district enrichment expenditure is \$0.84, and the highest district enrichment expenditure is \$15.90. The range between the highest and lowest district is \$15.06.
13. Teacher/Pupil Ratio is the average number of pupils per class whom an individual teacher will instruct daily. The state's mean average number of pupils per class is 25.8; the lowest district average number of pupils per

class is 20.3, and the highest district average number of pupils per class is 33.4. The range between lowest and highest district is 13.1.

14. Percentage Attendance is the average daily attendance (ADA) of the combined enrollment of a given school district for the period of one school year. The state's mean attendance is 94.55 percent; the lowest district attendance is 88.88 percent, and the highest district attendance is 98.07 percent. The range between the highest and lowest district is 9.19 percent.

Output Variables

Five output measures were used:

15. Percent of Ninth Graders Who Graduate from Secondary School is a measure of the holding power of the school district. The state's mean percent of ninth graders who graduate is 64.54; the lowest district percent of ninth graders who graduate is 41.60, and the highest district percent of ninth graders who graduate is 96.70. The range between the highest and lowest district is 55.10 percent.
16. Percent of High School Graduates Who Enter College is also a measure of holding power, but in addition reflects motivation and other factors. Influential also are such factors as parental income and the admission policies of public institutions of higher learning in Kentucky. The state's mean of high school graduates entering college is 39.85 percent; the lowest district percentage of high school graduates entering college is 5.0, and the highest district percent of high school graduates entering college is 81.00. The range between the highest and lowest district is 75.91 percent.
17. Percent of Ninth Graders Who Enter College is a third criterion of holding power considered more valid than Variable 16 in that it is not influenced by in- and out-migration of students in the districts but refers to the original enrollment. The state's mean percent of ninth graders entering col-

lege is 26.28; the lowest district percent of ninth graders entering college is 3.13, and the highest district percent of ninth graders entering college is 66.45. The range between the highest and lowest districts is 63.32 percent.

18. College Qualification Test (CQT) is a series of achievement tests developed by the Psychological Corporation to evaluate (1) verbal ability, (2) numerical ability, (3) social studies, and (4) the sciences. These tests are administered to Kentucky secondary schools on a voluntary basis under the direction and supervision of the University of Kentucky Testing Service. The tests are scored via Kentucky norms, with national norms available for comparison. Approximately 70 percent of Kentucky school districts give the CQT. The state's mean CQT score is 74.28 percent; the lowest district percentile is 13.0, and the highest district percentile is 99.99. The range between highest and lowest district is 86.00 percent.

19. Armed Forces Qualification Tests (AFQT) is a national test administered to all young men called up for examination by the local draft boards under the Selective Service Act. It consists of four categories of questions: (1) arithmetic reasoning, (2) verbal ability, (3) pattern analysis and interpretation, (4) mechanical aptitude. In the Kentucky study, the percentage of students in each district who fail the test is recorded, but on the profiles the signs are reversed so that the highest district with the lowest percentage of rejectees has the highest positive score. The state's mean percent of rejectees is 67.49, the lowest district percent of rejectees is 14.68, and the highest district percent of rejectees is 68.21. The range between the highest and lowest district percentages of rejectees is 53.53.

Calculating Data for Profiles

The data for the profiles were obtained as follows on an IBM 360/50: For each variable, the mean was calculated by adding the value of

the variable for each district and dividing by the number of districts. The standard deviation for each variable was calculated by the formula $\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$. Where \bar{x} is the

mean, x is each individual value and n is the number of districts.

The Z score for each variable for each district was then computed from the following:

$$Z = \frac{x - \bar{x}}{\sigma}$$

The Z score is nothing more than the number of standard deviations the value for any district is above or below the mean. From standard tables of the normal distributions, these Z scores were converted to the percentage of the entire population for plotting on the profile sheets.

The following table compares representative Z scores with percentages of the population.

<u>Z Score</u>	<u>Percent Population</u>
+3.0	99.87
+2.0	97.72
+1.0	84.13
.5	69.15
0.0	50.00
-.5	30.85
-1.0	15.87
-2.0	2.28
-3.0	.13

As an example, using the state's mean family income of \$3320 and the standard deviation of \$500, the Z score of a district with a mean family income of \$4000 would be:

$$Z \text{ score} = \frac{4000 - 3320}{500} = 1.35,$$

which would be equivalent to 91.15 percent. Therefore as measured by wealth, this district would be in the upper 8.85 percent of Kentucky districts.

It should be noted that a high percentage figure for some variables would be deleterious to quality education. (The percentage of Rank IV teachers is an example.) In these cases the Z score was computed as above and then the sign was changed. Thus, if a district had a high percentage of such teachers the initially computed Z score would be positive, but before plotting the data the sign would be changed to negative. Therefore, on the profiles a point

above the mean line always signifies a better than average score (ranking) with regard to that particular variable.

Calculating Data for Rankings

The ranking data were also obtained on the IBM 360/50 using the Z score data. For each district, the Z scores for all variables were added together and divided by the number of variables. This computed value was therefore the average Z score for the district over all 19 variables. The first ranked district (Ft. Thomas) was therefore the district with the highest average Z score.

In the case of the quality variables, the same procedure was used with the exception that only the Z scores of the five quality variables were added together and the divisor for most cases was five.

It will be noted that in a few districts there were missing data. In these cases the average Z score was computed on the basis of the numbers of data actually present. In effect this

procedure assigned the mean Z score of the given district equal to all missing values.

It should also be noted that equal weight was given to each variable in these rankings. In the case of the 19-variable ranking, each input variable was given equal weight with regard to every other input variable and also to each variable in the process or output category. In the case of the 5-variable quality ranking, all quality variables were considered to be of equal merit.

It is apparent that for a ranking procedure to be valid all the data must be placed on some common basis. That is one of the purposes served by first computing Z scores. For example, it would be meaningless to average the actual values of medium family income and pupil-teacher ratio since the magnitude of the former values would completely overwhelm the latter. Furthermore, the two items are in different units. In the case of Z scores, however, an average between these variables is valid since the values are in the same order of magnitude and in the same units.

CHAPTER III

RANKINGS

Two sets of rankings for each Kentucky public school district were obtained. The first rankings are based on all 19 factors used in the study while the second set of rankings include only the five output factors. A description and explanation of the procedures and statistical analyses are included in the previous chapter on methodology.

Rankings of Public School Districts on 19 Variables

This ranking reveals that 34 of the 50 top ranked school districts in the state's upper quarter are independent districts. Furthermore, seven of the 16 county districts ranked in the top quarter are either part of large metropolitan areas or adjacent to them so that close communication, business and commercial relationships are readily maintained. Adjoining school districts in these areas are motivated through competition, example, public expectation, and pressures to provide educational opportunities equivalent to those maintained by their neighbors.

Of the 50 school districts ranked in the state's lowest quarter, 45 are county districts

and only 5 are independent districts.

Geographically, the majority of school districts ranked in the top 50 are located in the Western Kentucky area, the Bluegrass, Northern Kentucky, and the general Louisville area. School districts ranking in the lower quarter are located in economically deprived sections, primarily in Eastern Kentucky.

No definite pattern emerged with respect to district size and quality ranking. Independent districts ranking in the top 50 vary in size from small to large, and this pattern is evident also for county districts ranked in the top quarter. However, districts with small school populations that ranked in the top quarter generally have very strong financial support.

The most important finding related to the 50 lower quarter districts is the presence of four very small school systems among the five independent districts in this category. This example indicates the problems faced by small districts in trying to maintain schools with inadequate enrollments and lack of finances. The lowest 50 county systems are fairly homogeneous in size, economy, cultural environment, and other social factors.

Rankings Based on 19 Variables

<u>Rank</u>	<u>School District</u>	<u>Rank</u>	<u>School District</u>
1	Fort Thomas Ind.	18	Fulton Ind.
2	Beechwood Ind.	19	Louisville Ind.
3	Murray Ind.	20	Lynch Ind.
4	Bardstown Ind.	21	Daviess County
5	Elizabethtown Ind.	22	Bourbon County
6	Fayette County	23	Woodford County
7	Frankfort Ind.	24	Erlanger Ind.
8	Lexington Ind.	25	Benton Ind.
9	Owensboro Ind.	26	Mt. Sterling Ind.
10	Jefferson County	27	Garrard County
11	Danville Ind.	28	Nelson County
12	Bellevue Ind.	29	Oldham County
13	Paducah Ind.	30	Ludlow Ind.
14	Covington Ind.	31	Ashland Ind.
15	McCracken County	32	Mayfield Ind.
16	Bowling Green Ind.	33	Lyon County
17	Clark County	34	Raceland Ind.

<u>Rank</u>	<u>School District</u>
35	Harrison County
36	Henderson Ind.
37	Harrodsburg Ind.
38	Walton-Verona Ind.
39	Glasgow Ind.
40	Stanford Ind.
41	Robertson County
42	Georgetown Ind.
43	Fairview Ind.
44	Russellville Ind.
45	Franklin County
46	Pikeville Ind.
47	Meade County
48	Somerset Ind.
49	South Portsmouth Ind.
50	McLean County
51	Berea Ind.
52	Ballard County
53	London Ind.
54	Campbellsville Ind.
55	Pineville Ind.
56	Marshall County
57	Hopkinsville Ind.
58	Henderson County
59	Harlan Ind.
60	Williamstown Ind.
61	Greenville Ind.
62	Paris Ind.
63	Williamsburg Ind.
64	Scottsville Ind.
65	Russell Ind.
66	Central City Ind.
67	Burgin Ind.
68	Caldwell County
69	Calloway County
70	Hardin County
71	Kenton County
72	Hancock County
73	Corbin Ind.
74	Trigg County
75	Simpson County
76	Shelbyville Ind.
77	Union County
78	Richmond Ind.
79	Henry County
80	Maysville Ind.
81	Christian County
82	Crittenden County
83	Graves County
84	Dawson Springs Ind.
85	Hickman County
86	Paintsville Ind.
87	Livingston County
88	Shelby County
89	Pendleton County
90	Boyle County

<u>Rank</u>	<u>School District</u>
91	Larue County
92	Liberty Ind.
93	Fleming County
94	Fulton County
95	Grant County
96	Boyd County
97	Hazard Ind.
98	Dayton Ind.
99	Anderson County
100	Greenup Ind.
101	Newport Ind.
102	Nicholas County
103	Irvine Ind.
104	Todd County
105	Leitchfield Ind.
106	Taylor County
107	Augusta Ind.
108	Boone County
109	Campbell County
110	Adair County
111	Barbourville Ind.
112	Allen County
113	Metcalfe County
114	Catlettsburg Ind.
115	Montgomery County
116	Breckinridge County
117	Warren County
118	Silver Grove Ind.
119	Scott County
120	Mason County
121	Jessamine County
122	Falmouth Ind.
123	Barren County
124	Bullitt County
125	Bracken County
126	Carlisle County
127	Providence Ind.
128	Caverna Ind.
129	Hopkins County
130	Jenkins Ind.
131	Monticello Ind.
132	Rowan County
133	Earlington Ind.
134	Webster County
135	Gallatin County
136	Green County
137	Mercer County
138	Cloverport Ind.
139	Russell County
140	Madison County
141	Marion County
142	Monroe County
143	Muhlenberg County
144	Logan County
145	Lincoln County
146	Hart County

<u>Rank</u>	<u>School District</u>
147	Butler County
148	Rockcastle County
149	Eminence Ind.
150	Pulaski County
151	Washington County
152	Middlesboro Ind.
153	Cumberland County
154	Clinton County
155	Spencer County
156	Pike County
157	Trimble County
158	Bath County
159	Floyd County
160	Edmonson County
161	Bell County
162	Owen County
163	Harlan County
164	Ferguson Ind.
165	Grayson County
166	Casey County
167	Knott County
168	Wolfe County
169	McCreary County
170	Wayne County
171	Elliott County

<u>Rank</u>	<u>School District</u>
172	Breathitt County
173	Owsley County
174	Ohio County
175	Laurel County
176	Knox County
177	Lee County
178	Carter County
179	Carroll County
180	Powell County
181	Johnson County
182	Whitley County
183	Morgan County
184	Letcher County
185	Lewis County
186	Greenup County
187	Lawrence County
188	Estill County
189	Clay County
190	Magoffin County
191	Jackson Ind.
192	Martin County
193	Perry County
194	Jackson County
195	Van Lear Ind.
196	Menifee County
197	Leslie County

Rankings of 197 Public School Districts on Five Quality Variables

Adjacent school districts with rather similar economic, cultural, and environmental conditions often differ greatly in the quality of schools provided; therefore, this ranking which is based upon quality criteria (output) should indicate how districts that have somewhat equal resources compare.

Rankings of 197 Kentucky school districts on the basis of 19 variables presented earlier and this ranking based on 5 variables may be compared by the following table:

Fifty Upper Quarter Districts

<u>Rankings Based on</u>	<u>Type of District</u>	
	<u>County</u>	<u>Independent</u>
19 Variables	16	34
5 Variables	9	41

It is evident from an analysis of the data obtained on the 197 school districts that relationships exist between the nineteen-variable and the five-variable rankings. However, when the 50 upper quarter districts are ranked by the five output variables, the number of independent districts in the top quarter increases substantially. Also, when rankings were made using five variables, the upper 50 districts included 19 districts, 9 independent and 10 county districts, that were not present in the earlier nineteen-variable ranking.

Both sets of rankings are included so the reader may use either one depending upon his purpose. If the primary interest is in quality ranking according to holding power and achievement test scores, then the five-variable ranking would be preferable. If the primary interest is in gaining greater insight into the input-process-output, then the nineteen-variable rating would be more applicable.

Rankings Based on Five Variables

<u>Rank</u>	<u>School District</u>	<u>Rank</u>	<u>School District</u>
1	Beechwood Ind.	52	Kenton County
2	Murray Ind.	53	South Portsmouth Ind.
3	Fort Thomas Ind.	54	Paintsville Ind.
4	Greenville Ind.	55	Clark County
5	Danville Ind.	56	Allen County
6	Bellevue Ind.	57	Ludlow Ind.
7	Fulton Ind.	58	Harrison County
8	Pikeville Ind.	59	Campbellsville Ind.
9	Bardstown Ind.	60	Stanford Ind.
10	Frankfort Ind.	61	Franklin County
11	Benton Ind.	62	Williamsburg Ind.
12	Shelbyville Ind.	63	Providence Ind.
13	Bowling Green Ind.	64	Raceland Ind.
14	Fayette County	65	Christian County
15	Russellville Ind.	66	Meade County
16	Harrodsburg Ind.	67	McLean County
17	Erlanger Ind.	68	Calloway County
18	Elizabethtown Ind.	69	Hancock County
19	Owensboro Ind.	70	Ballard County
20	Mayfield Ind.	71	Corbin Ind.
21	Jefferson County	72	Pendleton County
22	McCracken County	73	Henry County
23	London Ind.	74	Barbourville Ind.
24	Somerset Ind.	75	Richmond Ind.
25	Walton-Verona Ind.	76	Oldham County
26	Ashland Ind.	77	Covington Ind.
27	Burgin Ind.	78	Shelby County
28	Paducah Ind.	79	Harlan Ind.
29	Caldwell County	80	Anderson County
30	Henderson Ind.	81	Eminence Ind.
31	Georgetown Ind.	82	Washington County
32	Leitchfield Ind.	83	Boone County
33	Simpson County	84	Bourbon County
34	Glasgow Ind.	85	Monticello Ind.
35	Lexington Ind.	86	Graves County
36	Berea Ind.	87	Paris Ind.
37	Hazard Ind.	88	Maysville Ind.
38	Dawson Springs Ind.	89	Breckinridge County
39	Pineville Ind.	90	Earlington Ind.
40	Henderson County	91	Lynch Ind.
41	Marshall County	92	Hopkinsville Ind.
42	Caverna Ind.	93	Greenup Ind.
43	Larue County	94	Casey County
44	Augusta Ind.	95	Jessamine County
45	Mt. Sterling Ind.	96	Webster County
46	Garrard County	97	Adair County
47	Central City Ind.	98	Boyle County
48	Hickman County	99	Carlisle County
49	Daviess County	100	Bullitt County
50	Scottsville Ind.	101	Irvine Ind.
51	Russell Ind.	102	Mercer County

<u>Rank</u>	<u>School District</u>
103	Fleming County
104	Catlettsburg Ind.
105	Scott County
106	Logan County
107	Hopkins County
108	Louisville Ind.
109	Crittenden County
110	Cloverport Ind.
111	Montgomery County
112	Campbell County
113	Woodford County
114	Dayton Ind.
115	Trimble County
116	Spenser County
117	Knott County
118	Floyd County
119	Lyon County
120	Trigg County
121	Nelson County
122	Union County
123	Hardin County
124	Nicholas County
125	Grant County
126	Bracken County
127	Cumberland County
128	Green County
129	Edmonson County
130	Pike County
131	Taylor County
132	Williamstown Ind.
133	Barren County
134	Jackson Ind.
135	Owsley County
136	Jenkins Ind.
137	Madison County
138	Fulton County
139	Fairview Ind.
140	Mason County
141	Clinton County
142	Robertson County
143	Marion County
144	McCreary County
145	Boyd County
146	Grayson County
147	Metcalfe County
148	Rockcastle County
149	Ohio County

<u>Rank</u>	<u>School District</u>
150	Livingston County
151	Russell County
152	Warren County
153	Newport Ind.
154	Butler County
155	Owen County
156	Muhlenberg County
157	Monroe County
158	Silver Grove Ind.
159	Liberty Ind.
160	Letcher County
161	Falmouth Ind.
162	Rowan County
163	Todd County
164	Lawrence County
165	Greenup County
166	Middlesboro Ind.
167	Powell County
168	Lincoln County
169	Elliott County
170	Johnson County
171	Wayne County
172	Gallatin County
173	Morgan County
174	Carroll County
175	Bath County
176	Hart County
177	Carter County
178	Lee County
179	Lewis County
180	Harlan County
181	Bell County
182	Wolfe County
183	Pulaski County
184	Laurel County
185	Magoffin County
186	Breathitt County
187	Perry County
188	Clay County
189	Martin County
190	Menifee County
191	Ferguson Ind.
192	Estill County
193	Whitley County
194	Jackson County
195	Leslie County
196	Knox County
197	Van Lear Ind.

CHAPTER IV

CONCLUSIONS AND INTERPRETATIONS

The following conclusions and interpretations are drawn from profile analysis of 197 school districts where the criteria for ranking were the nineteen quality indicators mentioned earlier. (In offering conclusions and interpretations one should not need to detail the problems of formulating generalizations from the complex and varying data used in this study.)

1. The findings related to rankings of the 197 Kentucky public school systems indicate that independent school districts are superior to county school districts in a substantial majority of cases.
2. The data also reveal that certain areas of Western, Central, and Northern Kentucky have school districts of higher quality than do Eastern Kentucky and adjacent areas.
3. The rankings suggest that community wealth and expenditures largely determine the rank of school districts, and that these factors are related closely to other financial and quality indicator factors.
4. Small independent and county districts without sufficient financial support and enrollments usually have poor schools, yet some few districts with rather small student bodies but strong financial support are exceptions and do have good schools. The data suggest that small districts in the lower Kentucky quartiles should consolidate since systems with inadequate enrollments are drastically limited in programs.
5. School size alone, however, is not the determining factor in school quality because many larger systems with adequate financial resources are inferior; therefore, other factors in addition to those used in this research are responsible for large school districts ranking low in quality. These causes may be a lack of community interest and support, poor administrative leadership, or the influence of a number of other socio-economic and cultural factors combined with the above to affect the quality of school systems. Despite any evidence to the contrary, the fact remains that Kentucky has entirely too many small school districts tenaciously clinging to independence and tradition, thereby depriving children of an opportunity for quality education.

CHAPTER V

PROFILES OF 197 KENTUCKY SCHOOL DISTRICTS

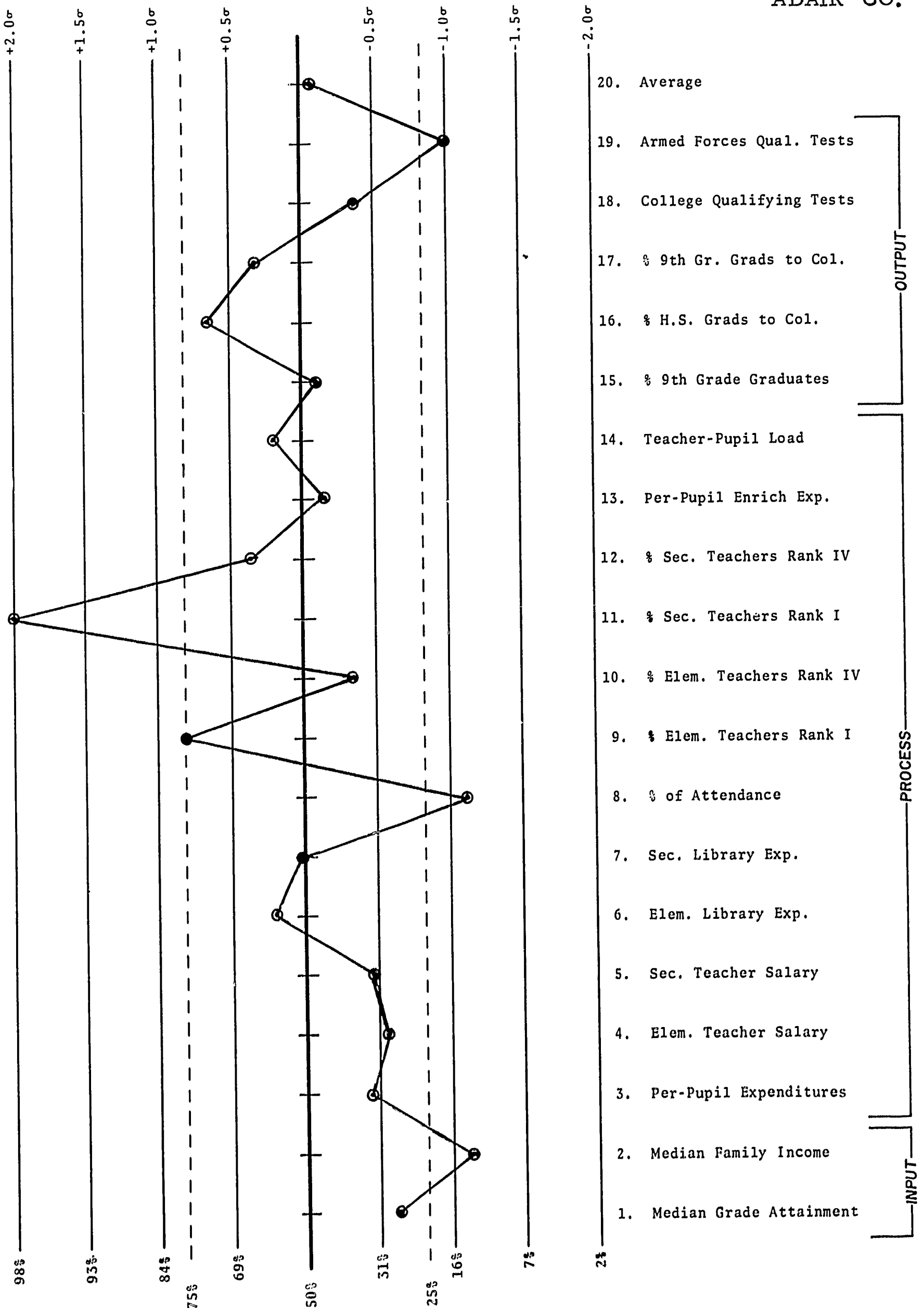
The profiles in this chapter are arranged alphabetically. The rank of the district can be found in Chapter III.

The procedure for developing the profiles is outlined in Chapter IV, and a detailed explanation of the statistical procedures is included in Volume II of this study (now in preparation) on A Methodology for Assessing The Quality of Public Education.

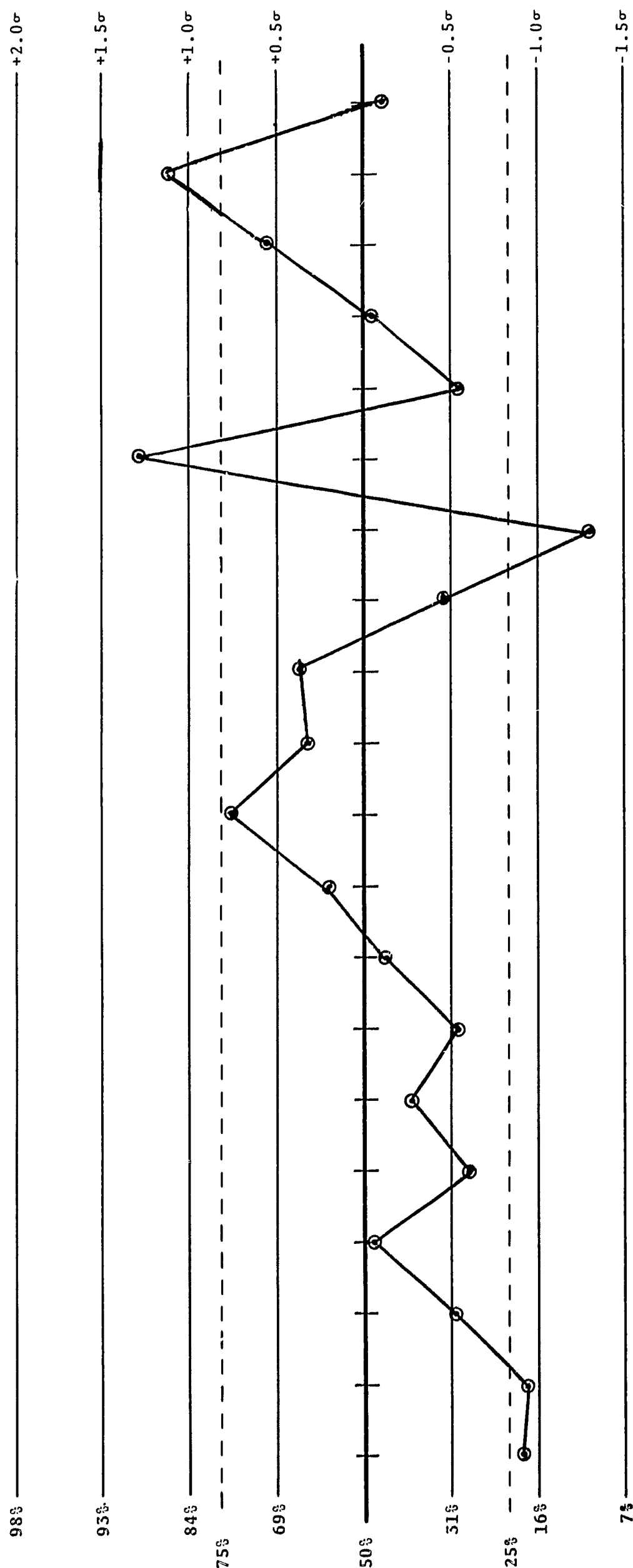
The following suggestions are offered to assist in using the profiles:

1. The state average or mean for each variable is designated by the heavy black 50% line located in the center of each profile. Relative positions of individual districts above or below the state average are graphically presented in standard deviations (σ) at the right and in percentages (%) at the left.
2. Compare the relative positions of the input and process variables with the output variables to see if an upward trend line can be established by the data. For example, if the five output factors (holding power and achievement factors) are well above average yet the expenditures are average or below, one might conclude that the school district is receiving a good return for educational expenditures.
3. A final suggestion pertaining to the overall appearance of the district's profile may be pertinent. A rather marked consistency of approximate equality in the level of the various variables would indicate a rather stable school system in which an awareness of the necessity for emphasis and progress in every category of education exists.

ADAIR CO.



ALLEN CO.



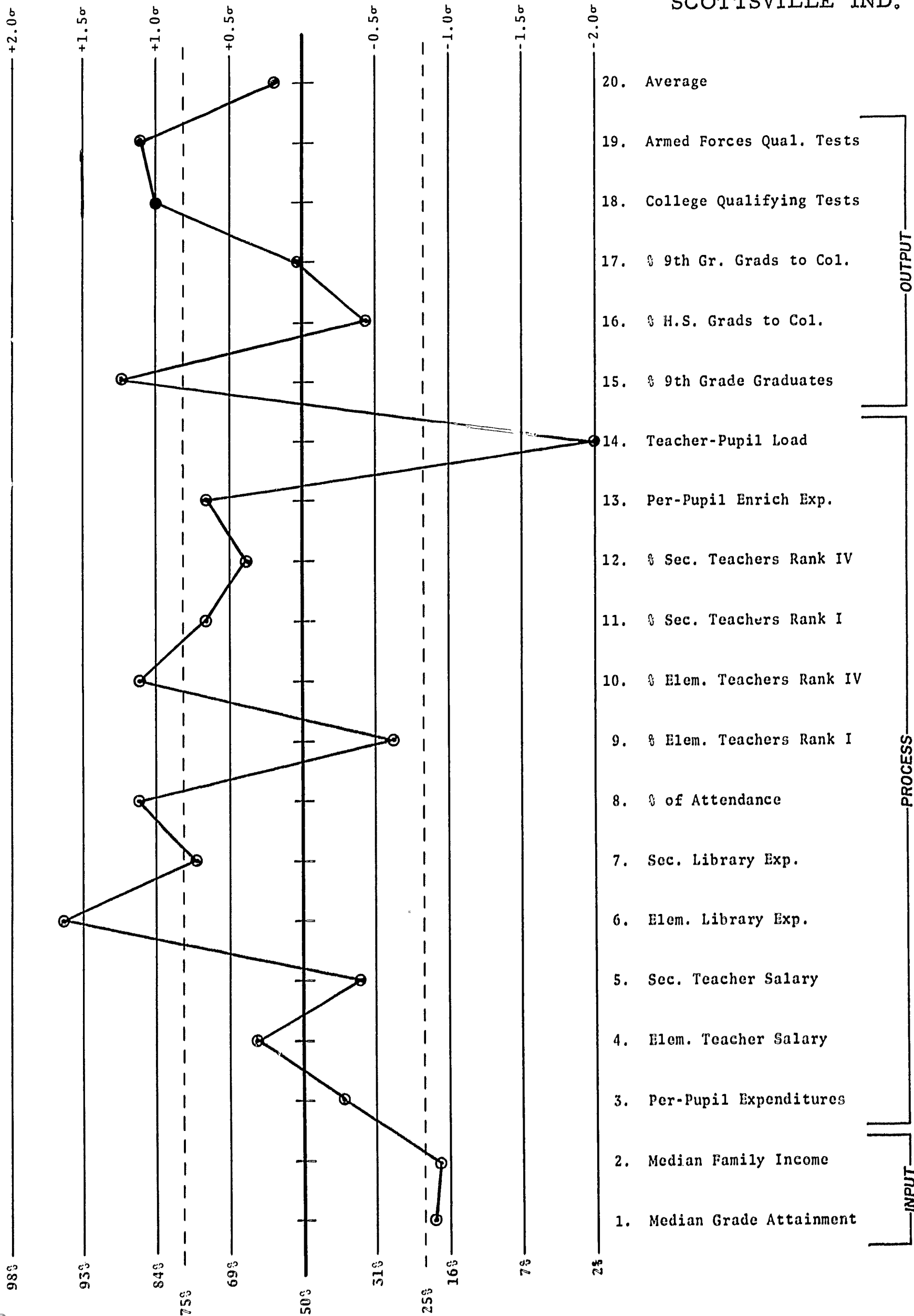
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

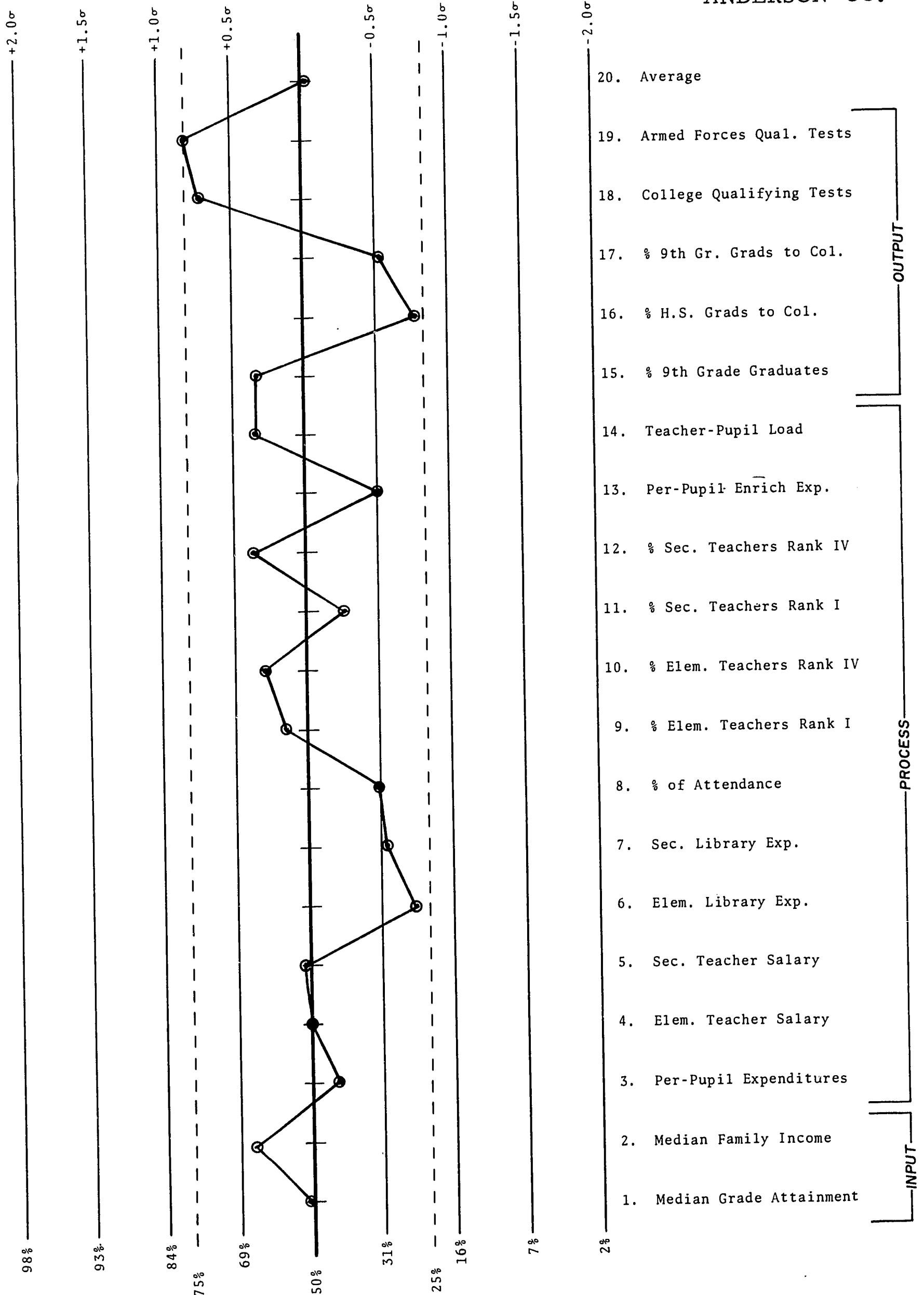
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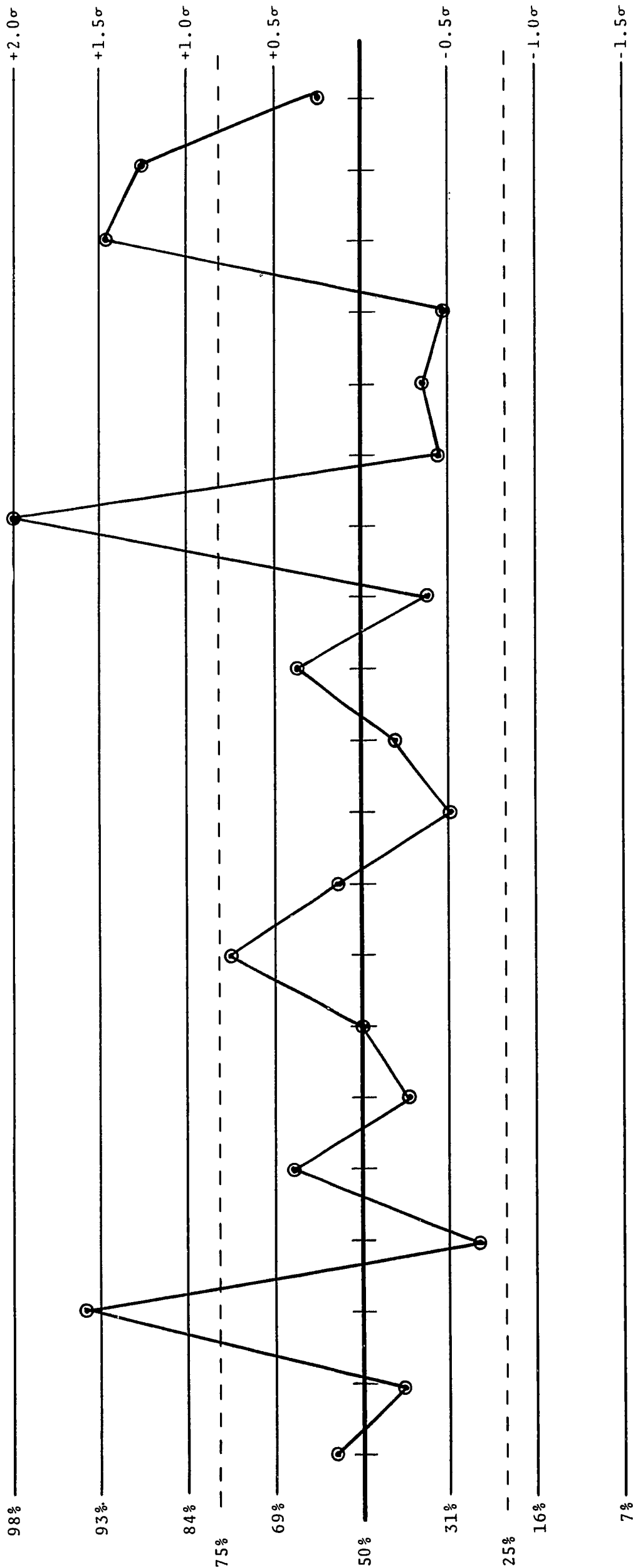
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ANDERSON CO.



BALLARD CO.



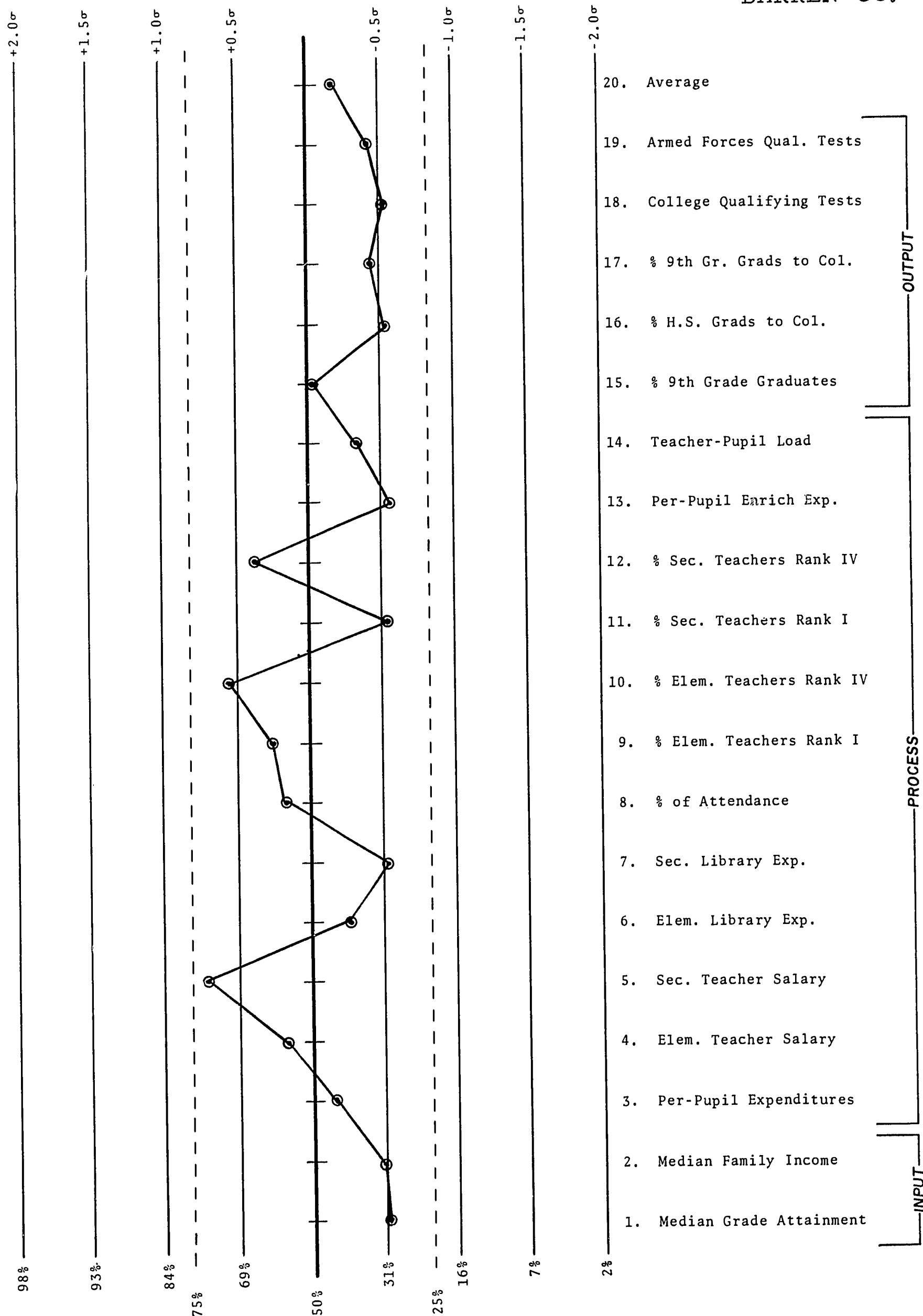
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

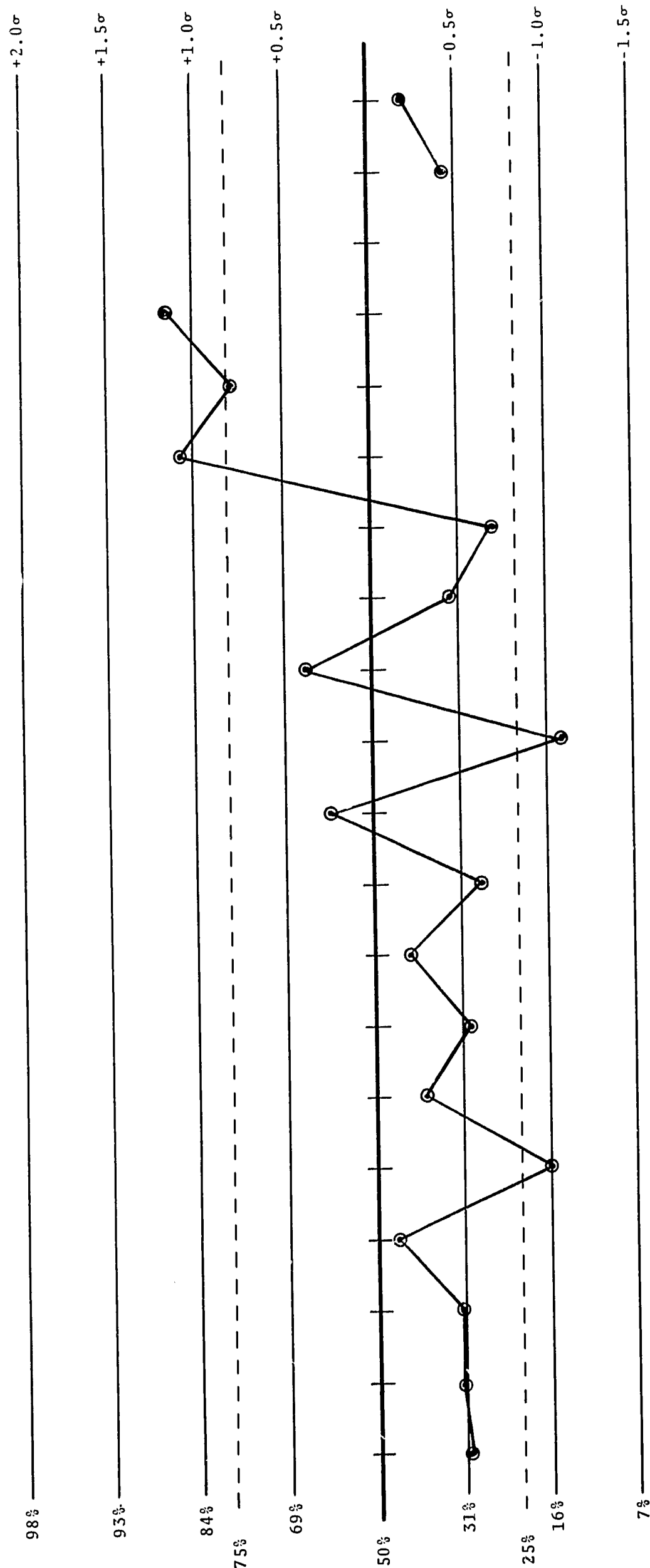
PROCESS

INPUT

BARREN CO.



CAVERNA IND.



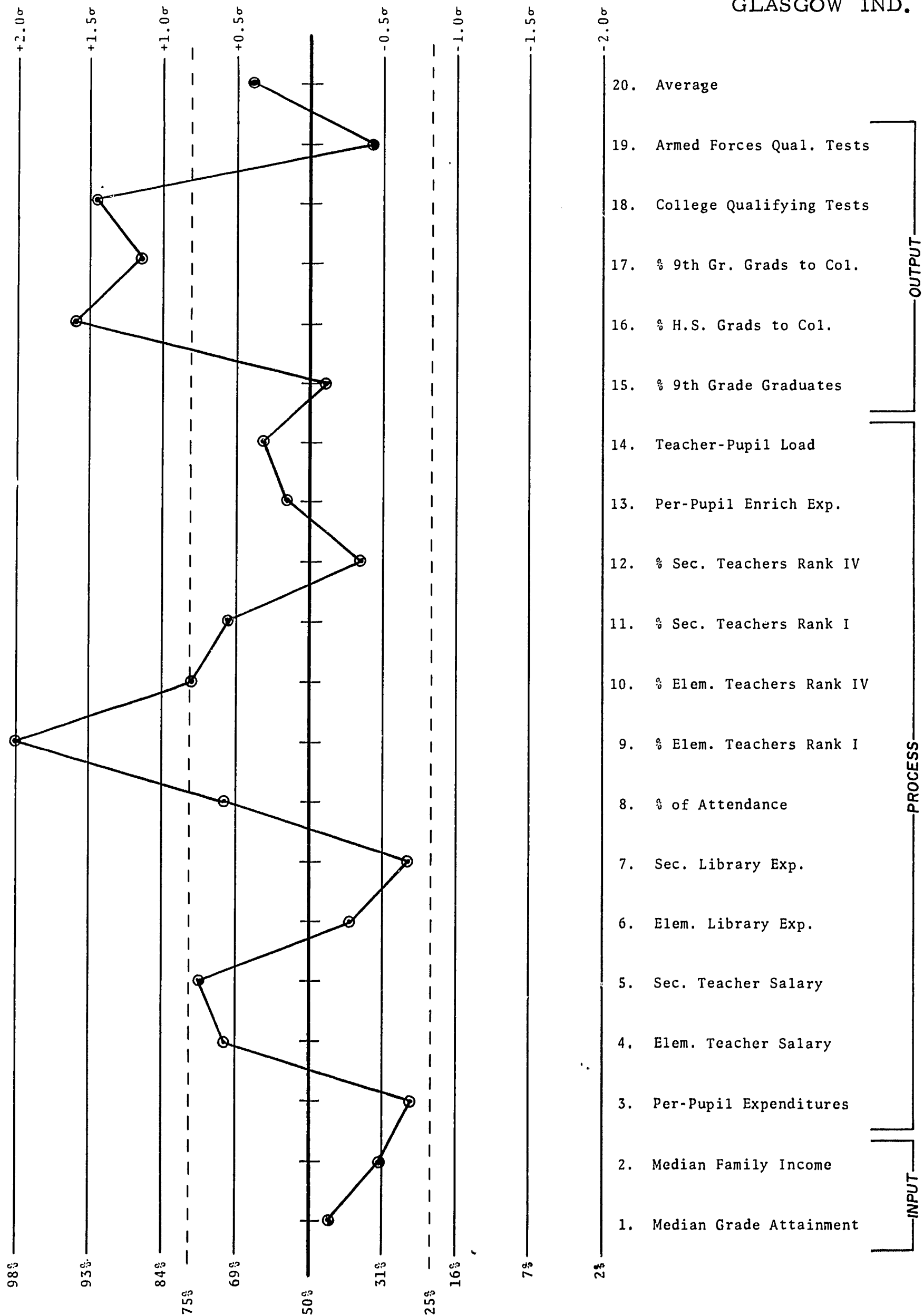
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15. % 9th Grade Graduates
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6. Elem. Library Exp.
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3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

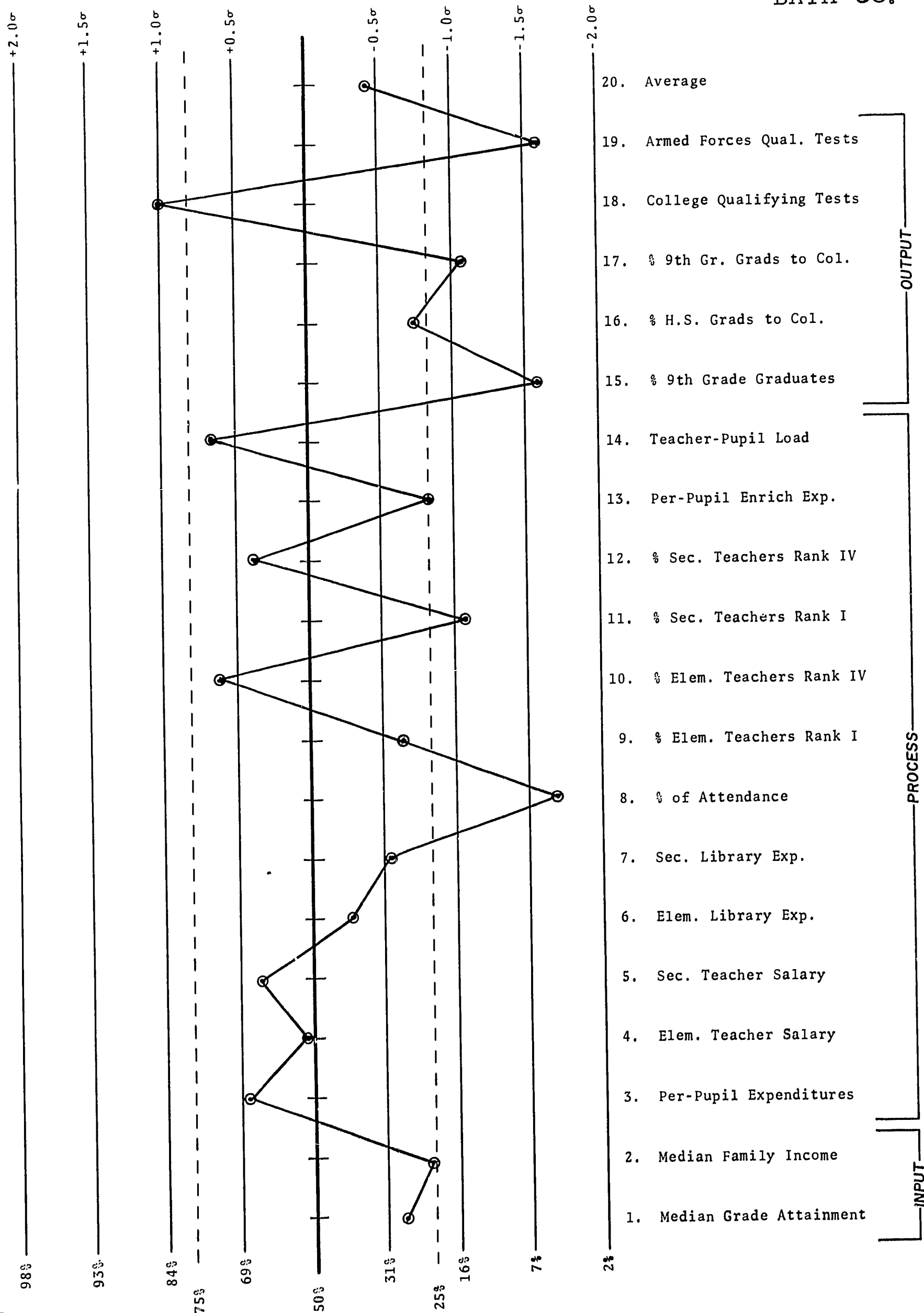
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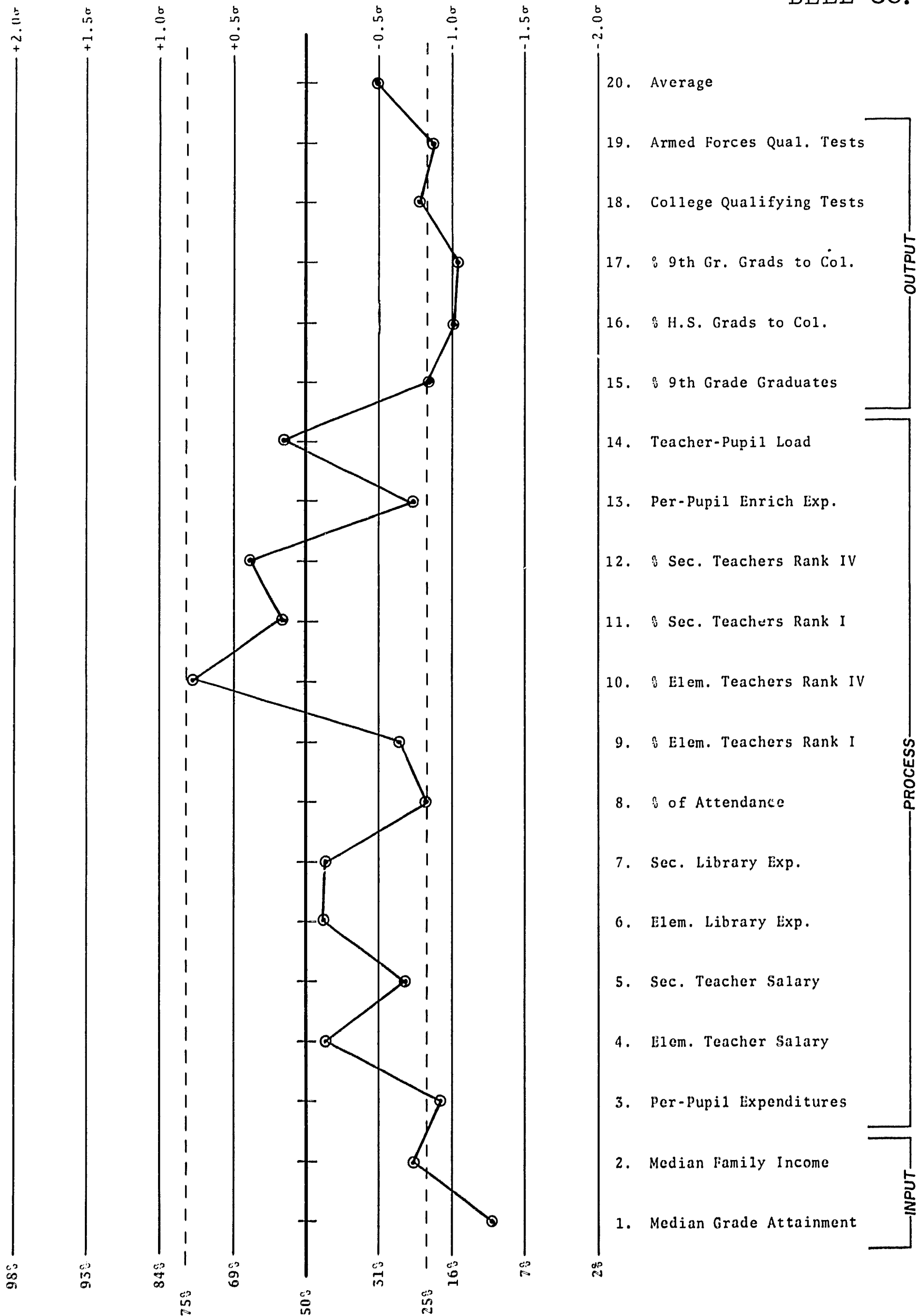
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GLASGOW IND.

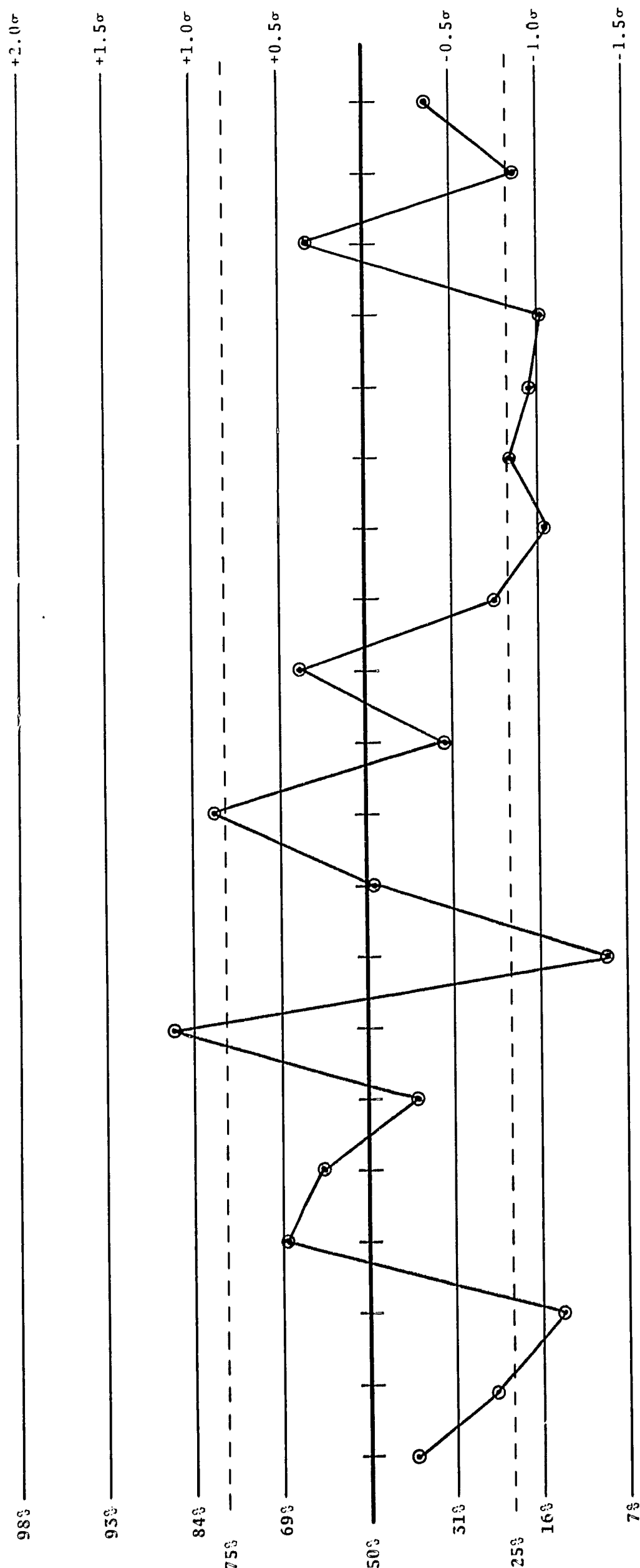


BATH CO.





MIDDLESBORO IND.



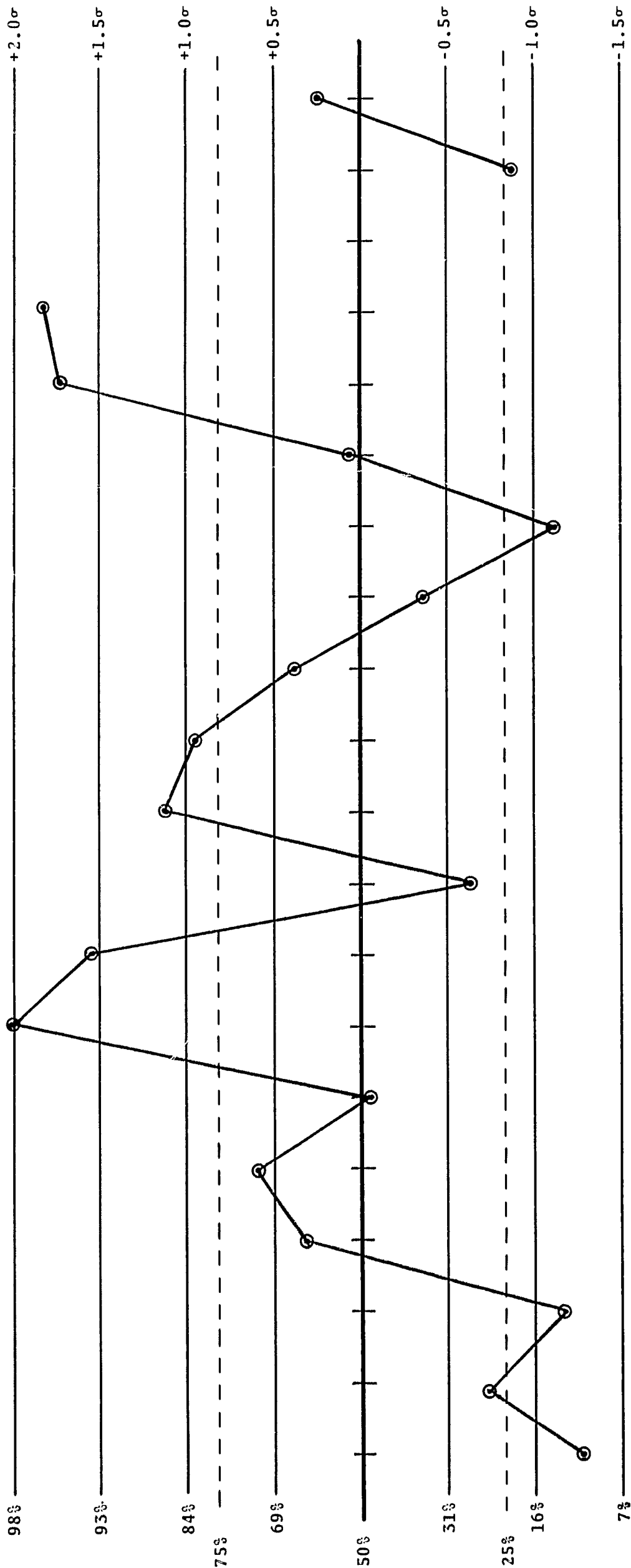
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15. % 9th Grade Graduates
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6. Elem. Library Exp.
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

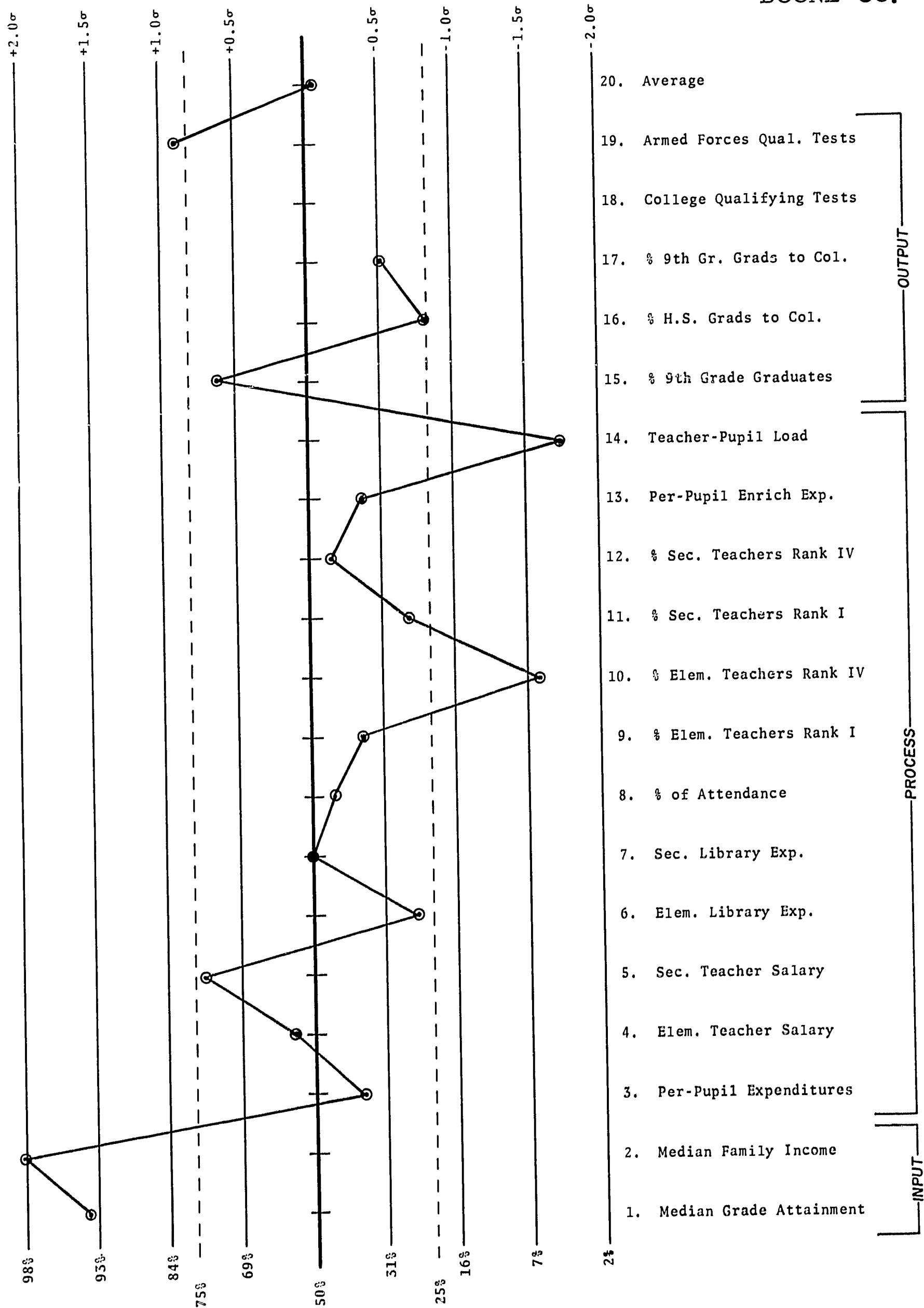
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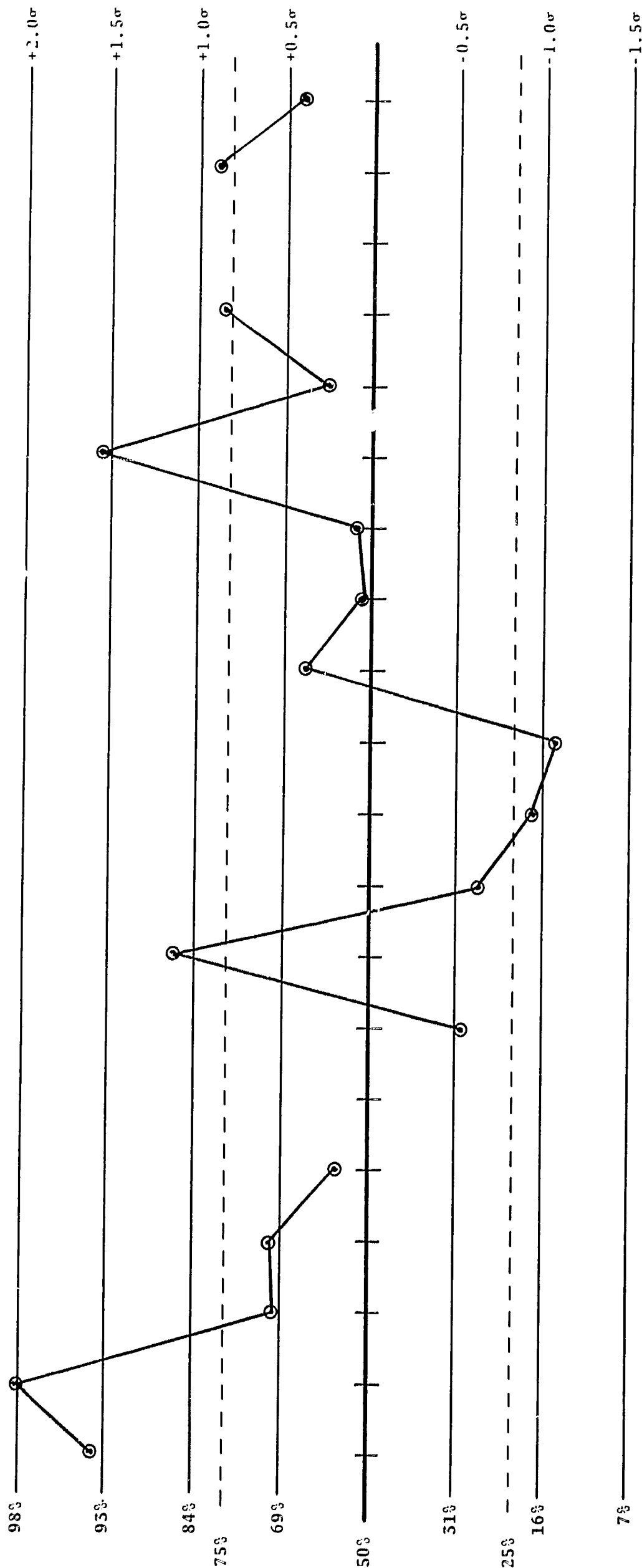


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18. College Qualifying Tests
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16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
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7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

BOONE CO.



WALTON-VERONA IND.



2% 7% 16% 25% 31% 50% 69% 75% 84% 93% 98%

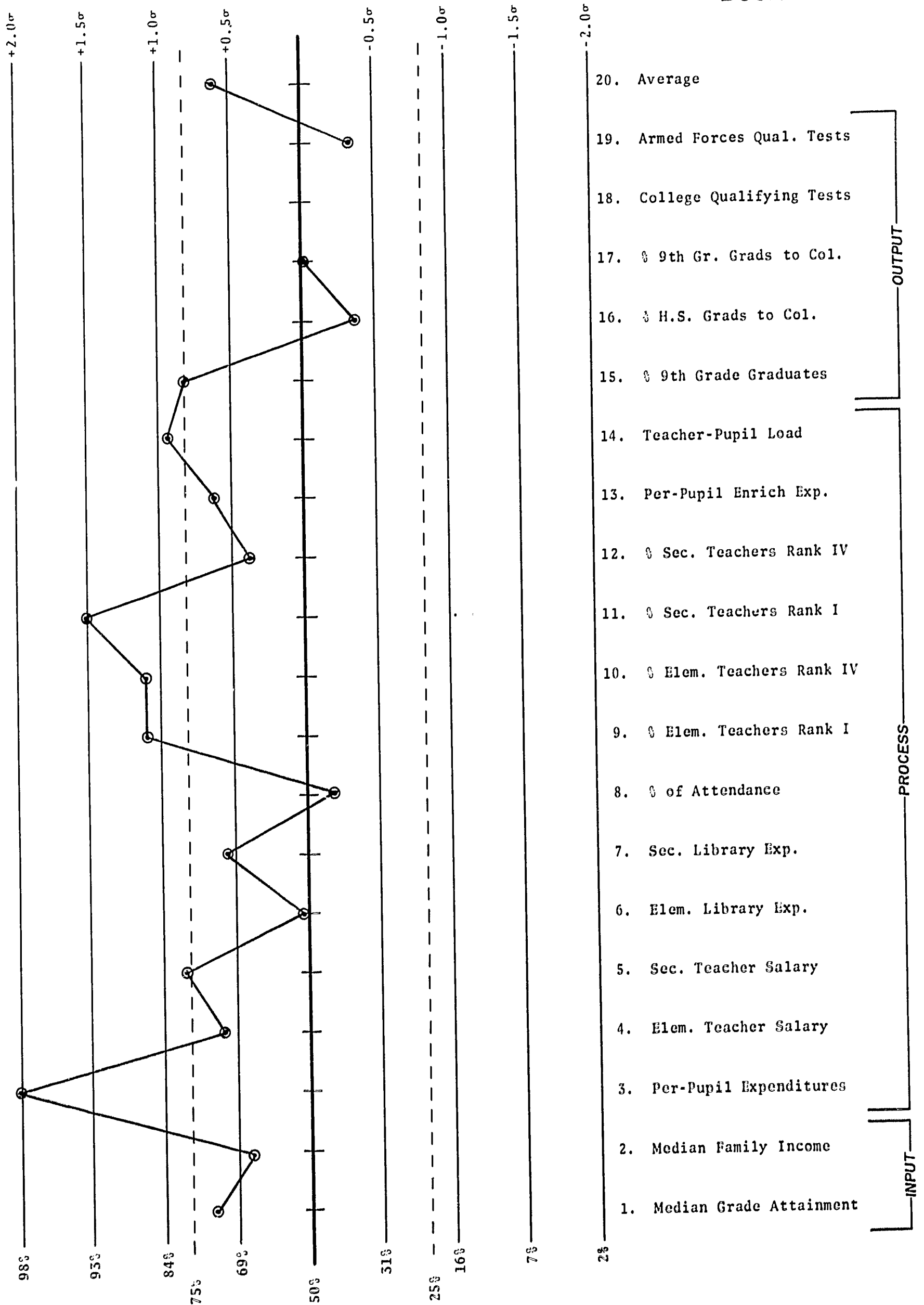
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

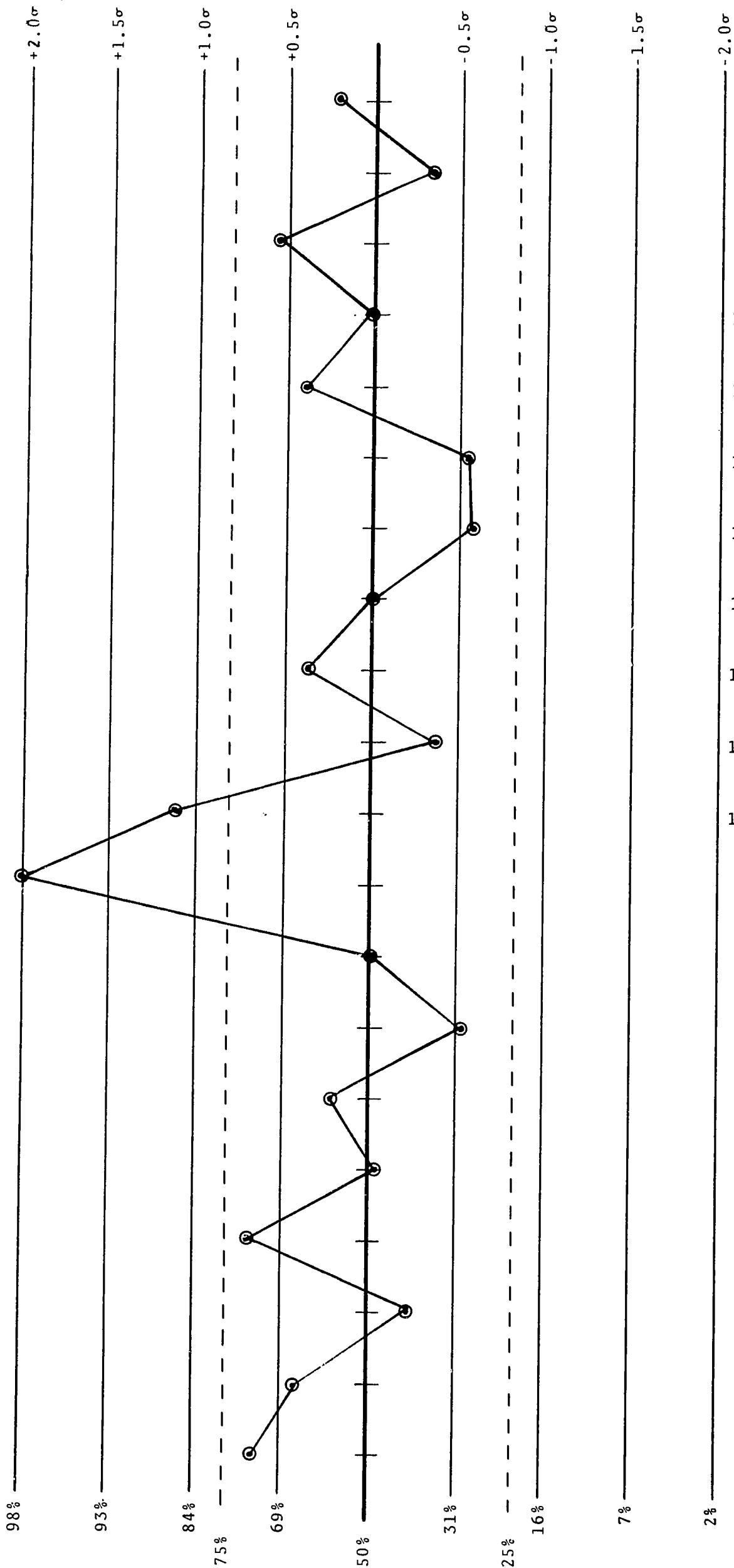
PROCESS

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BOURBON CO.



PARIS IND.



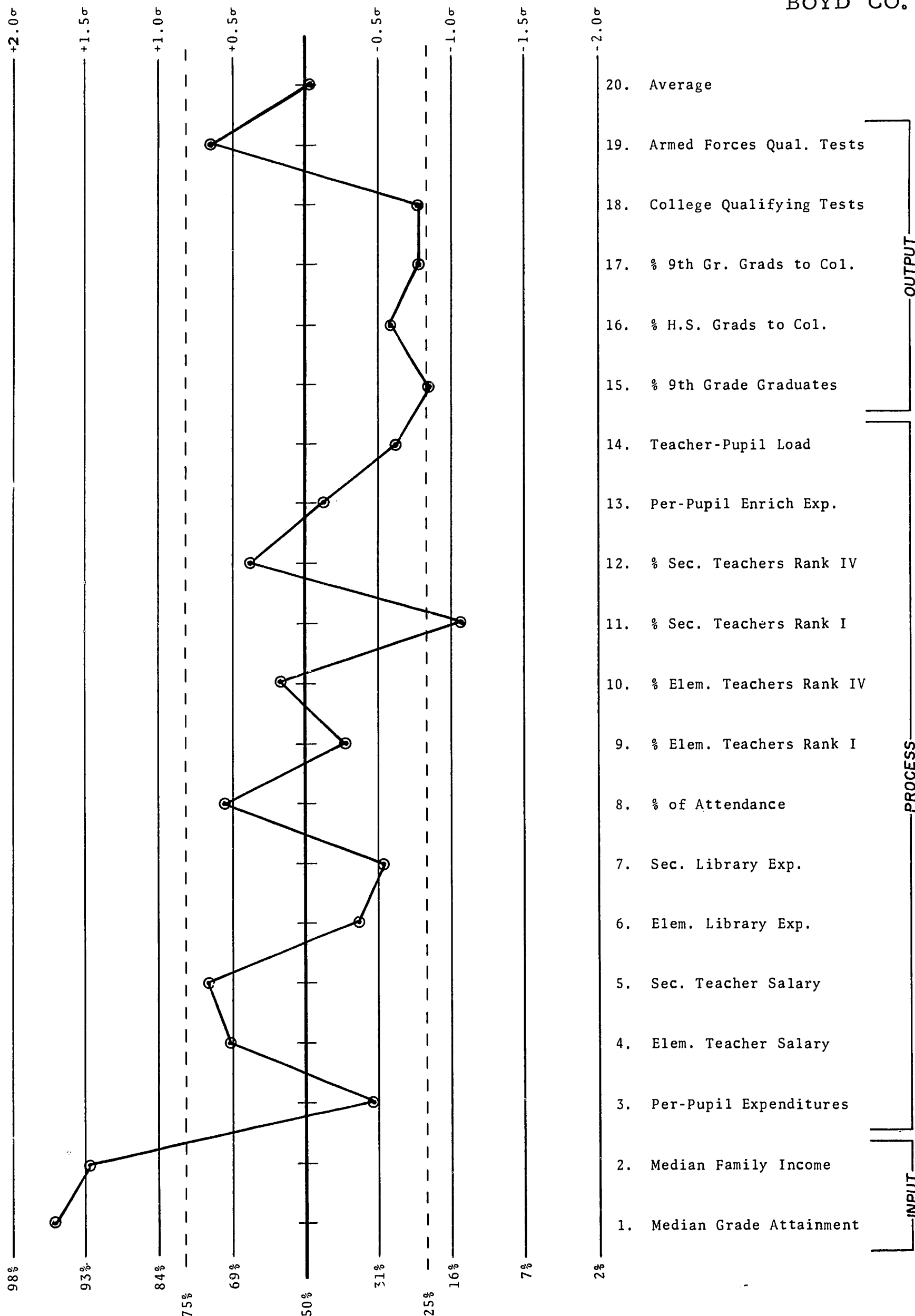
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3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

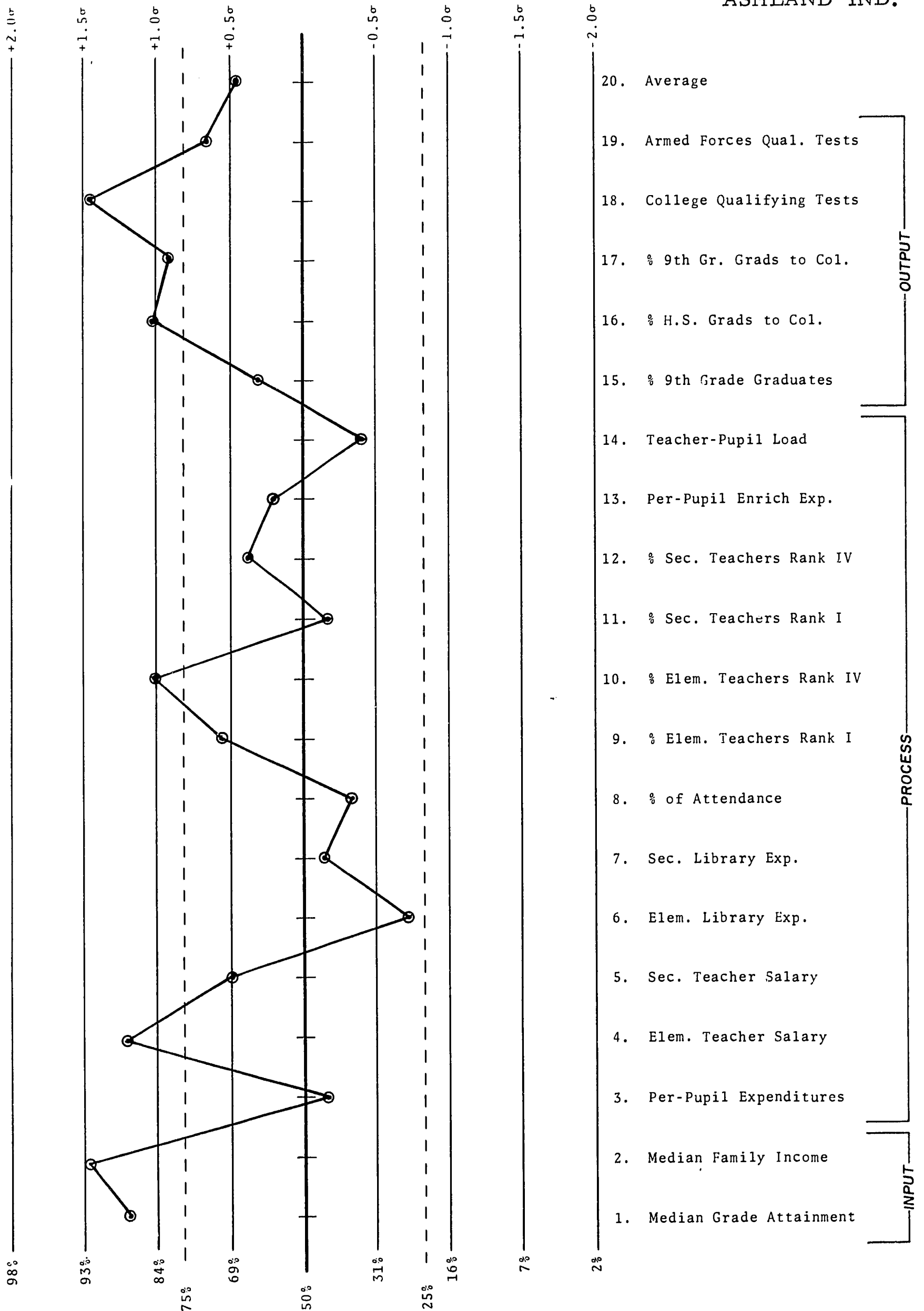
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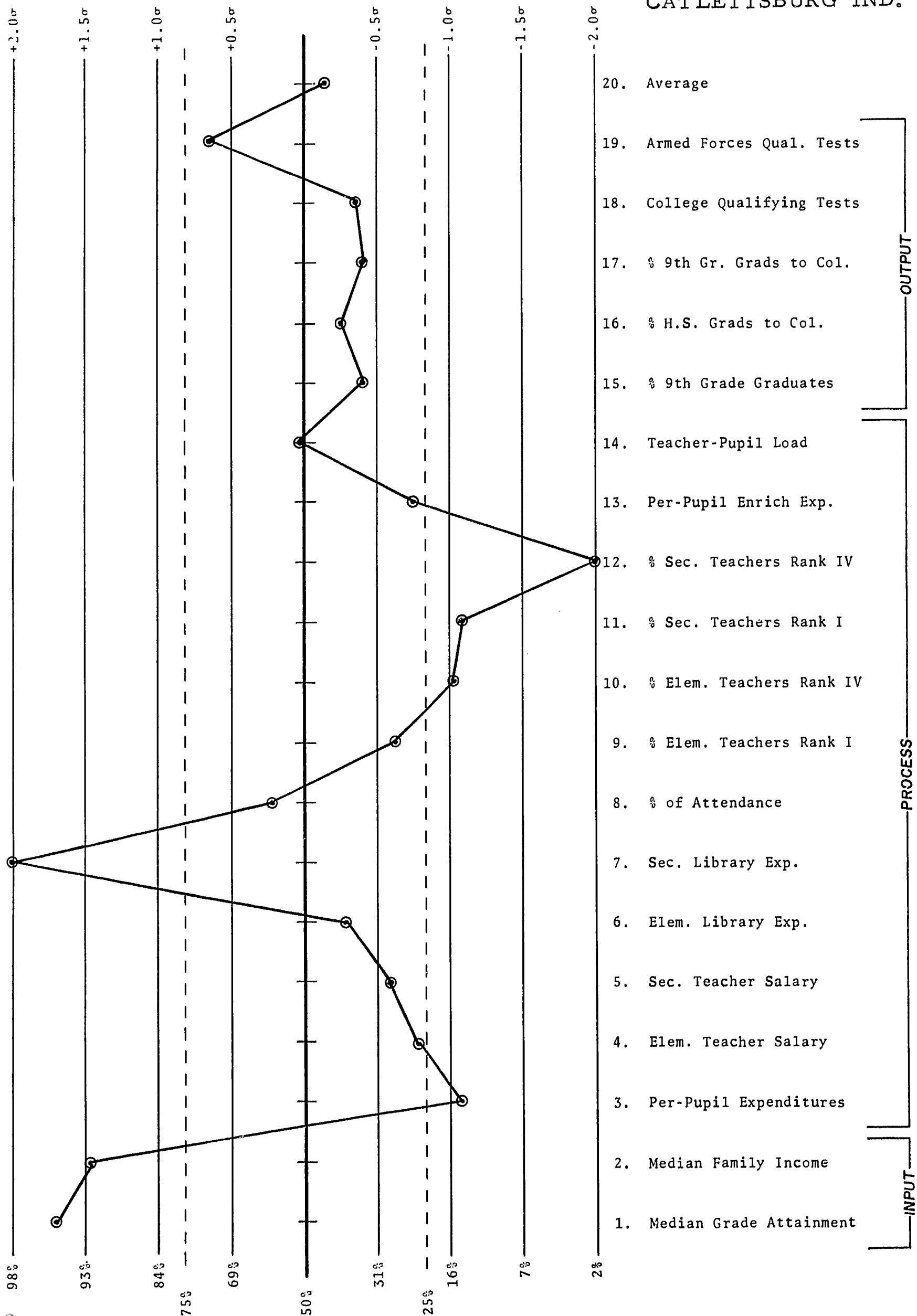
BOYD CO.



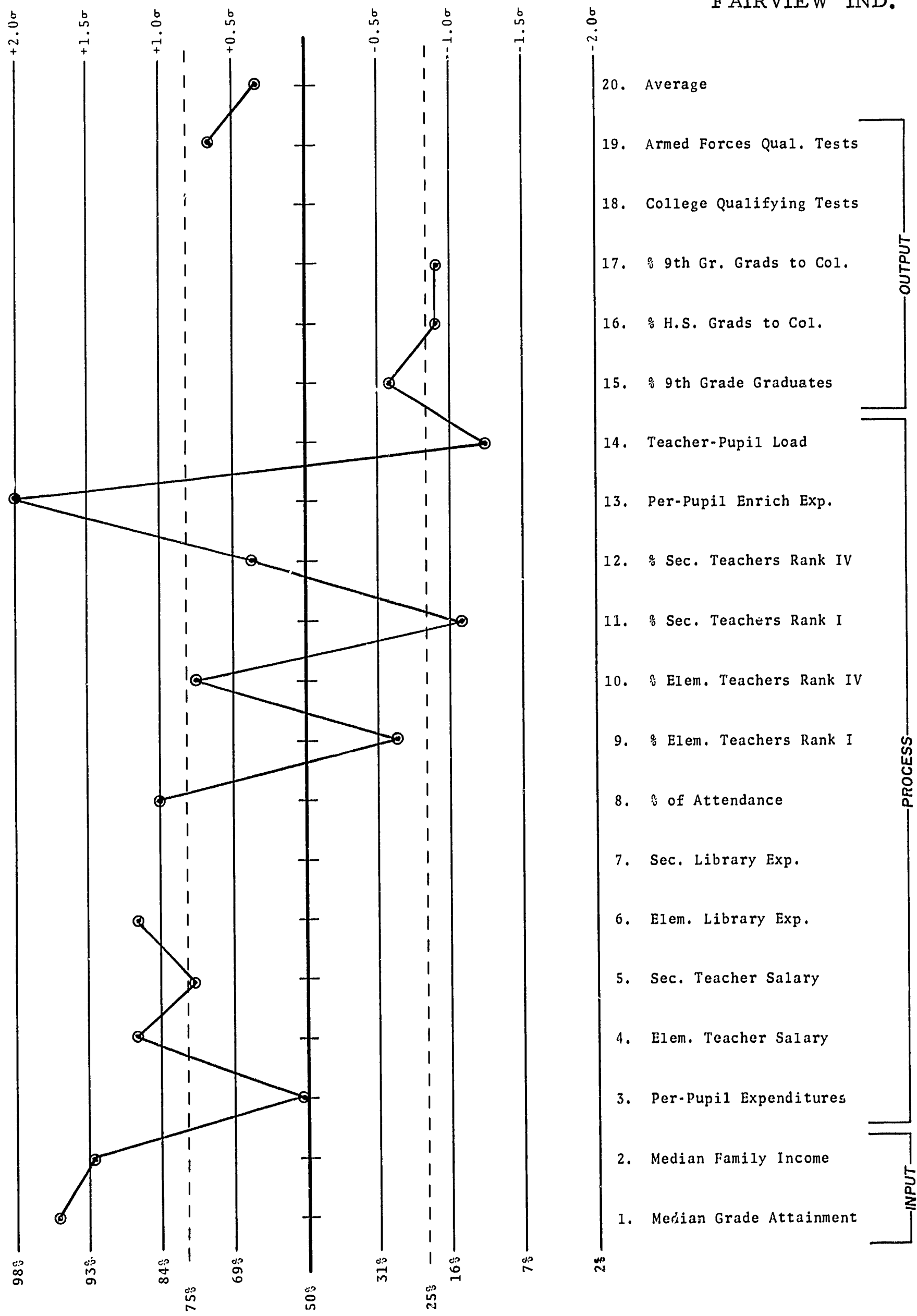
ASHLAND IND.



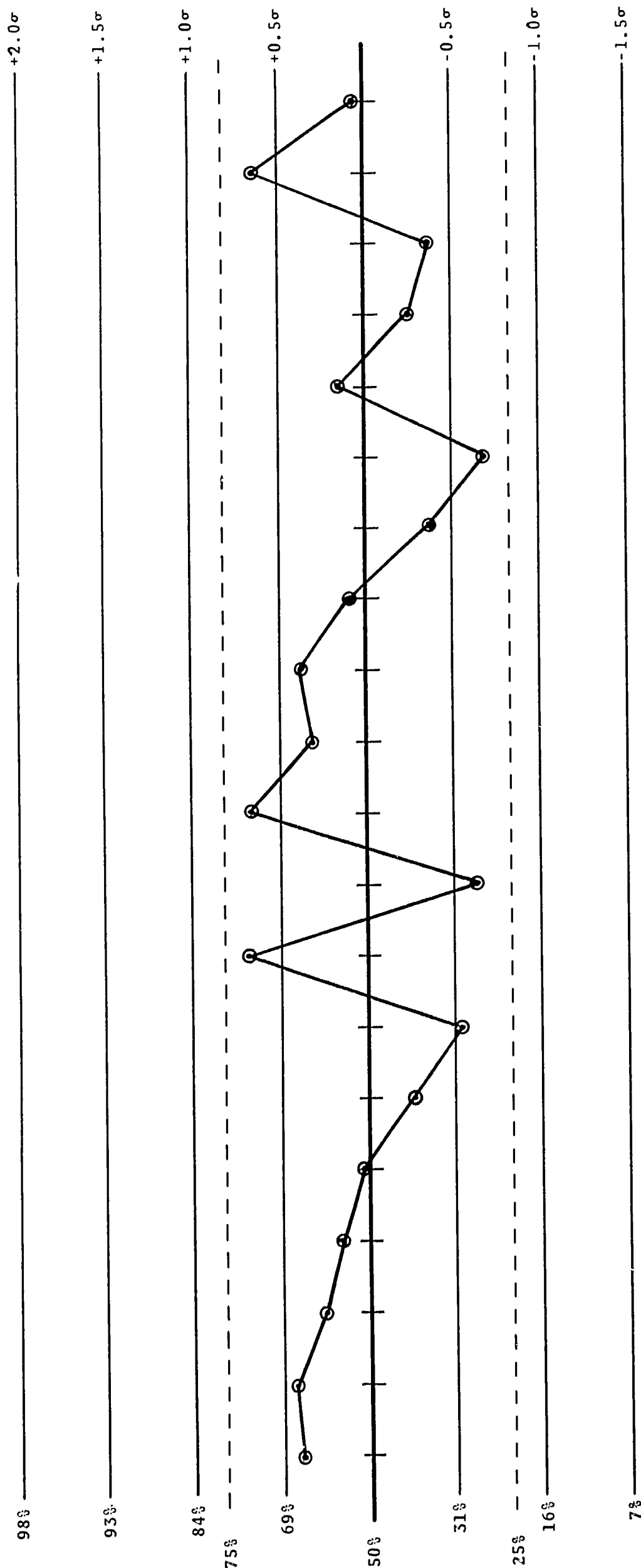
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FAIRVIEW IND.



BOYLE CO.



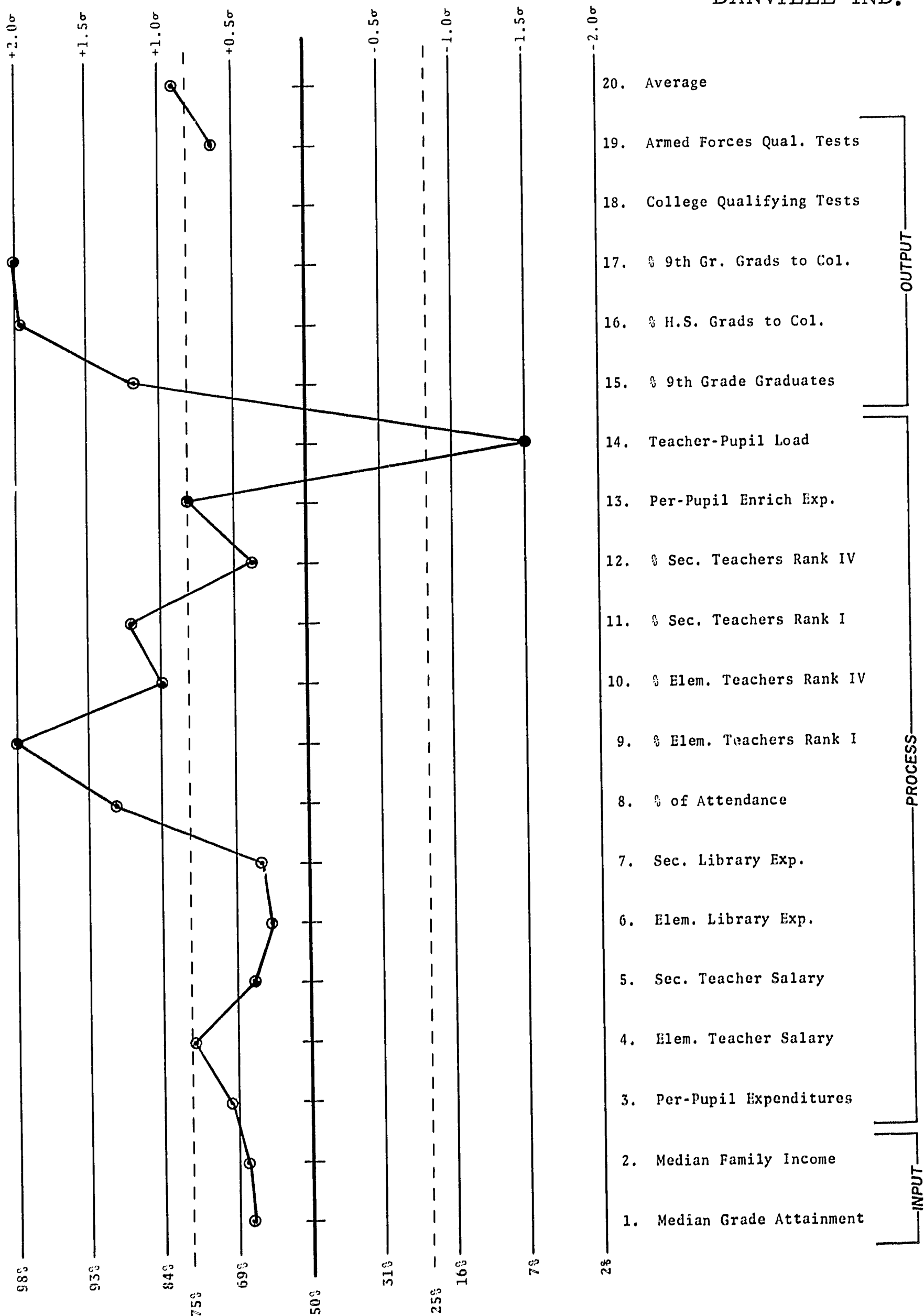
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3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

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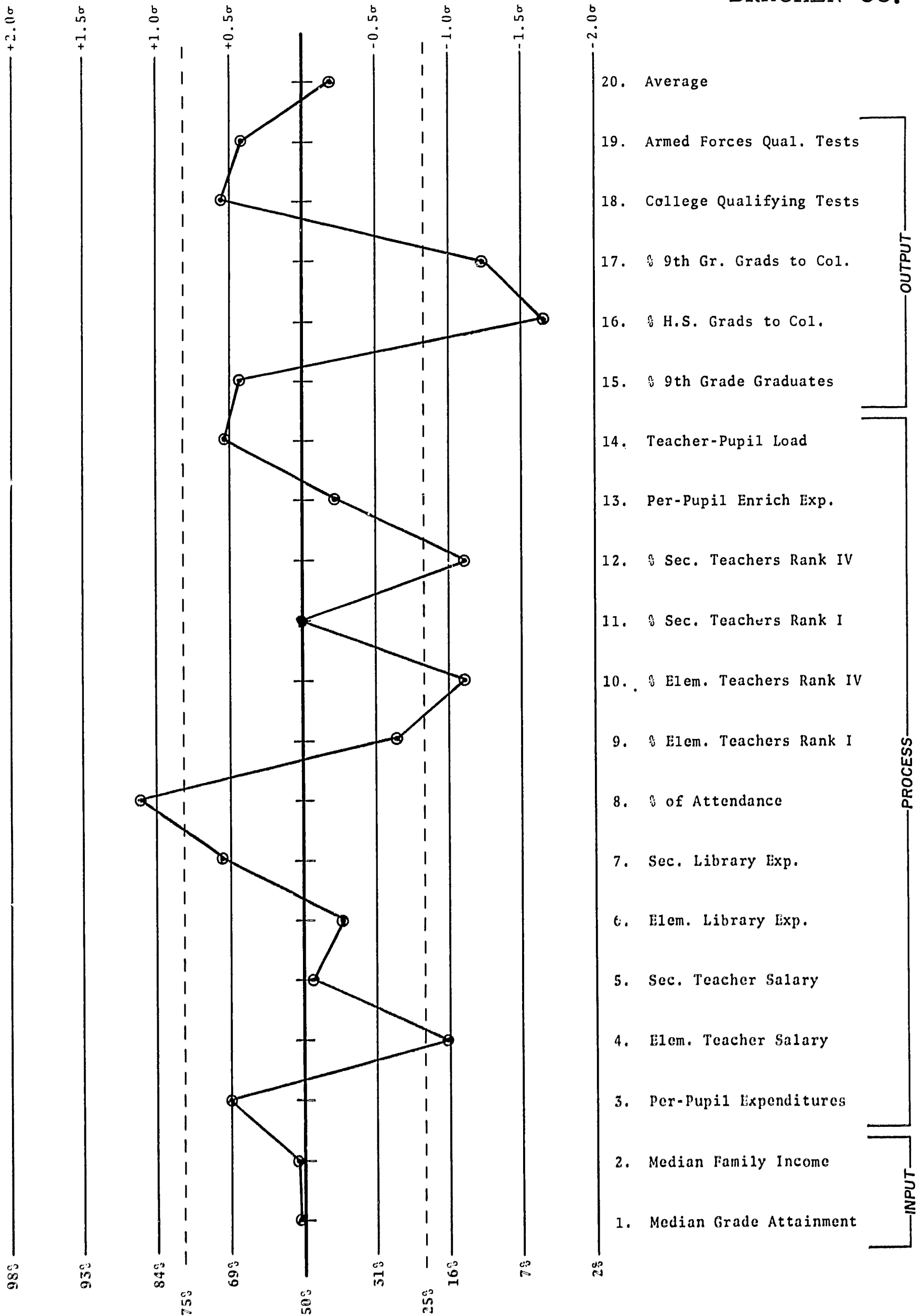
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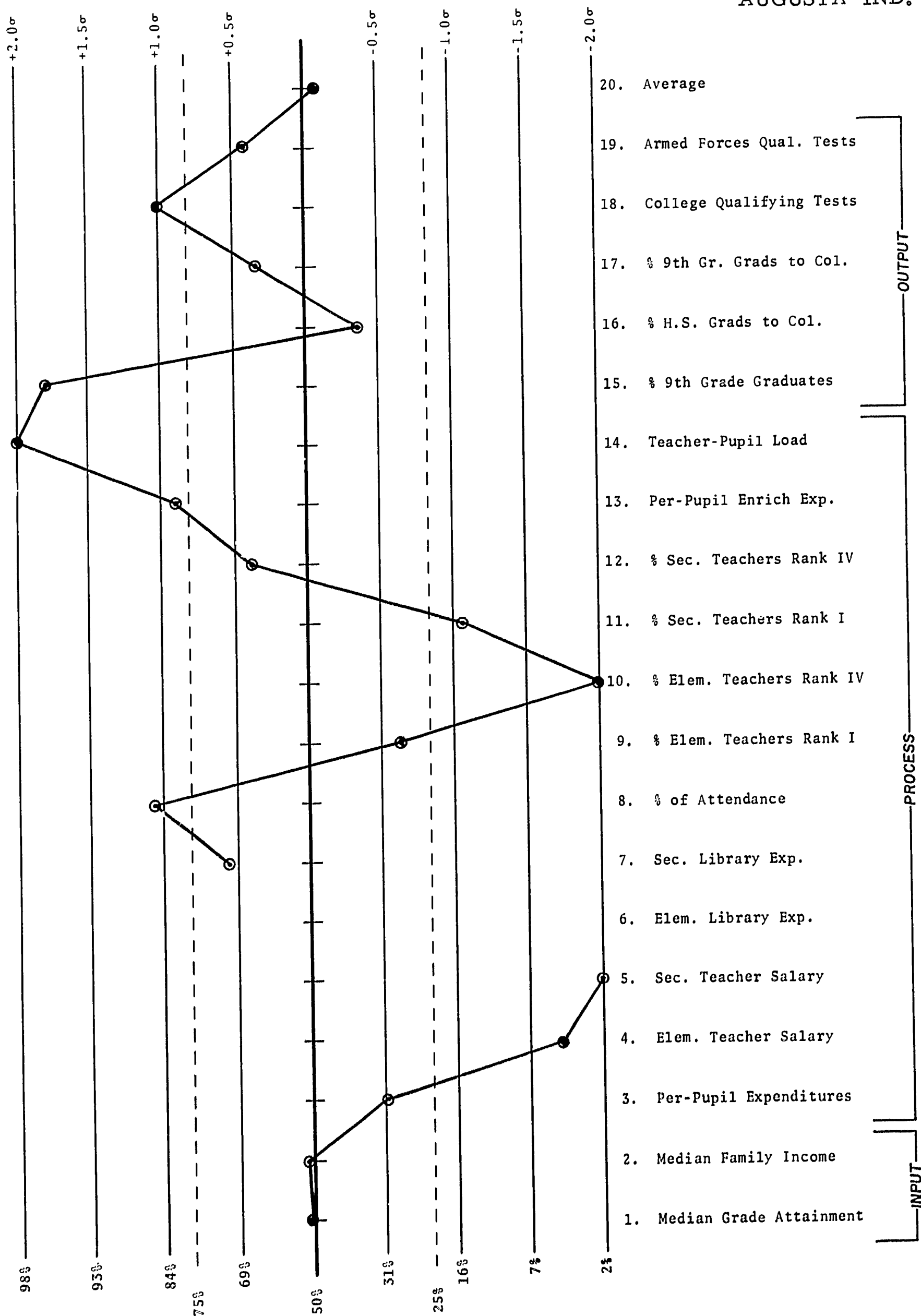
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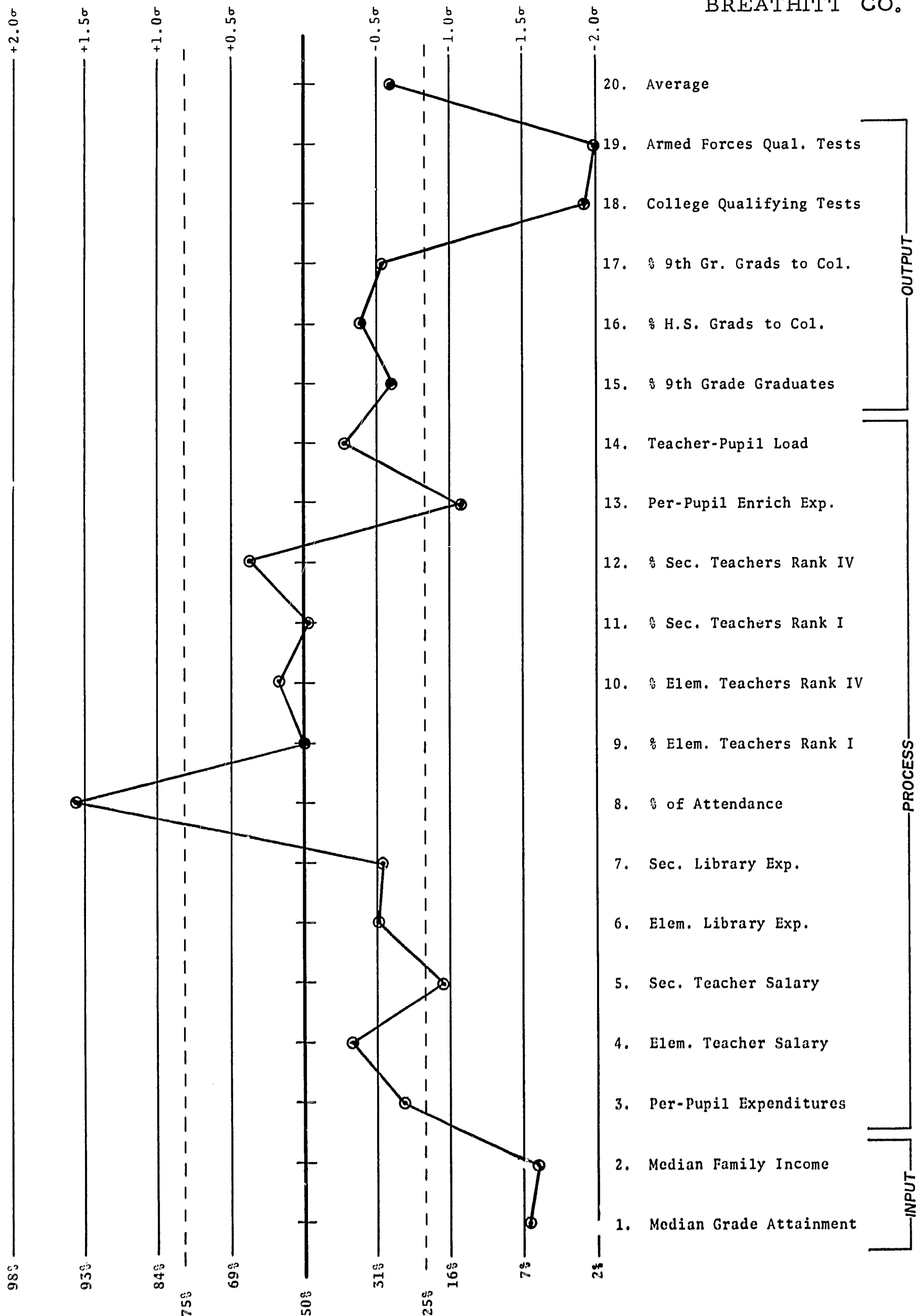
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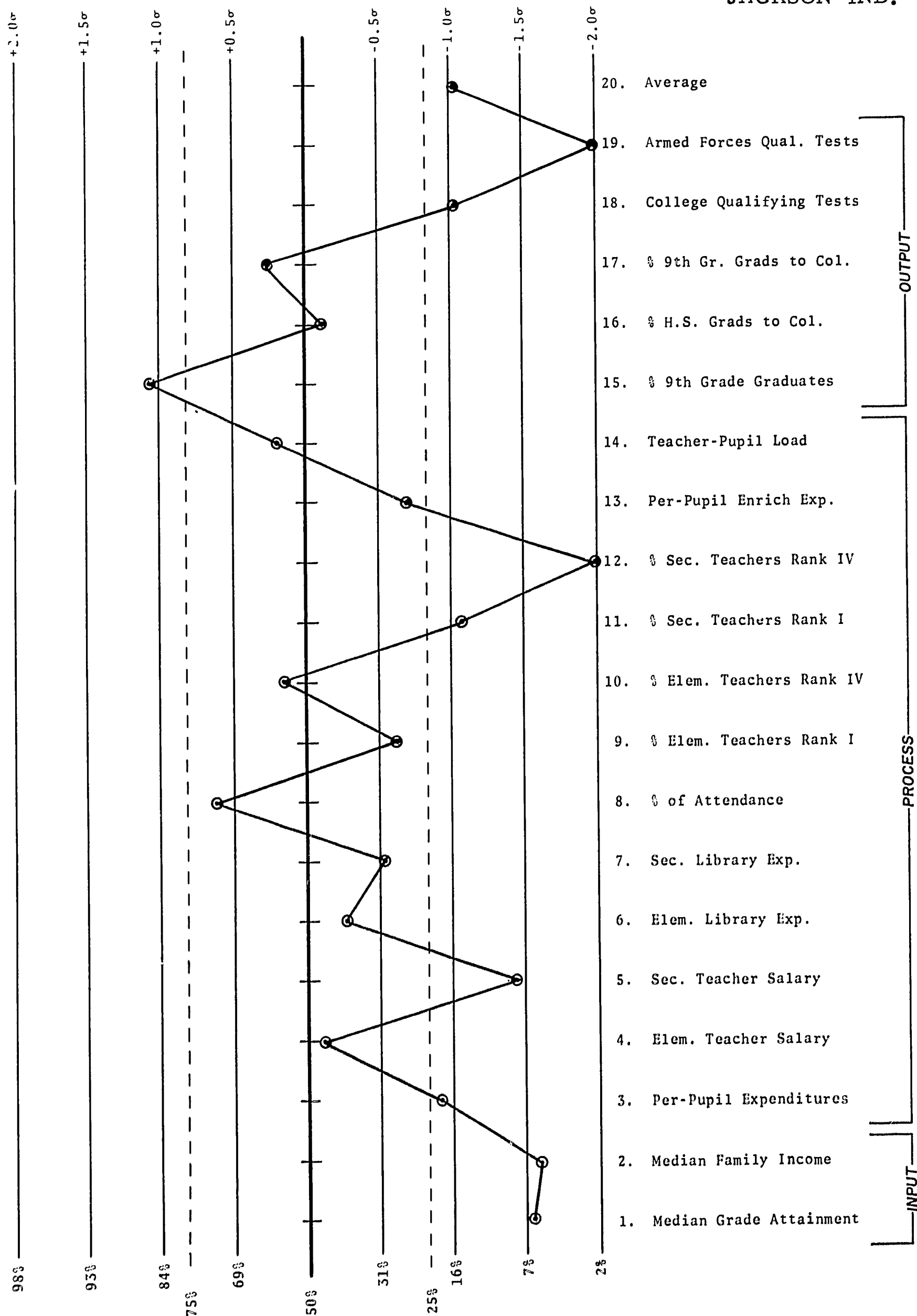
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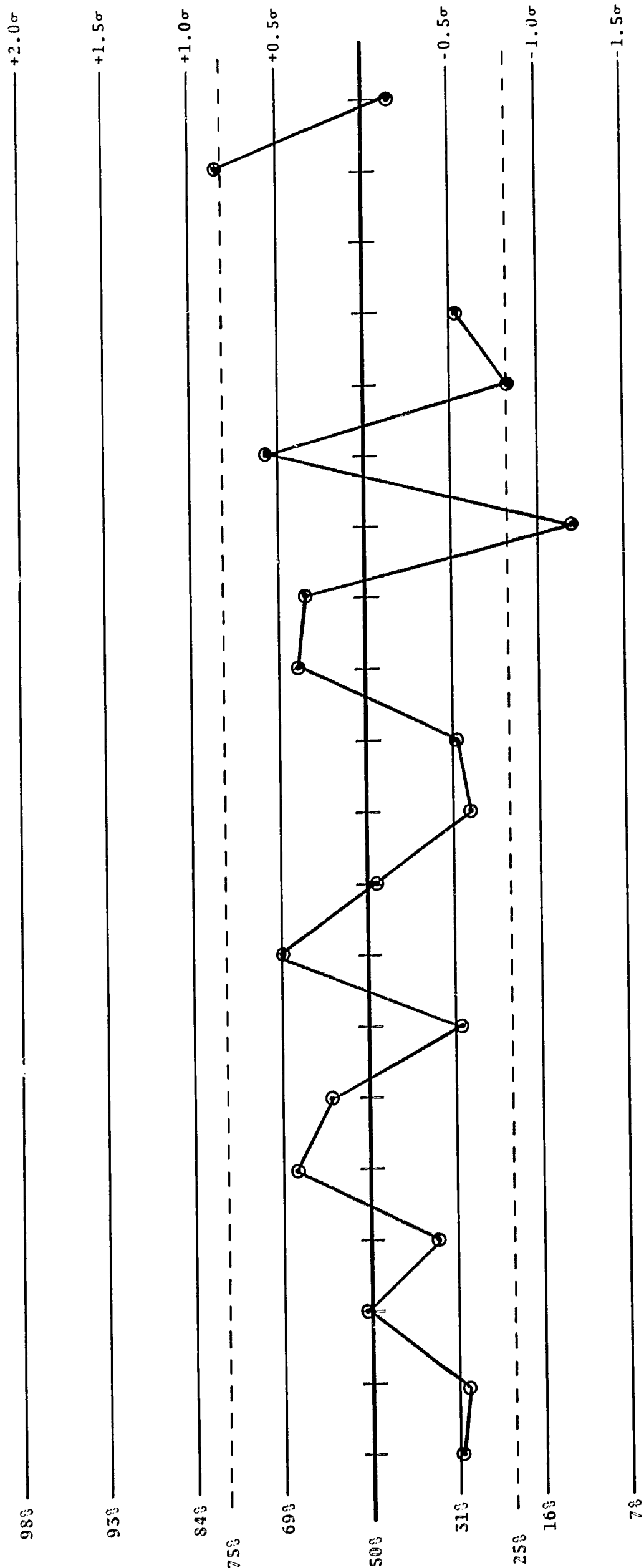
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JACKSON IND.



BRECKINRIDGE CO.



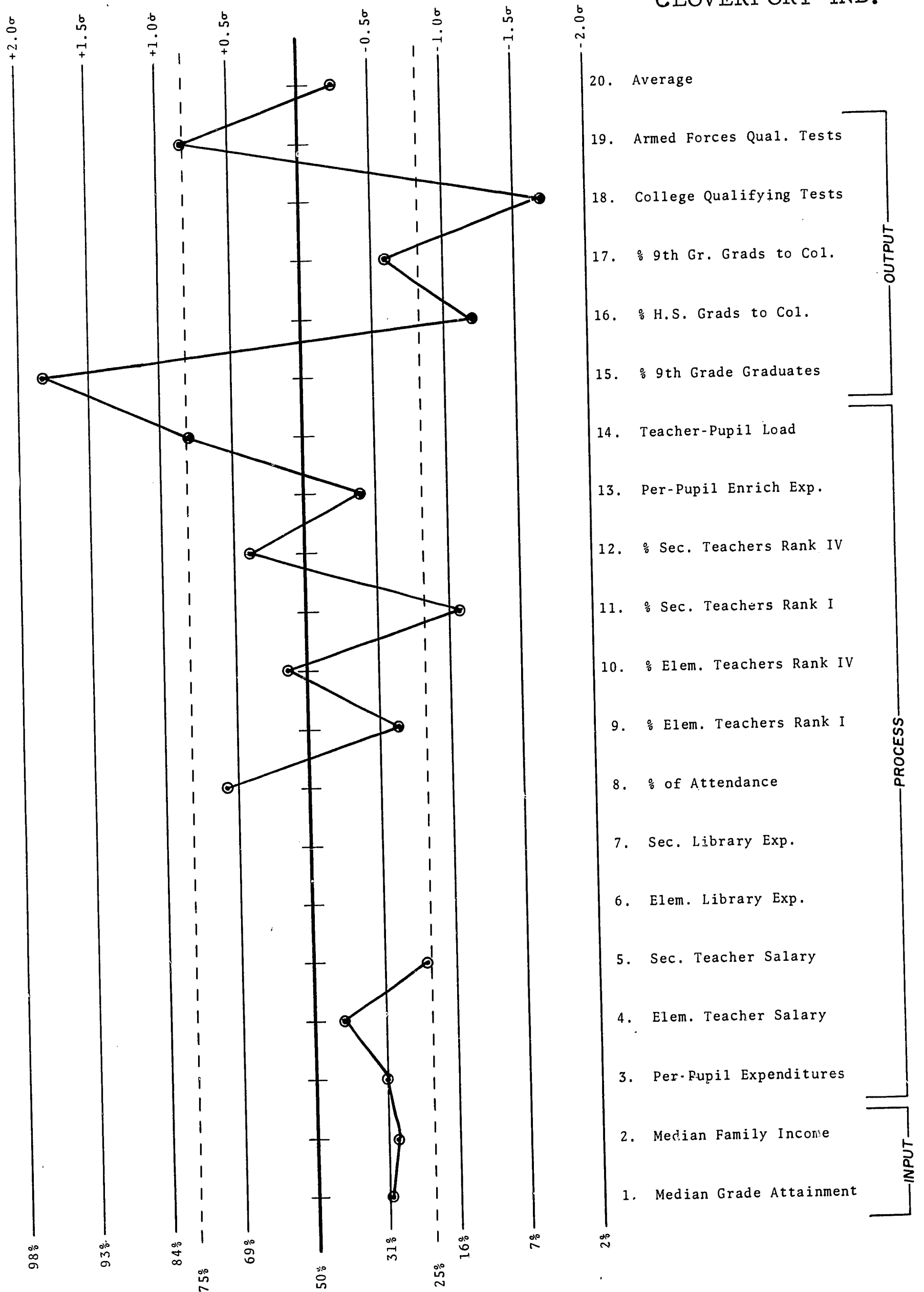
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2. Median Family Income
1. Median Grade Attainment

OUTPUT

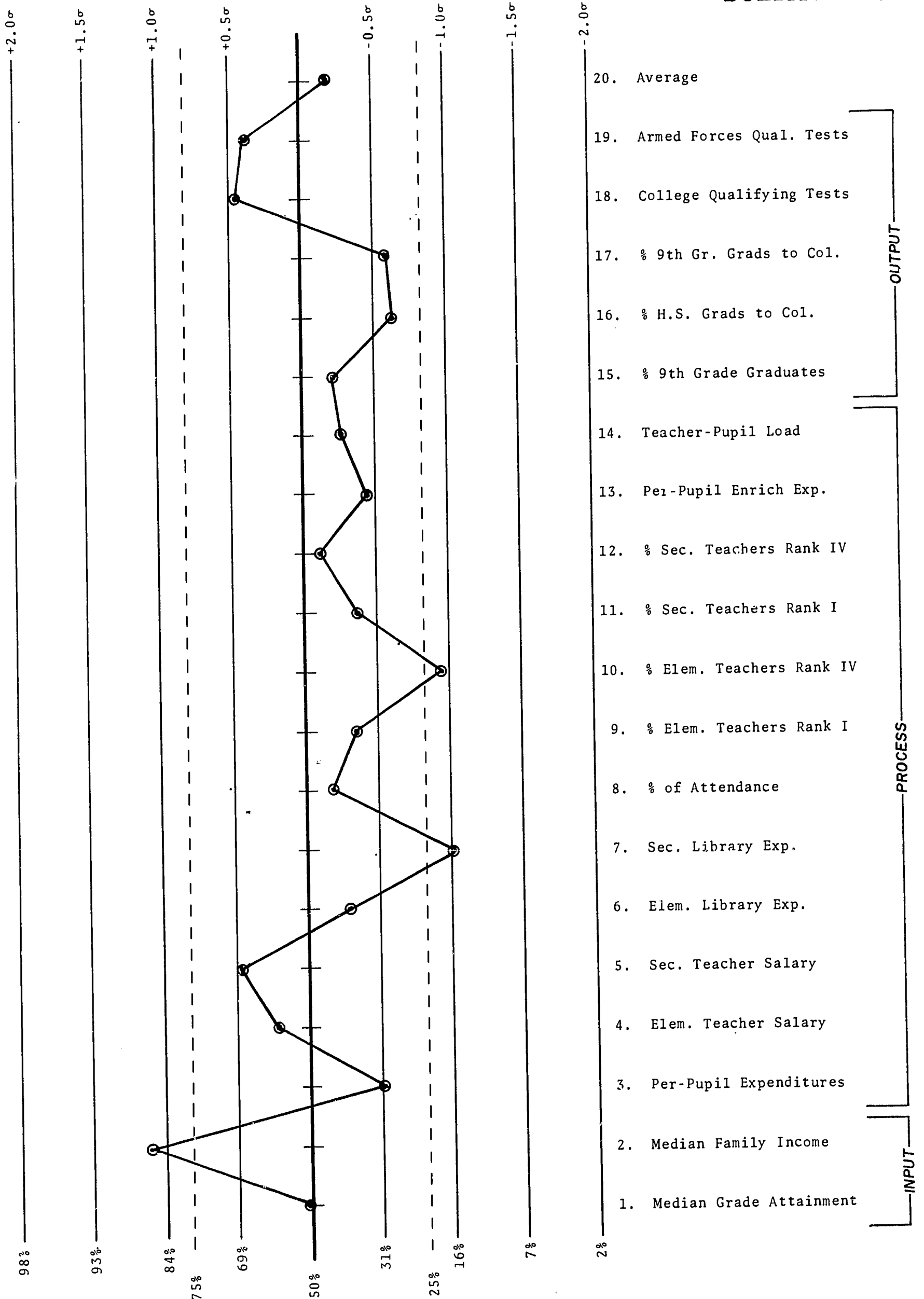
PROCESS

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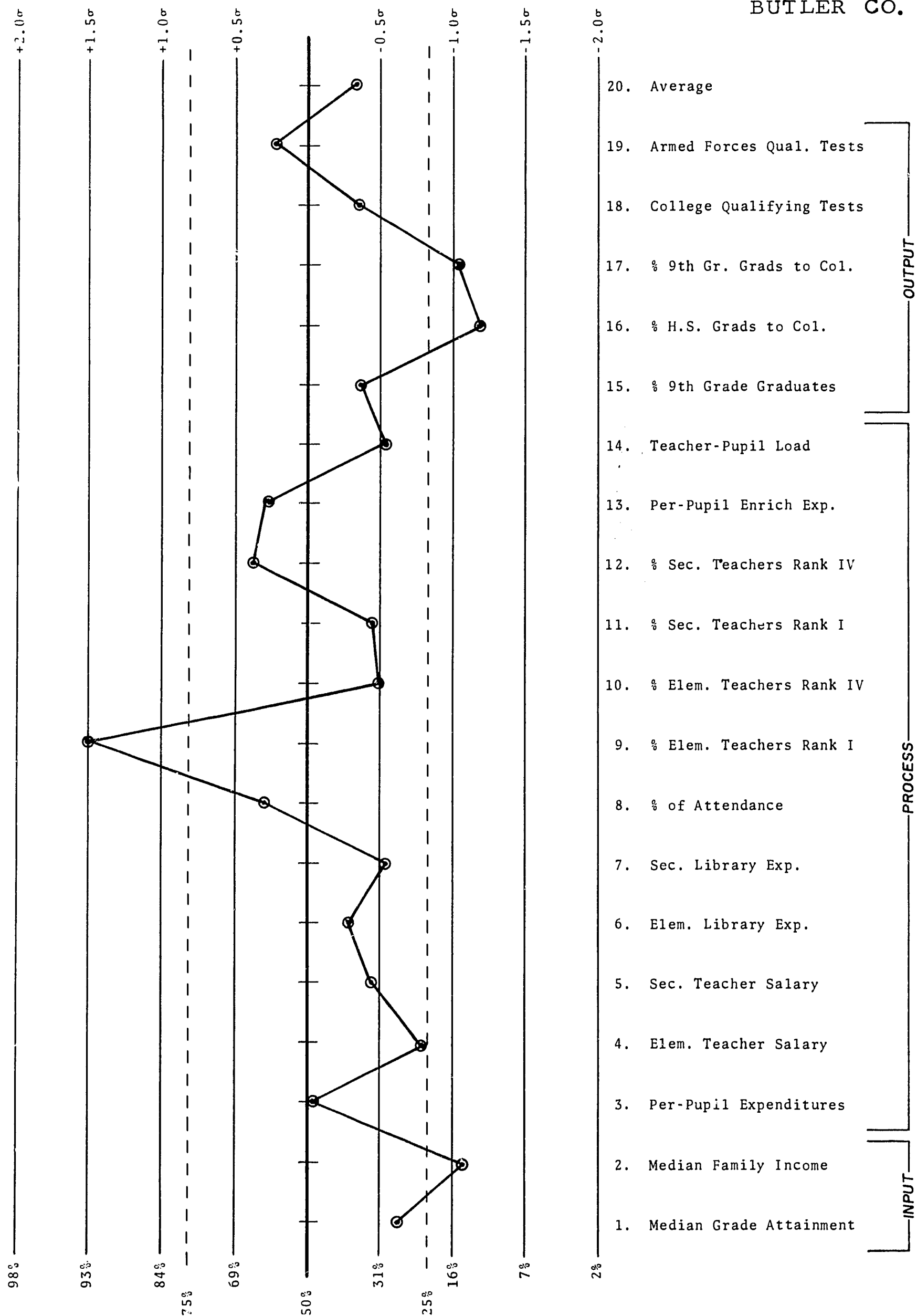
CLOVERPORT IND.



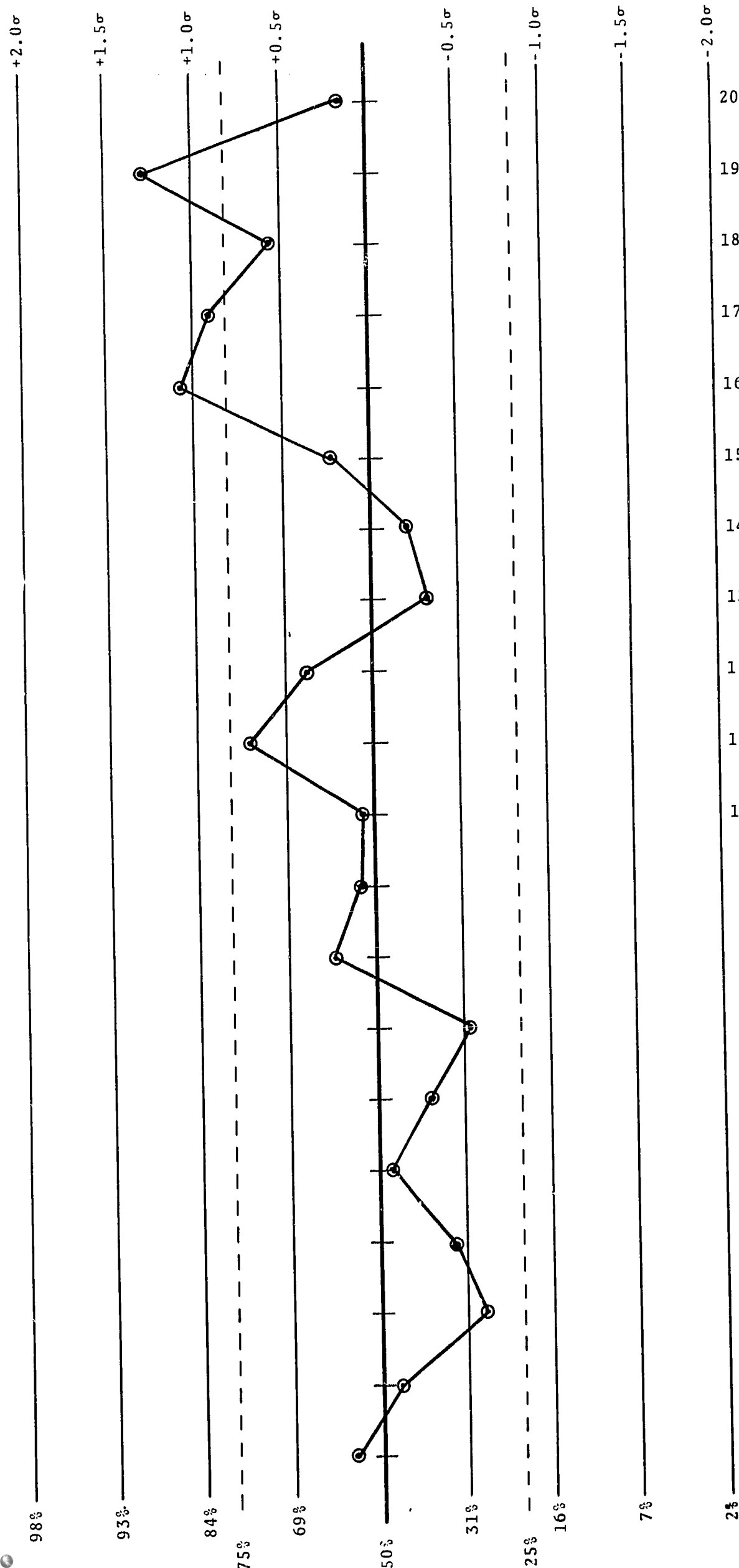
BULLITT CO.



BUTLER CO.



CALDWELL CO.



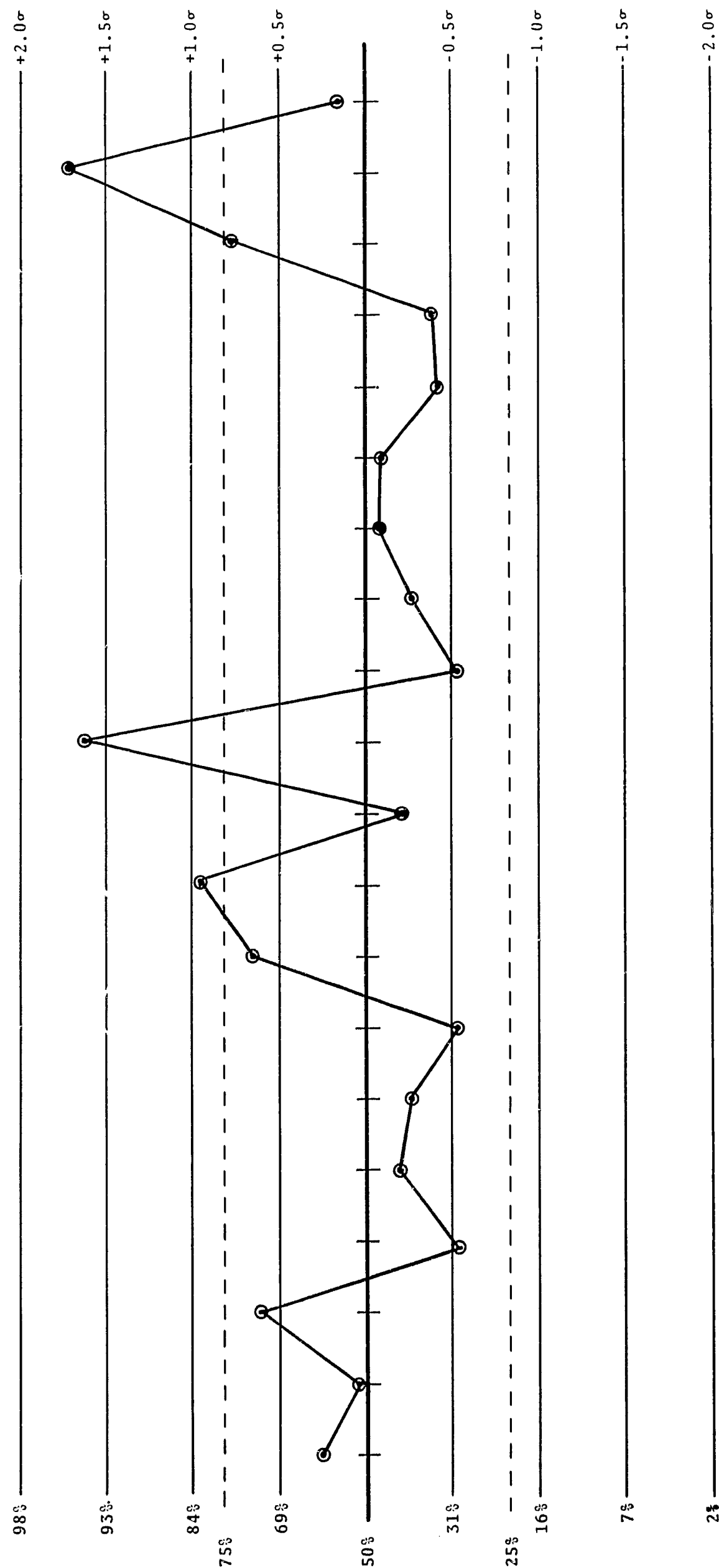
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7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

CALLOWAY CO.



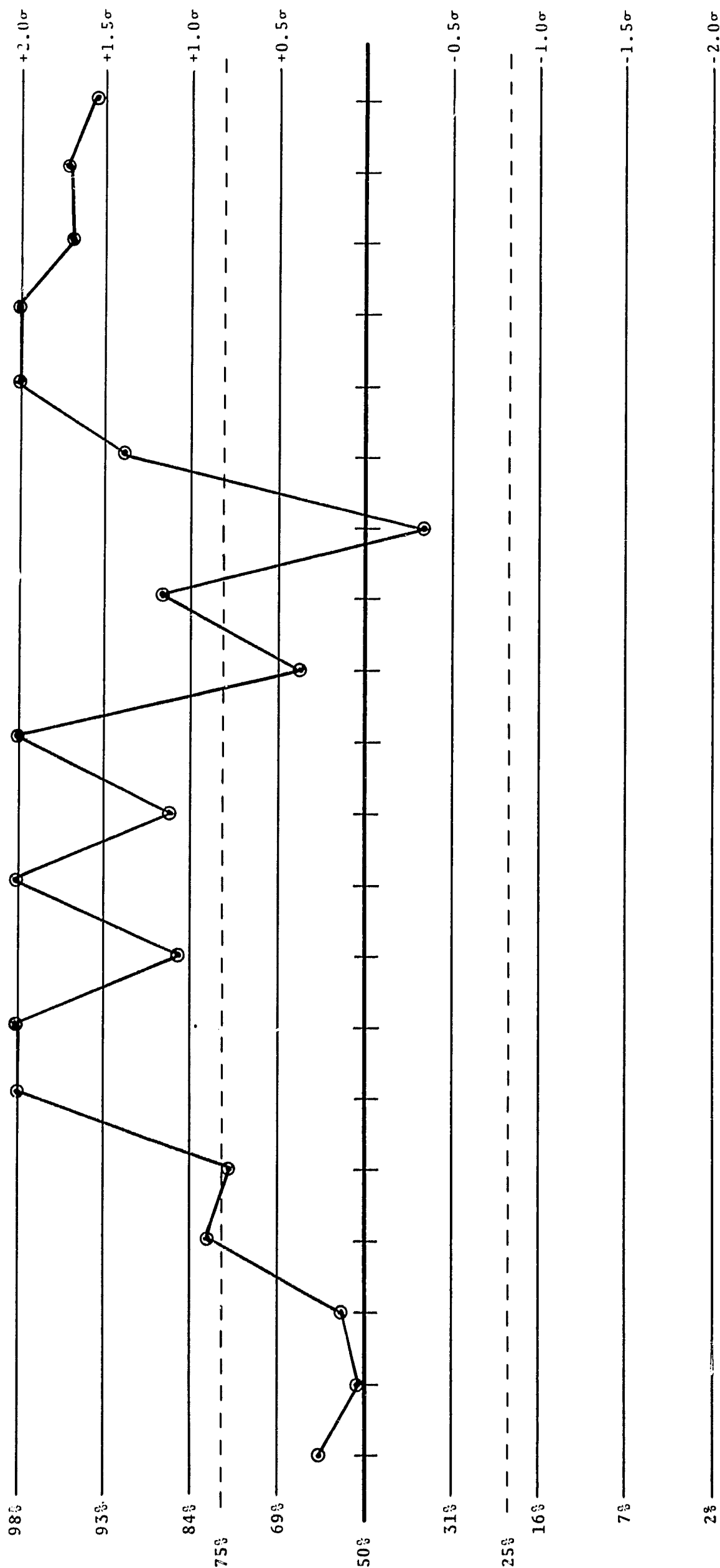
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6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

MURRAY IND.



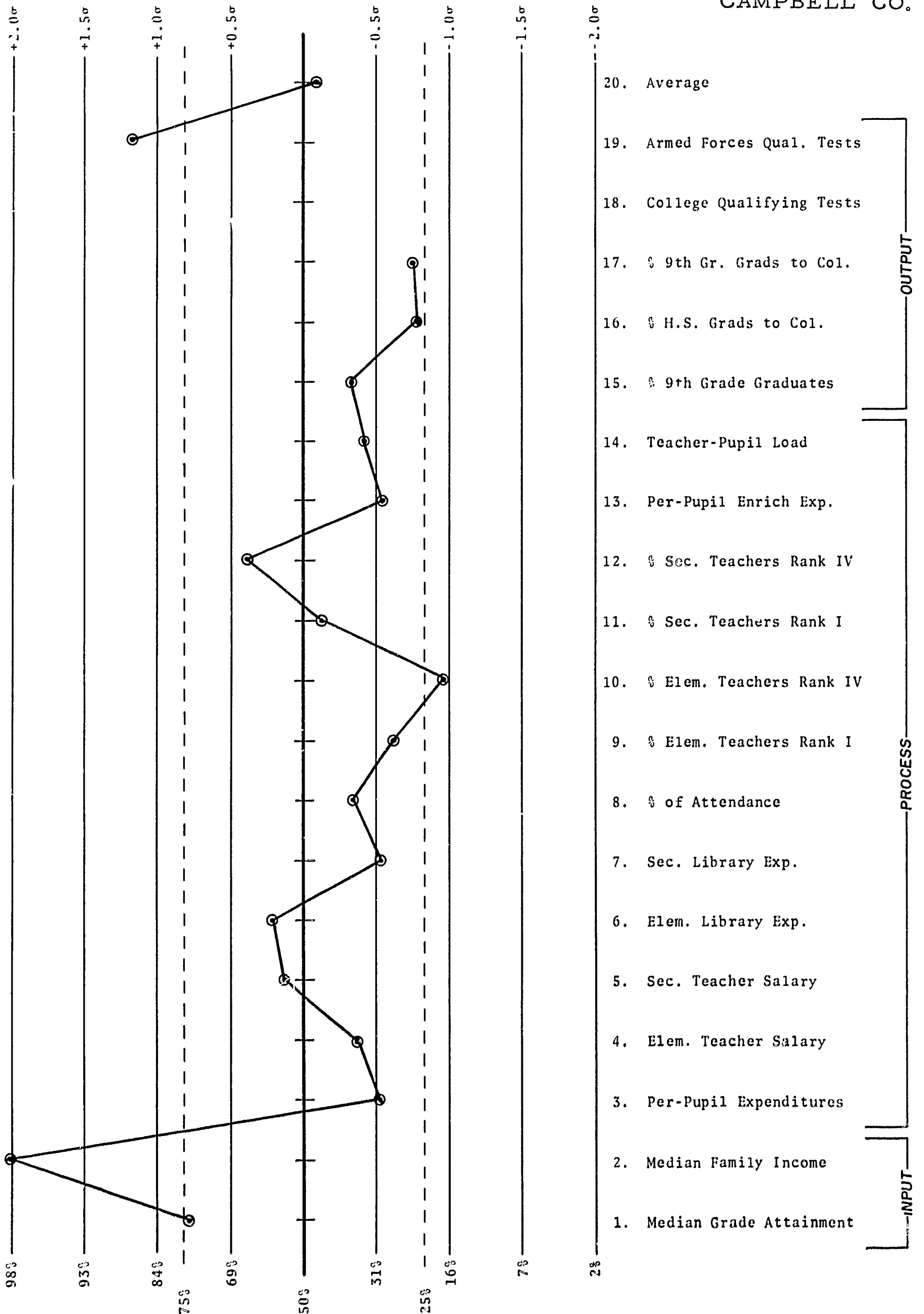
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

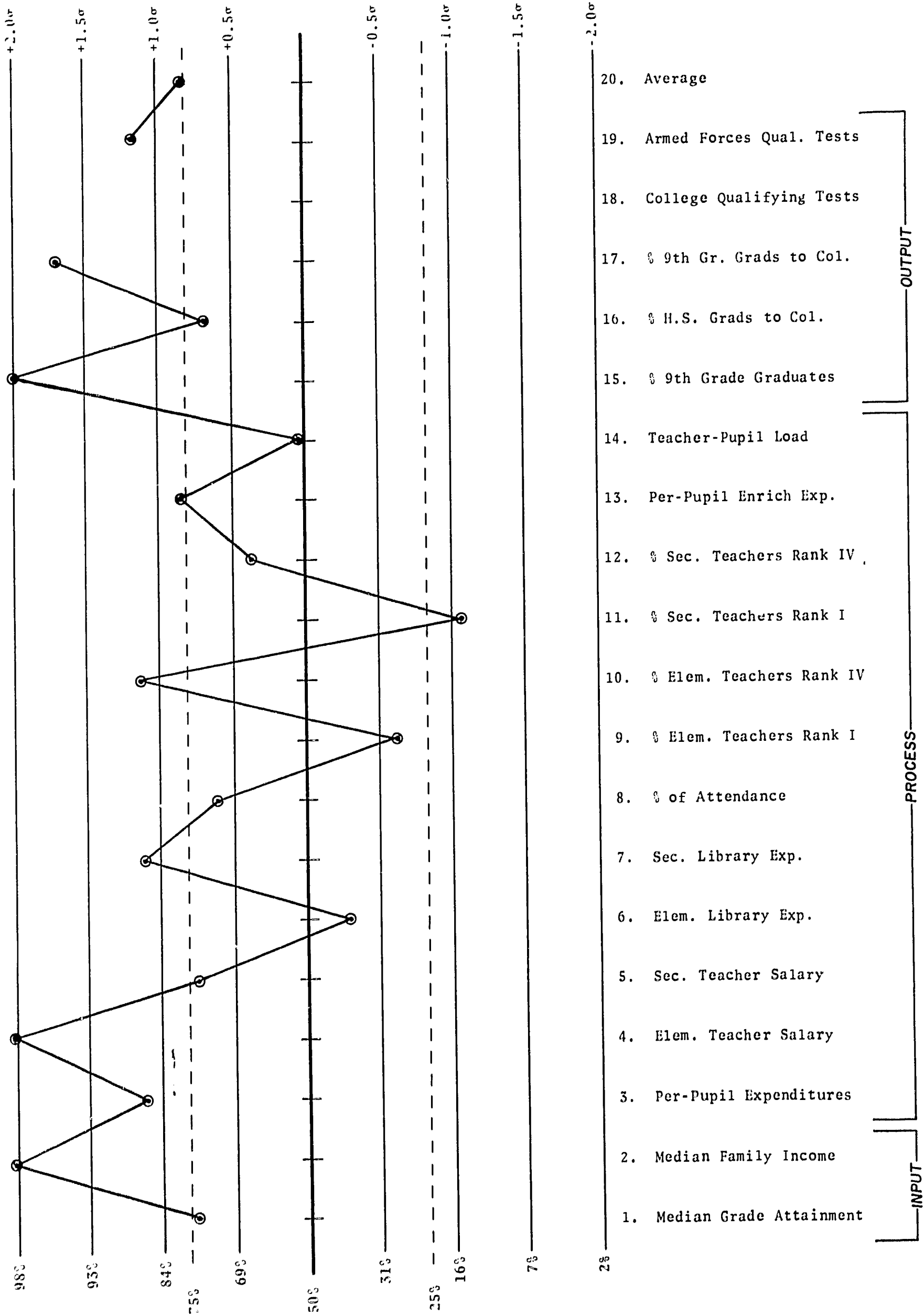
PROCESS

INPUT

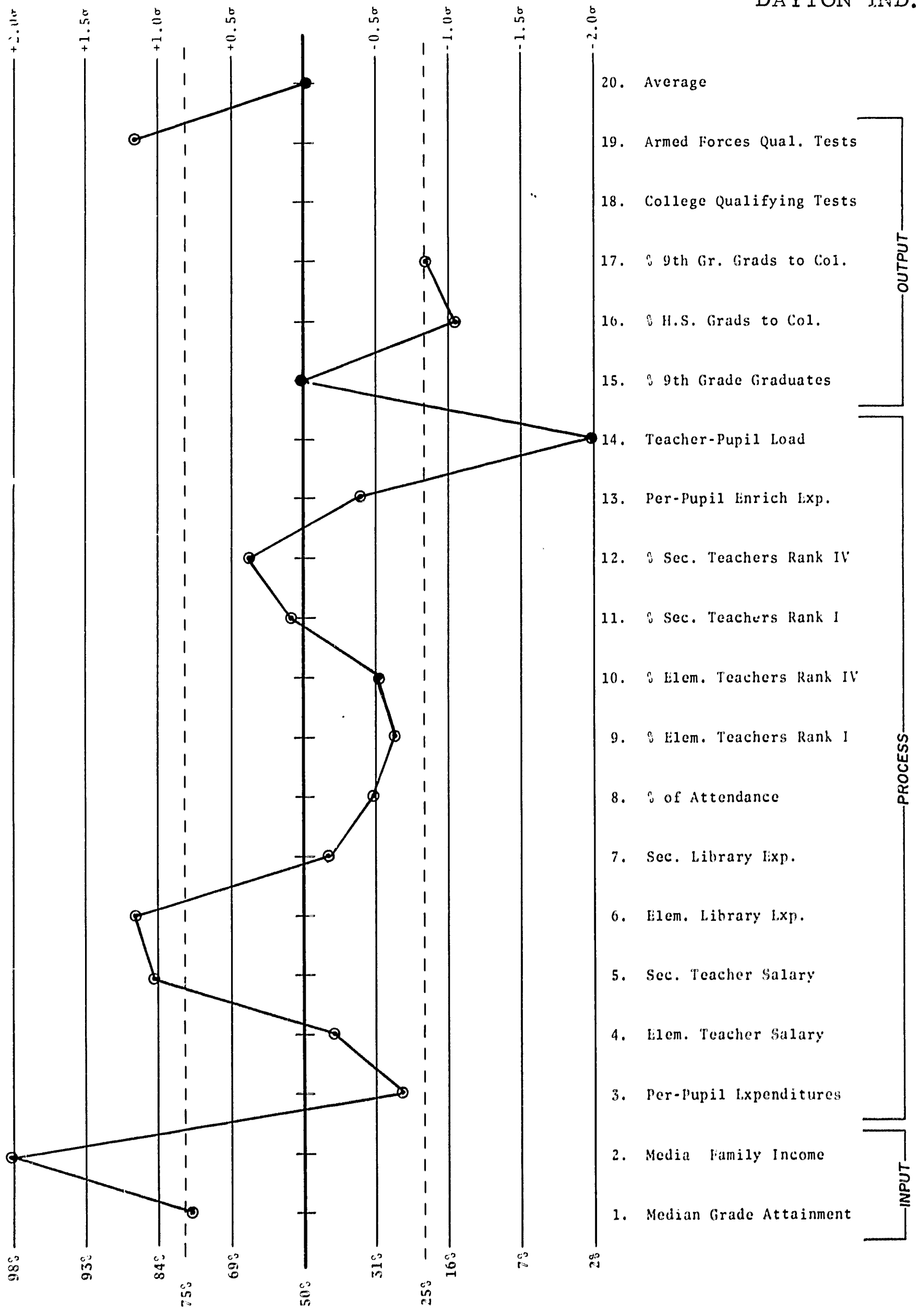
CAMPBELL CO.



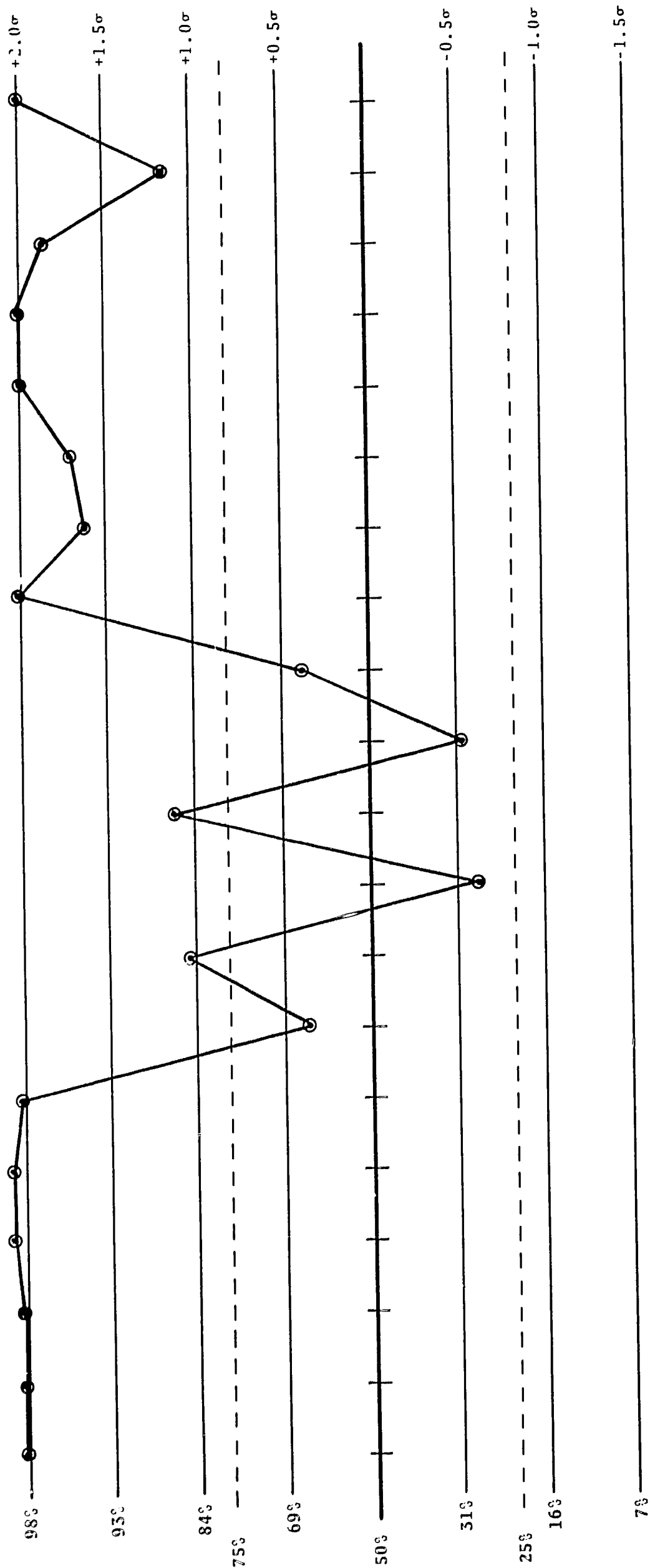
BELLEVUE IND.



DAYTON IND.



FORT THOMAS IND.



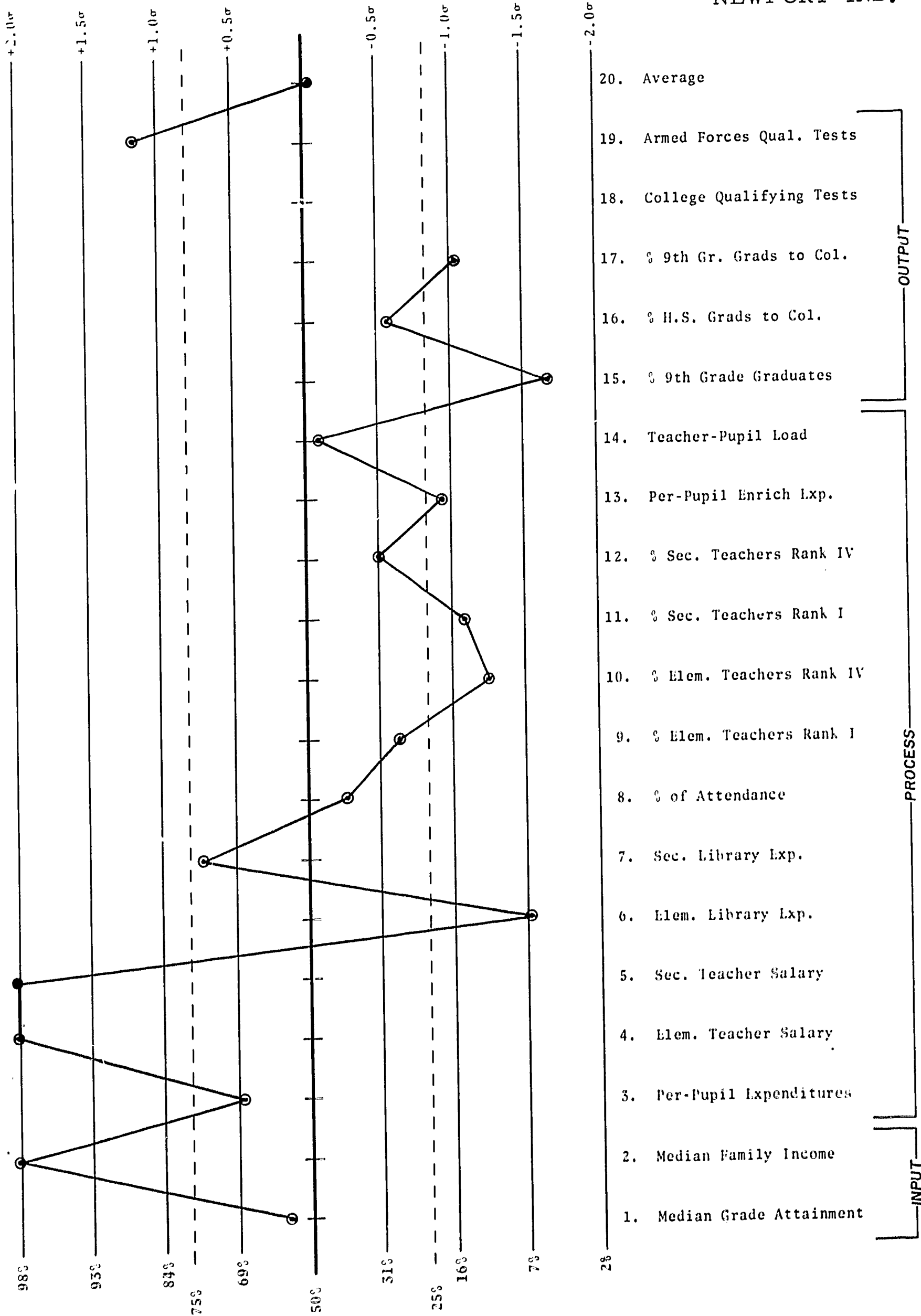
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

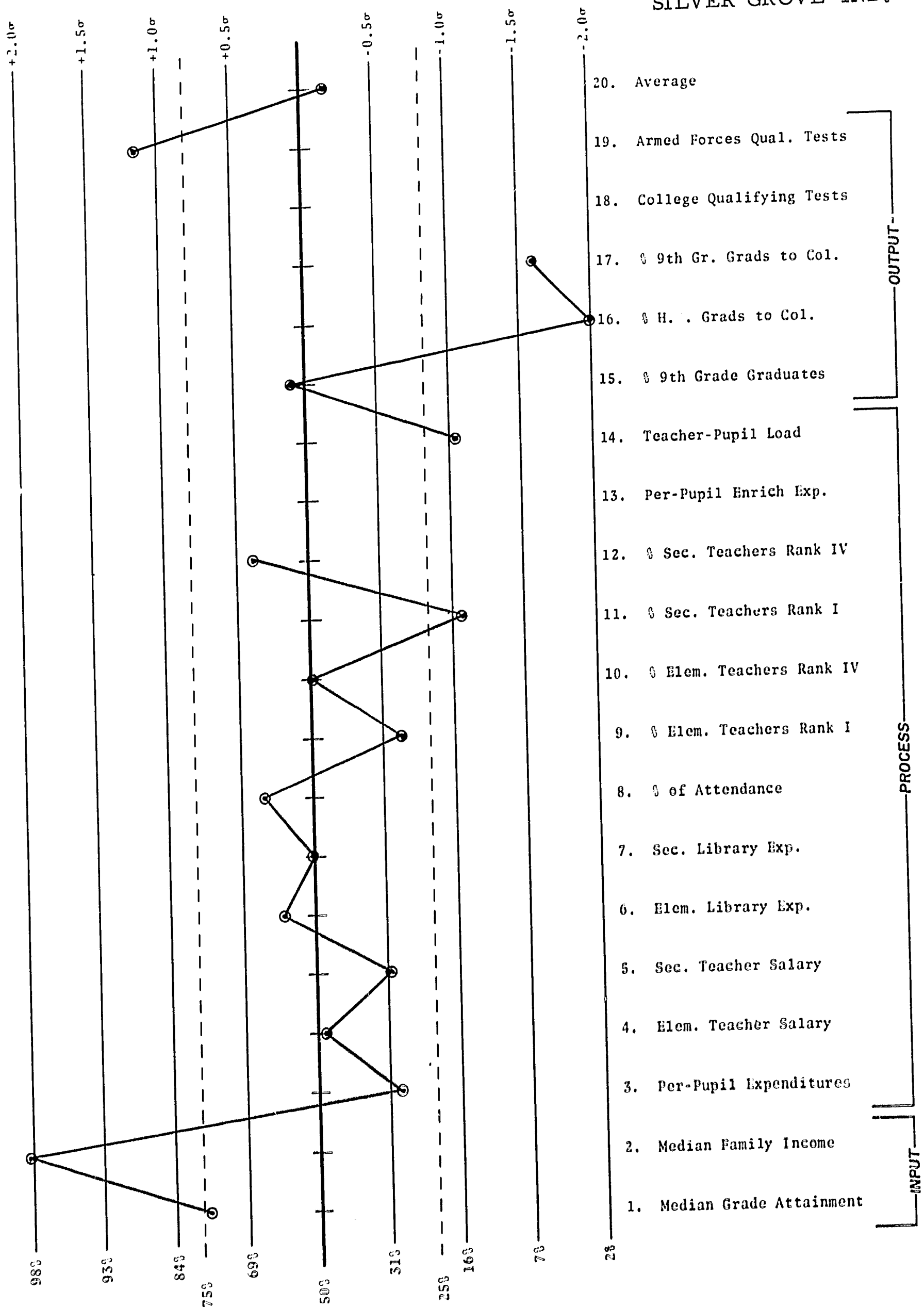
PROCESS

INPUT

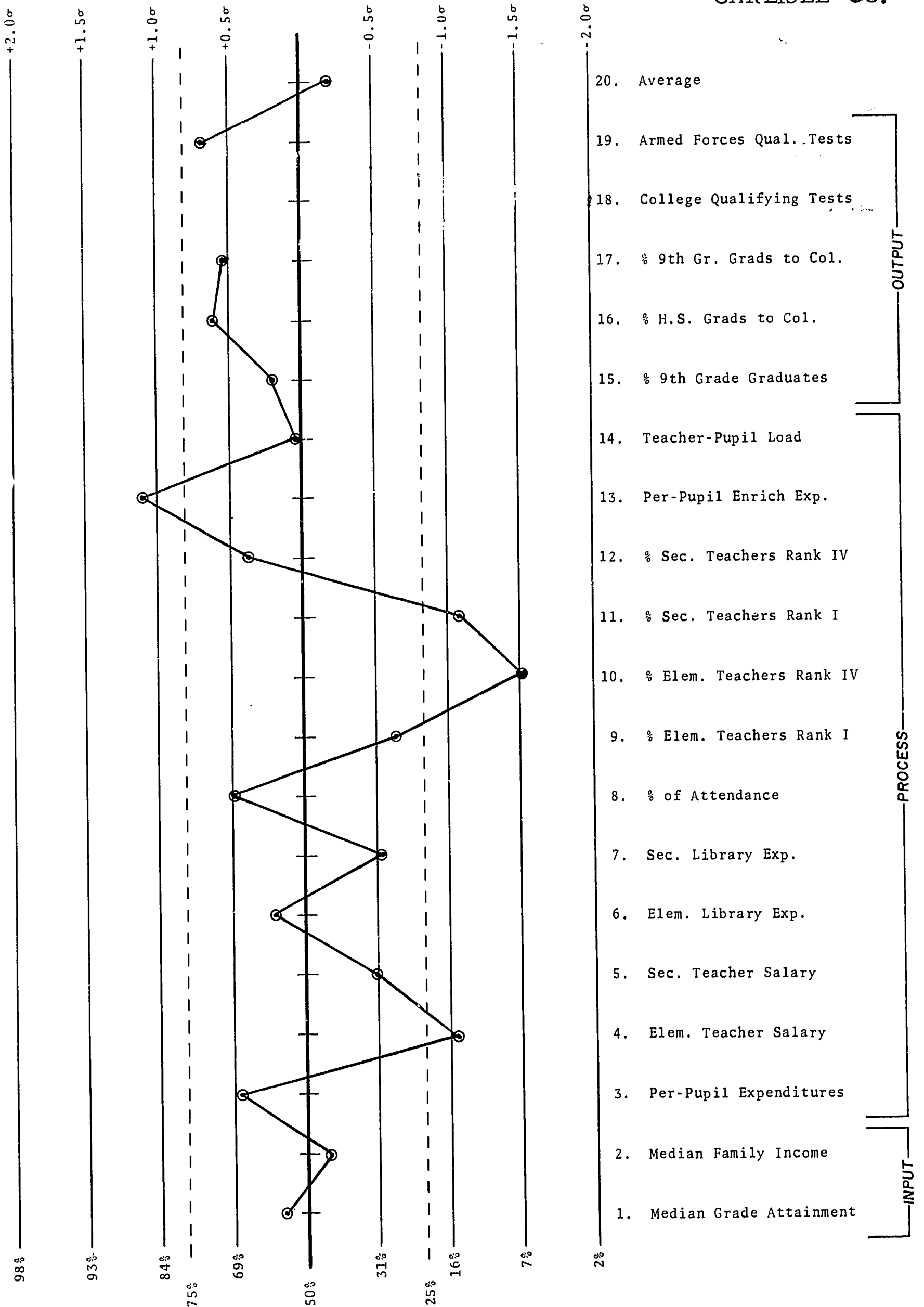
NEWPORT IND.



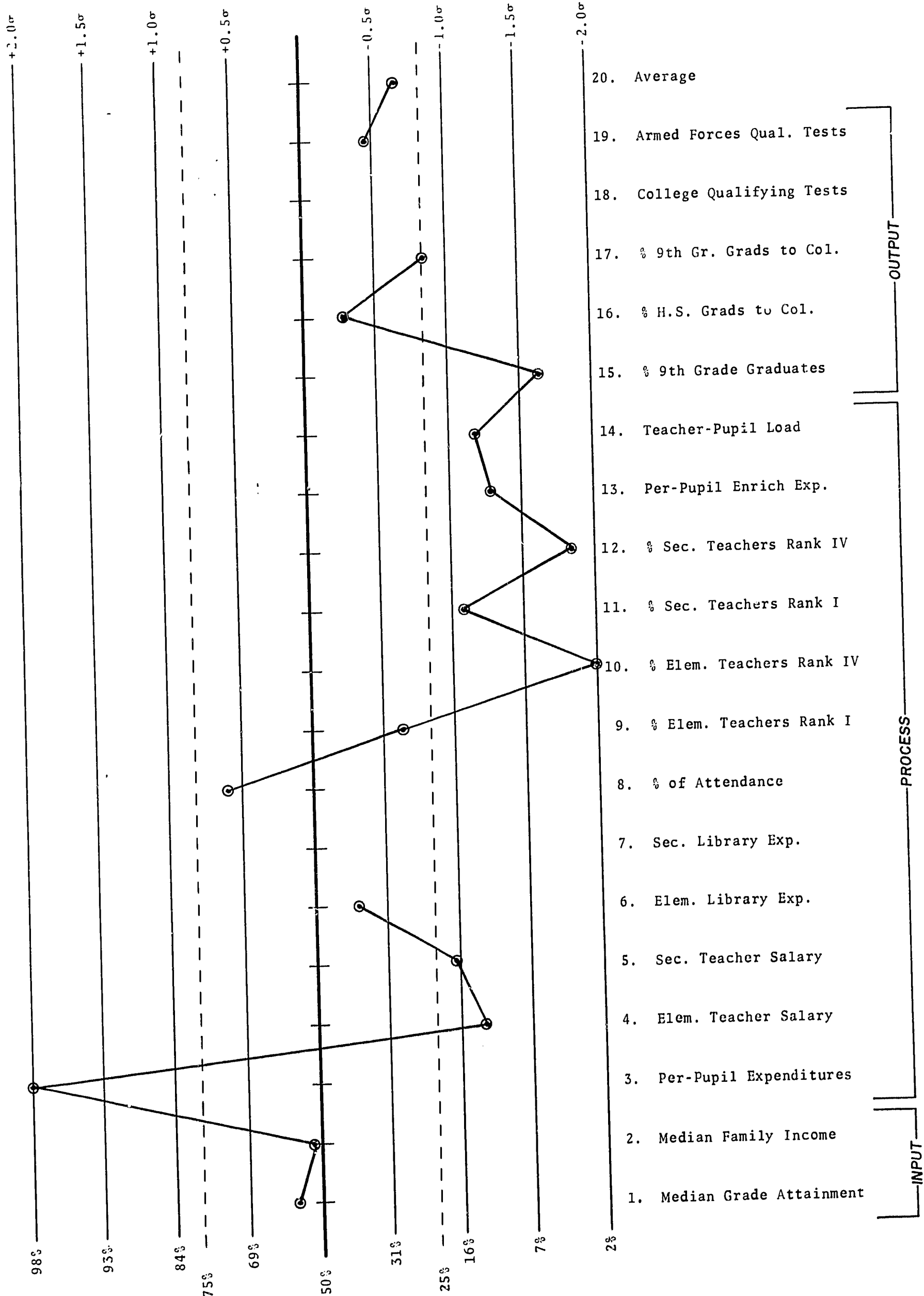
SILVER GROVE IND.



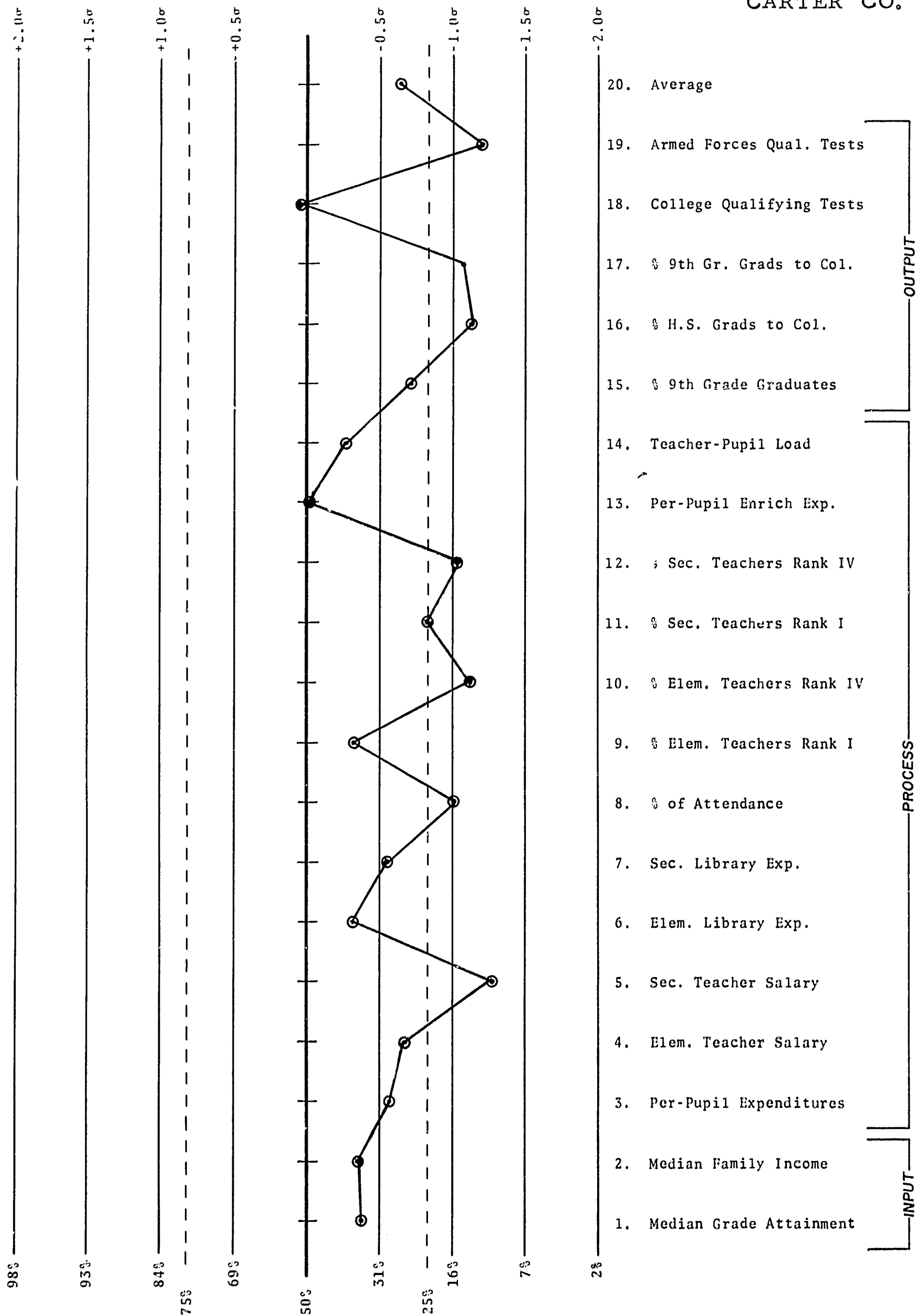
CARLISLE CO.



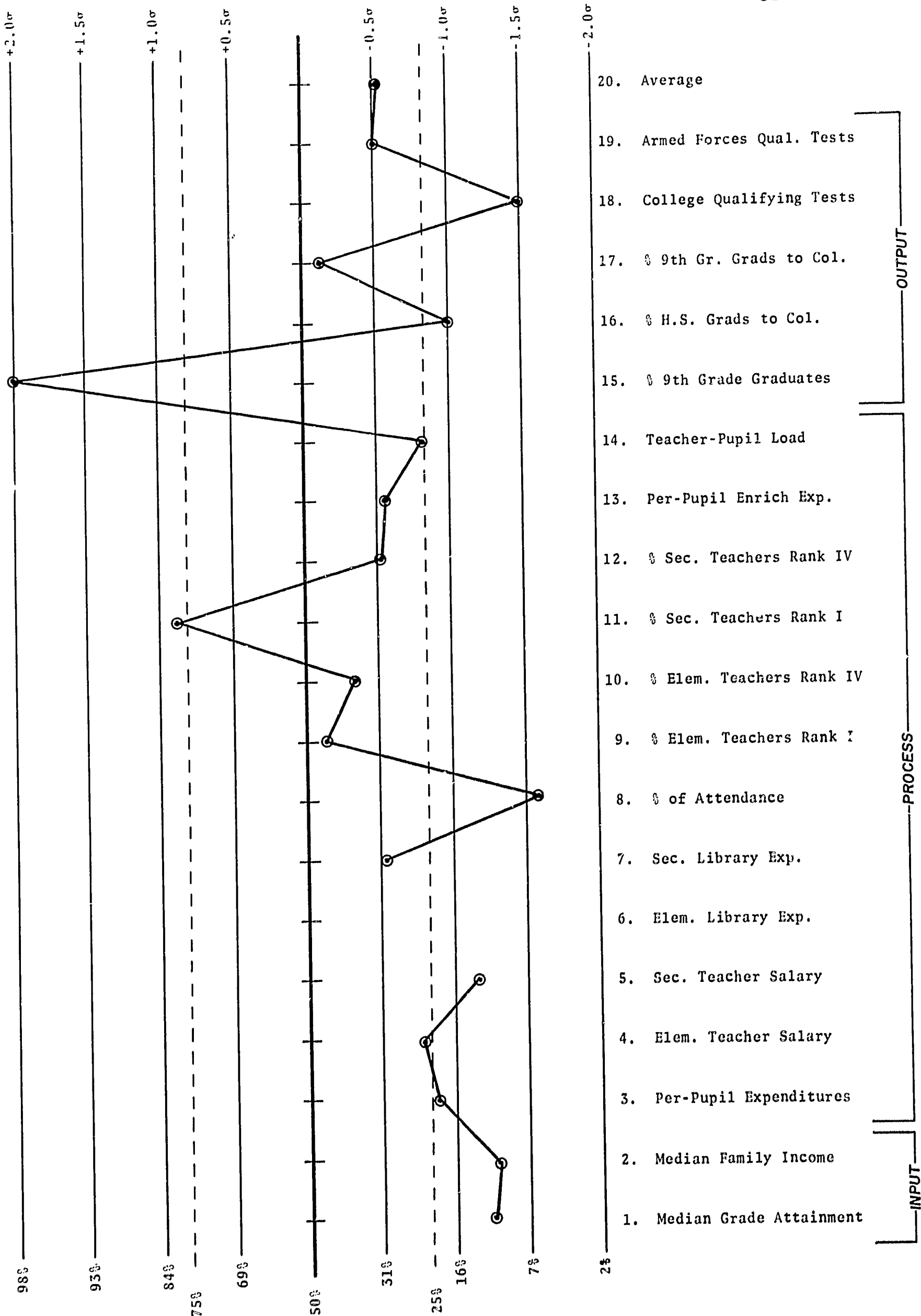
CARROLL CO.



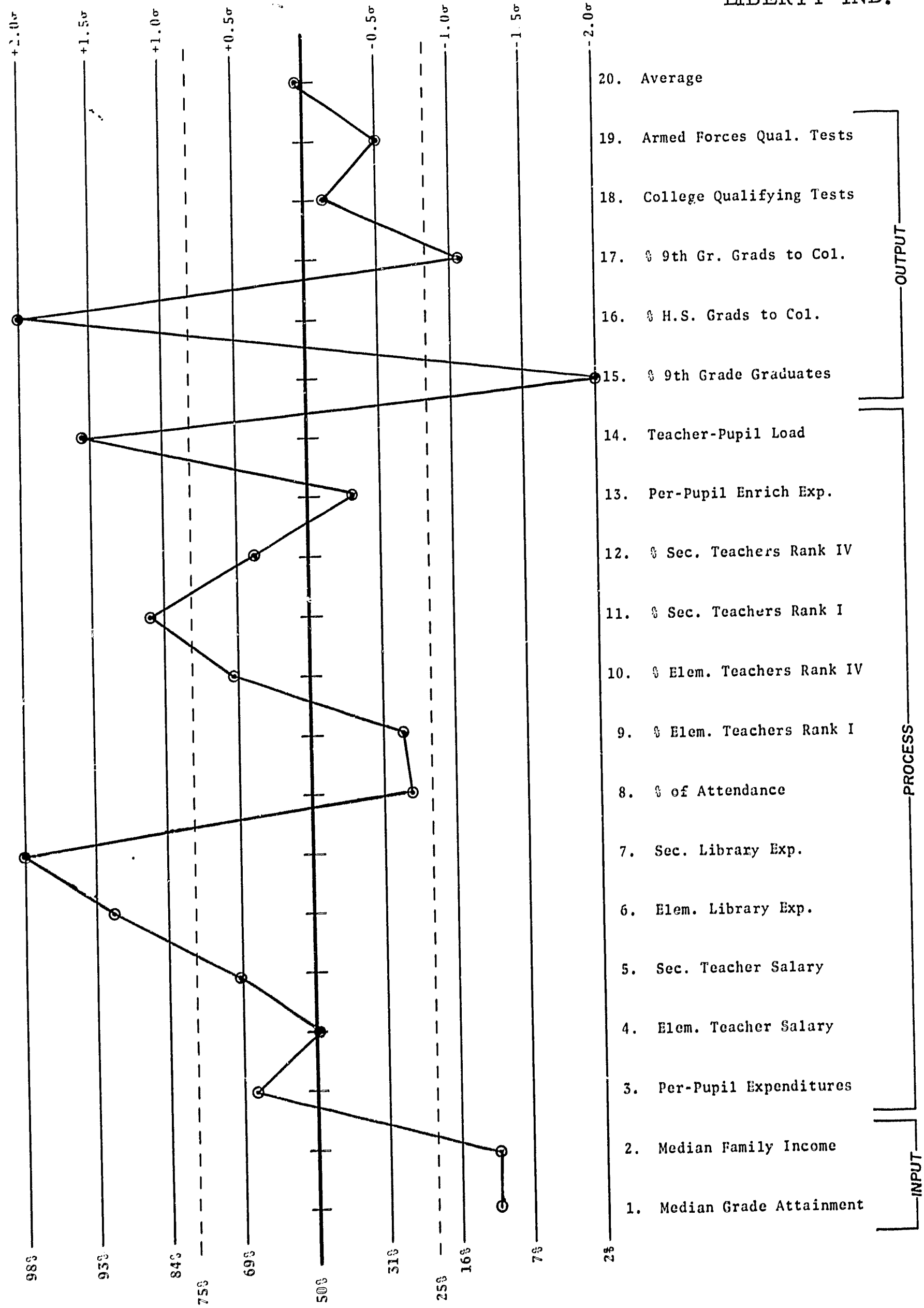
CARTER CO.



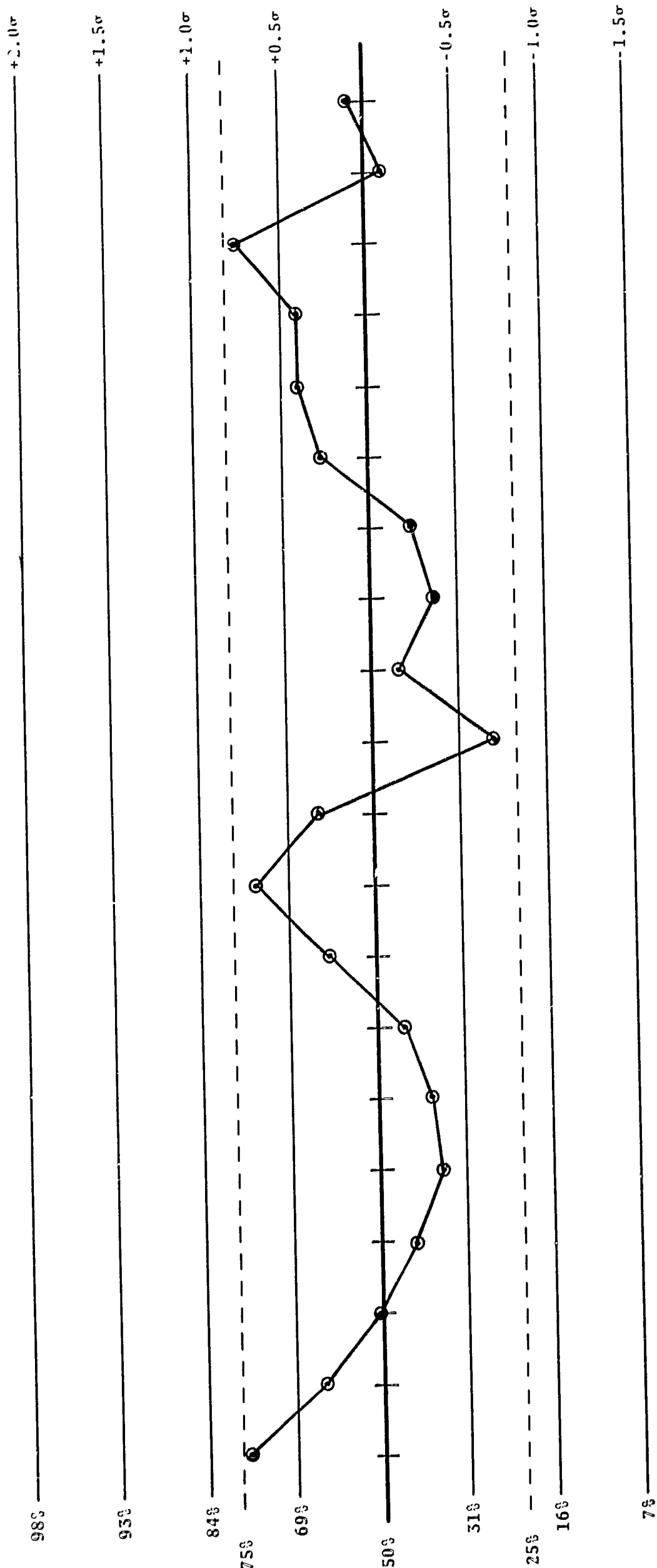
CASEY CO.



LIBERTY IND.



CHRISTIAN CO.



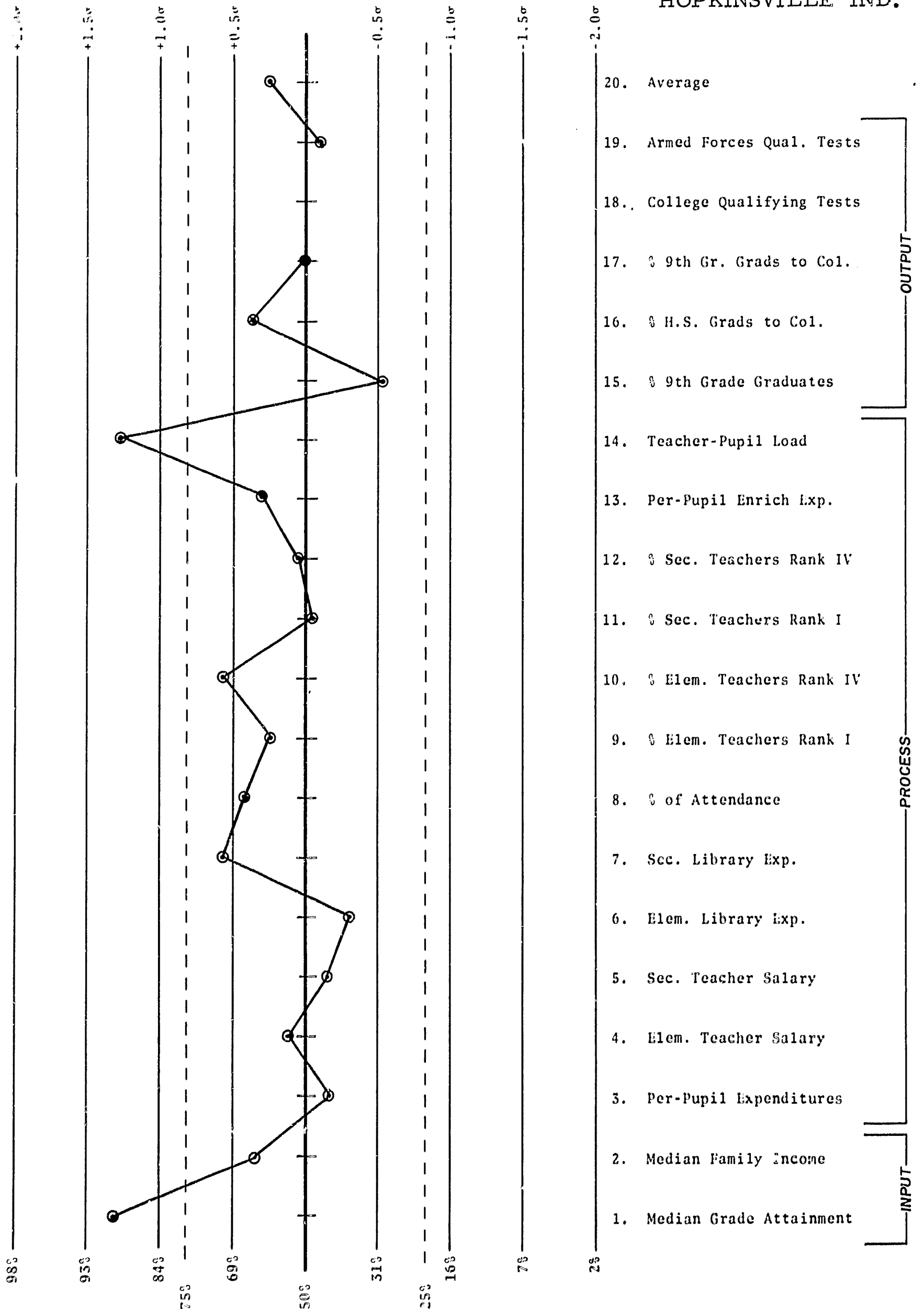
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

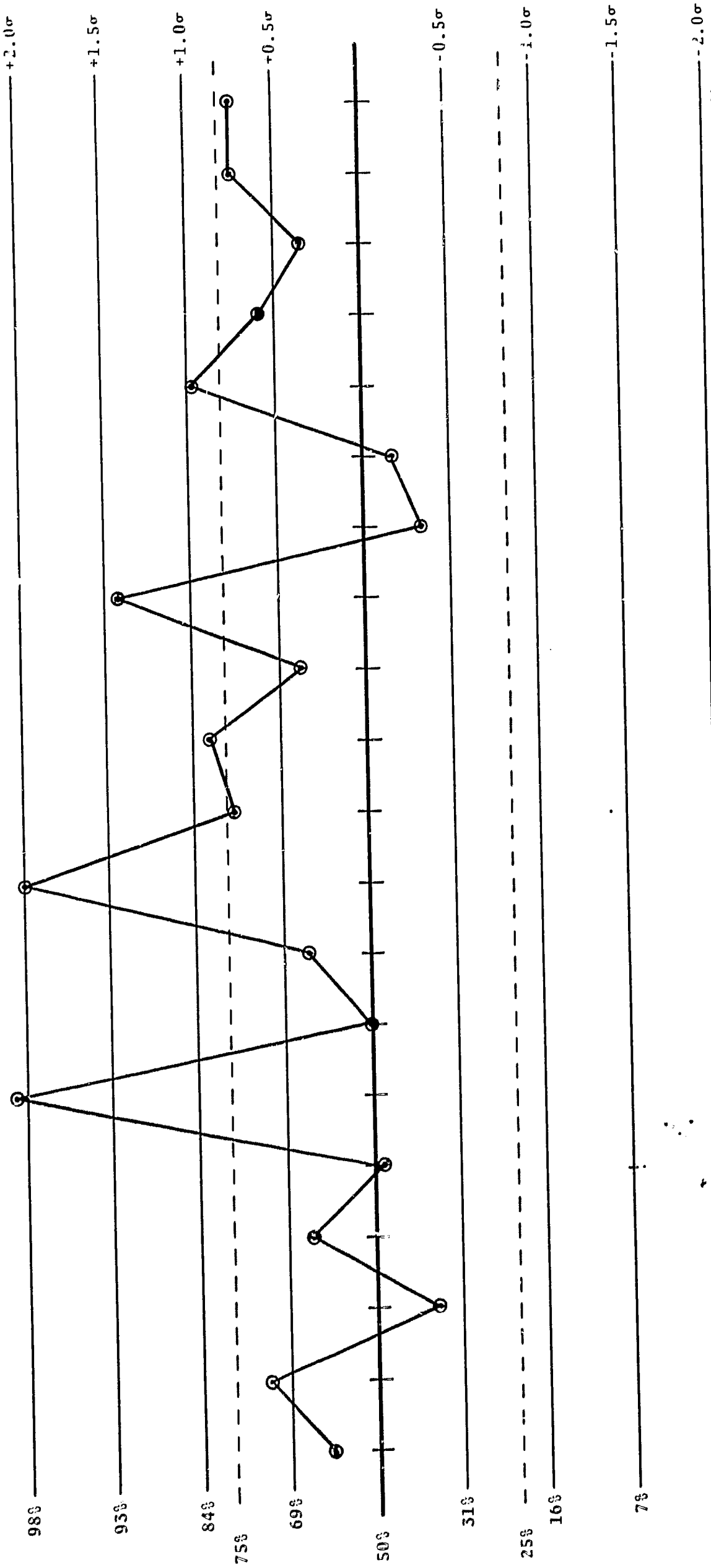
PROCESS

INPUT

HOPKINSVILLE IND.



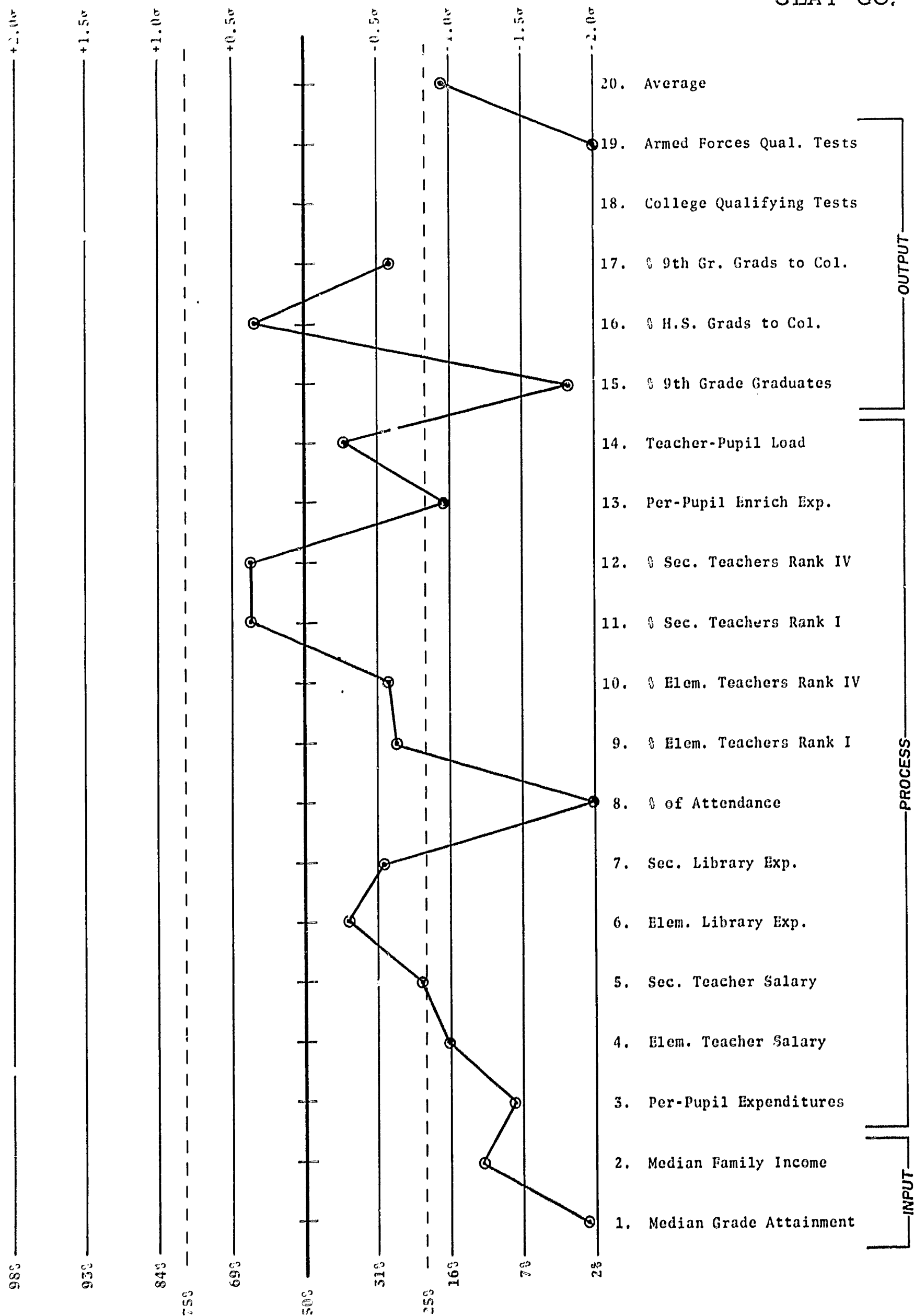
CLARK CO.



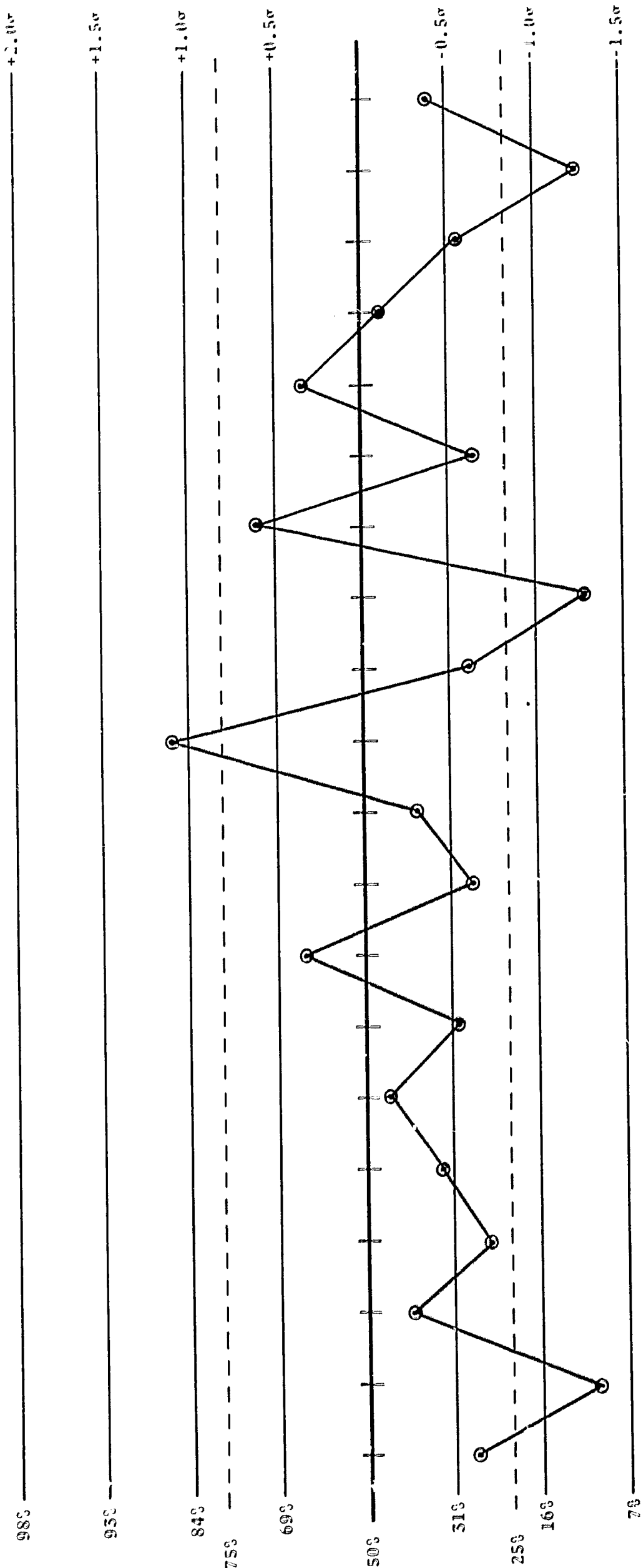
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

INPUT PROCESS OUTPUT

CLAY CO.



CLINTON CO.



20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

17. % 9th Gr. Grads to Col.

16. % H.S. Grads to Col.

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

12. % Sec. Teachers Rank IV

11. % Sec. Teachers Rank 1

10. % Elem. Teachers Rank IV

9. % Elem. Teachers Rank 1

8. % of Attendance

7. Sec. Library Exp.

6. Elem. Library Exp.

5. Sec. Teacher Salary

4. Elem. Teacher Salary

3. Per-Pupil Expenditures

2. Median Family Income

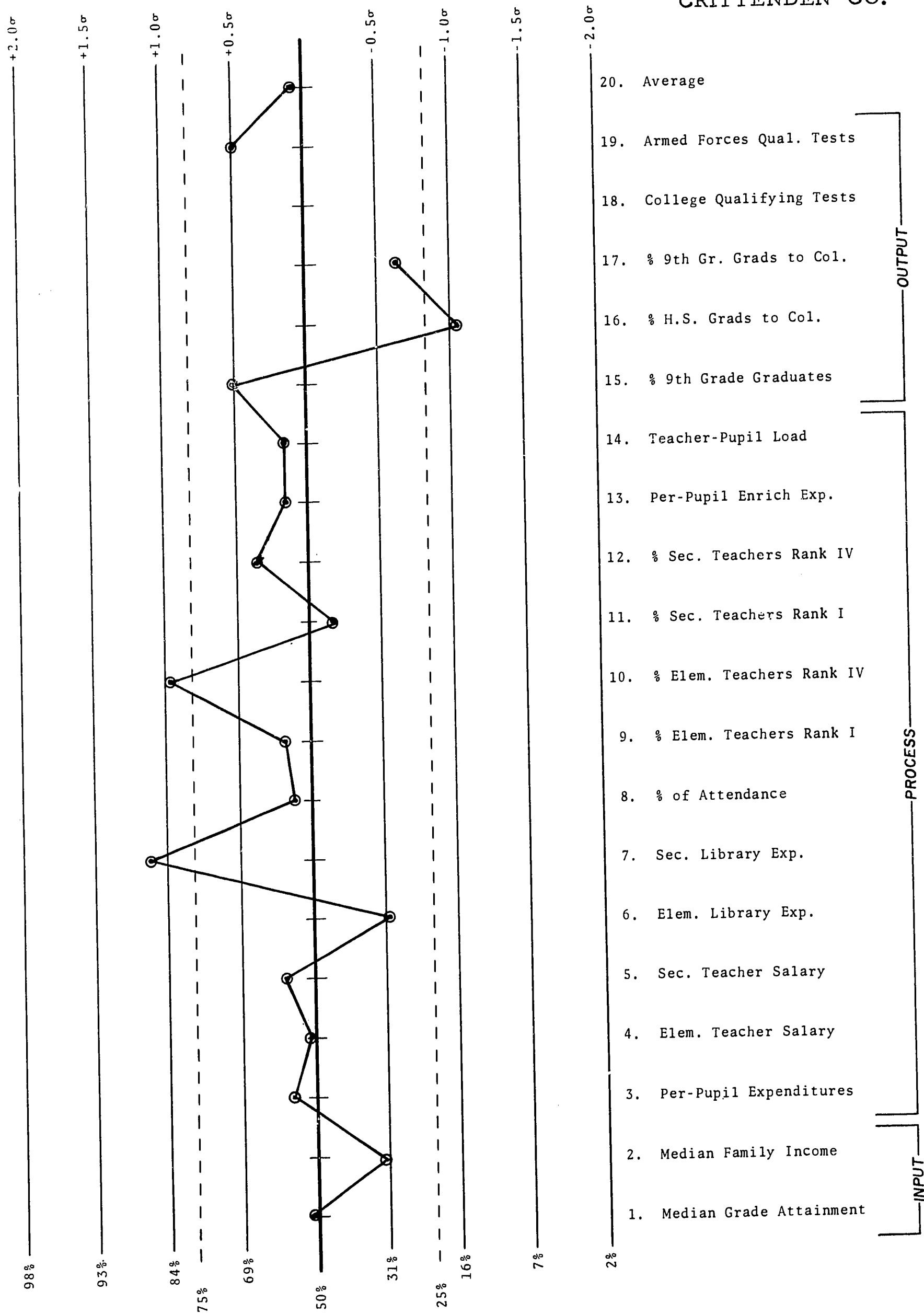
1. Median Grade Attainment

OUTPUT

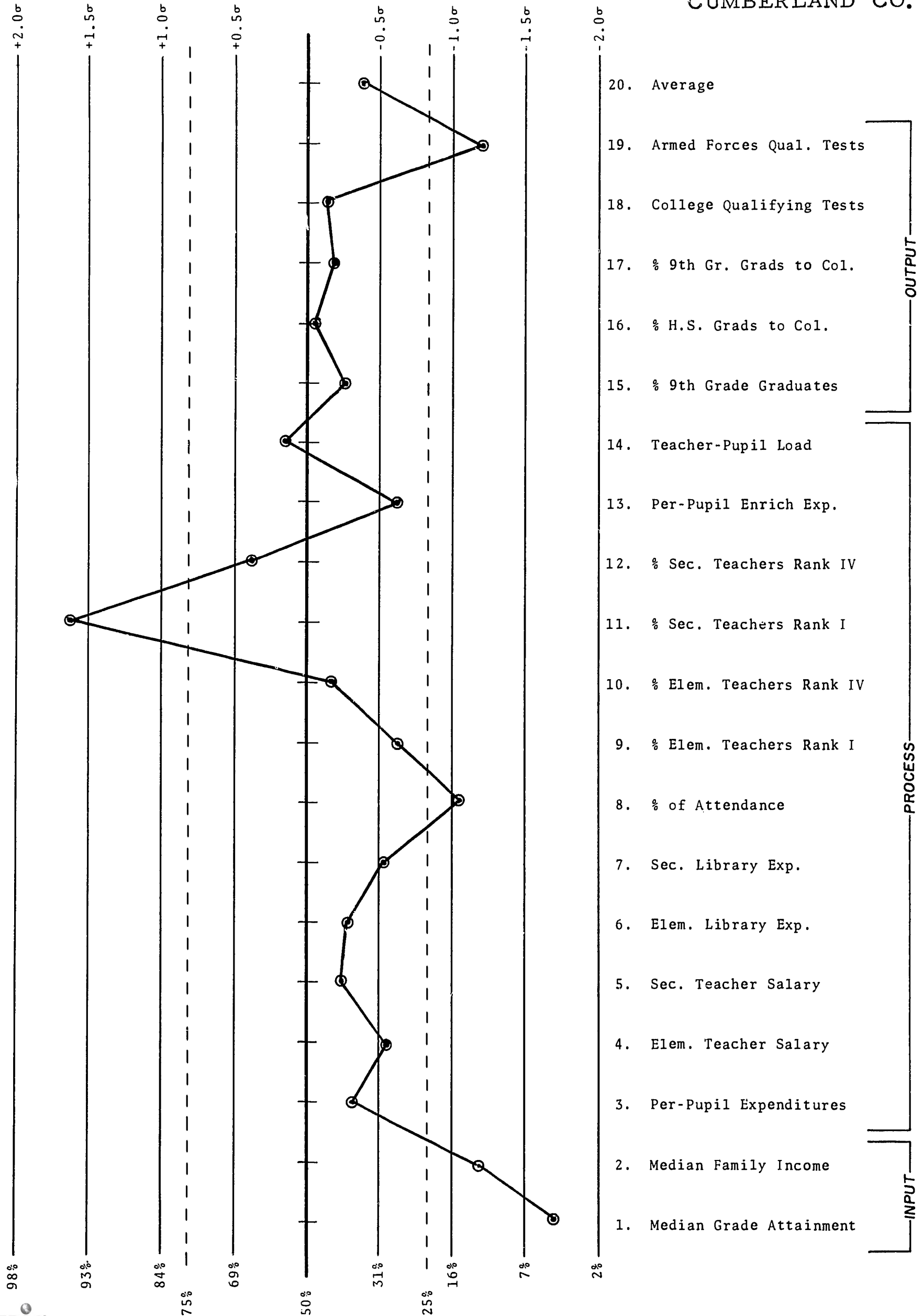
PROCESS

INPUT

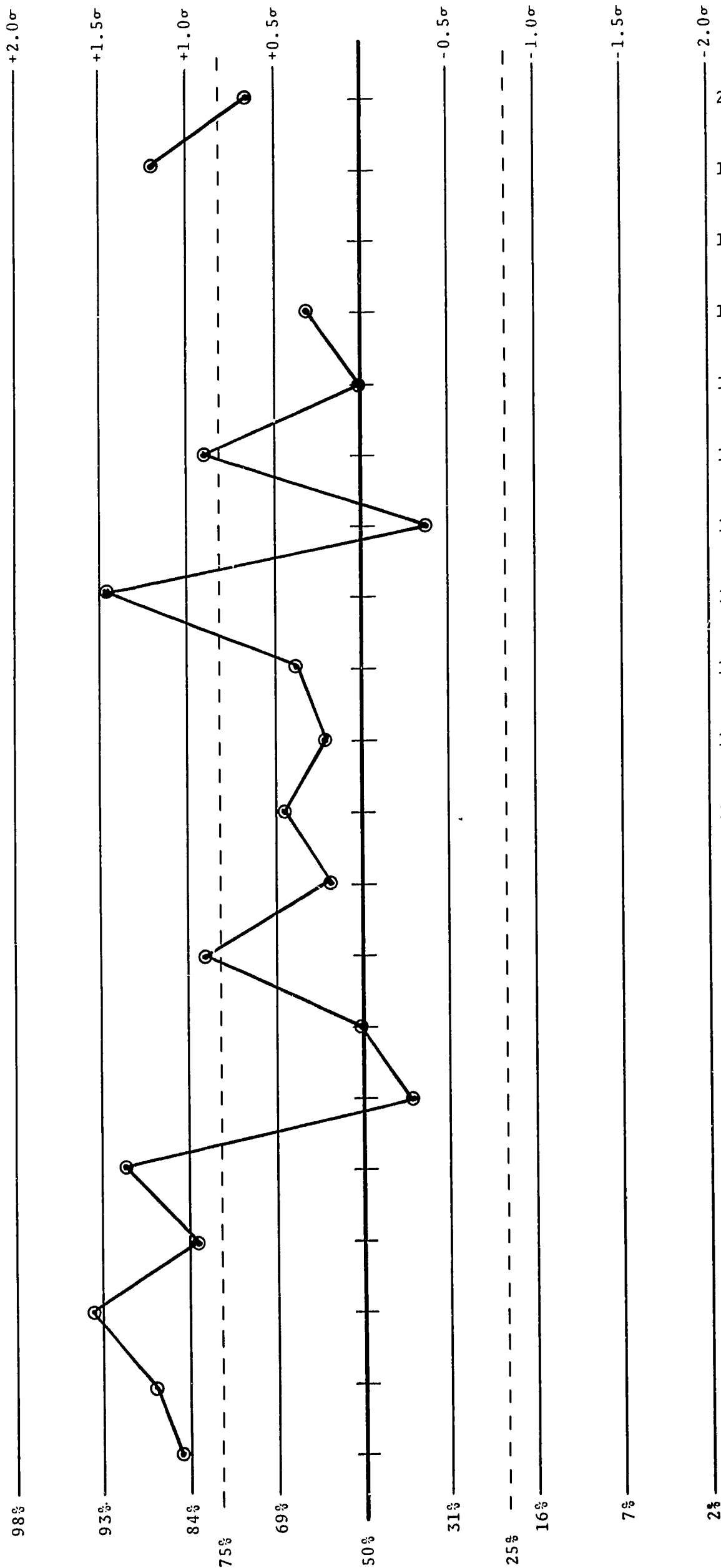
CRITTENDEN CO.



CUMBERLAND CO.



DAVIESS CO.



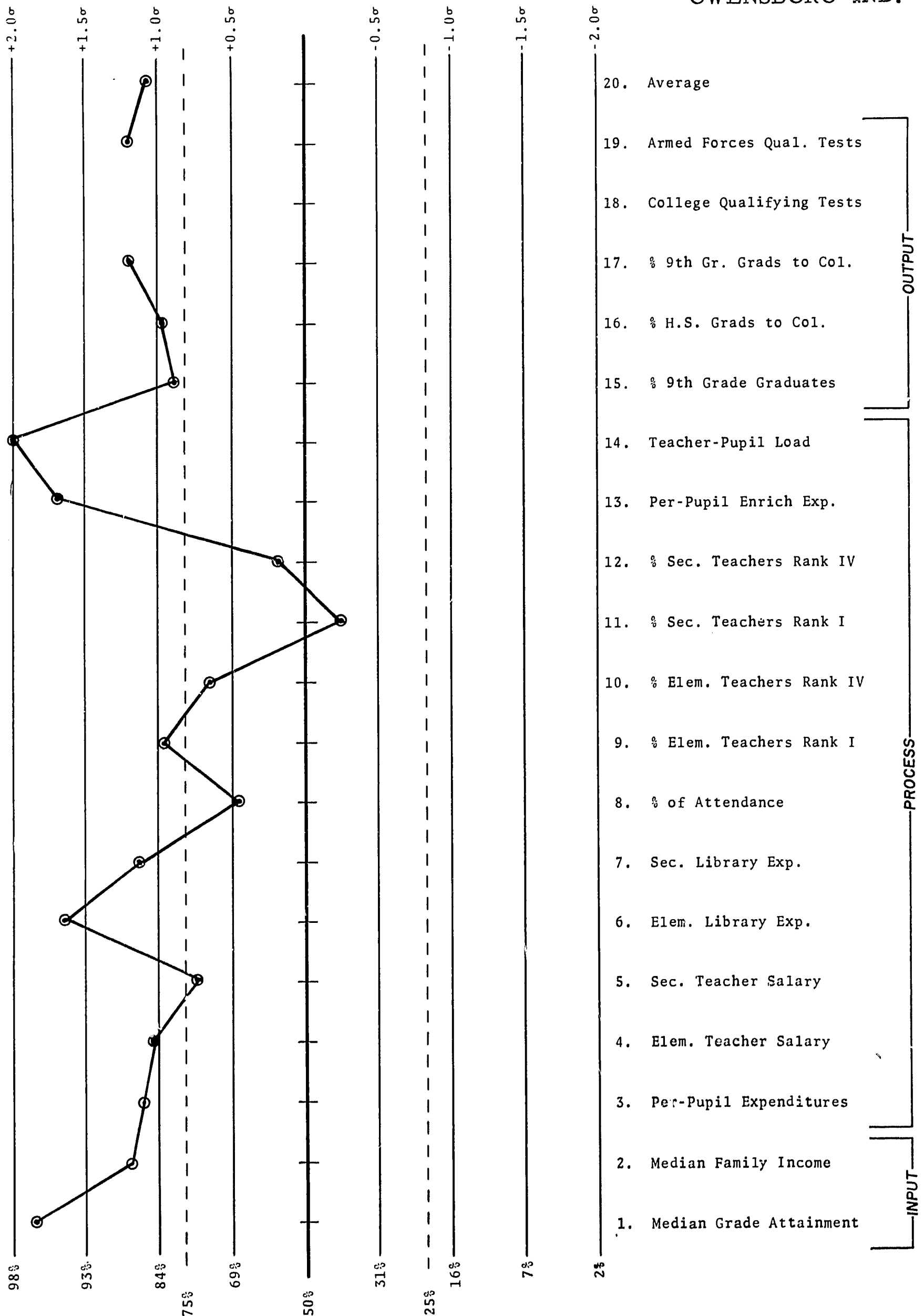
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

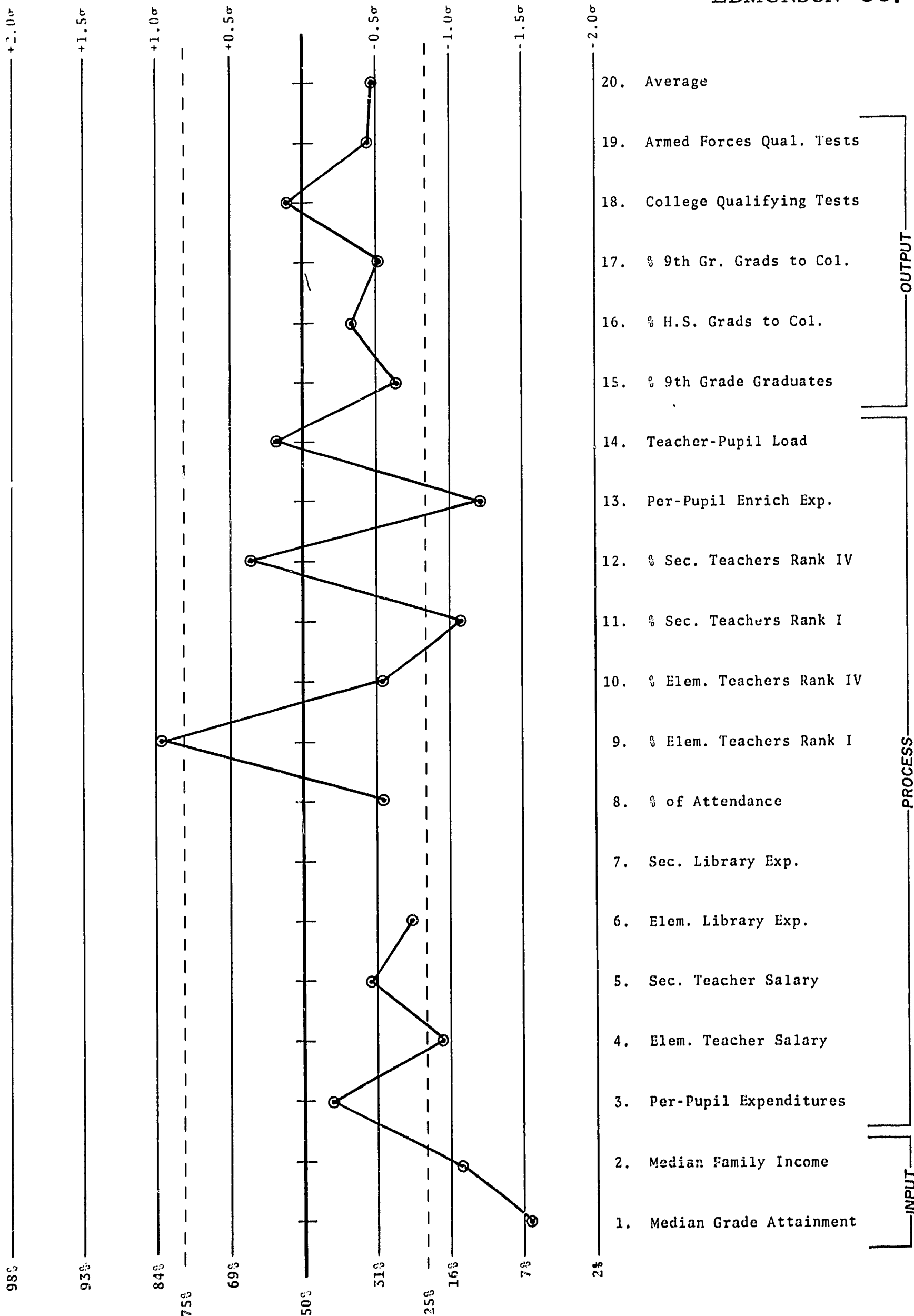
OUTPUT

PROCESS

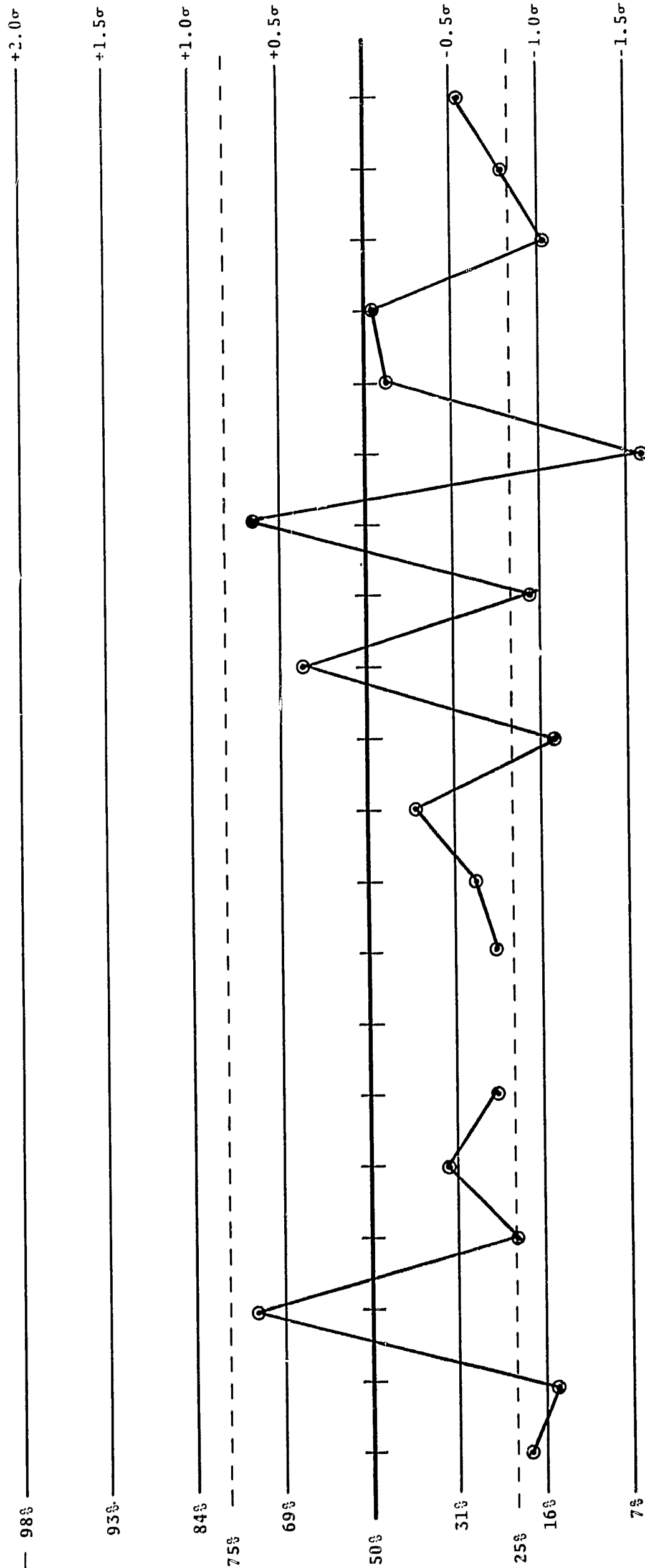
INPUT

OWENSBORO IND.





ELLIOTT CO.



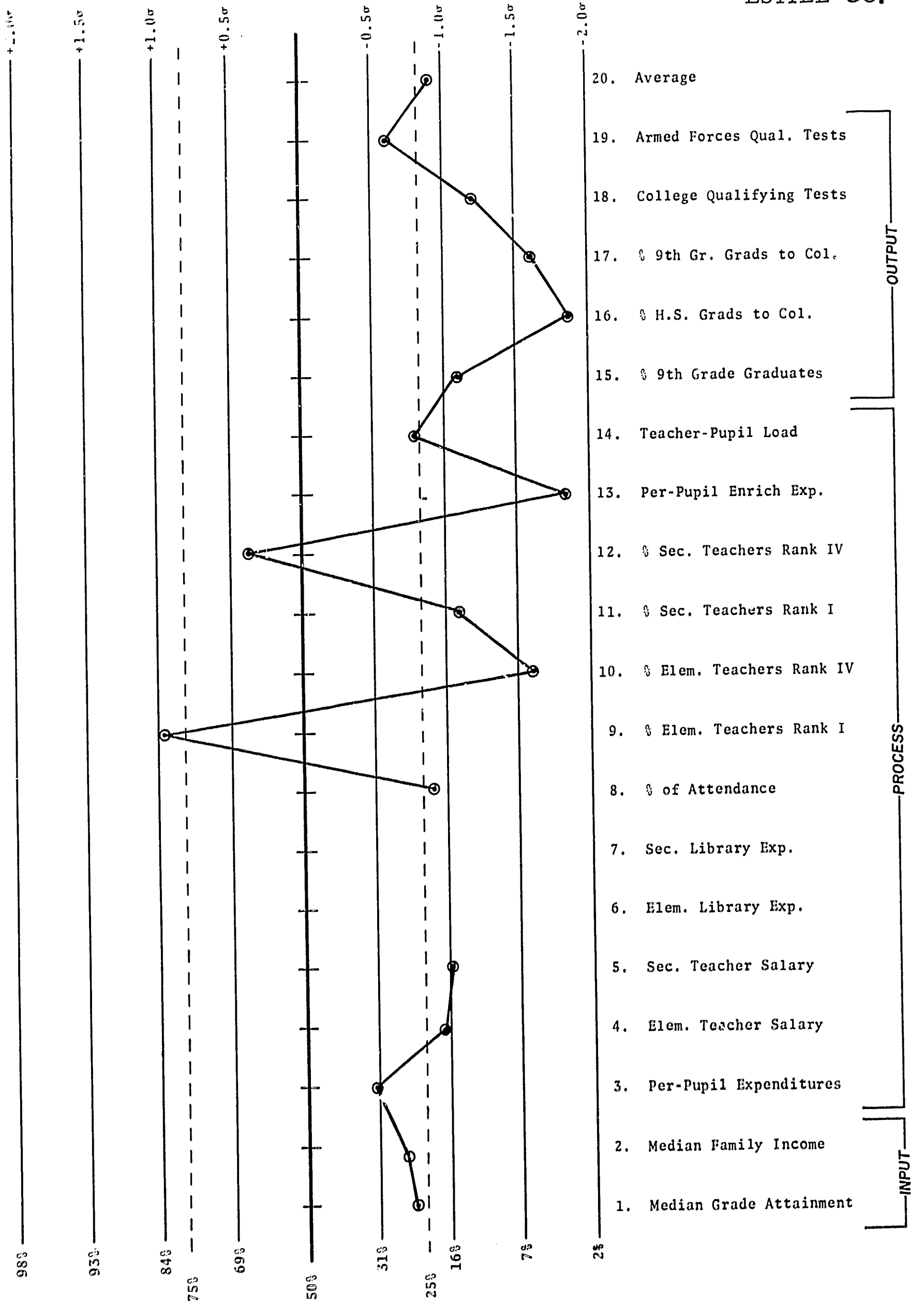
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

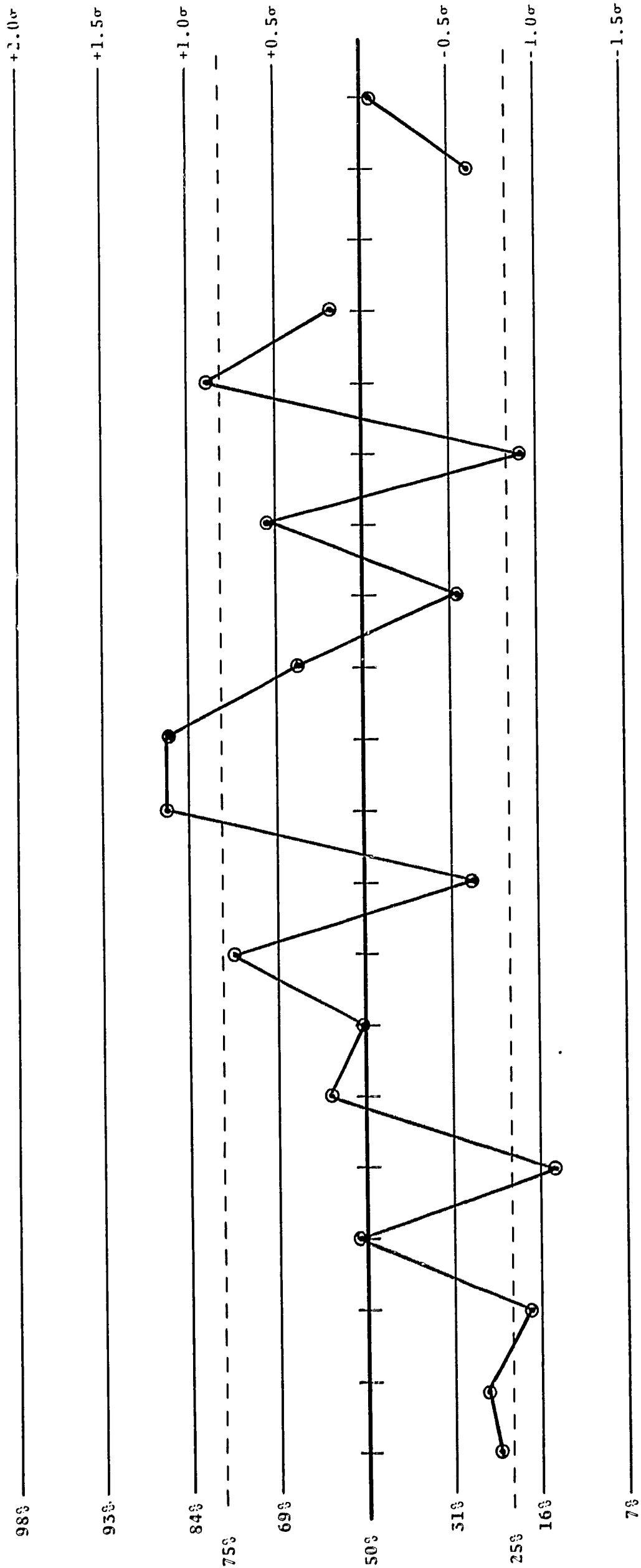
PROCESS

INPUT

ESTILL CO.



IRVINE IND.



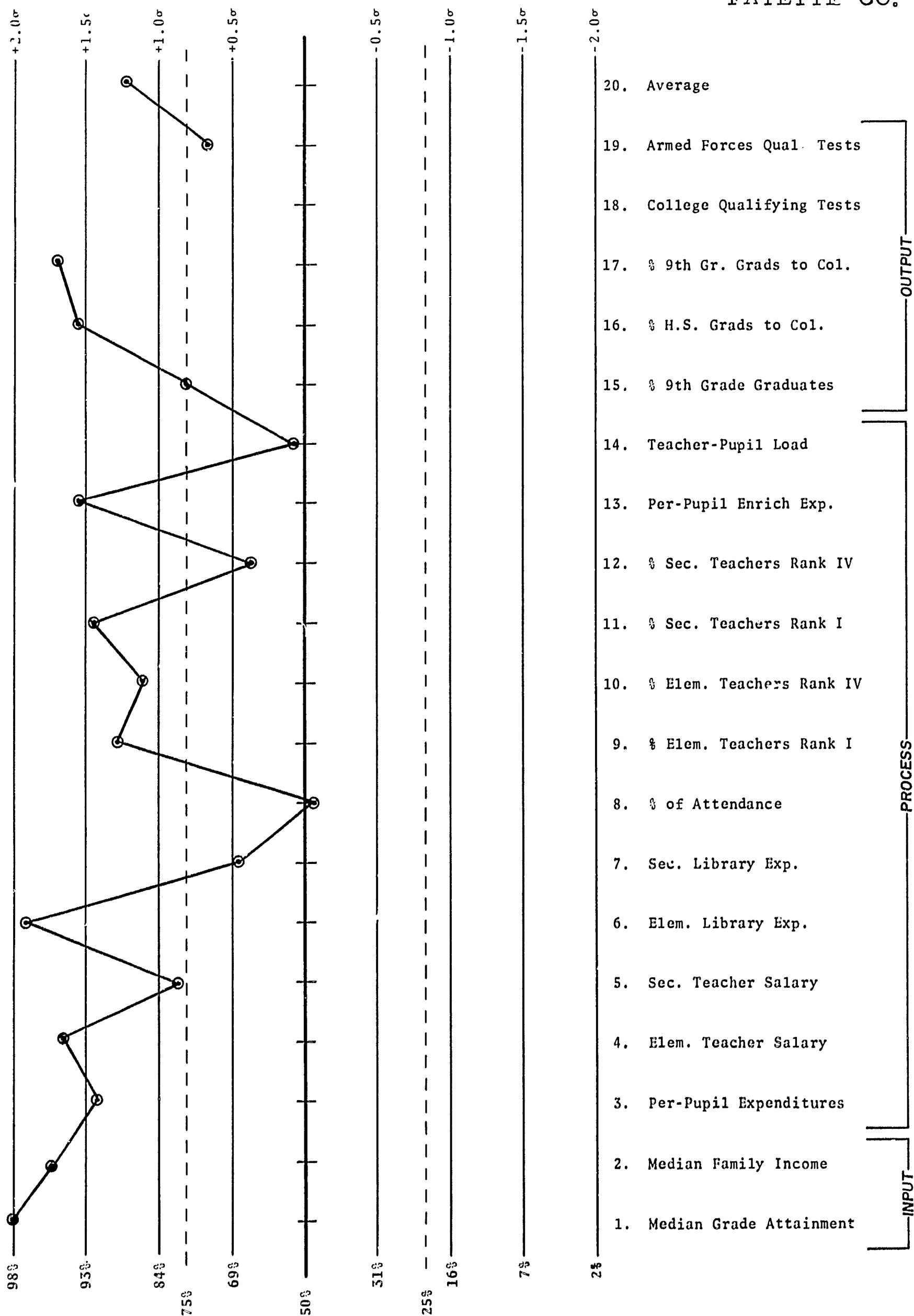
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

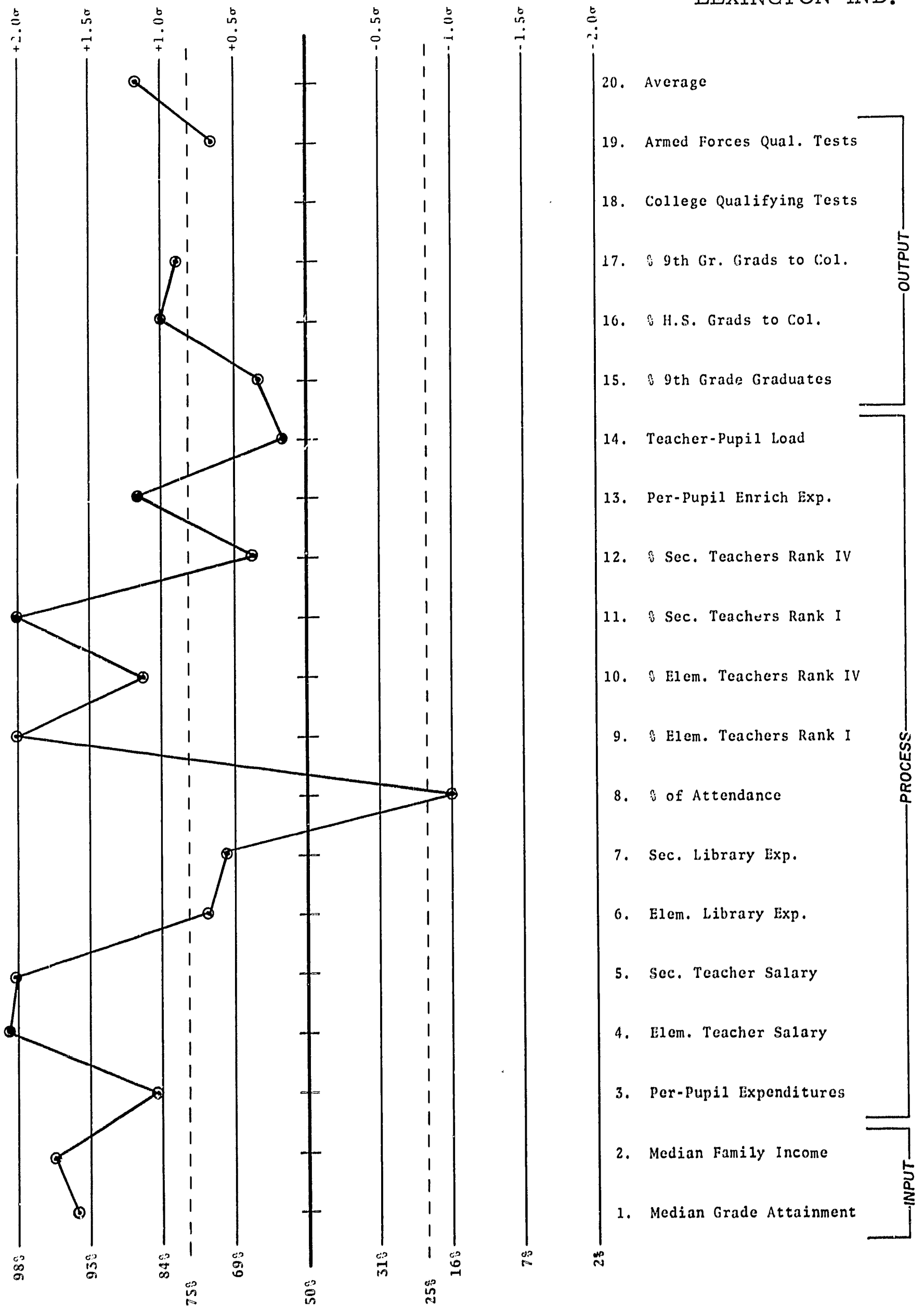
PROCESS

INPUT

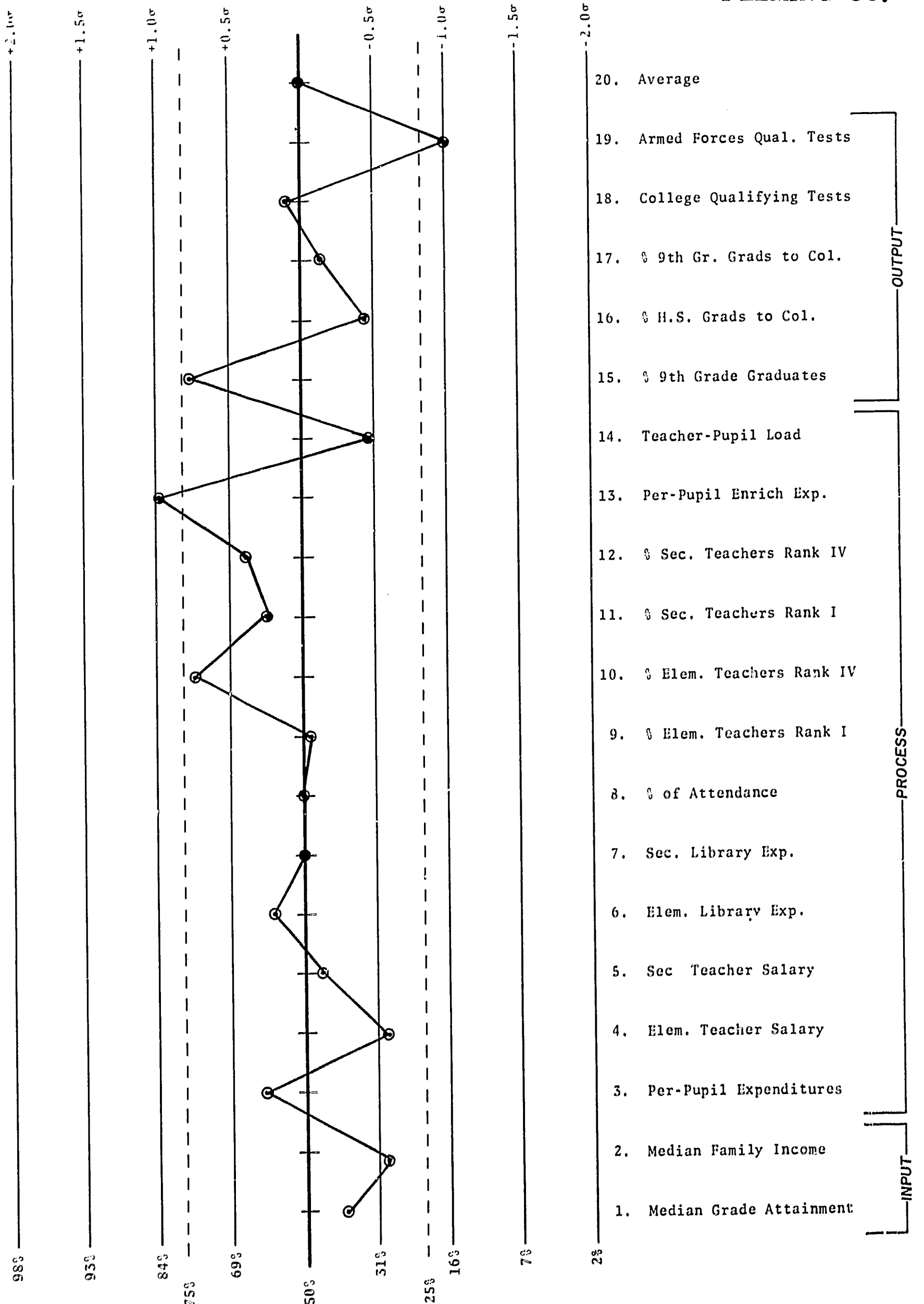
FAYETTE CO.



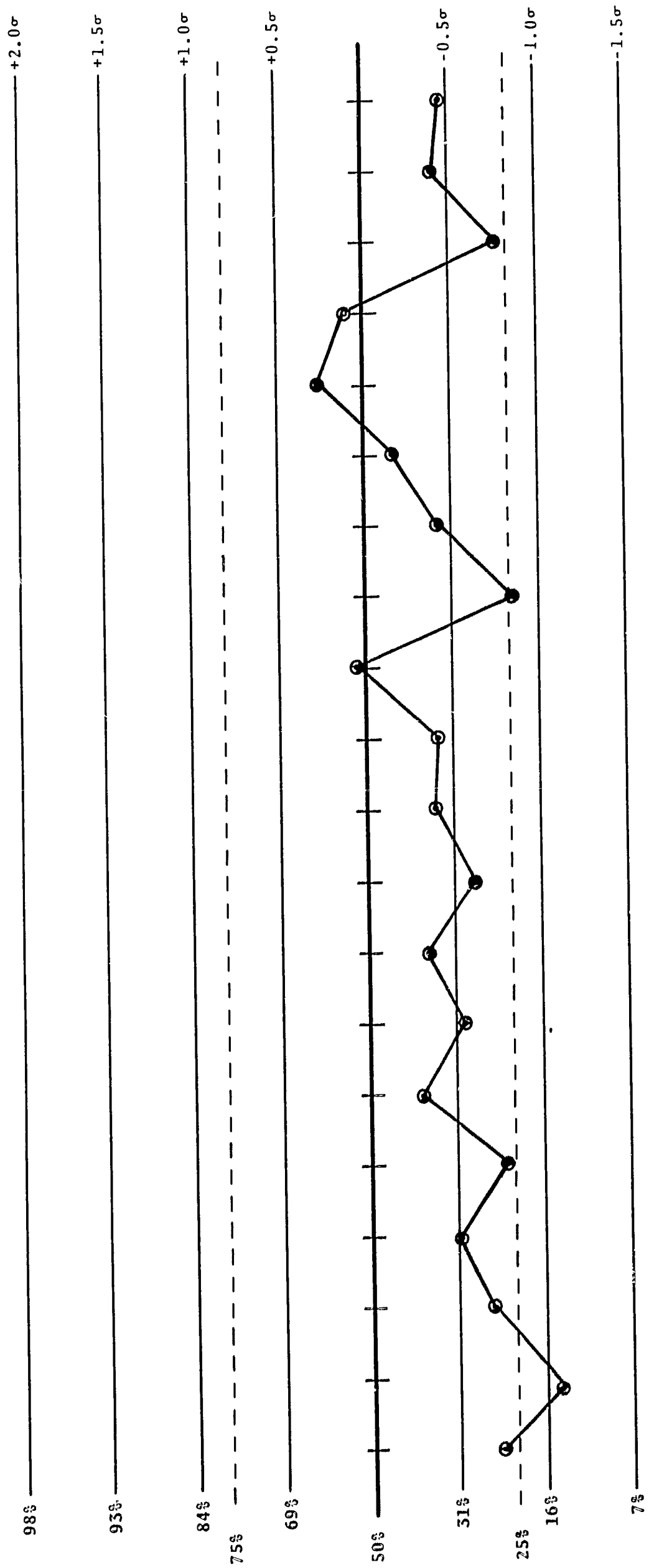
LEXINGTON IND.



FLEMING CO.



FLOYD CO.



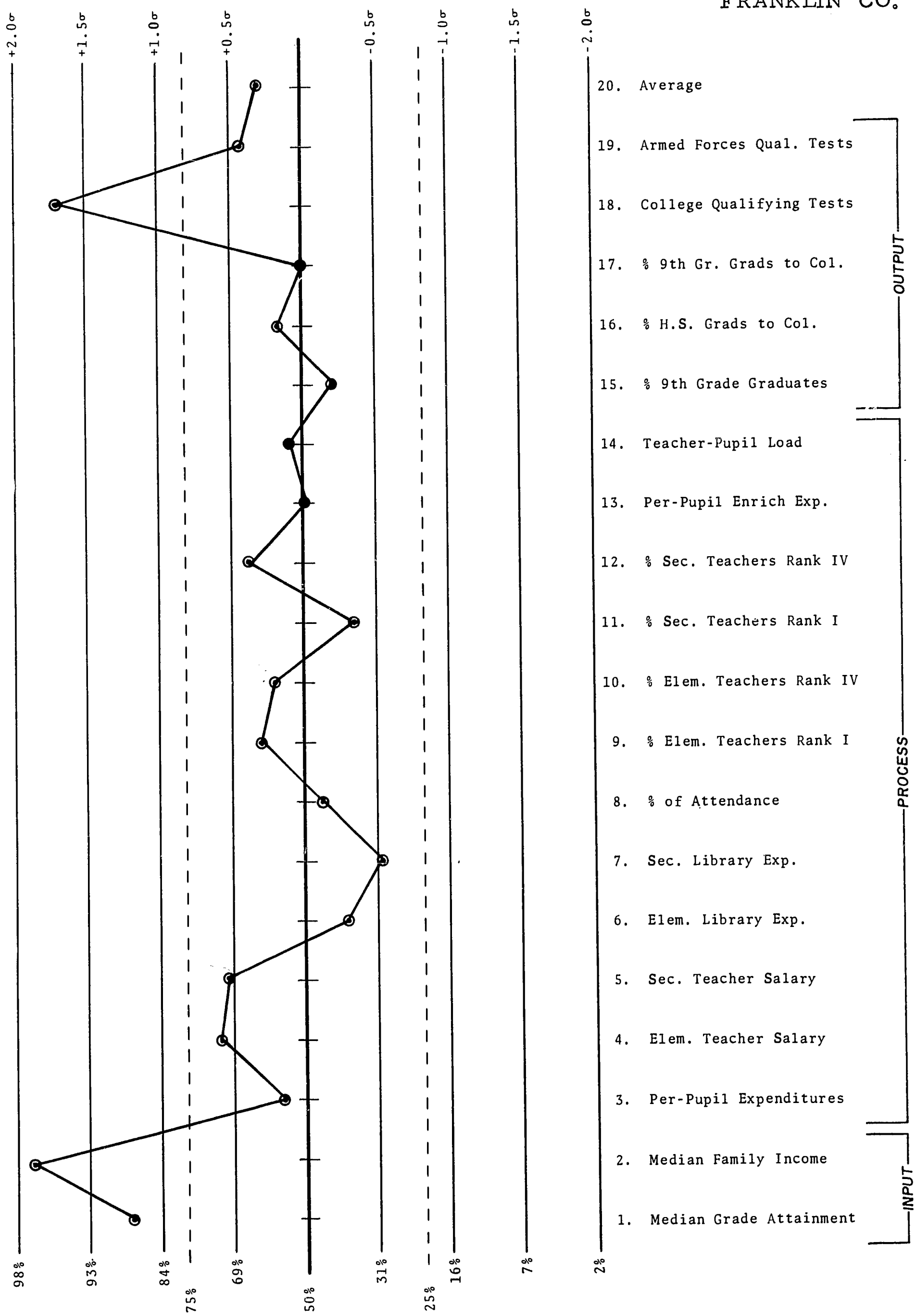
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

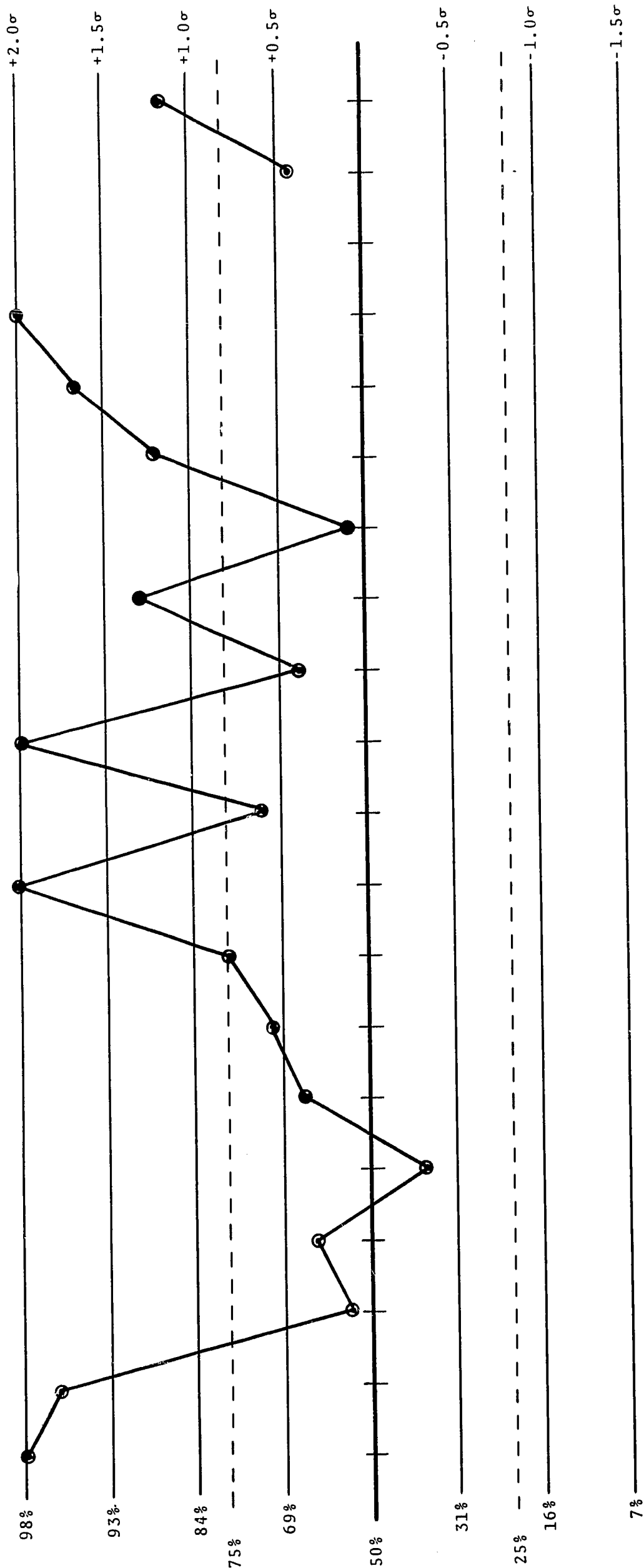
PROCESS

INPUT

FRANKLIN CO.



FRANKFORT IND.



20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

17. % 9th Gr. Grads to Col.

16. % H.S. Grads to Col.

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

12. % Sec. Teachers Rank IV

11. % Sec. Teachers Rank I

10. % Elem. Teachers Rank IV

9. % Elem. Teachers Rank I

8. % of Attendance

7. Sec. Library Exp.

6. Elem. Library Exp.

5. Sec. Teacher Salary

4. Elem. Teacher Salary

3. Per-Pupil Expenditures

2. Median Family Income

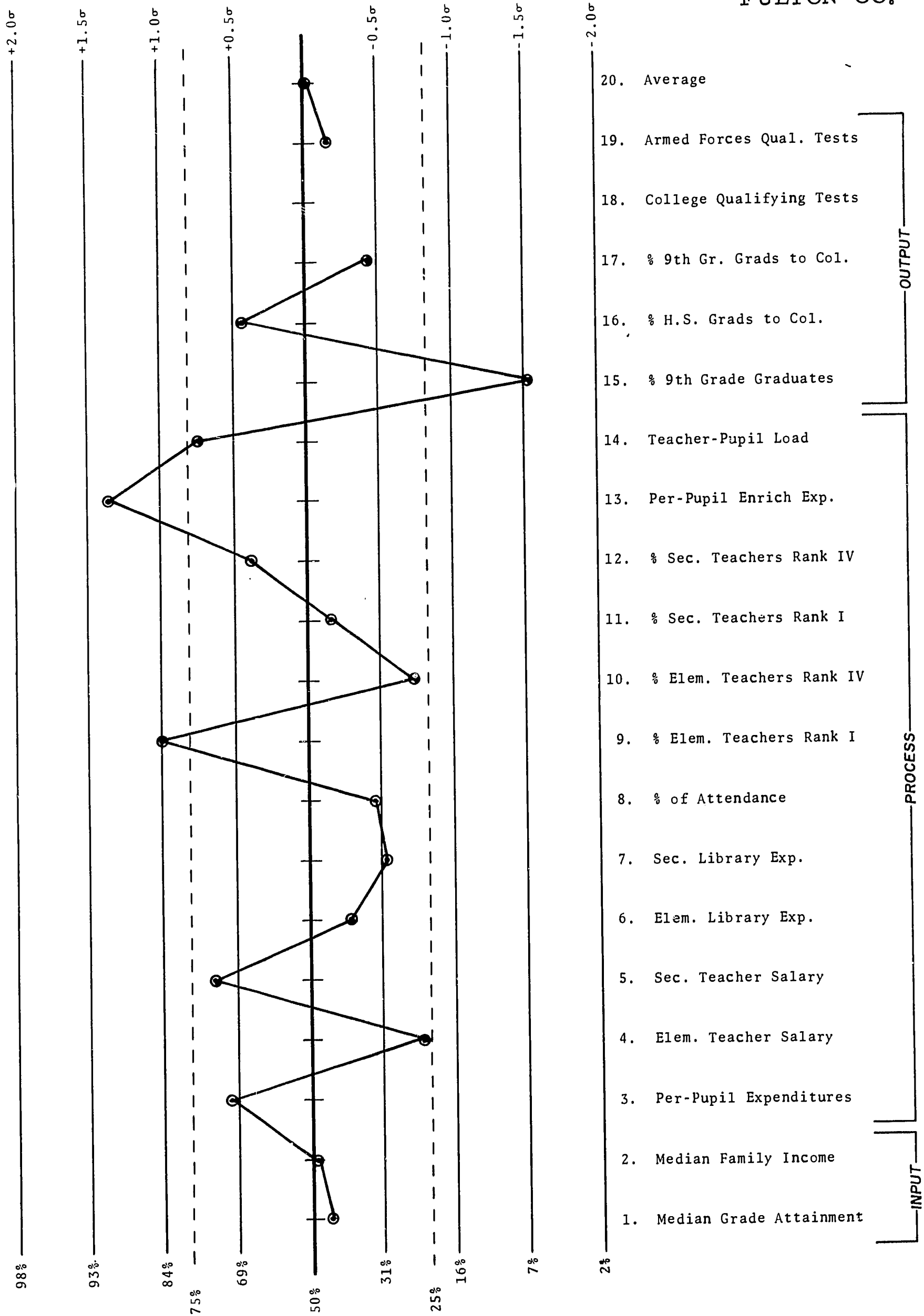
1. Median Grade Attainment

OUTPUT

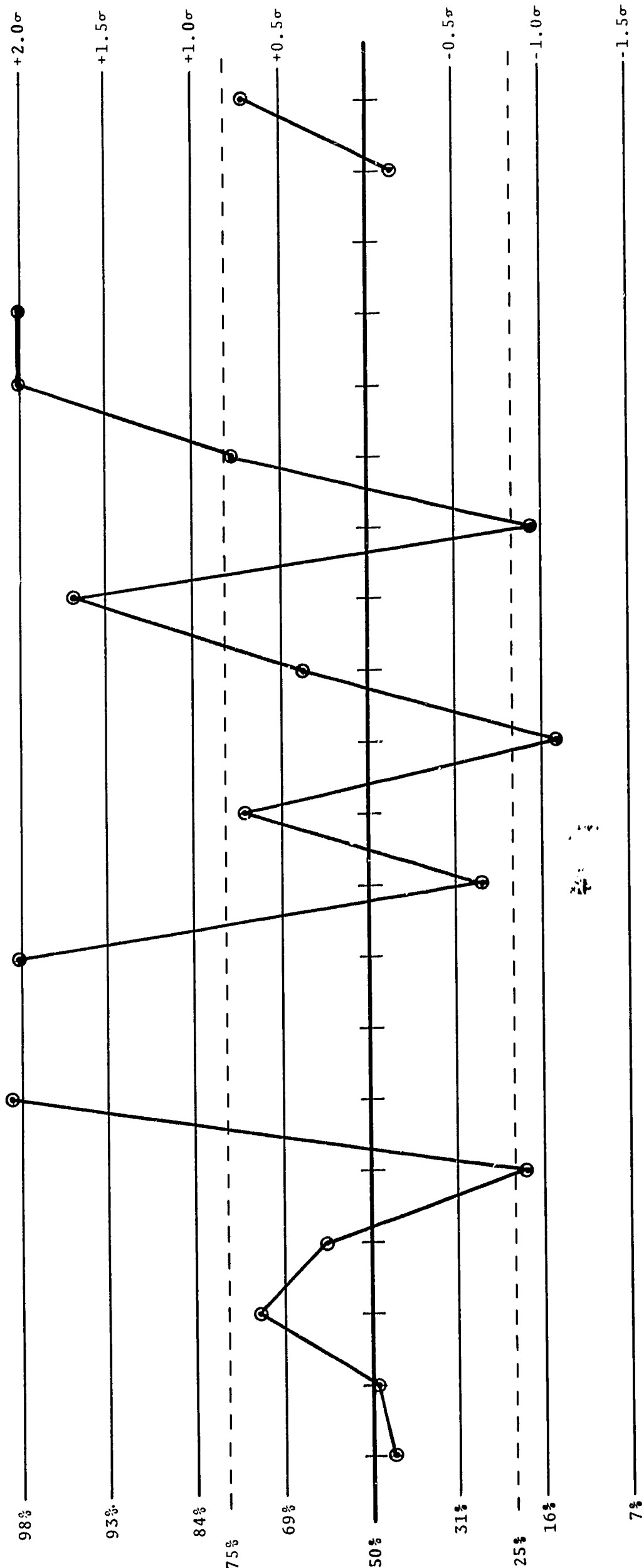
PROCESS

INPUT

FULTON CO.



FULTON IND.



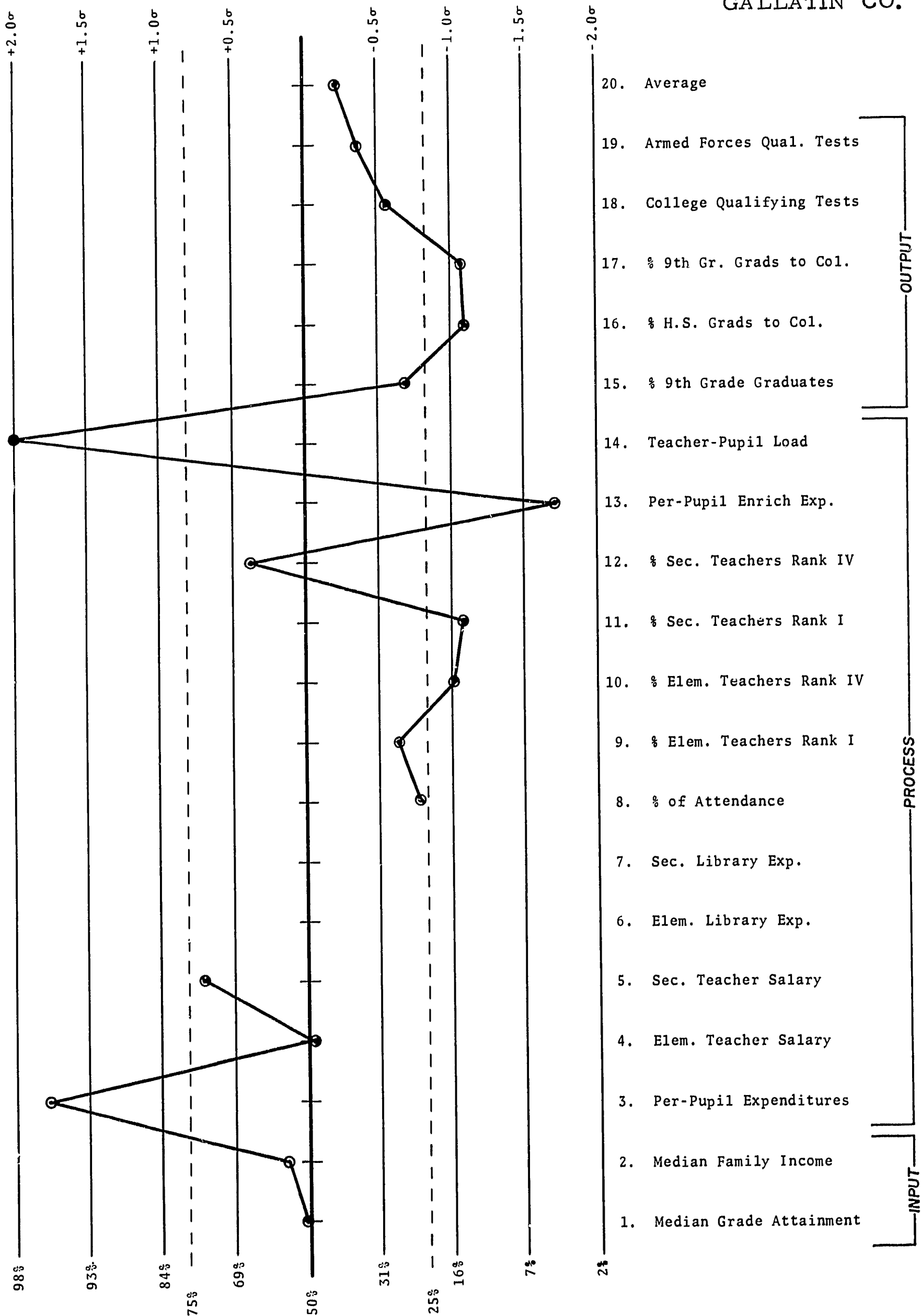
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

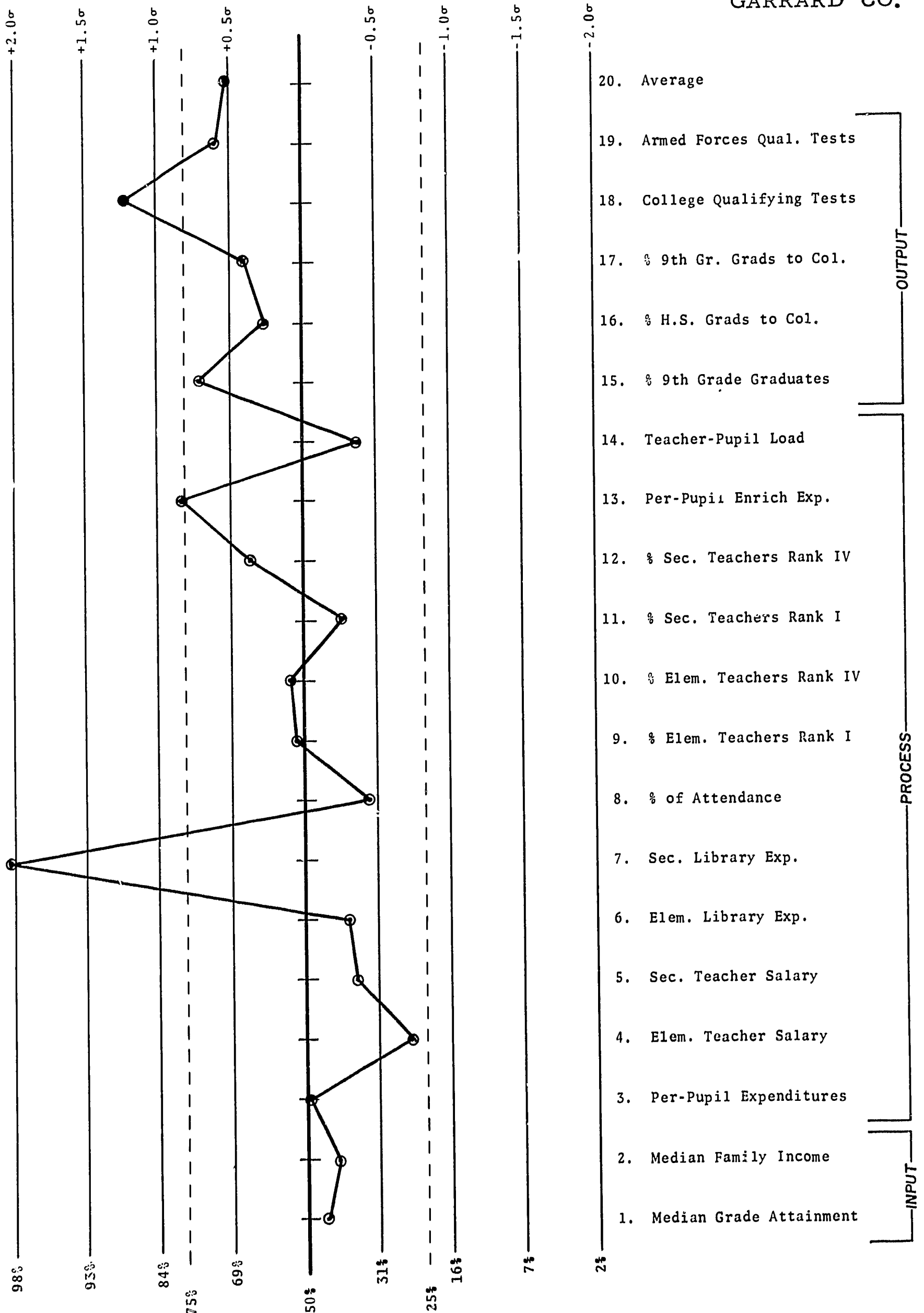
PROCESS

INPUT

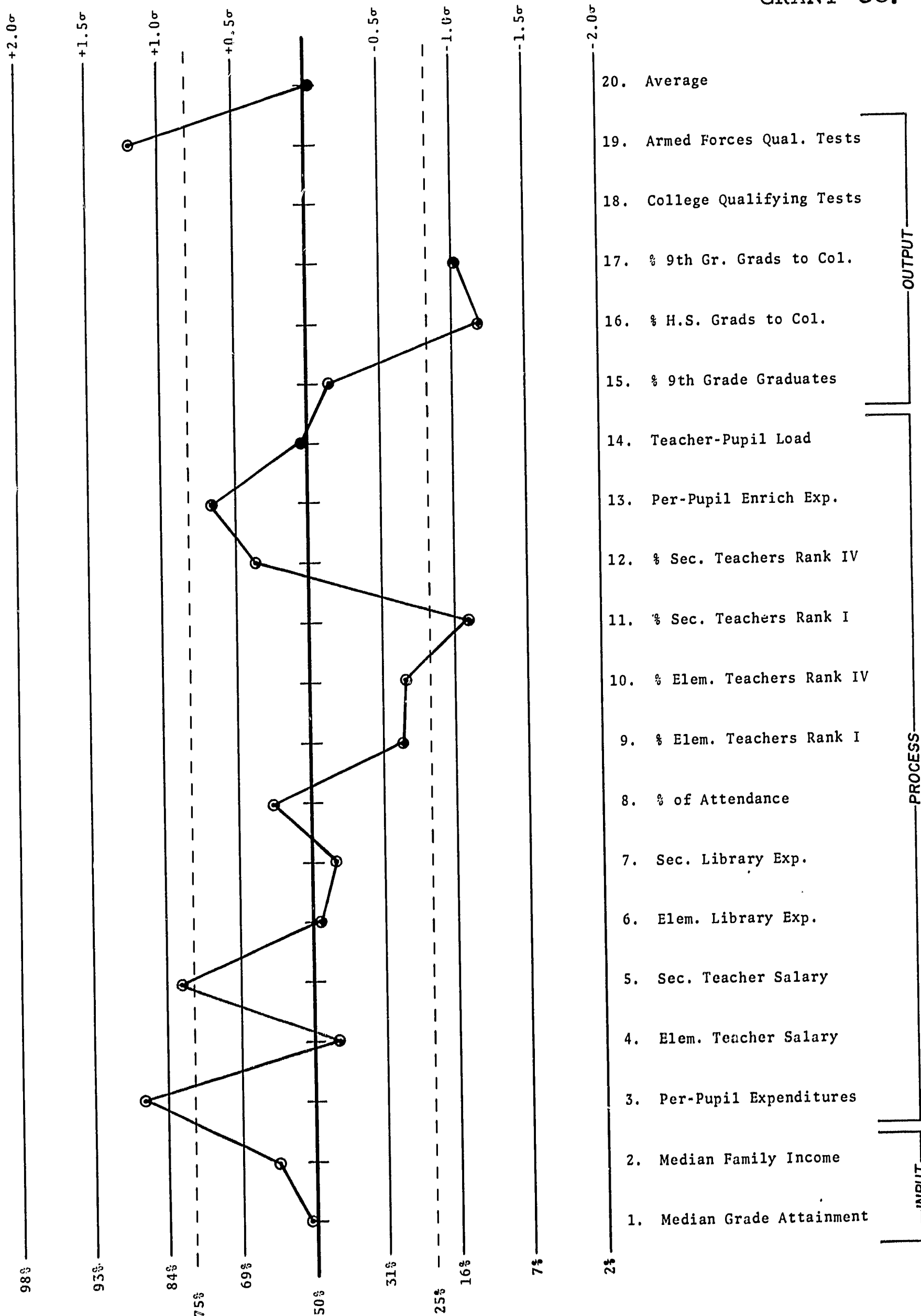
GALLATIN CO.



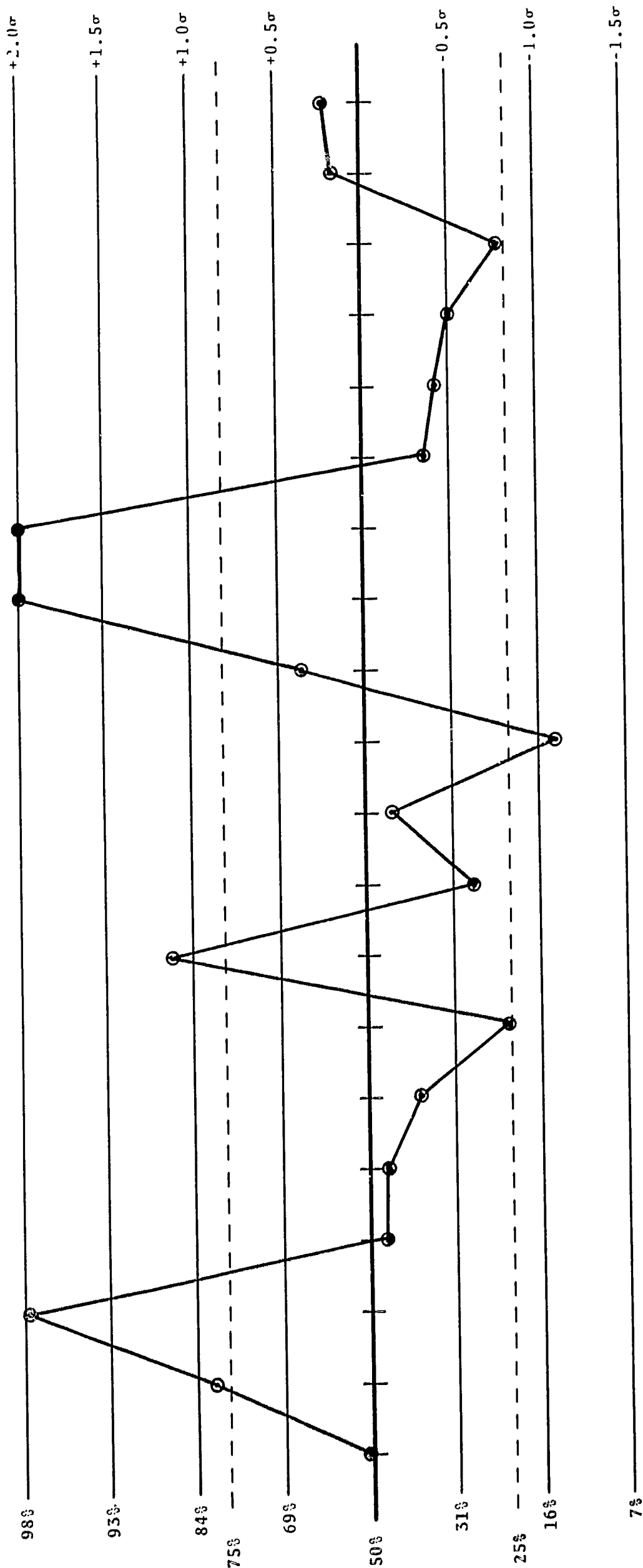
GARRARD CO.



GRANT CO.



WILLIAMSTOWN IND.



20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

17. % 9th Gr. Grads to Col.

16. % H.S. Grads to Col.

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

12. % Sec. Teachers Rank IV

11. % Sec. Teachers Rank I

10. % Elem. Teachers Rank IV

9. % Elem. Teachers Rank I

8. % of Attendance

7. Sec. Library Exp.

6. Elem. Library Exp.

5. Sec. Teacher Salary

4. Elem. Teacher Salary

3. Per-Pupil Expenditures

2. Median Family Income

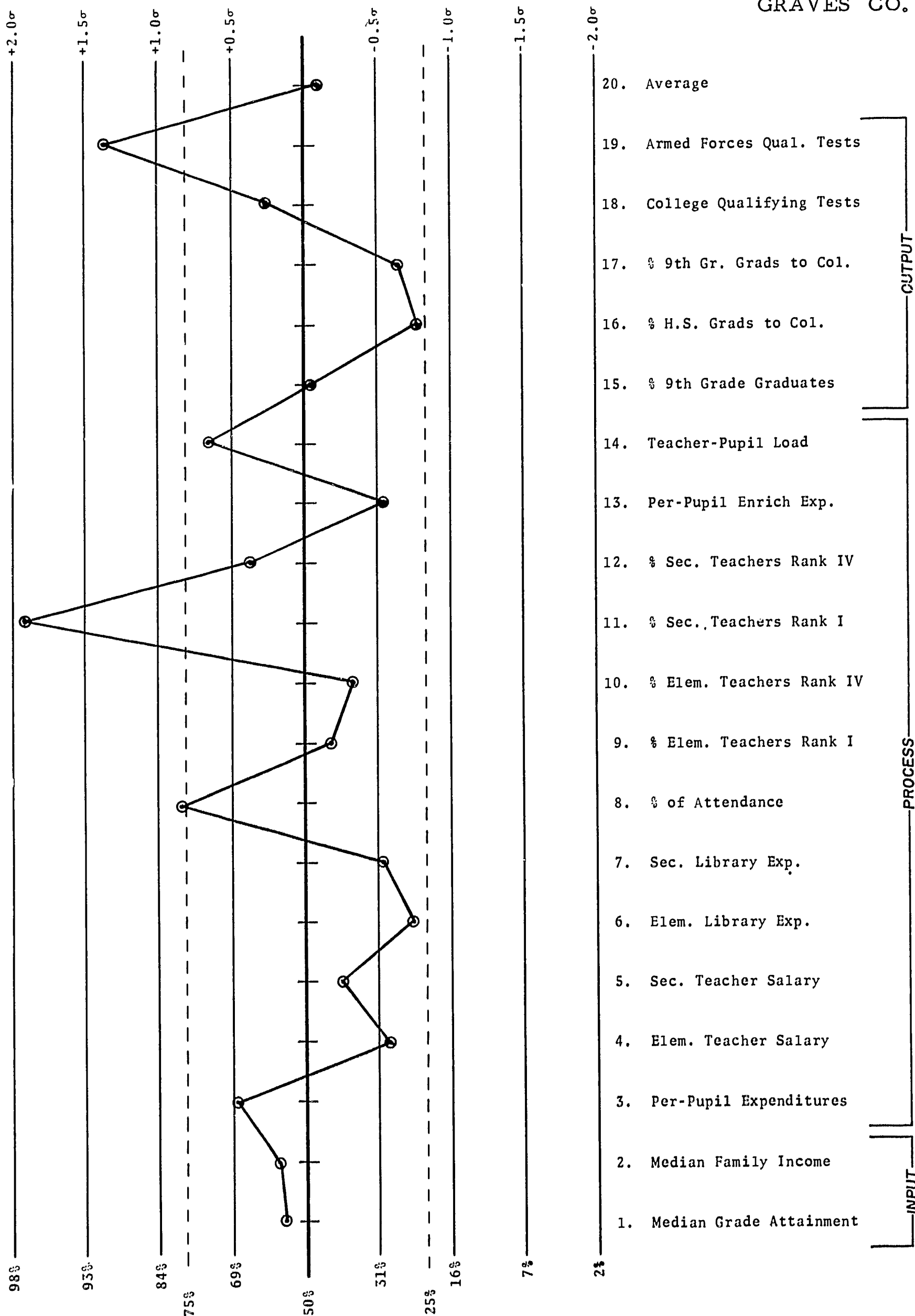
1. Median Grade Attainment

OUTPUT

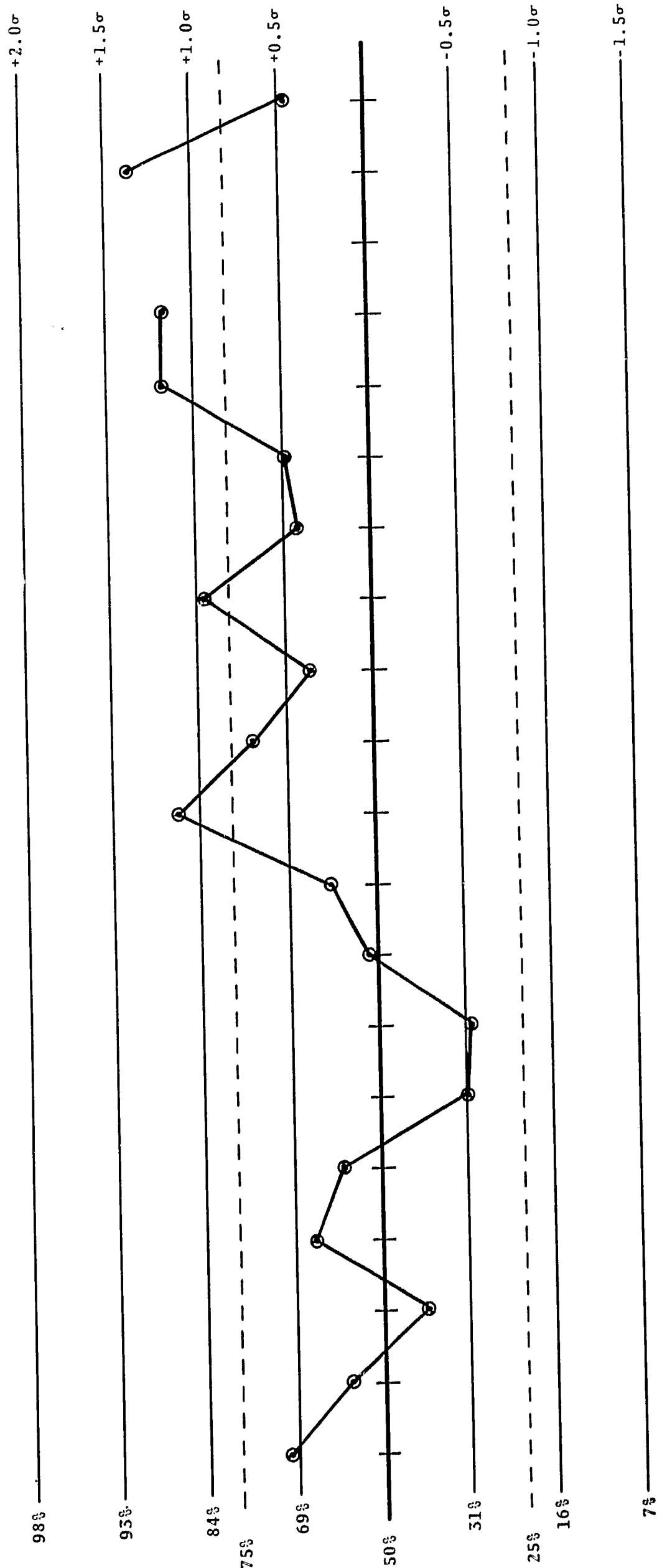
PROCESS

INPUT

GRAVES CO.



MAYFIELD IND.



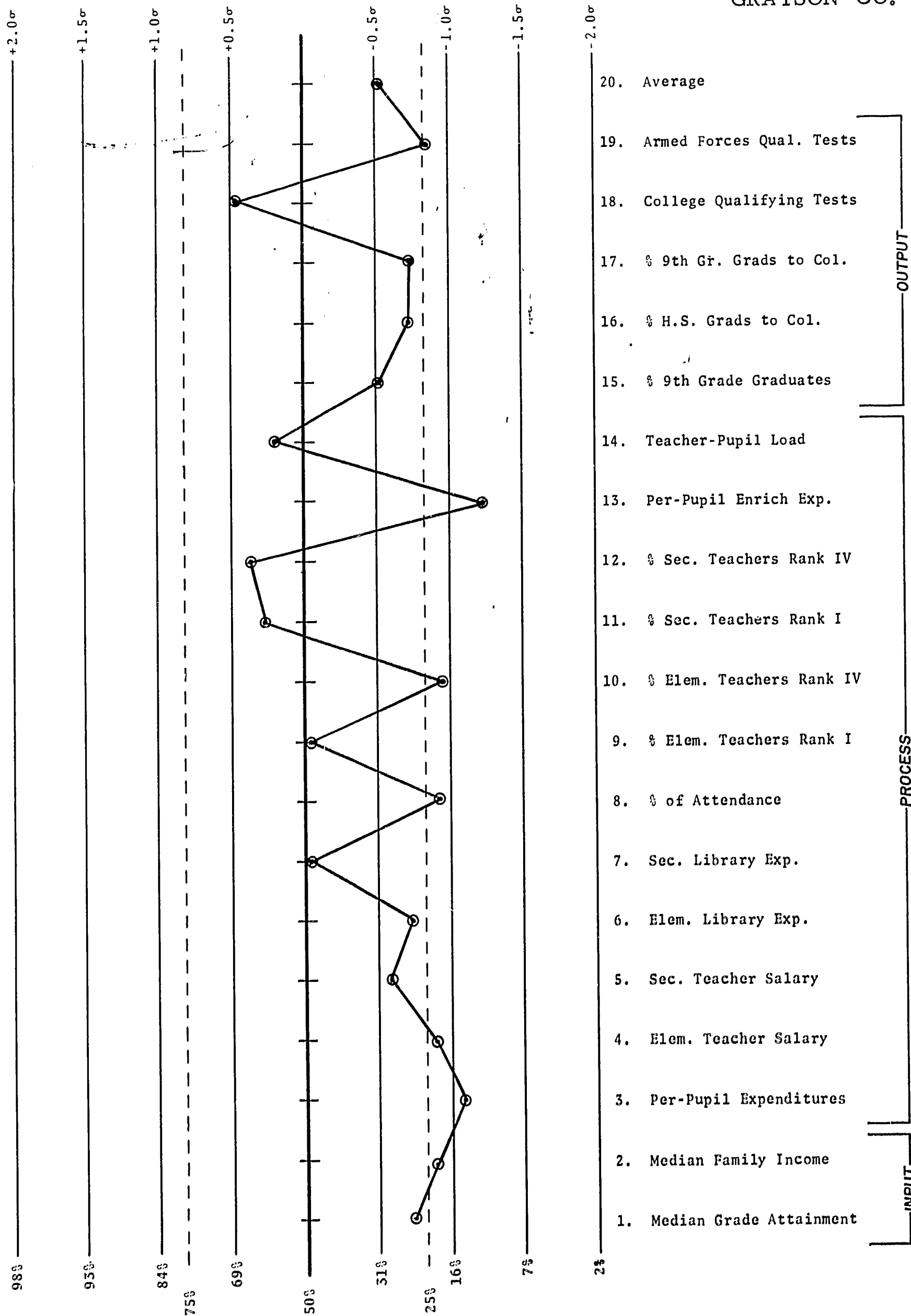
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

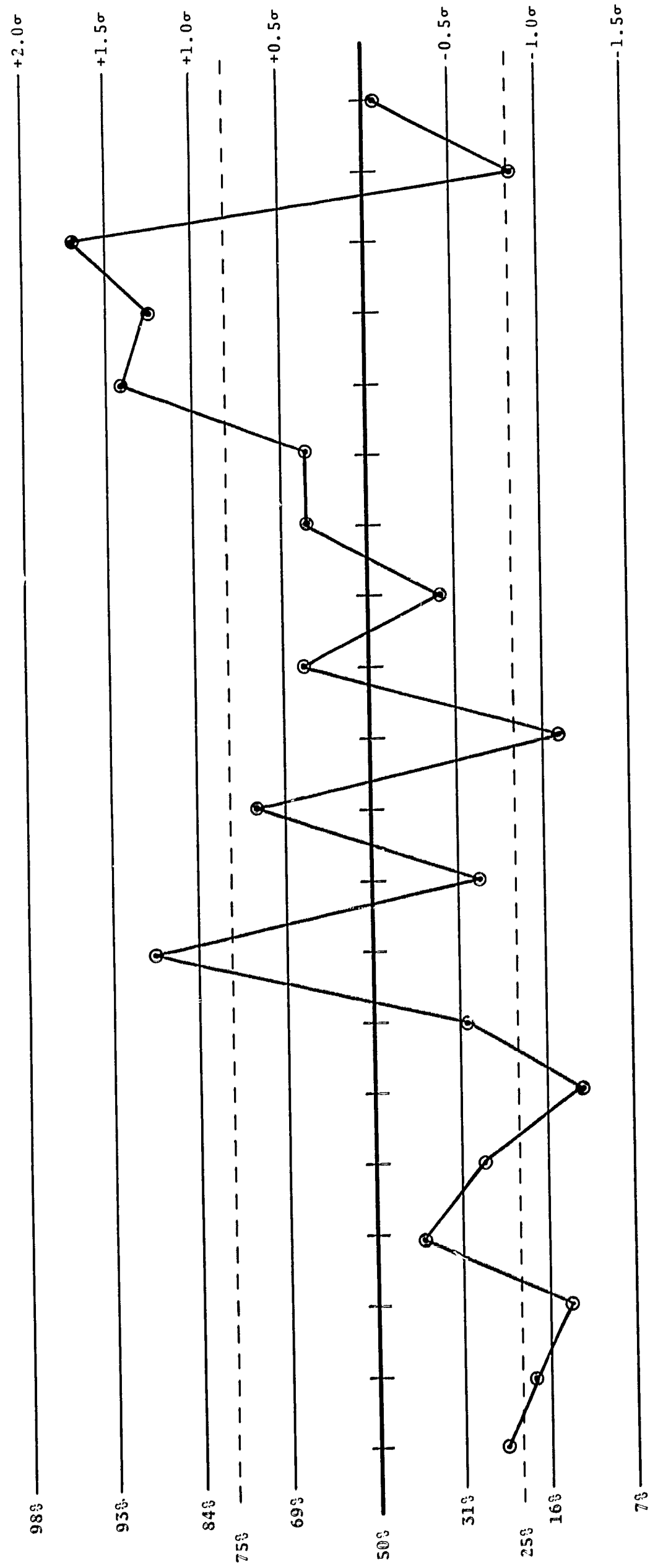
PROCESS

INPUT

GRAYSON CO.



LEITCHFIELD IND.



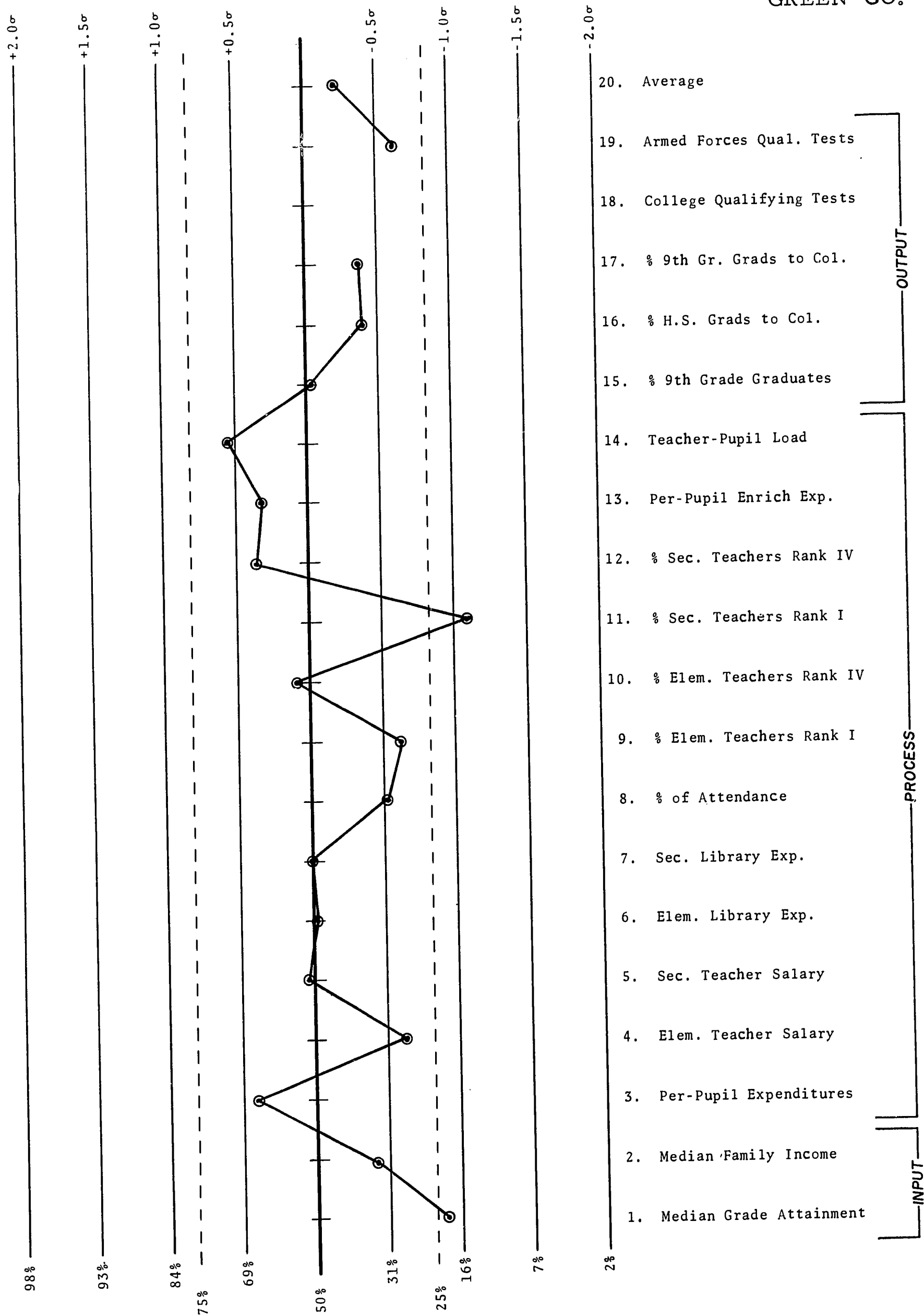
- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

OUTPUT

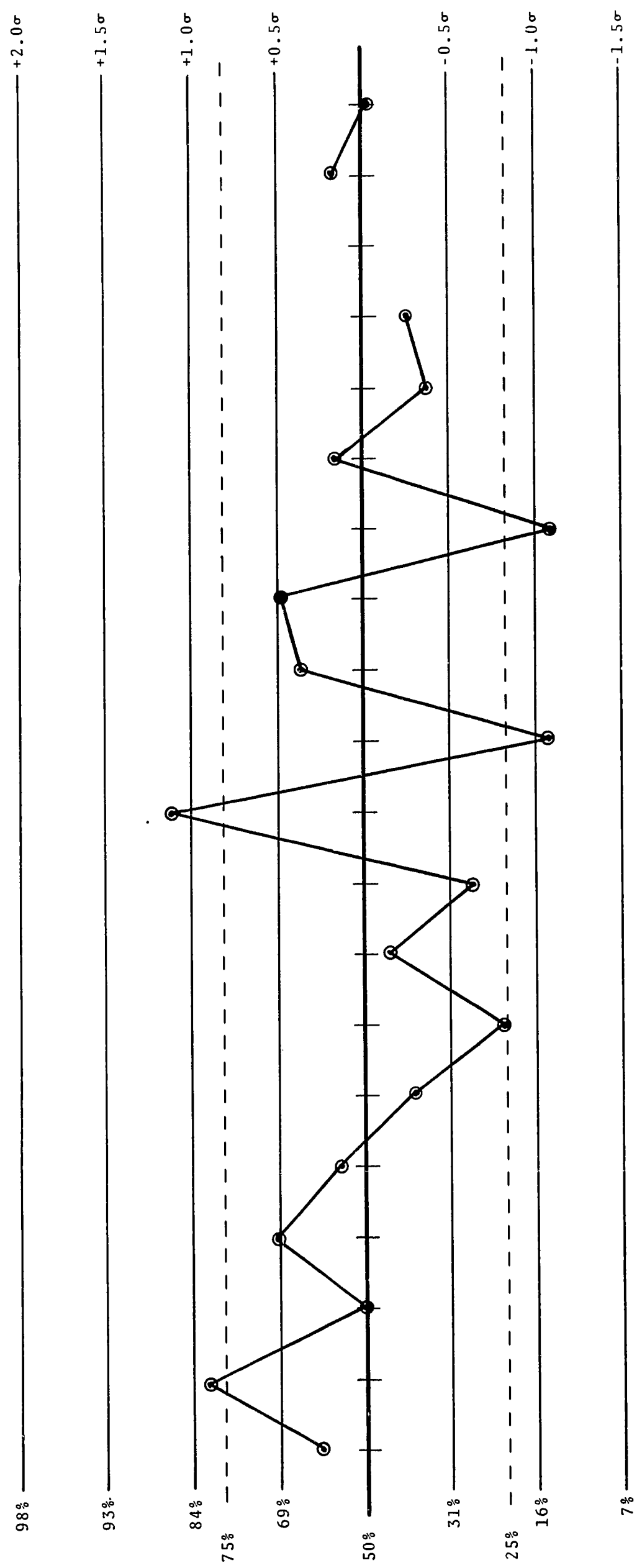
PROCESS

INPUT

GREEN CO.



GREENUP CO.



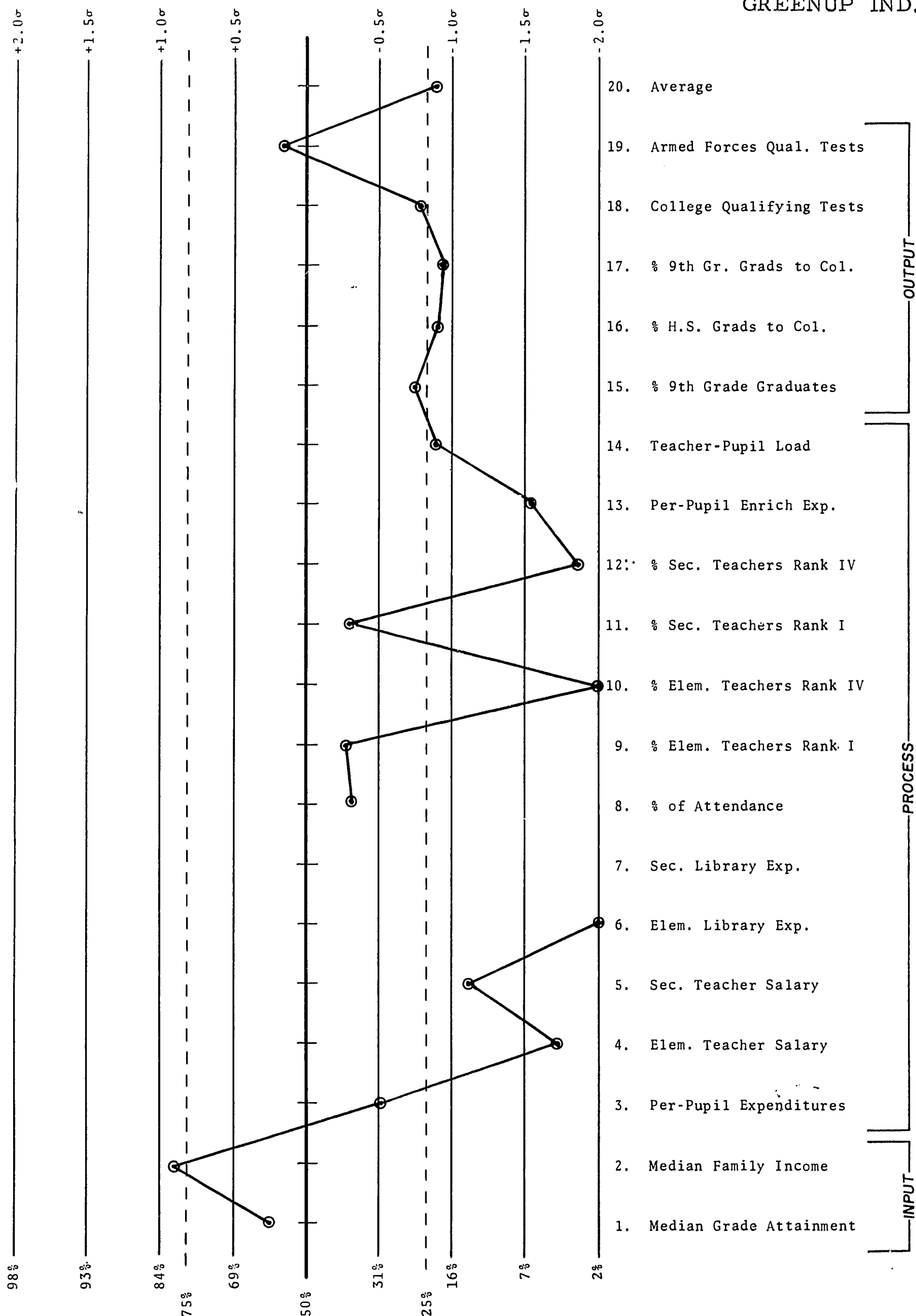
- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

OUTPUT

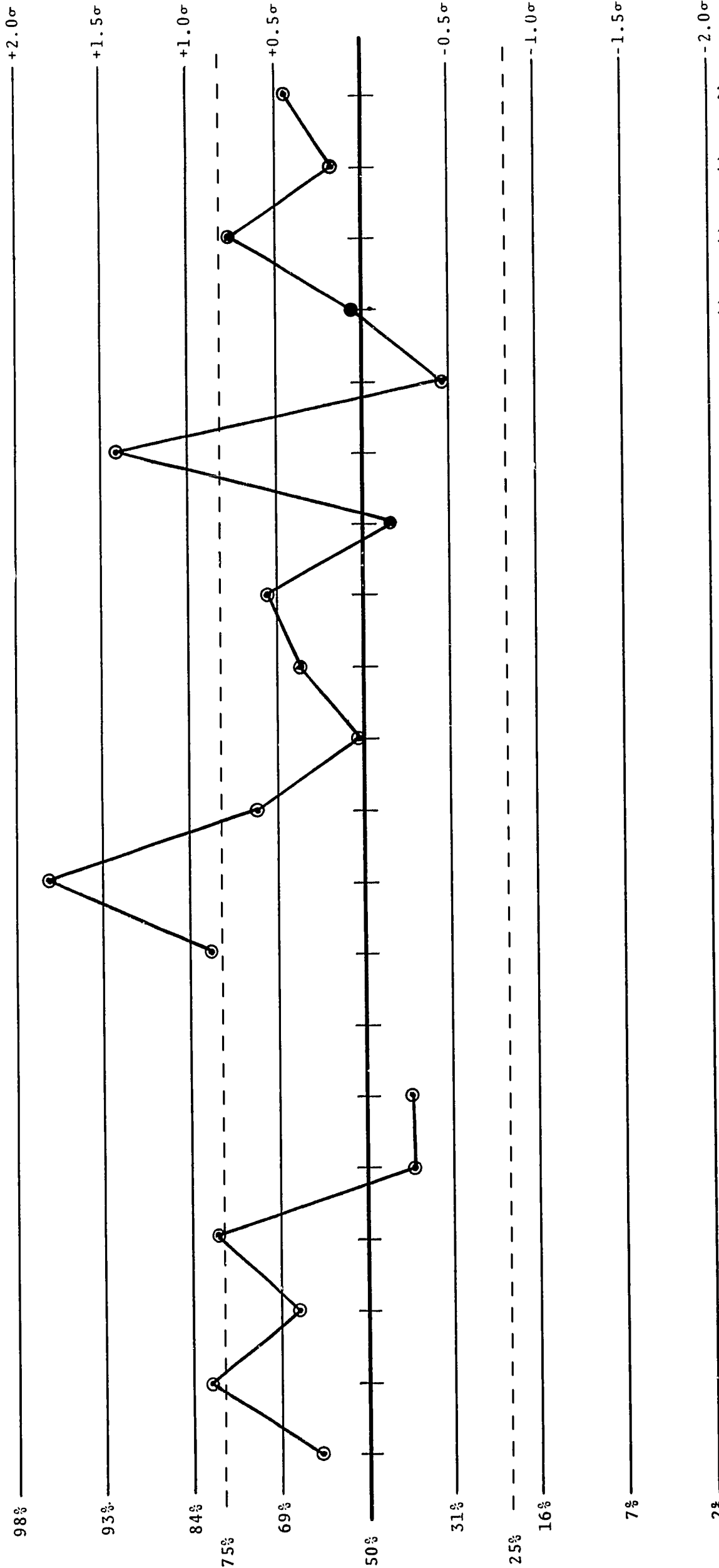
PROCESS

INPUT

GREENUP IND.



RACELAND IND.



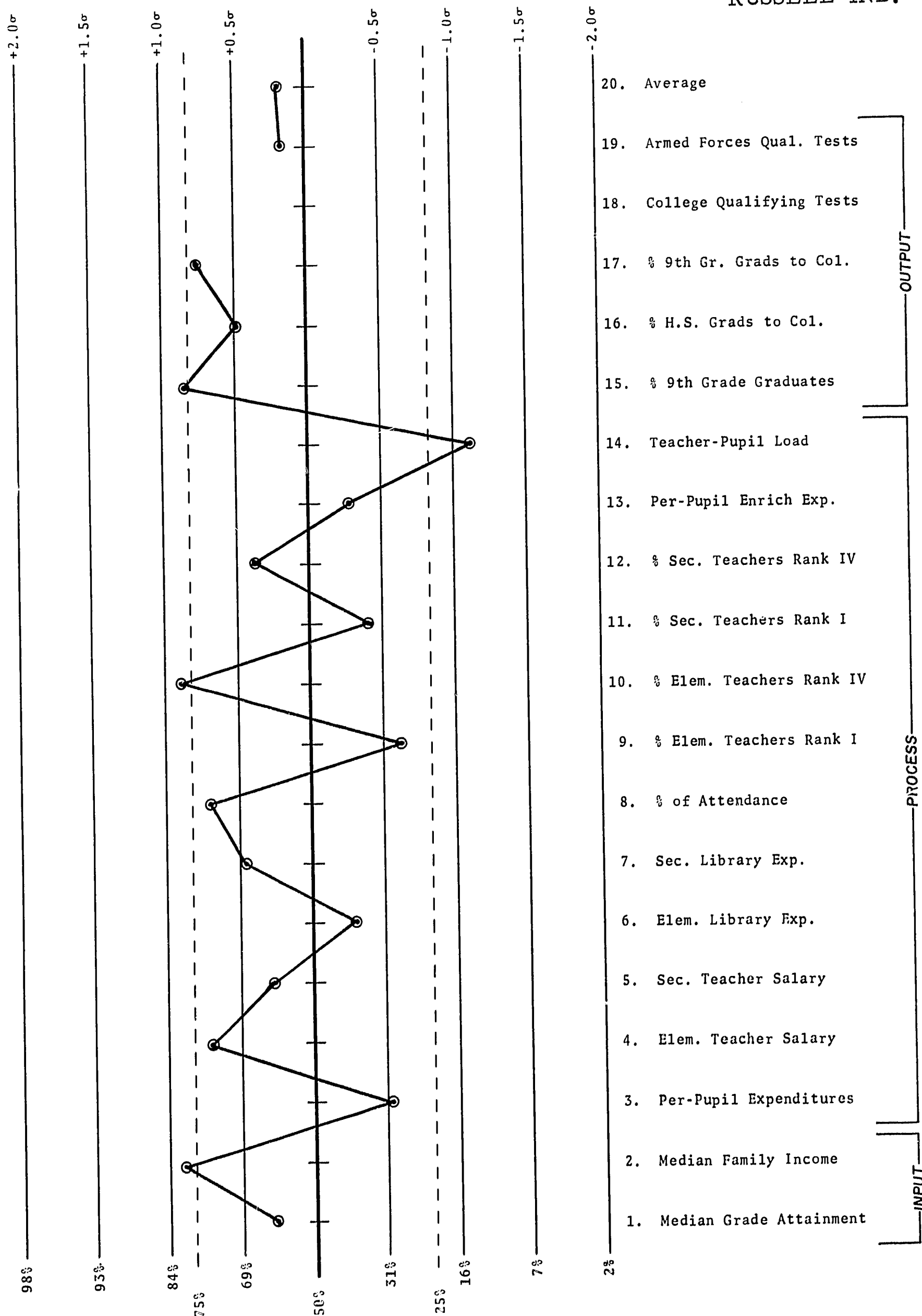
- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

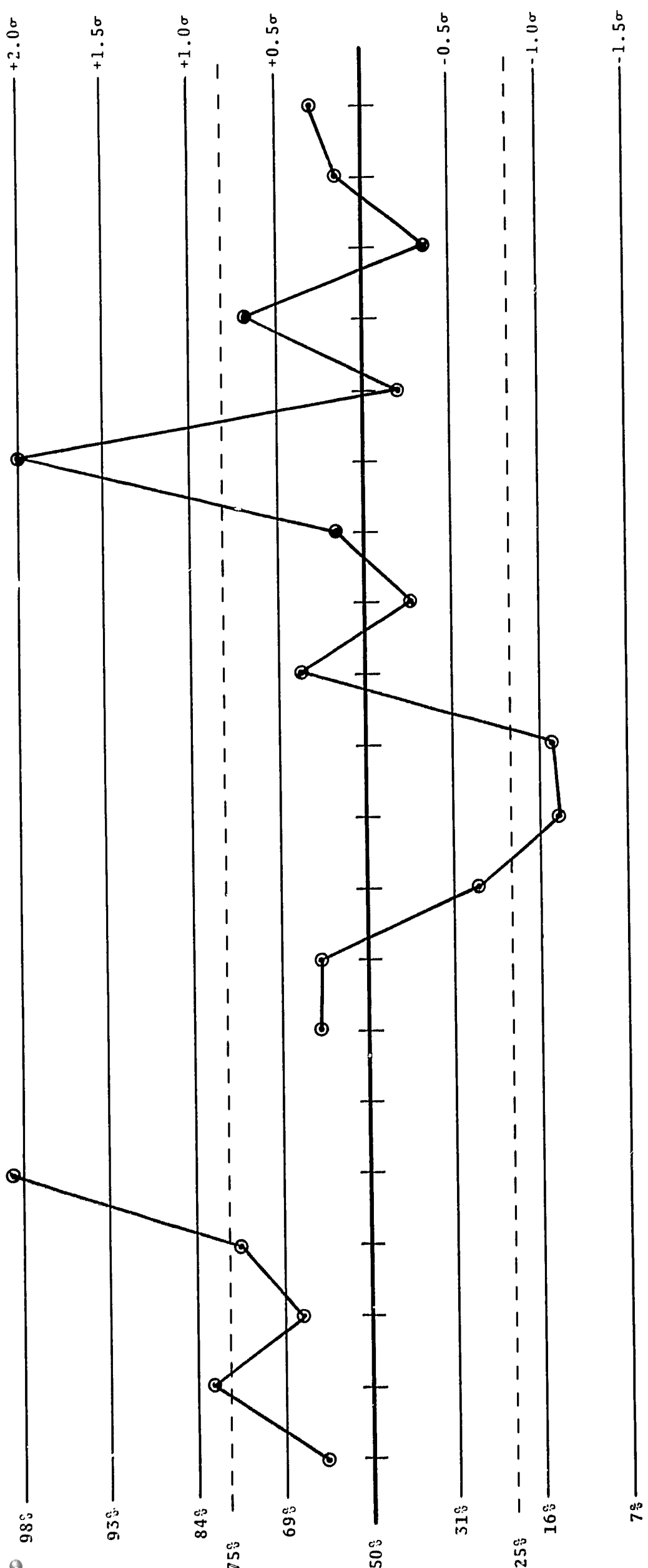
OUTPUT

PROCESS

INPUT

RUSSELL IND.

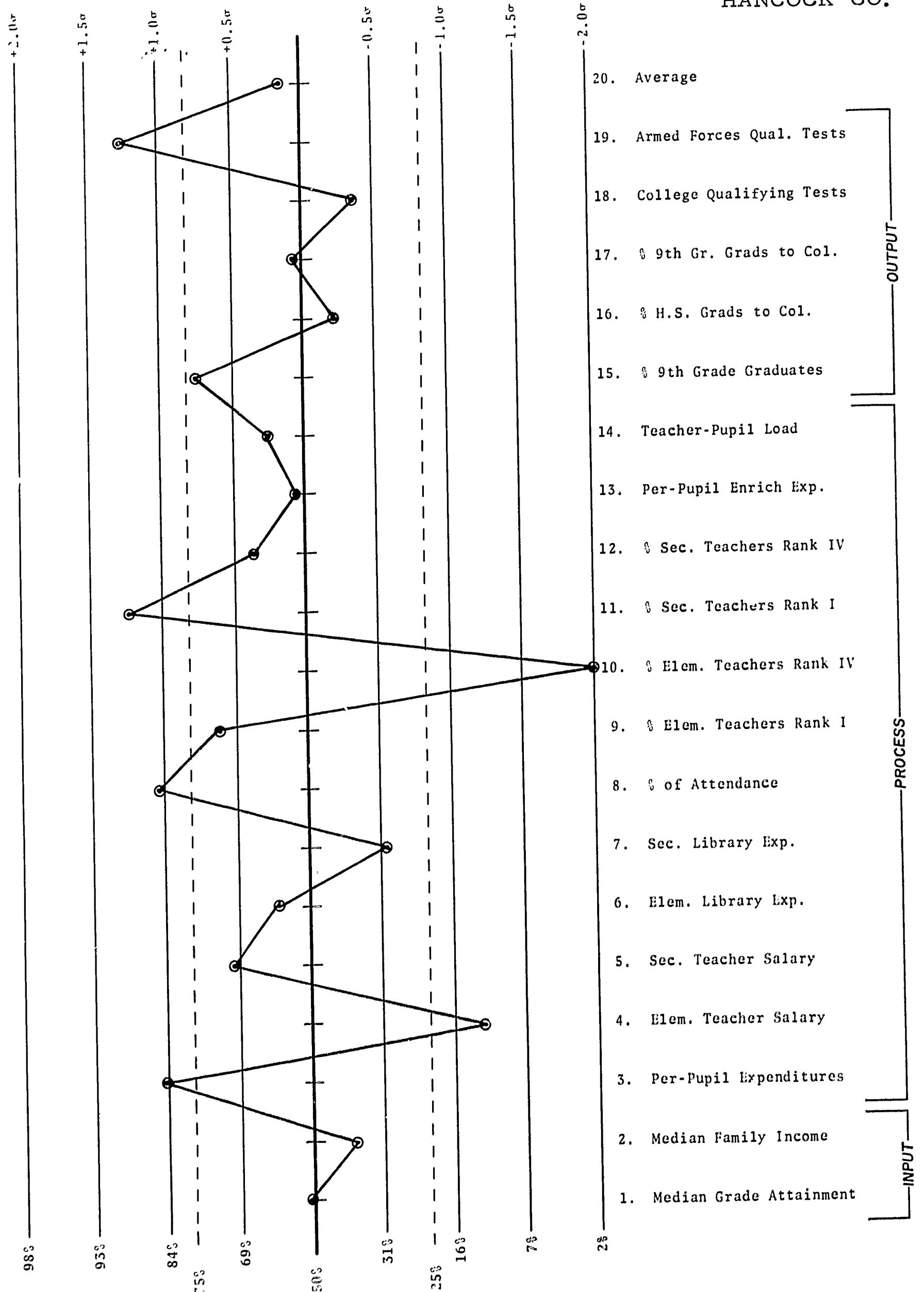




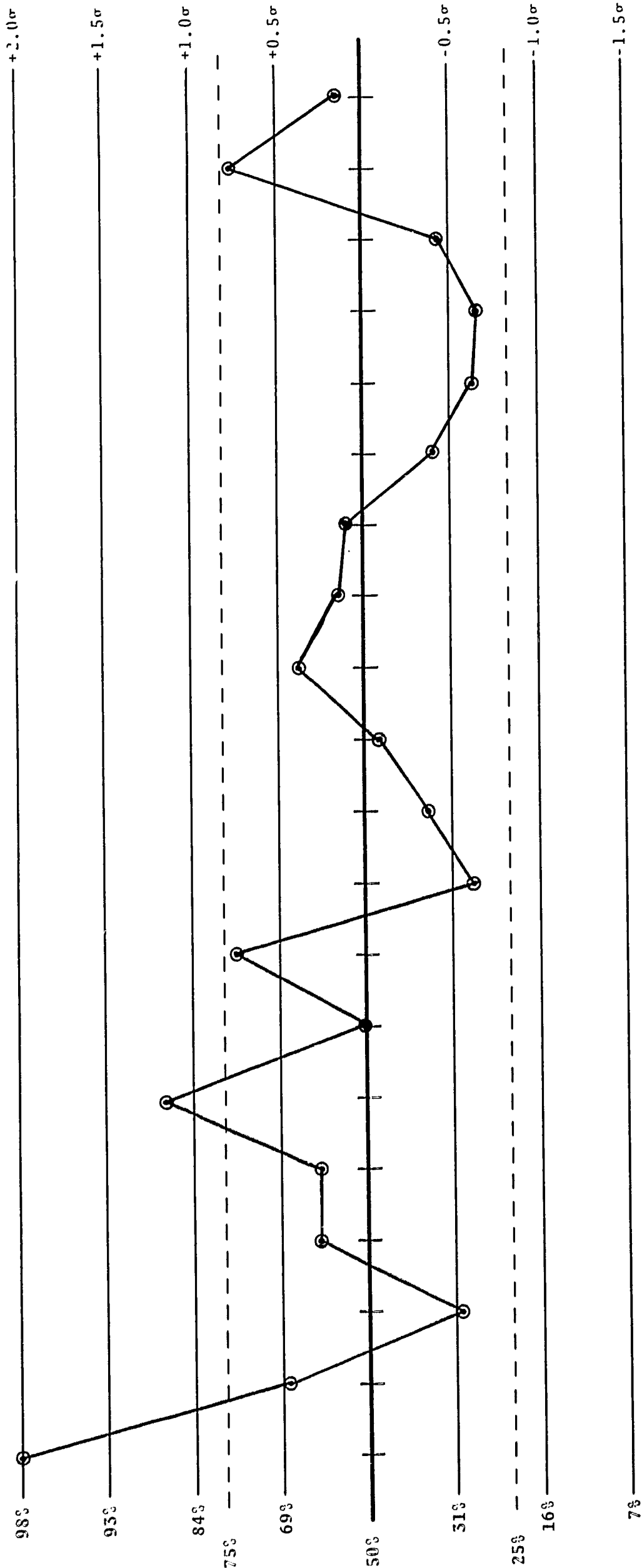
SOUTH PORTSMOUTH IND.

- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

INPUT PROCESS OUTPUT



HARDIN CO.



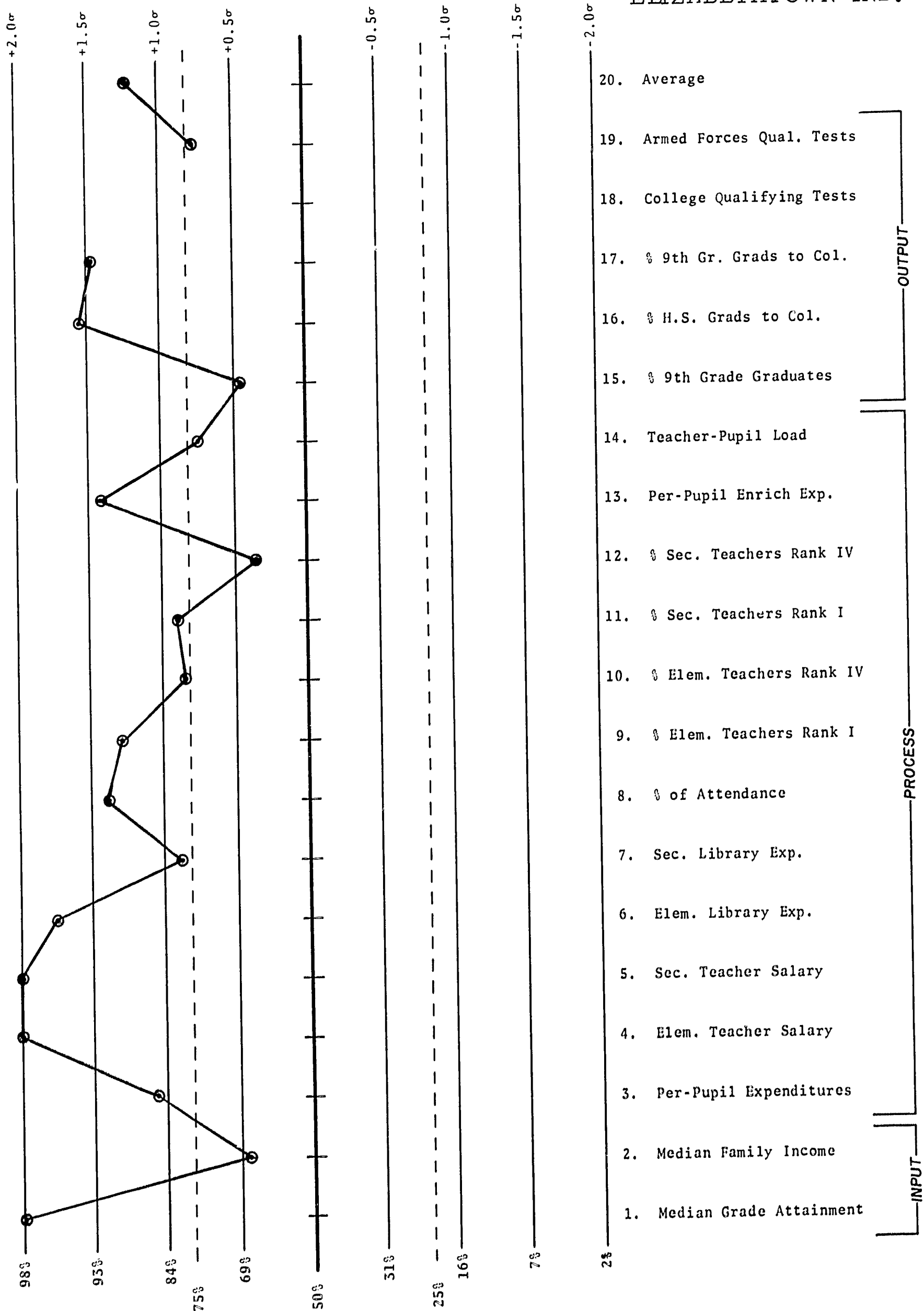
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

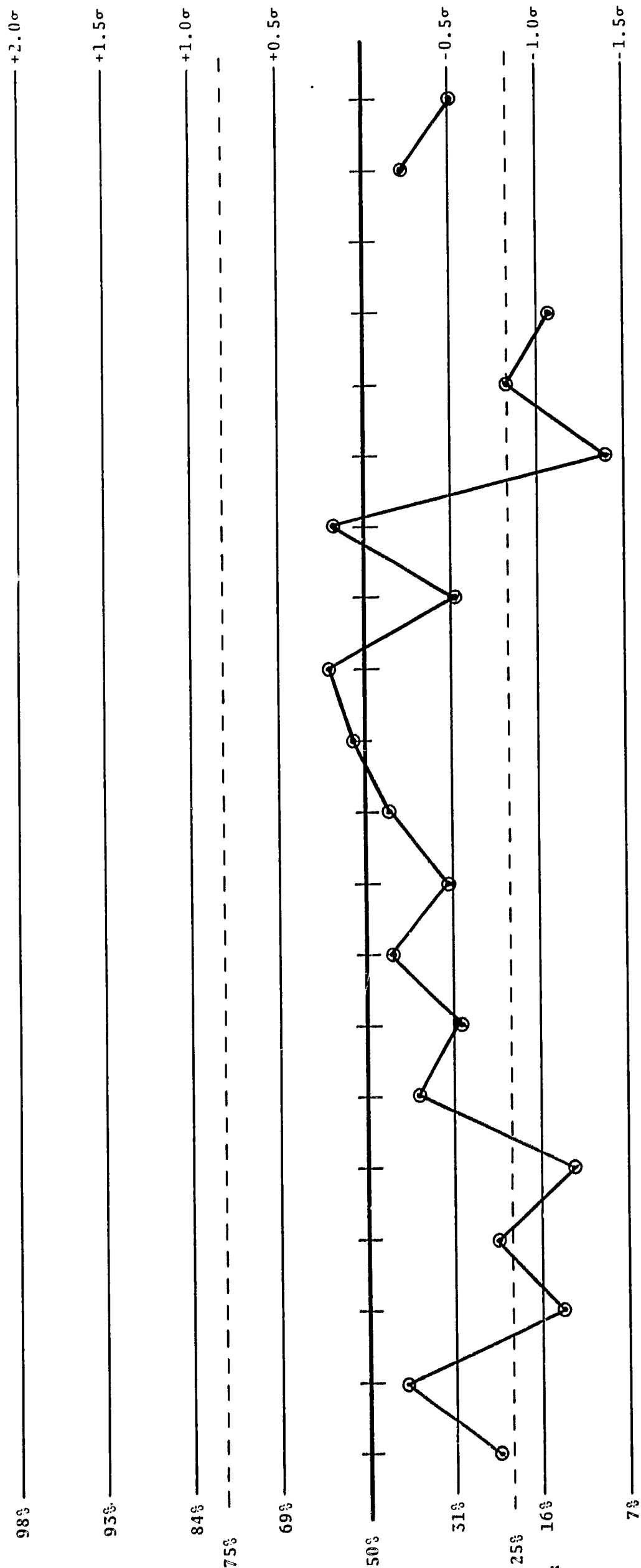
PROCESS

INPUT

ELIZABETHTOWN IND.

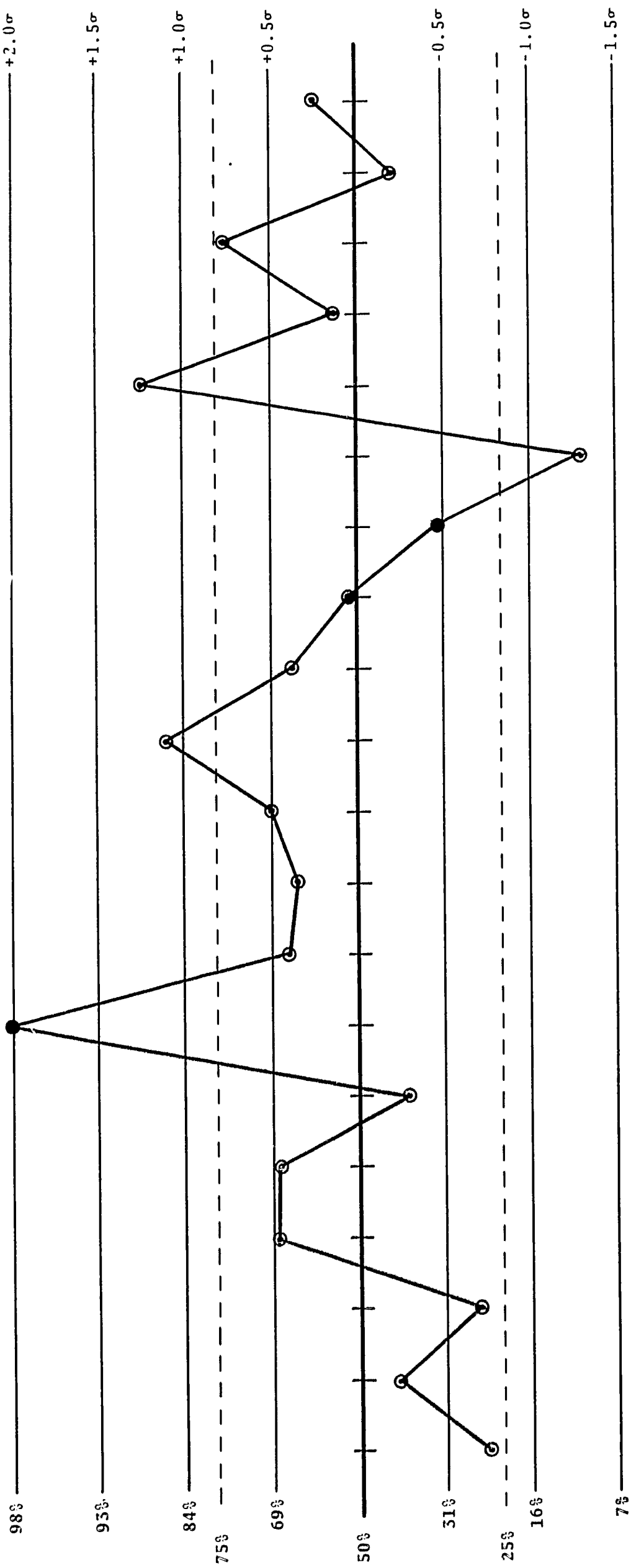


HARLAN CO.



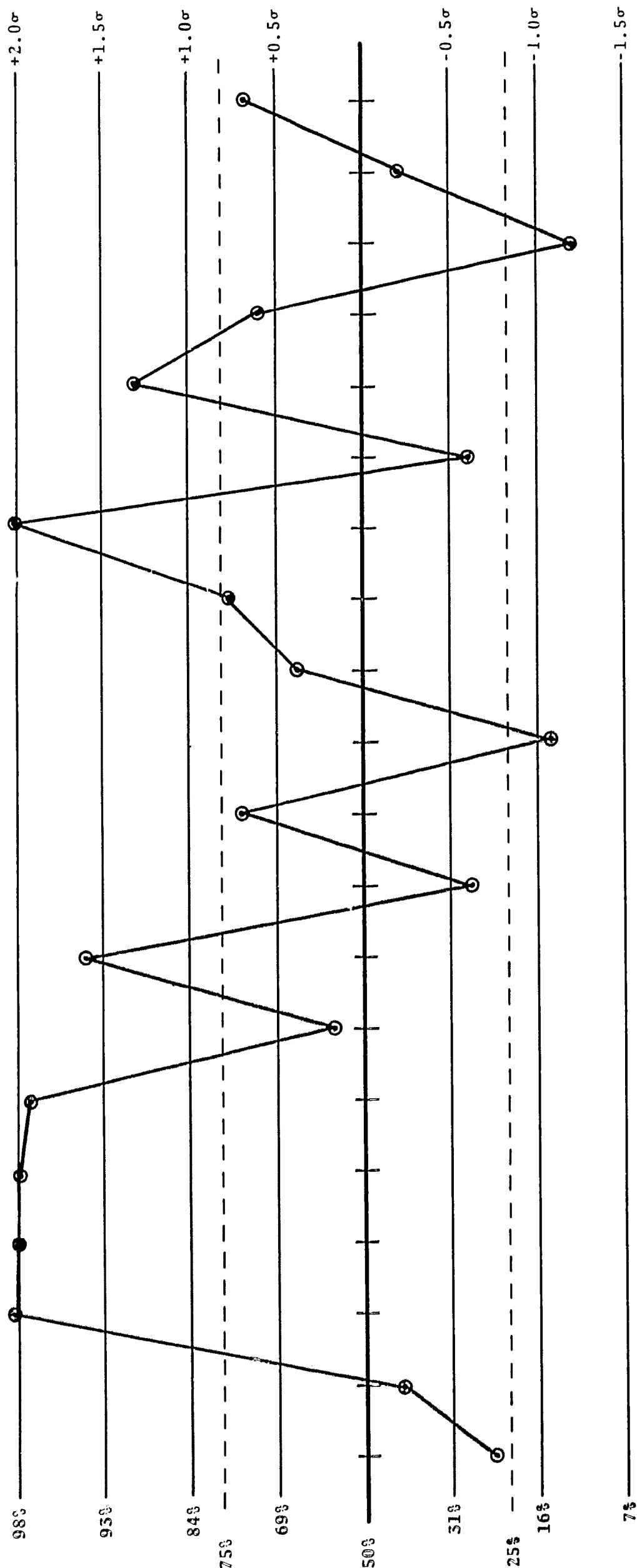
- | | |
|------------------------------|---------|
| 20. Average | OUTPUT |
| 19. Armed Forces Qual. Tests | |
| 18. College Qualifying Tests | |
| 17. % 9th Gr. Grads to Col. | |
| 16. % H.S. Grads to Col. | |
| 15. % 9th Grade Graduates | PROCESS |
| 14. Teacher-Pupil Load | |
| 13. Per-Pupil Enrich Exp. | |
| 12. % Sec. Teachers Rank IV | |
| 11. % Sec. Teachers Rank I | |
| 10. % Elem. Teachers Rank IV | |
| 9. % Elem. Teachers Rank I | |
| 8. % of Attendance | |
| 7. Sec. Library Exp. | |
| 6. Elem. Library Exp. | |
| 5. Sec. Teacher Salary | |
| 4. Elem. Teacher Salary | |
| 3. Per-Pupil Expenditures | |
| 2. Median Family Income | |
| 1. Median Grade Attainment | |

HARLAN IND.



- 20. Average
 - 19. Armed Forces Qual. Tests
 - 18. College Qualifying Tests
 - 17. % 9th Gr. Grads to Col.
 - 16. % H.S. Grads to Col.
 - 15. % 9th Grade Graduates
 - 14. Teacher-Pupil Load
 - 13. Per-Pupil Enrich Exp.
 - 12. % Sec. Teachers Rank IV
 - 11. % Sec. Teachers Rank I
 - 10. % Elem. Teachers Rank IV
 - 9. % Elem. Teachers Rank I
 - 8. % of Attendance
 - 7. Sec. Library Exp.
 - 6. Elem. Library Exp.
 - 5. Sec. Teacher Salary
 - 4. Elem. Teacher Salary
 - 3. Per-Pupil Expenditures
 - 2. Median Family Income
 - 1. Median Grade Attainment
- OUTPUT
- PROCESS
- INPUT

LYNCH IND.



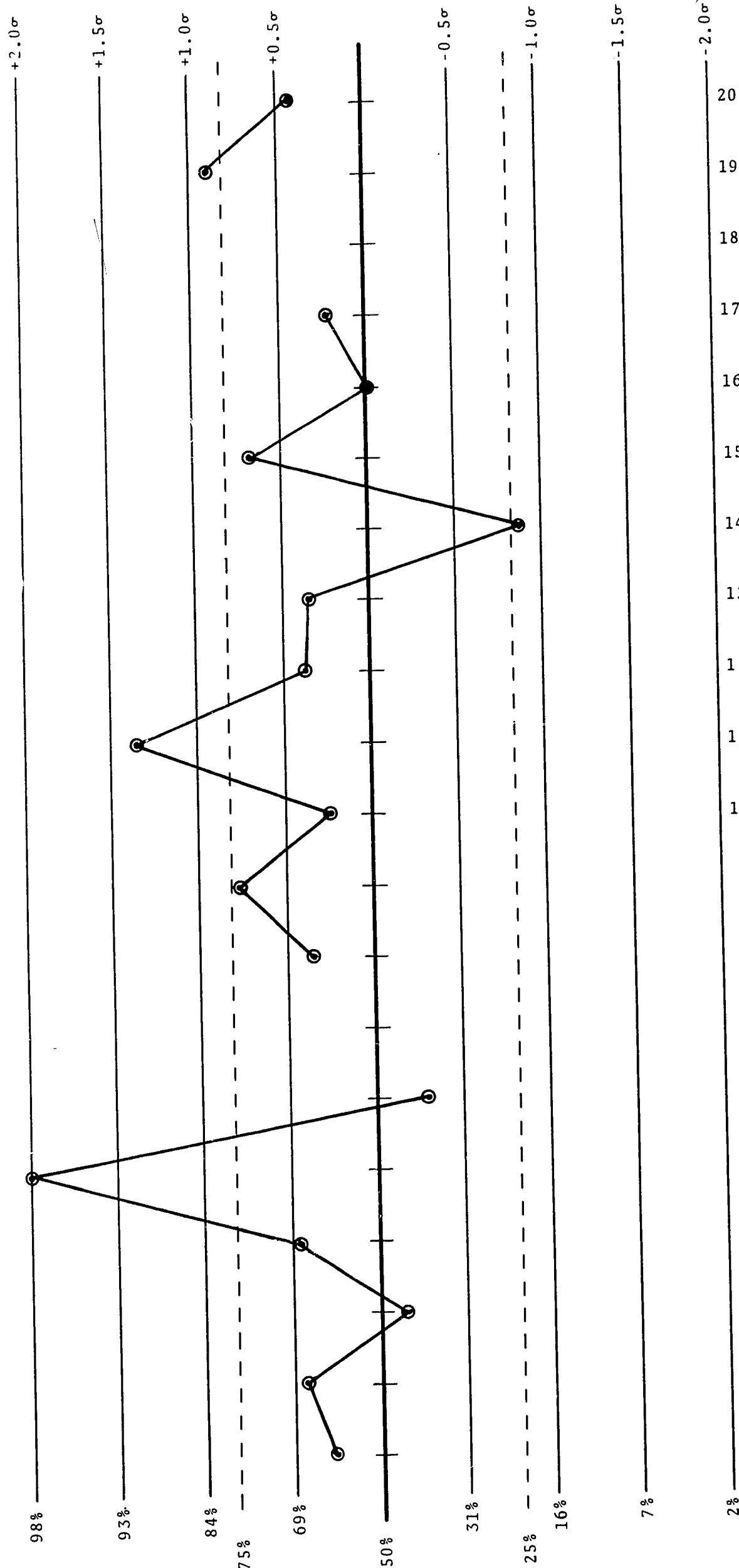
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

HARRISON CO.



20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

17. % 9th Gr. Grads to Col.

16. % H.S. Grads to Col.

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

12. % Sec. Teachers Rank IV

11. % Sec. Teachers Rank I

10. % Elem. Teachers Rank IV

9. % Elem. Teachers Rank I

8. % of Attendance

7. Sec. Library Exp.

6. Elem. Library Exp.

5. Sec. Teacher Salary

4. Elem. Teacher Salary

3. Per-Pupil Expenditures

2. Median Family Income

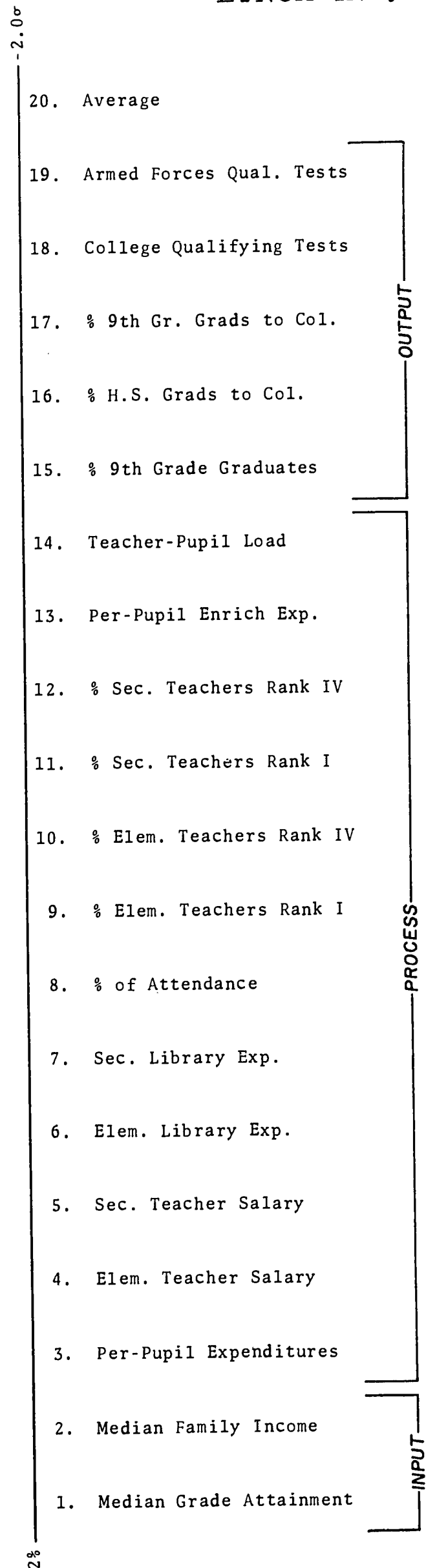
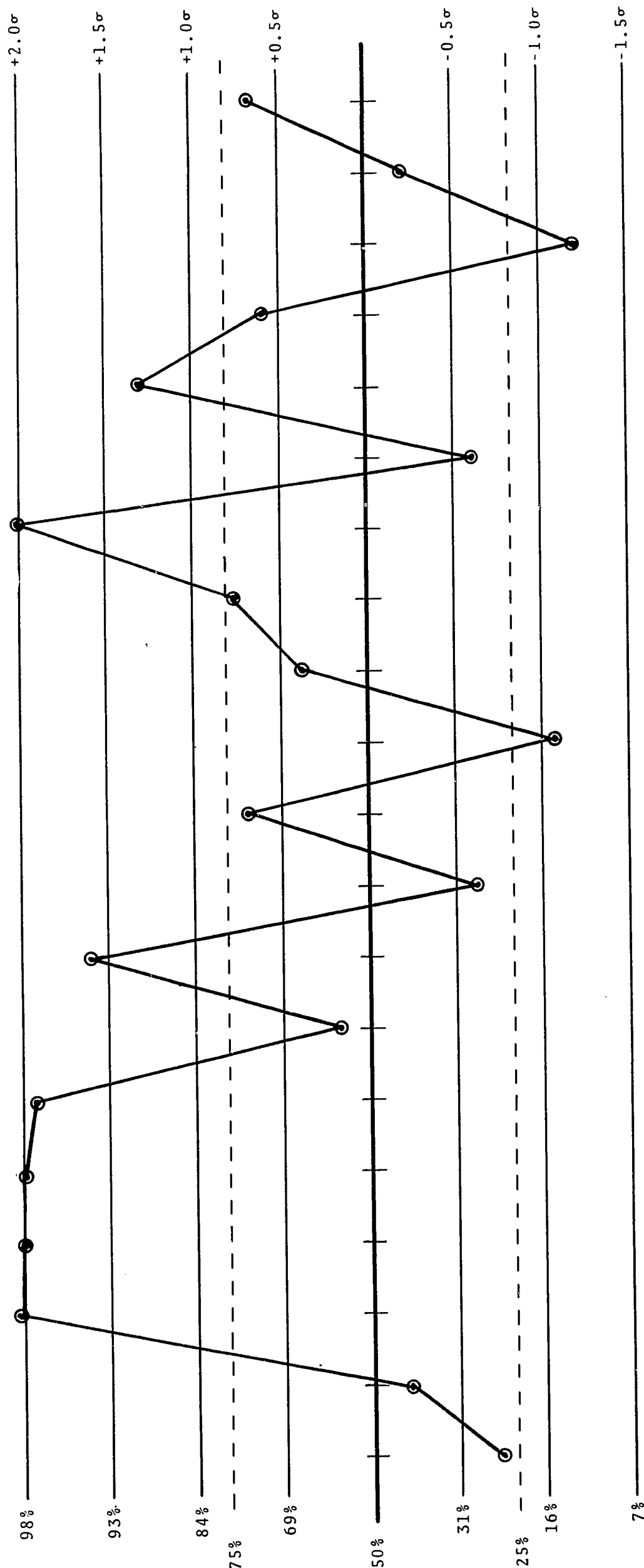
1. Median Grade Attainment

OUTPUT

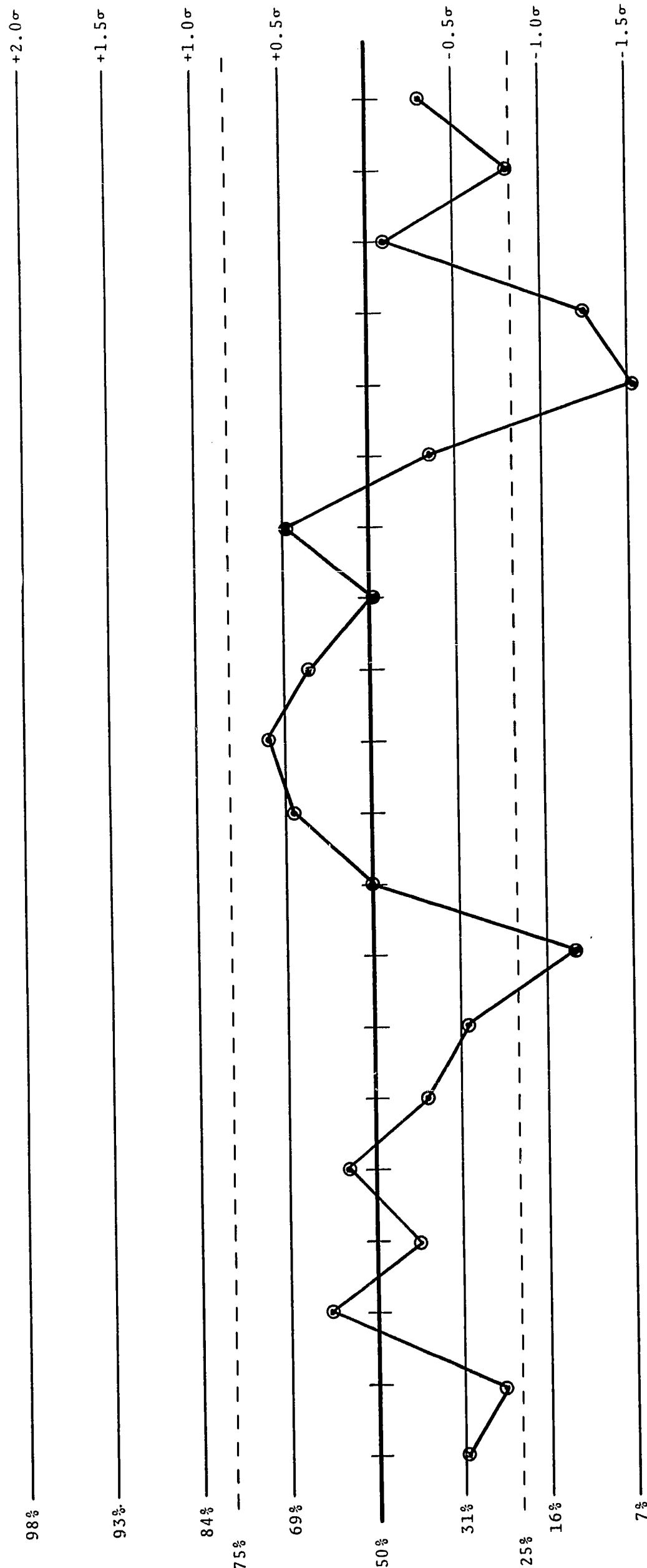
PROCESS

INPUT

LYNCH IND.

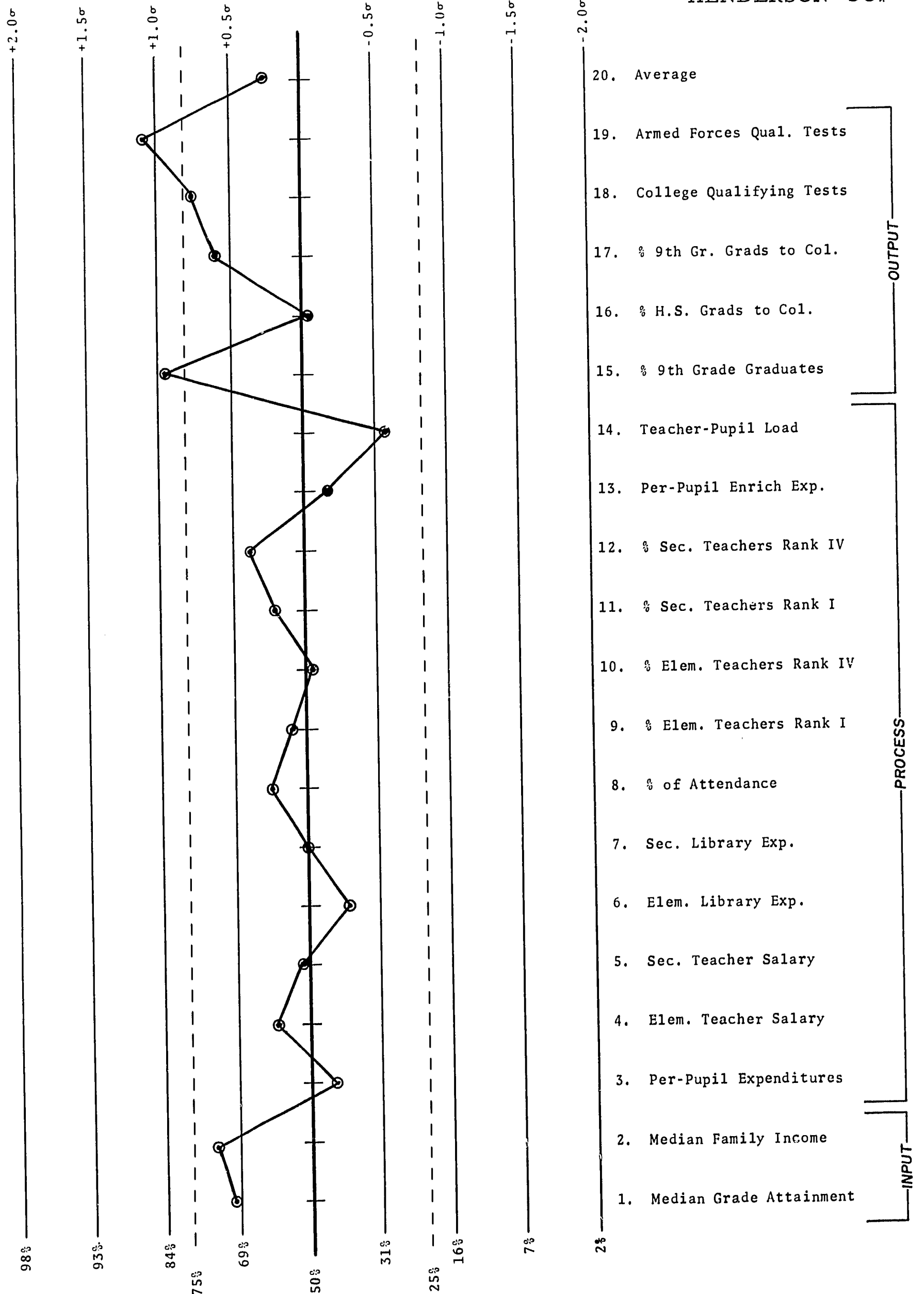


HART CO.

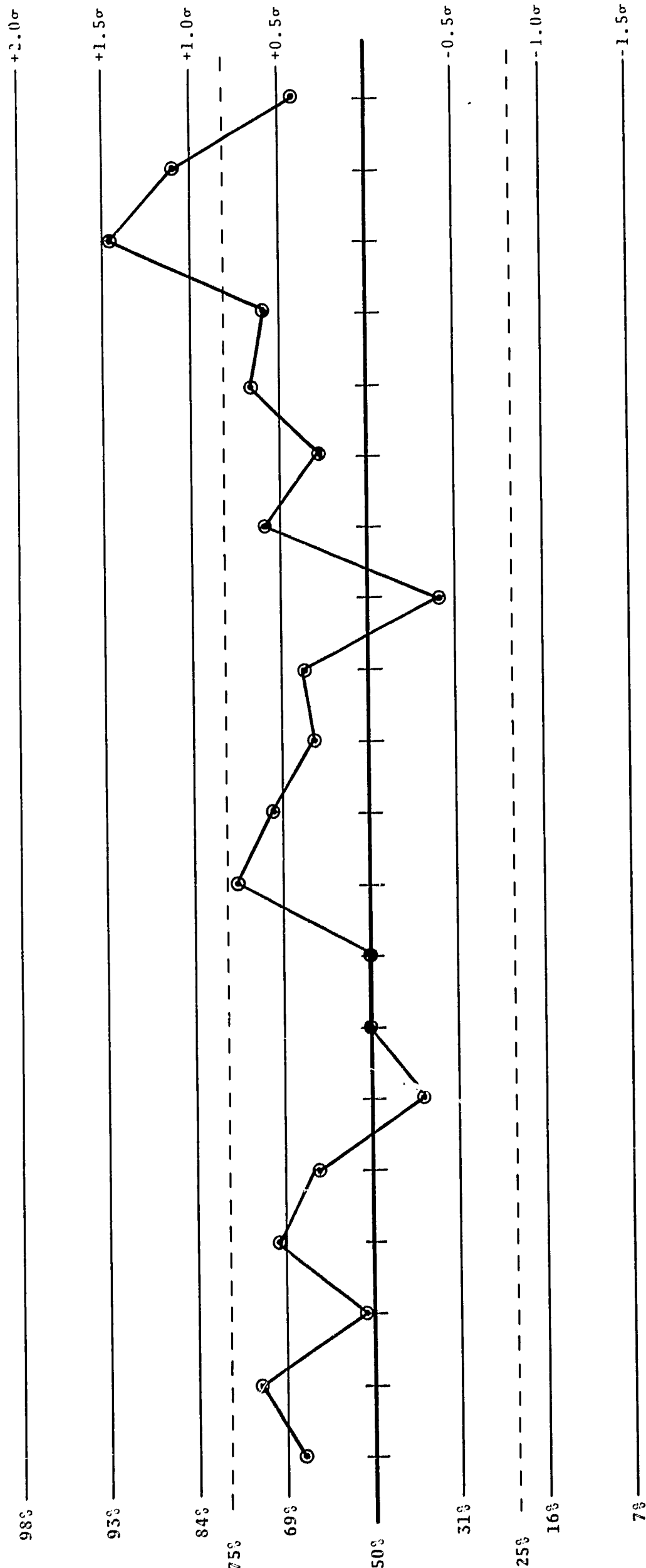


20. Average	
19. Armed Forces Qual. Tests	
18. College Qualifying Tests	
17. % 9th Gr. Grads to Col.	
16. % H.S. Grads to Col.	
15. % 9th Grade Graduates	
14. Teacher-Pupil Load	
13. Per-Pupil Enrich Exp.	
12. % Sec. Teachers Rank IV	
11. % Sec. Teachers Rank I	
10. % Elem. Teachers Rank IV	
9. % Elem. Teachers Rank I	
8. % of Attendance	
7. Sec. Library Exp.	
6. Elem. Library Exp.	
5. Sec. Teacher Salary	
4. Elem. Teacher Salary	
3. Per-Pupil Expenditures	
2. Median Family Income	
1. Median Grade Attainment	

HENDERSON CO.



HENDERSON IND.



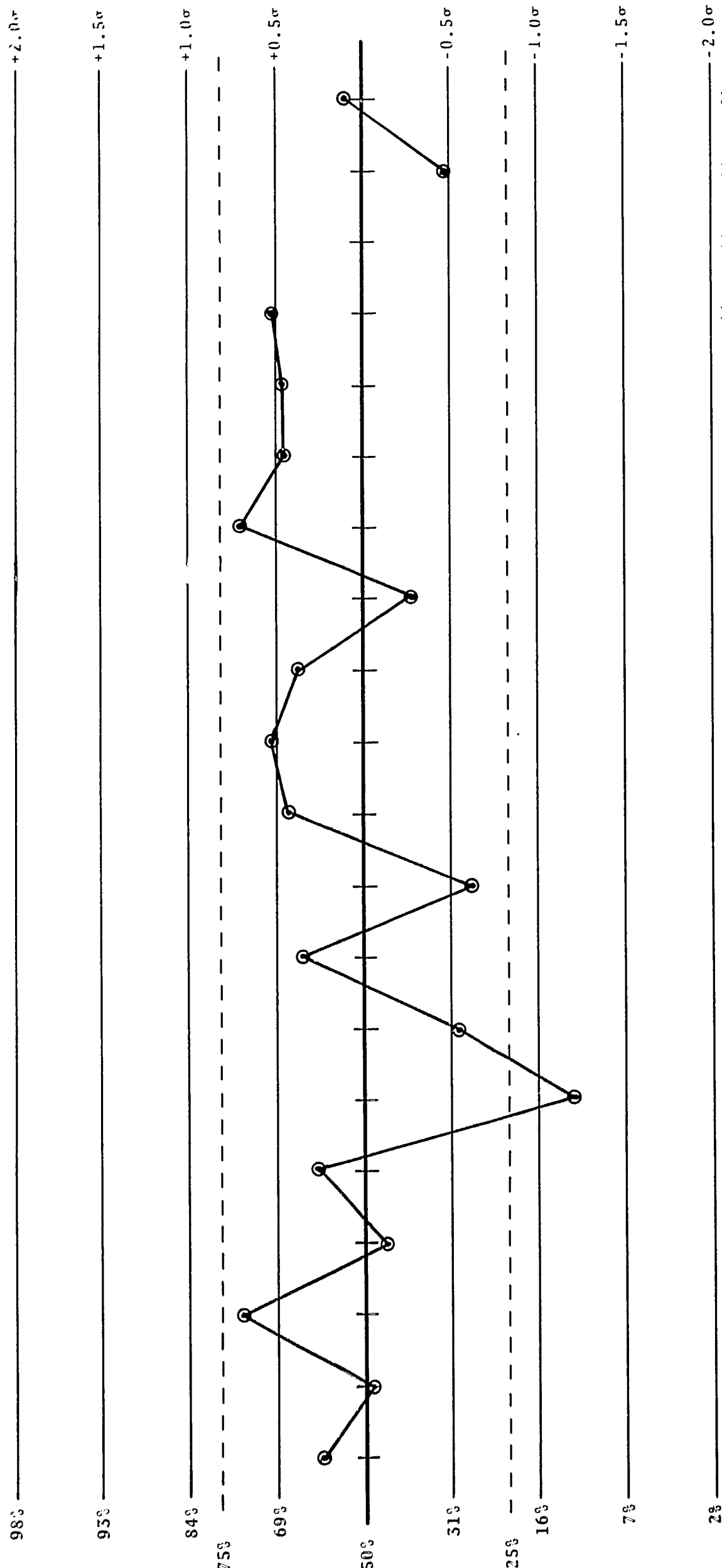
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

HENRY CO.



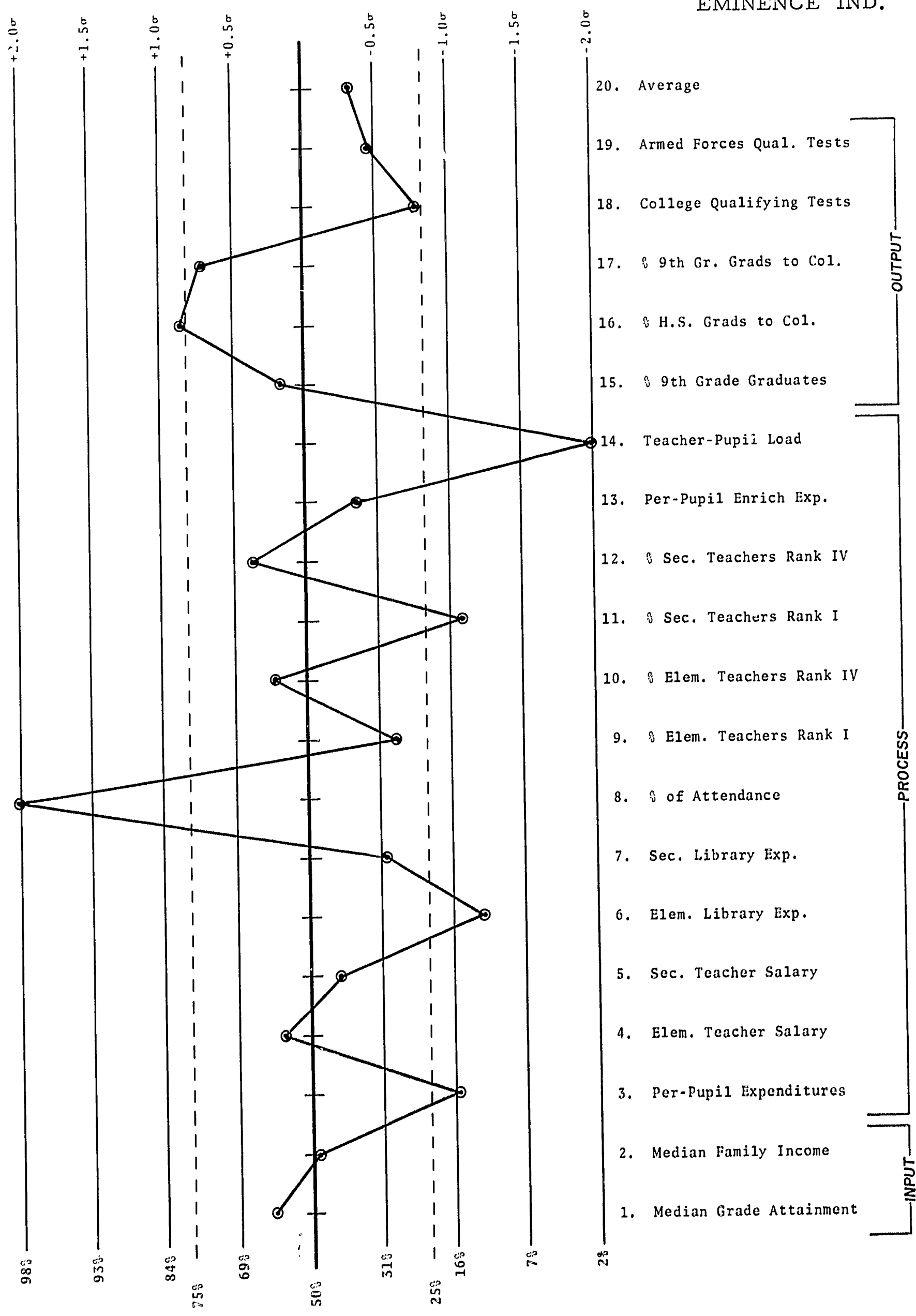
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

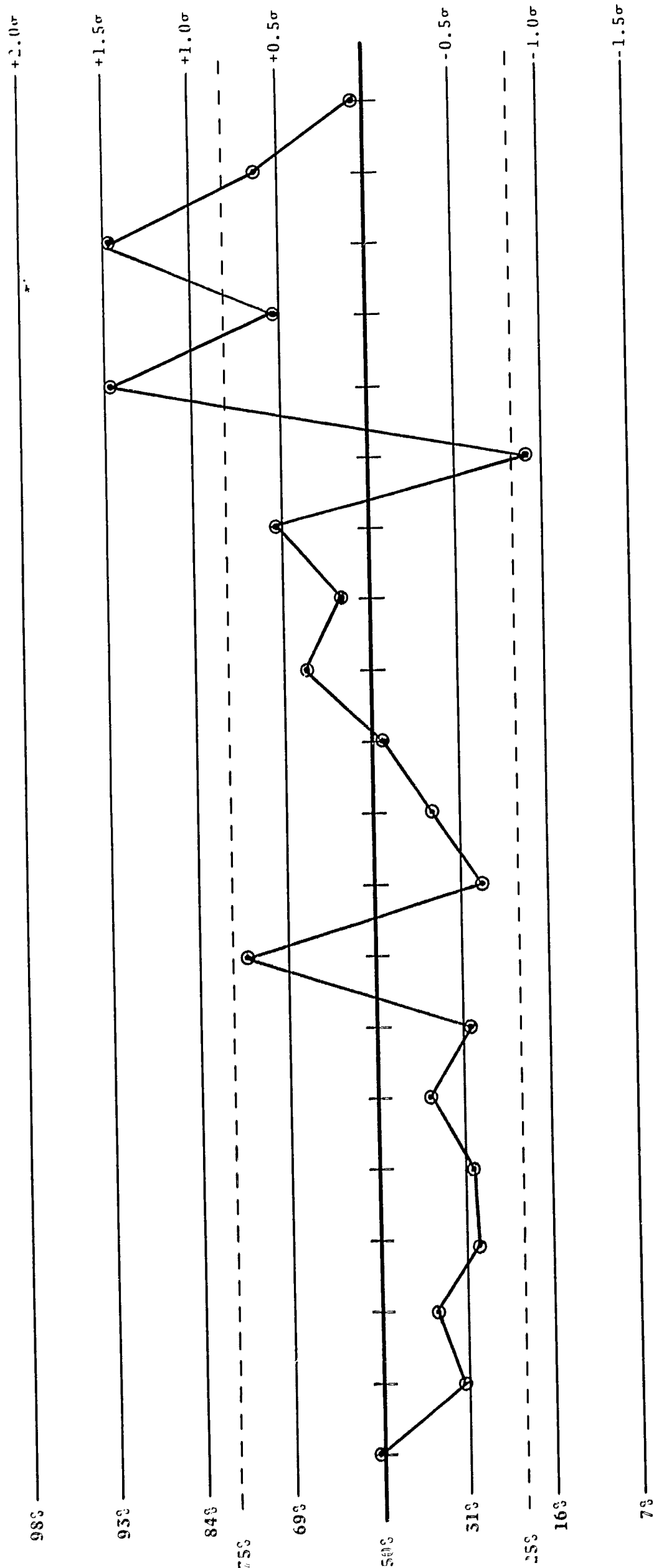
PROCESS

INPUT

EMINENCE IND.



HICKMAN CO.



20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

17. % 9th Gr. Grads to Col.

16. % H.S. Grads to Col.

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

12. % Sec. Teachers Rank IV

11. % Sec. Teachers Rank I

10. % Elem. Teachers Rank IV

9. % Elem. Teachers Rank I

8. % of Attendance

7. Sec. Library Exp.

6. Elem. Library Exp.

5. Sec. Teacher Salary

4. Elem. Teacher Salary

3. Per-Pupil Expenditures

2. Median Family Income

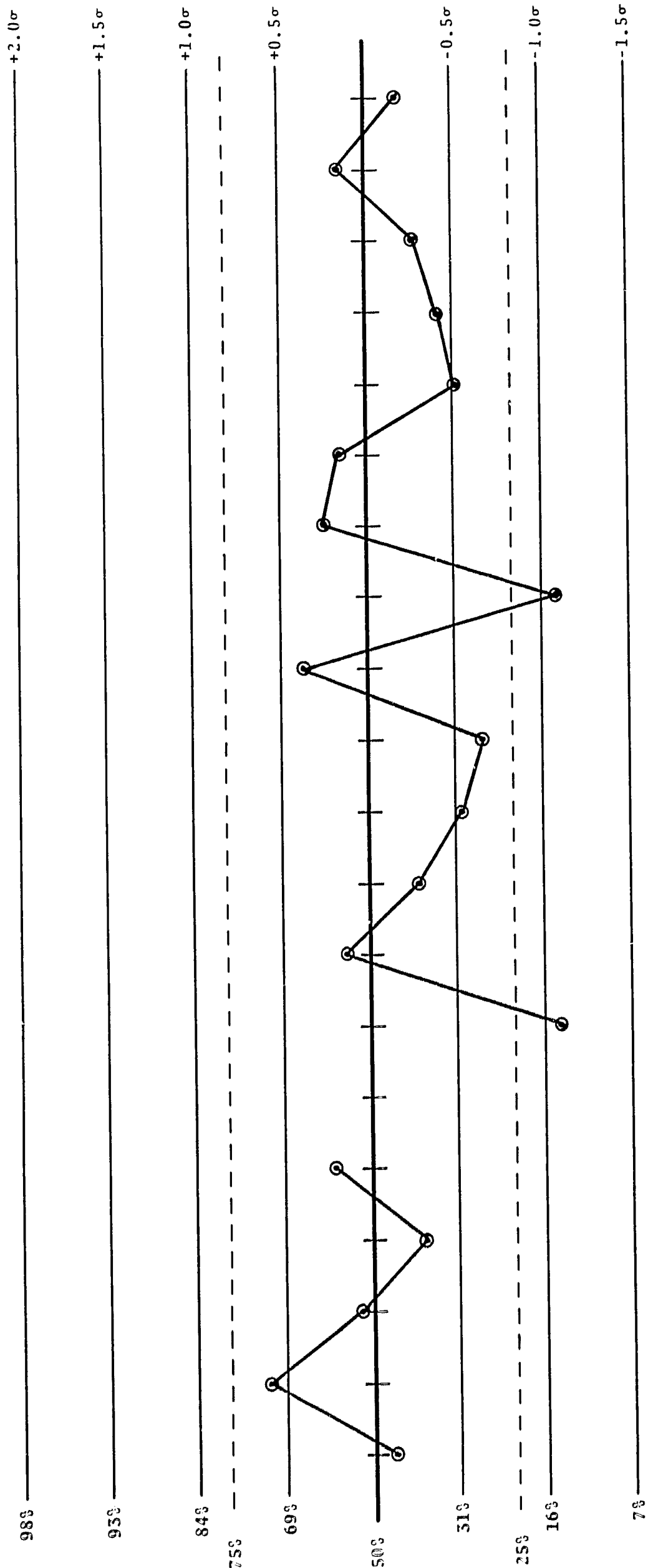
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

HOPKINS CO.



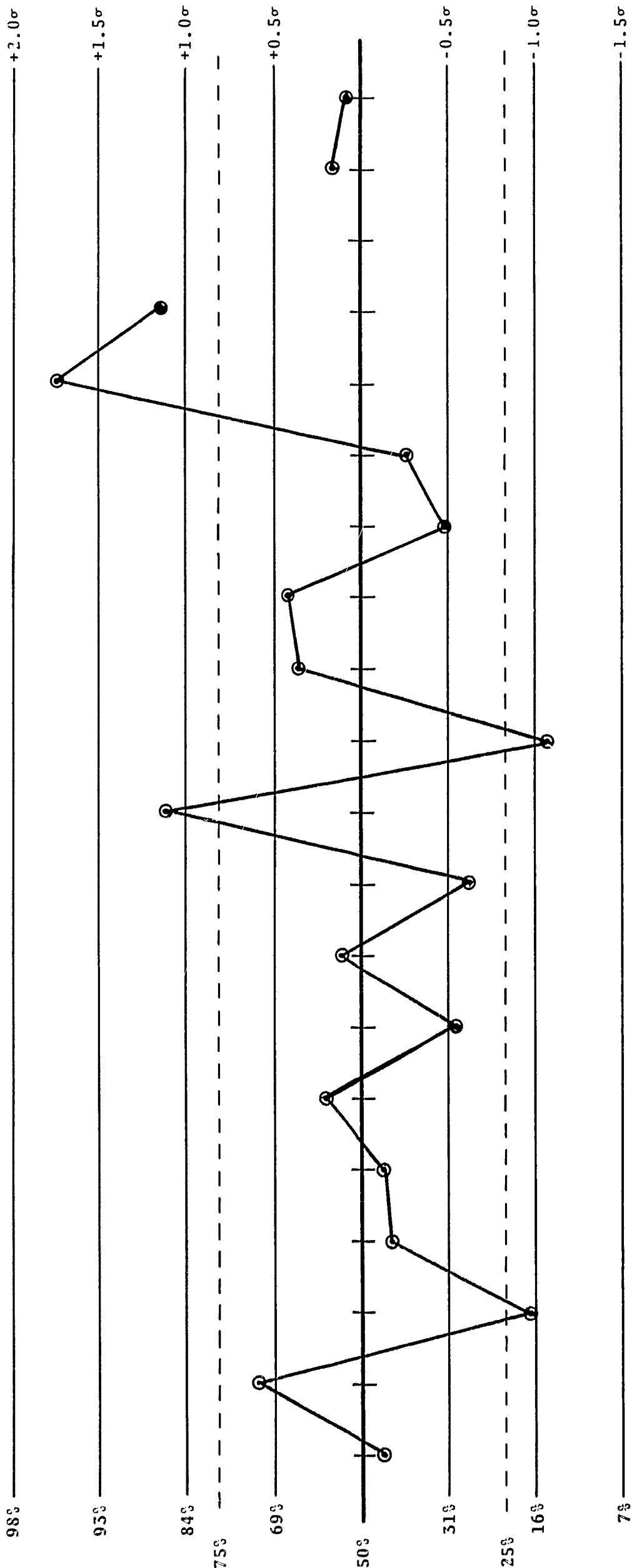
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

DAWSON SPRINGS IND.



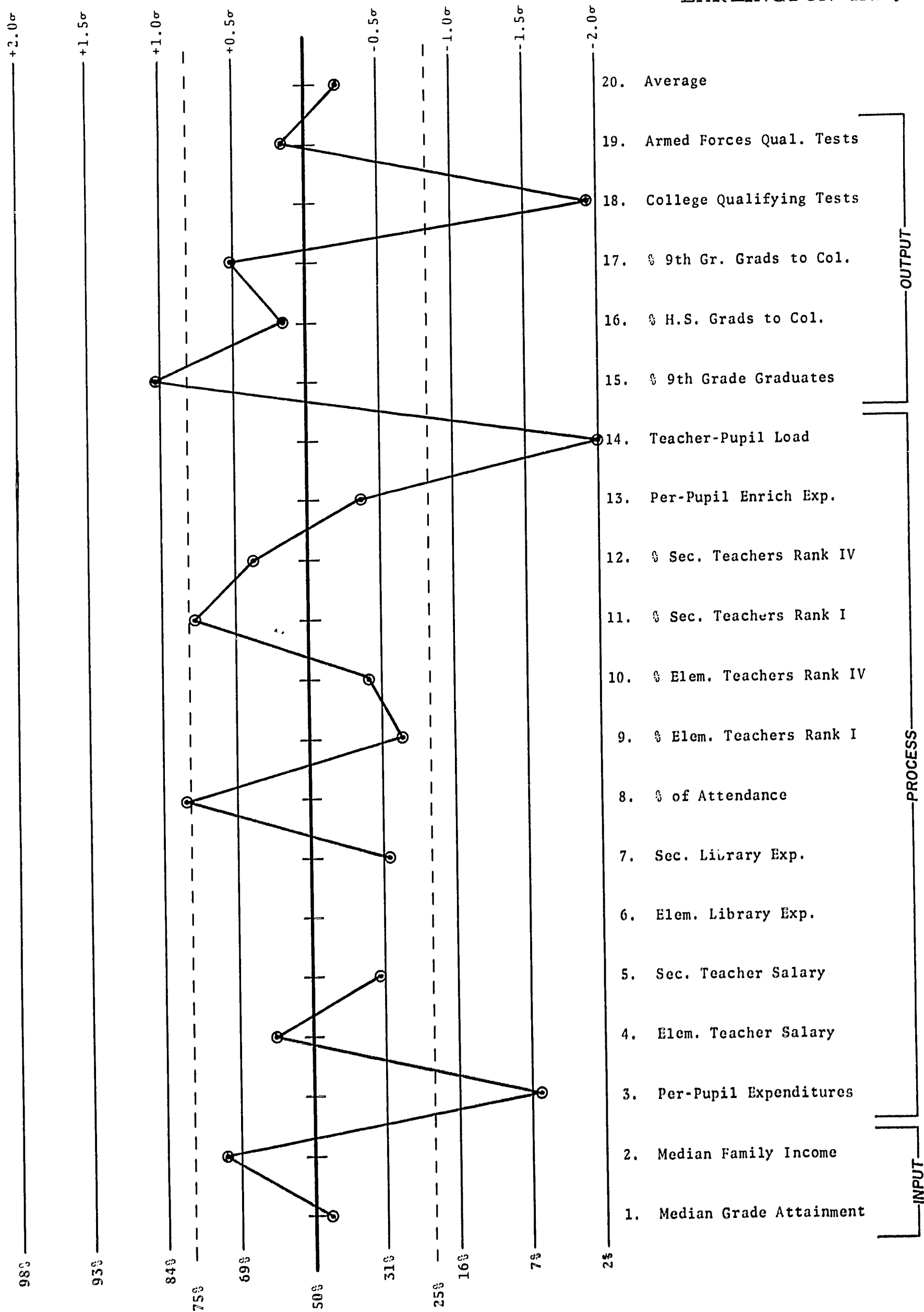
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

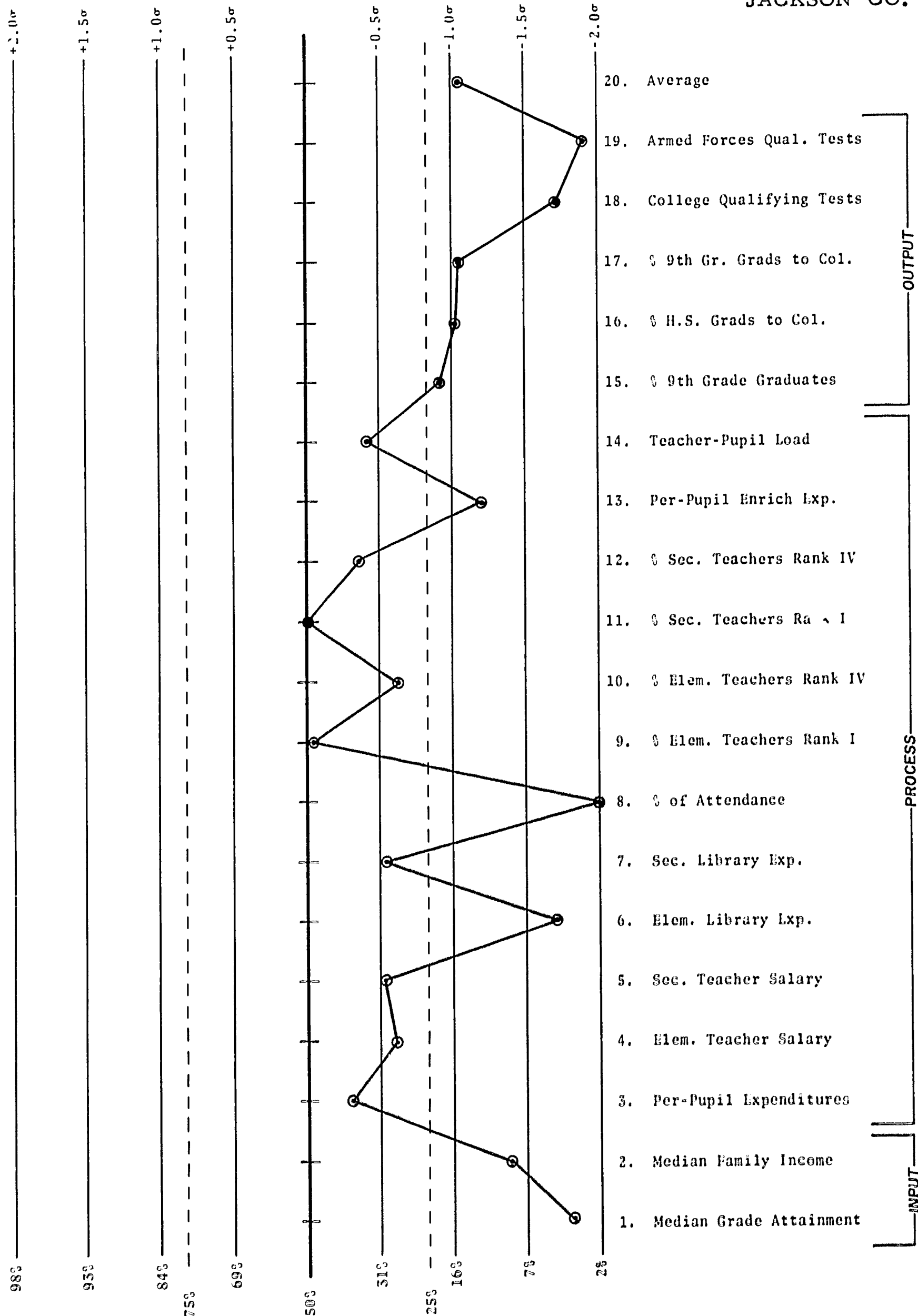
PROCESS

INPUT

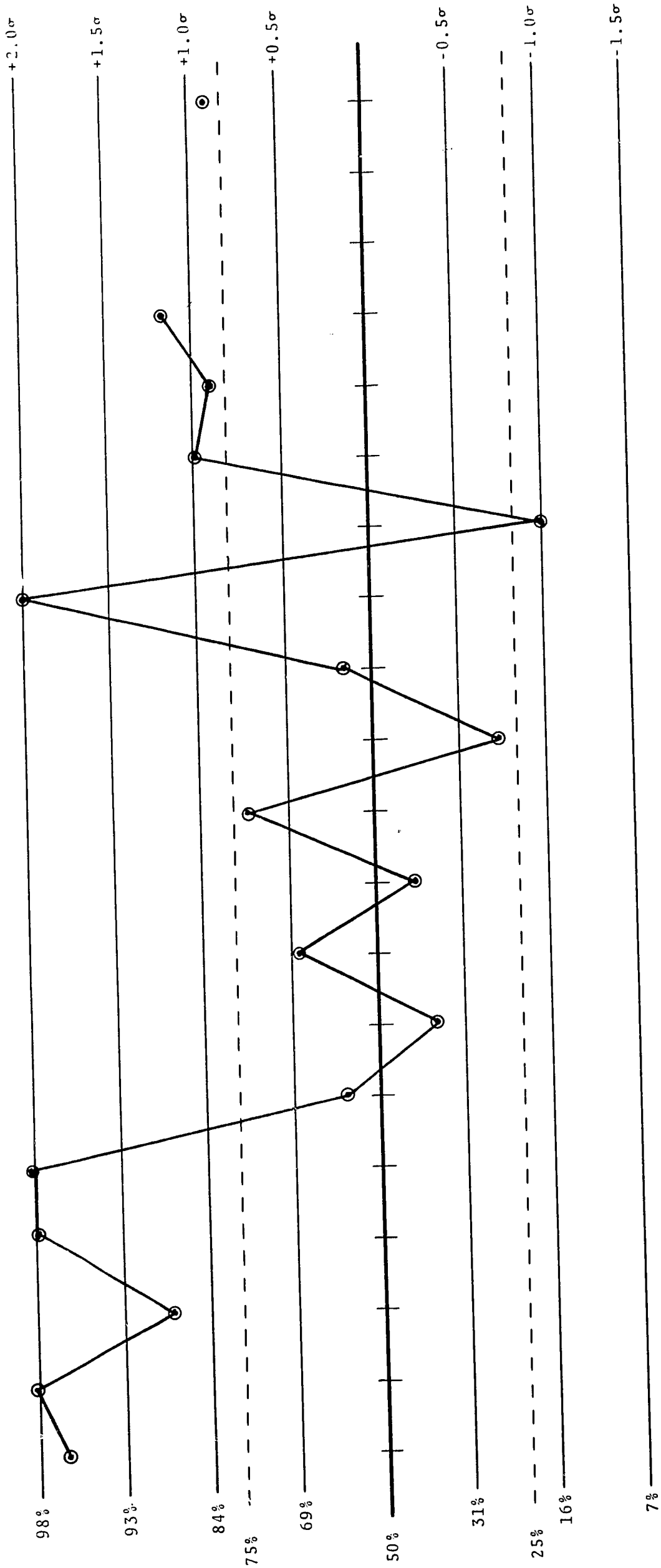
EARLINGTON IND.



JACKSON CO.



JEFFERSON CO.



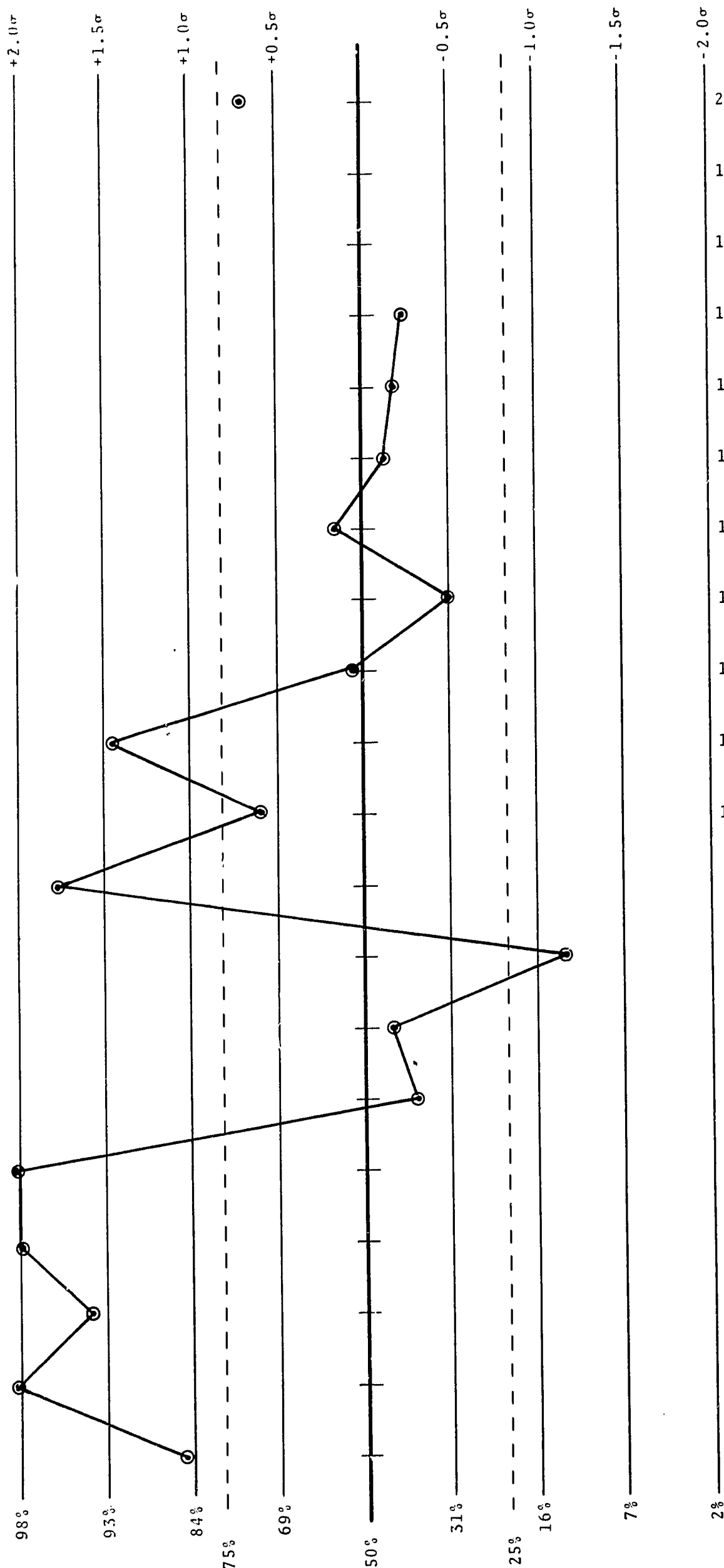
- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

LOUISVILLE IND.



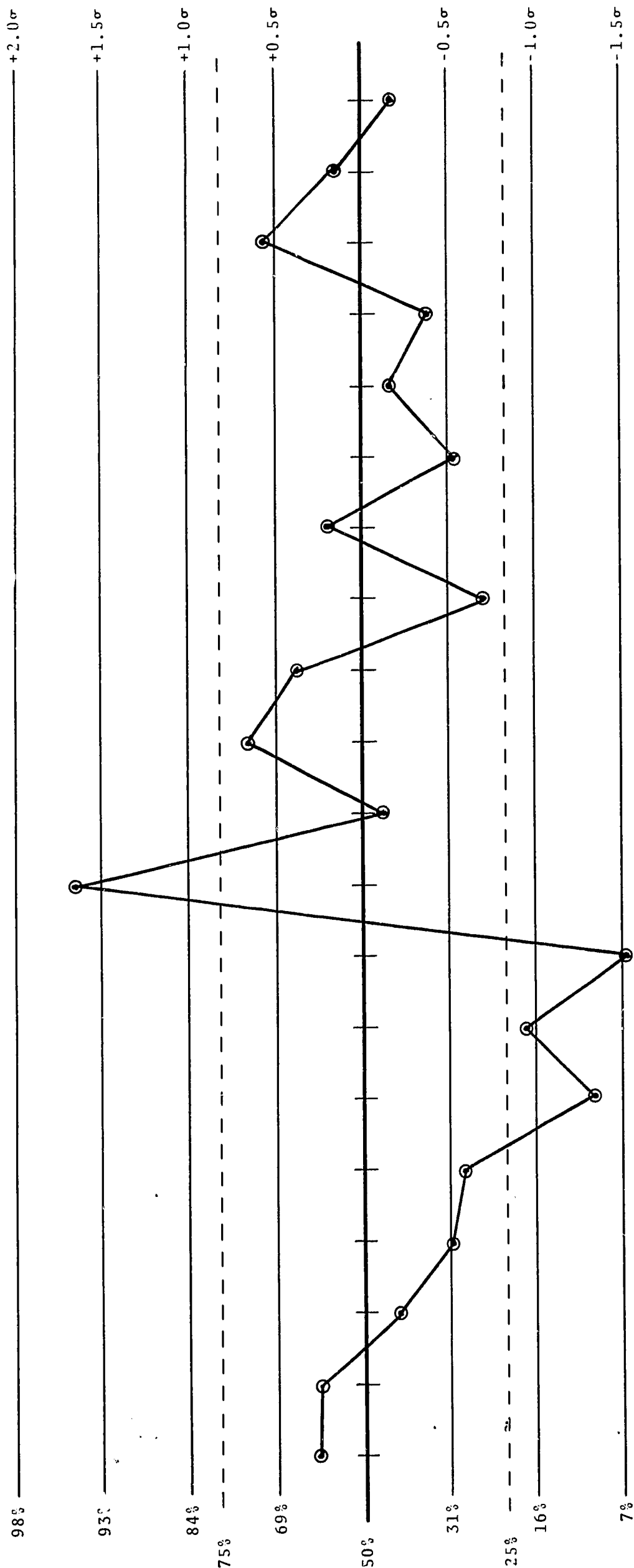
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

JESSAMINE CO.



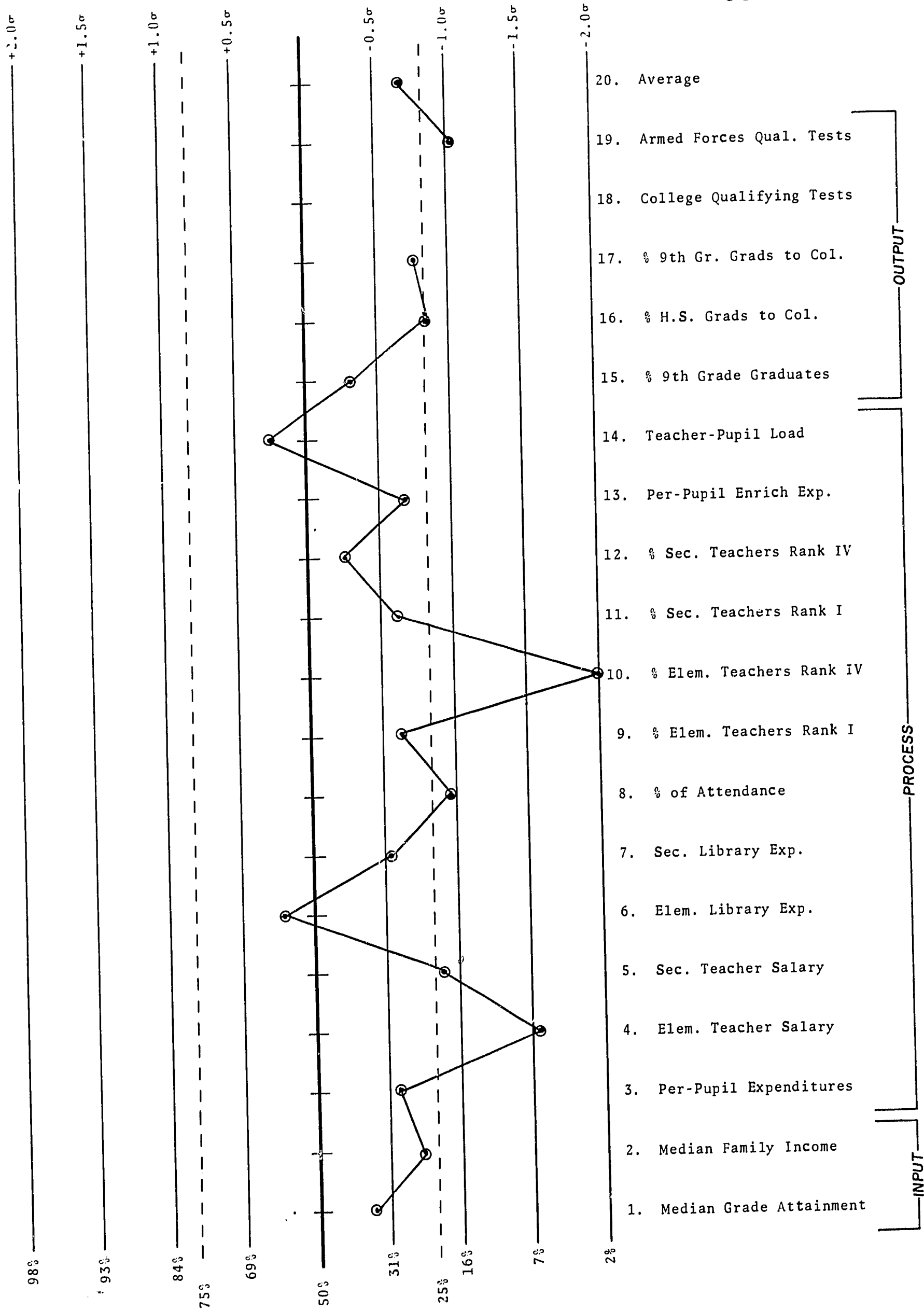
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

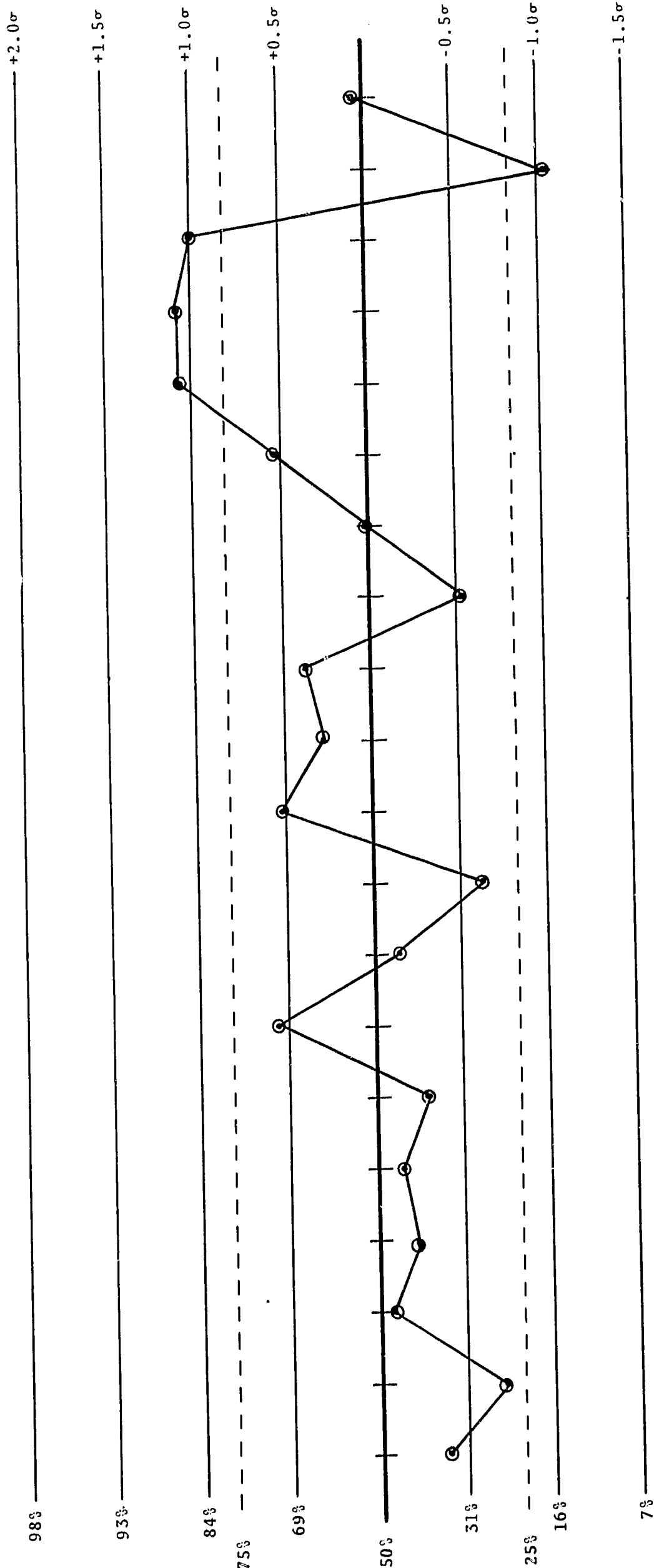
PROCESS

INPUT

JOHNSON CO.



PAINTSVILLE IND.



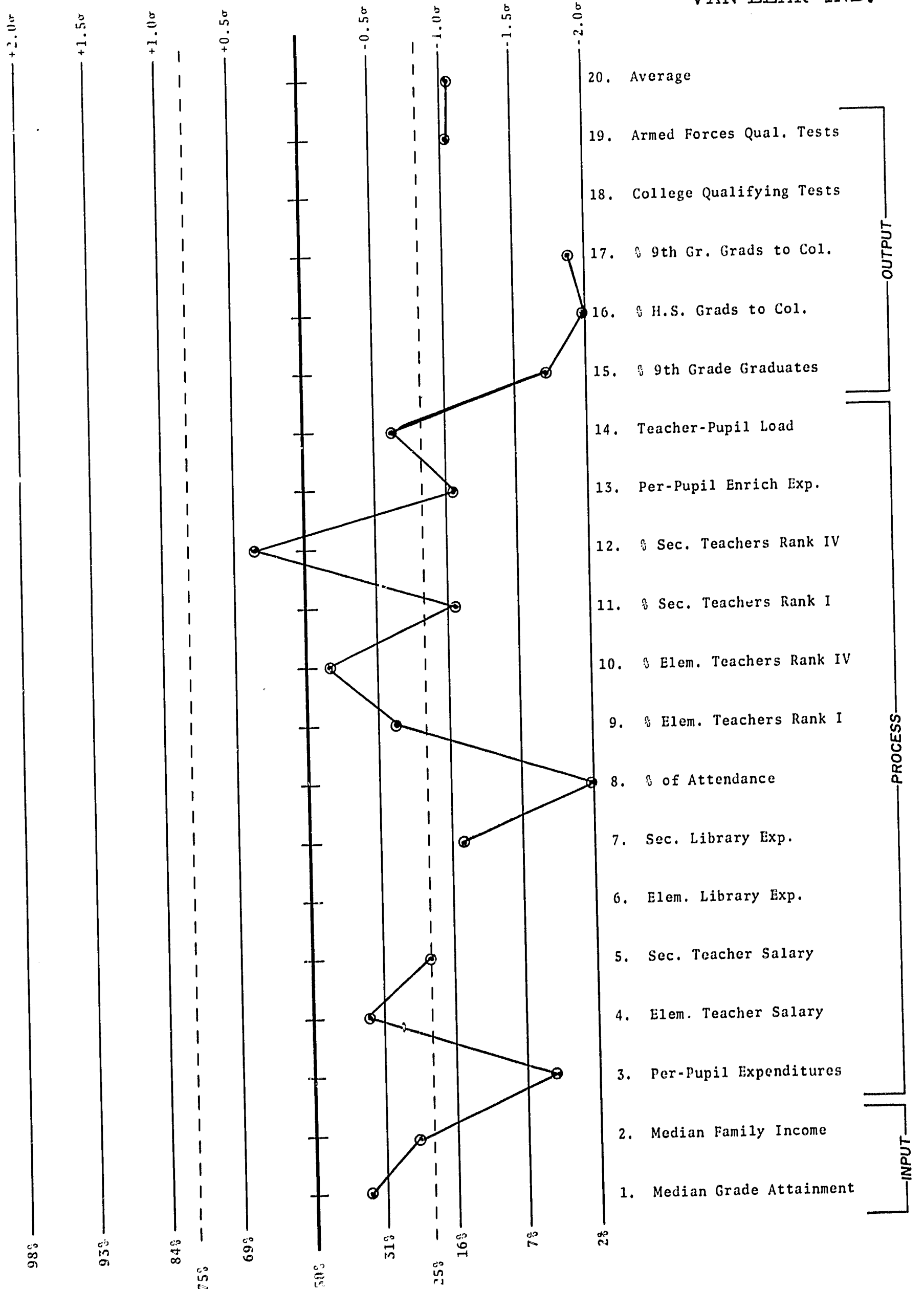
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

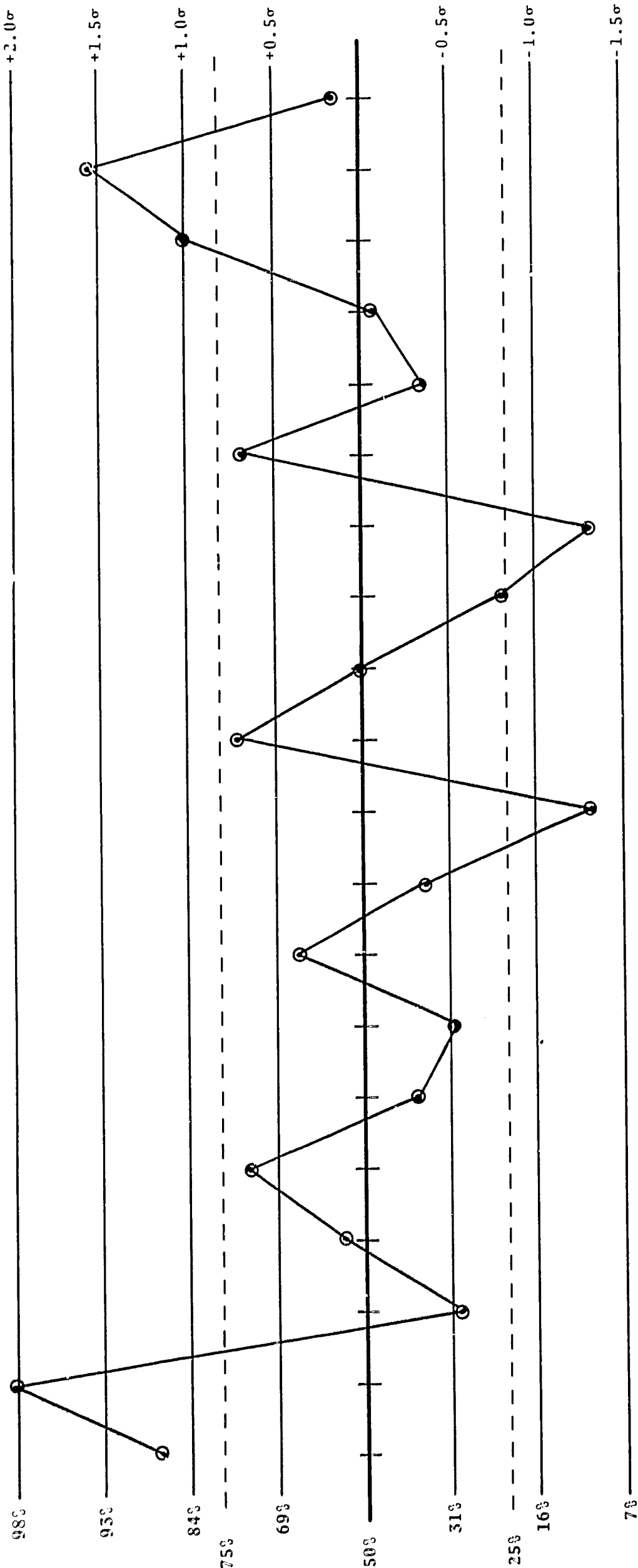
PROCESS

INPUT

VAN LEAR IND.

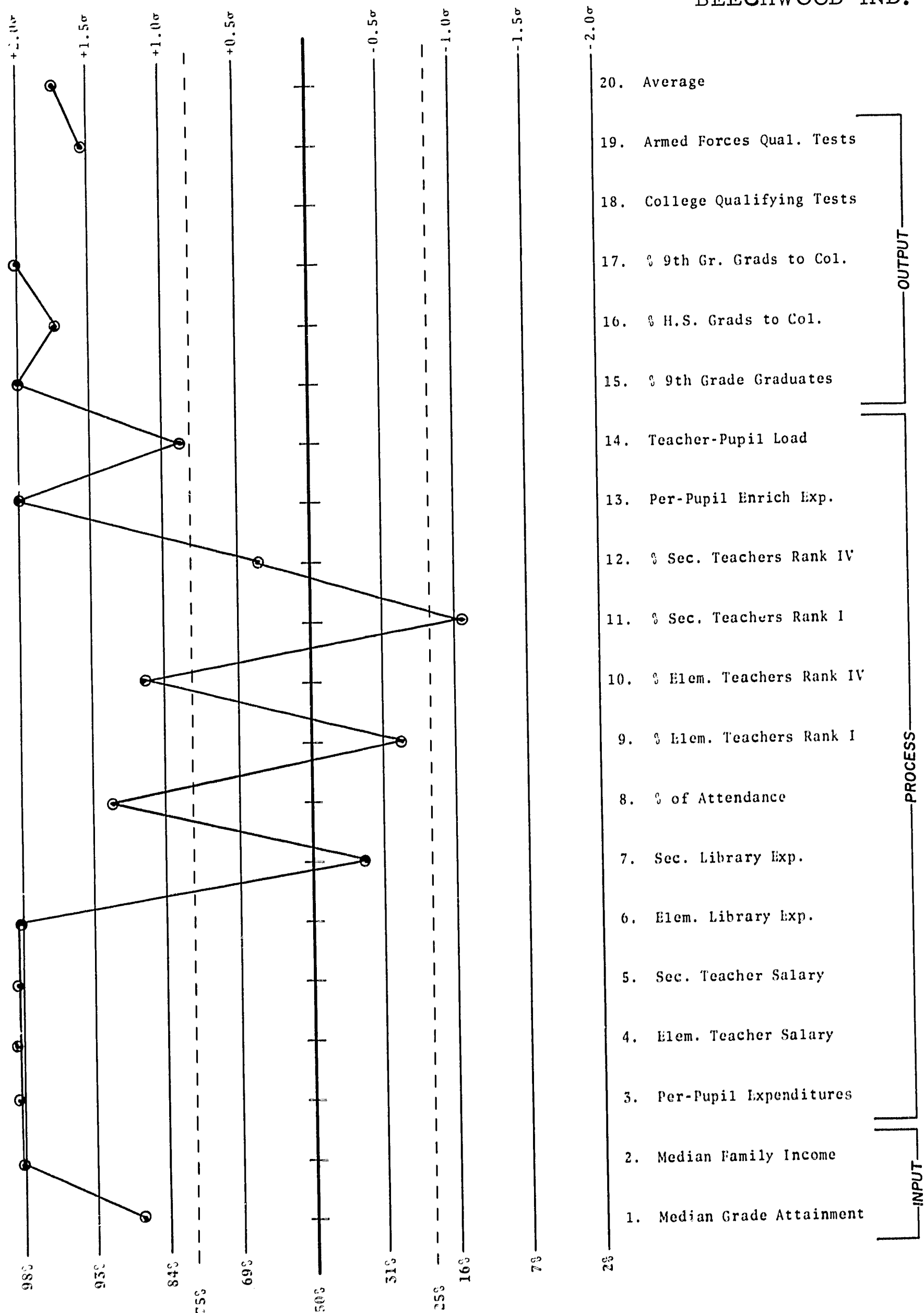


KENTON CO.

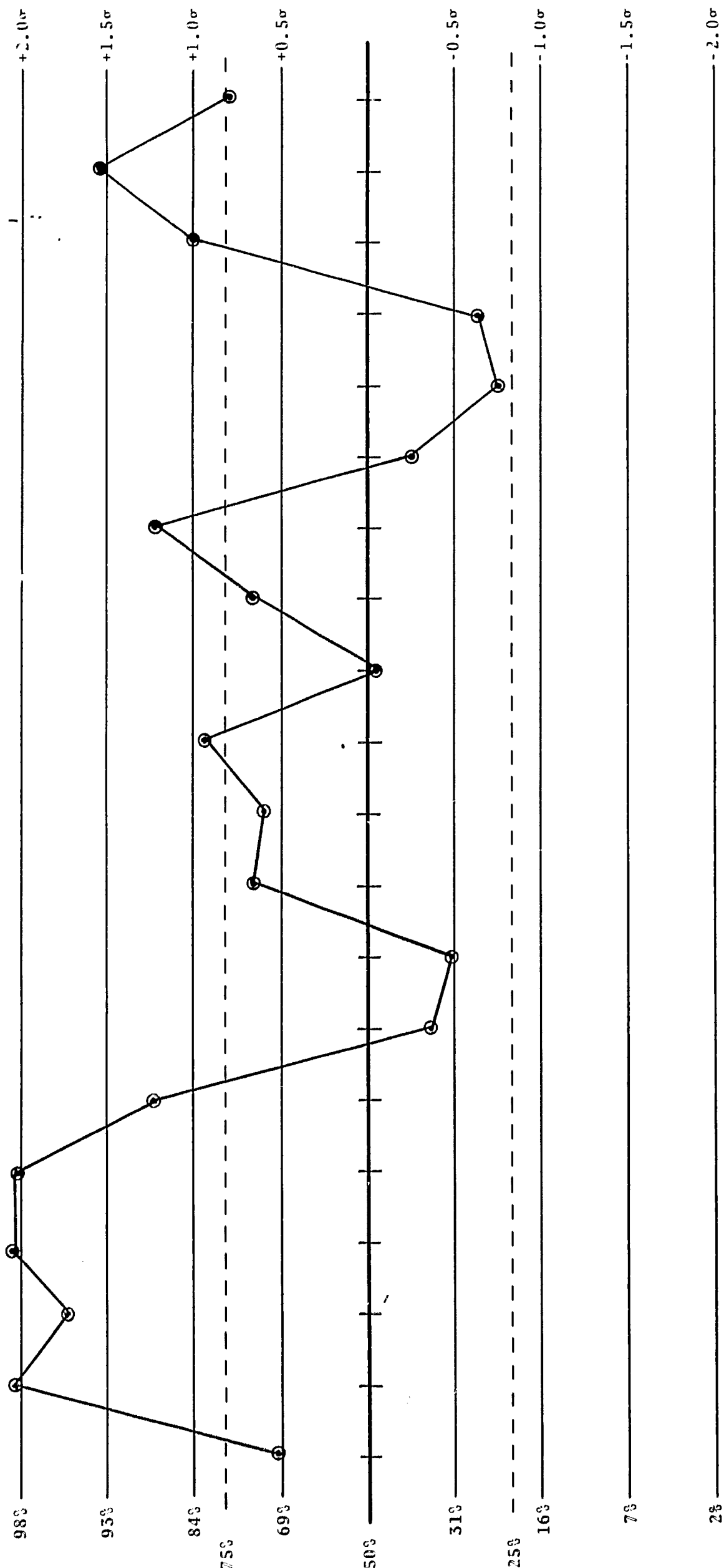


20. Average	OUTPUT
19. Armed Forces Qual. Tests	
18. College Qualifying Tests	
17. % 9th Gr. Grads to Col.	
16. % H.S. Grads to Col.	
15. % 9th Grade Graduates	PROCESS
14. Teacher-Pupil Load	
13. Per-Pupil Enrich Exp.	
12. % Sec. Teachers Rank IV	
11. % Sec. Teachers Rank I	
10. % Elem. Teachers Rank IV	
9. % Elem. Teachers Rank I	
8. % of Attendance	
7. Sec. Library Exp.	
6. Elem. Library Exp.	
5. Sec. Teacher Salary	
4. Elem. Teacher Salary	
3. Per-Pupil Expenditures	
2. Median Family Income	INPUT
1. Median Grade Attainment	

BEECHWOOD IND.



COVINGTON IND.



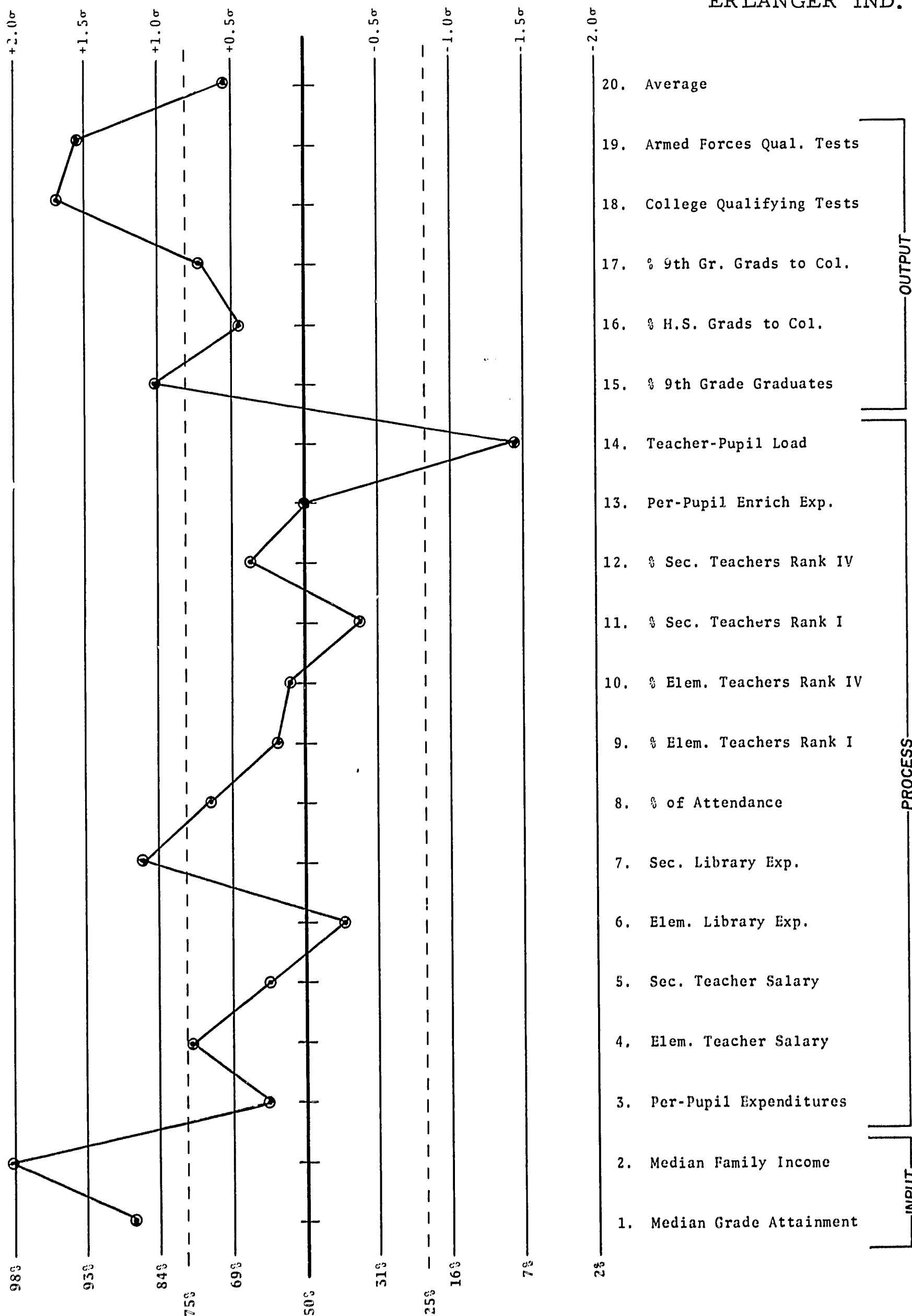
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

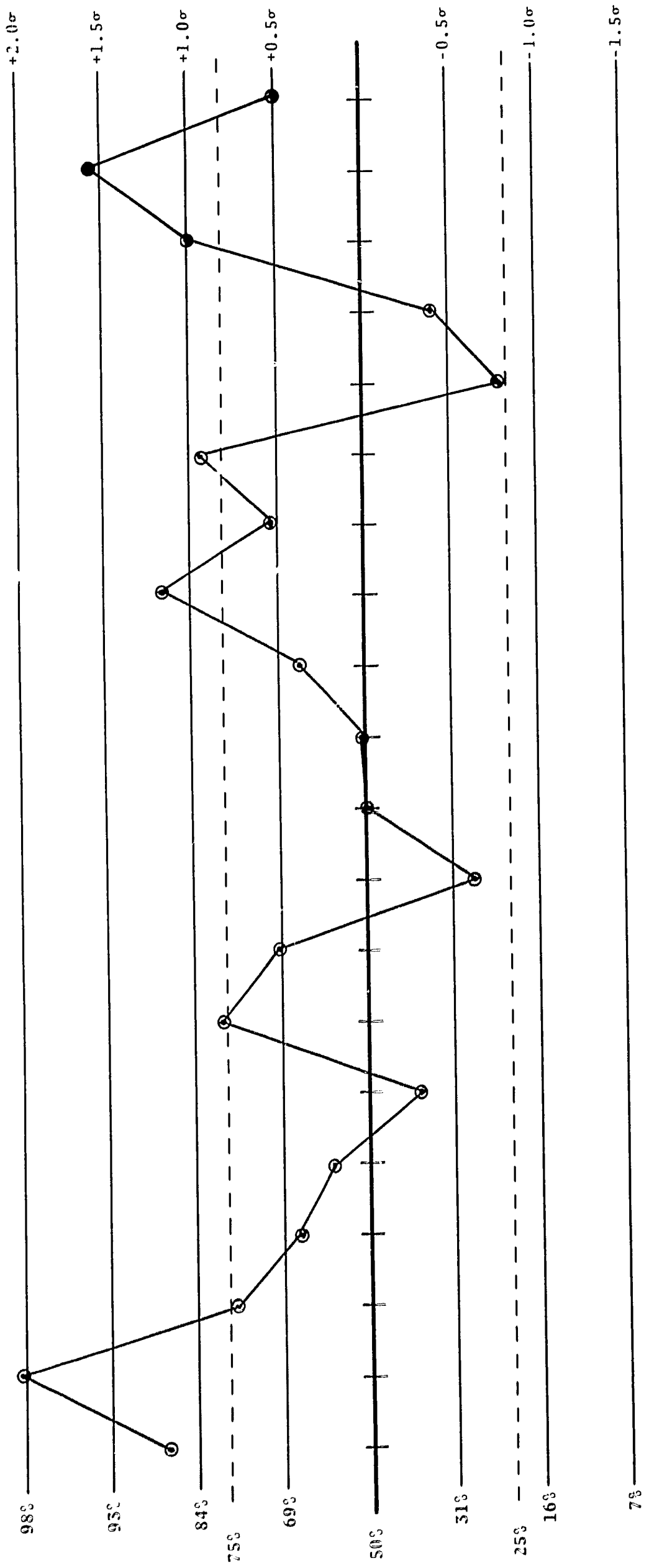
PROCESS

INPUT

ERLANGER IND.



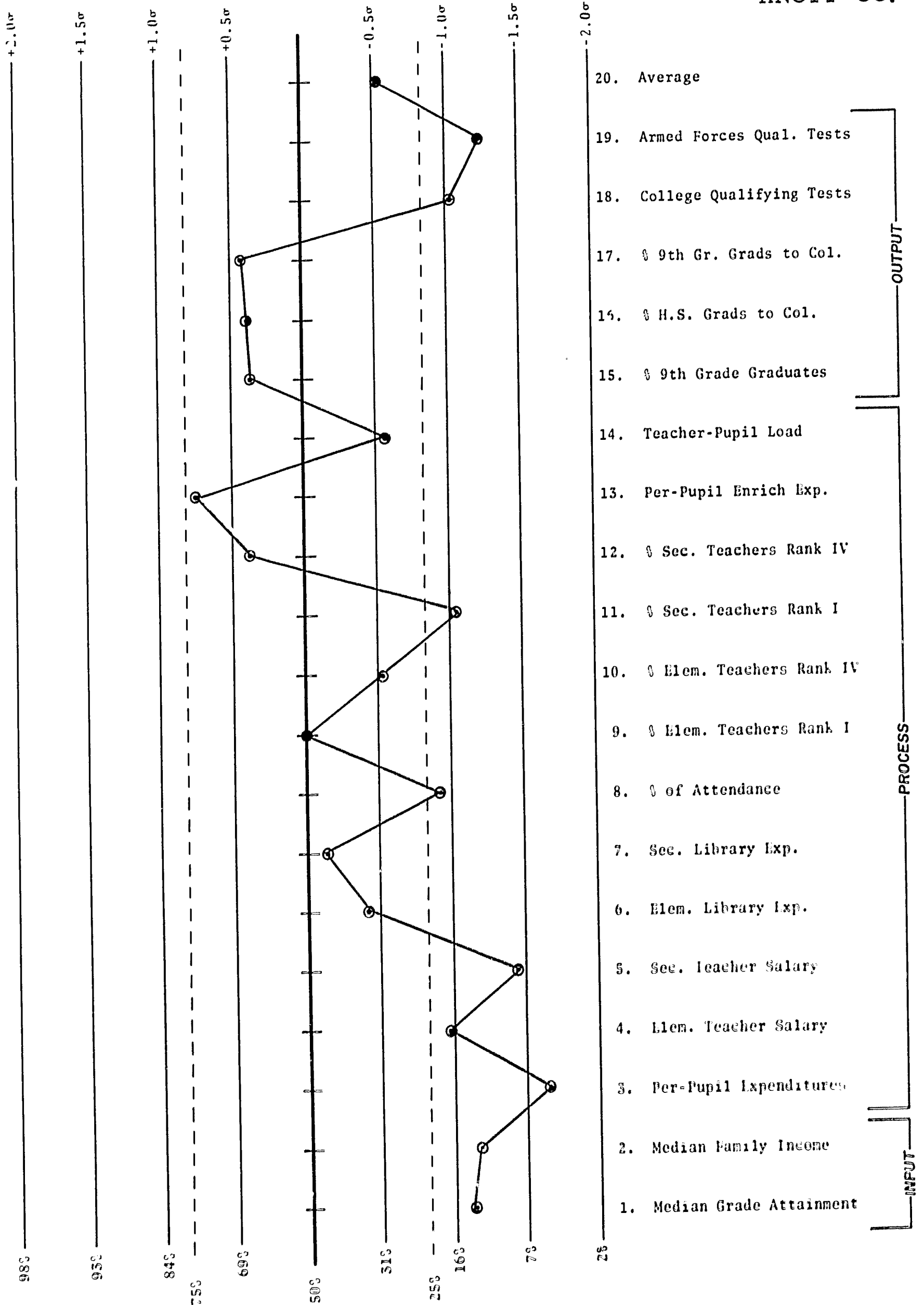
LUDLOW IND.



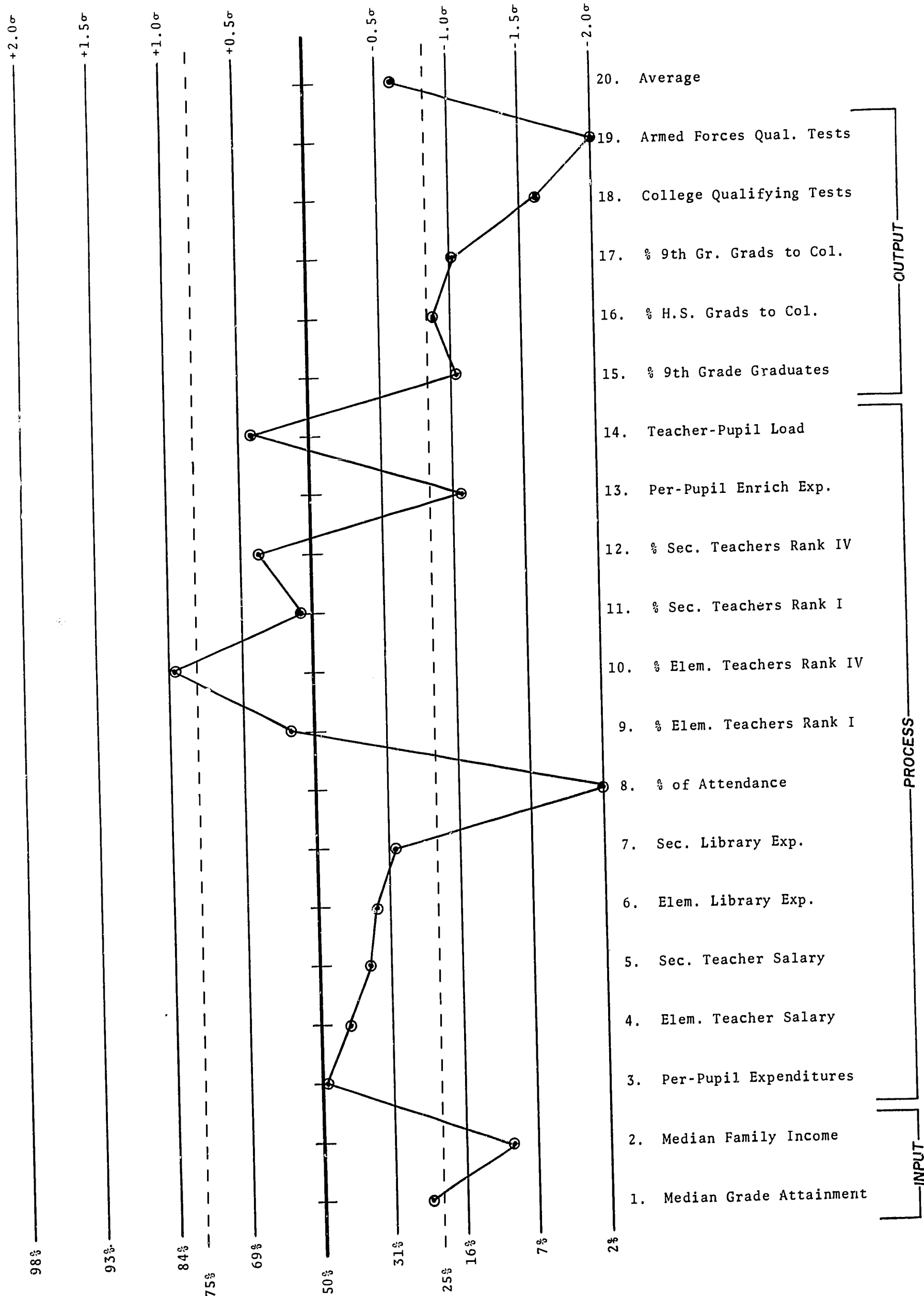
- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

INPUT PROCESS OUTPUT

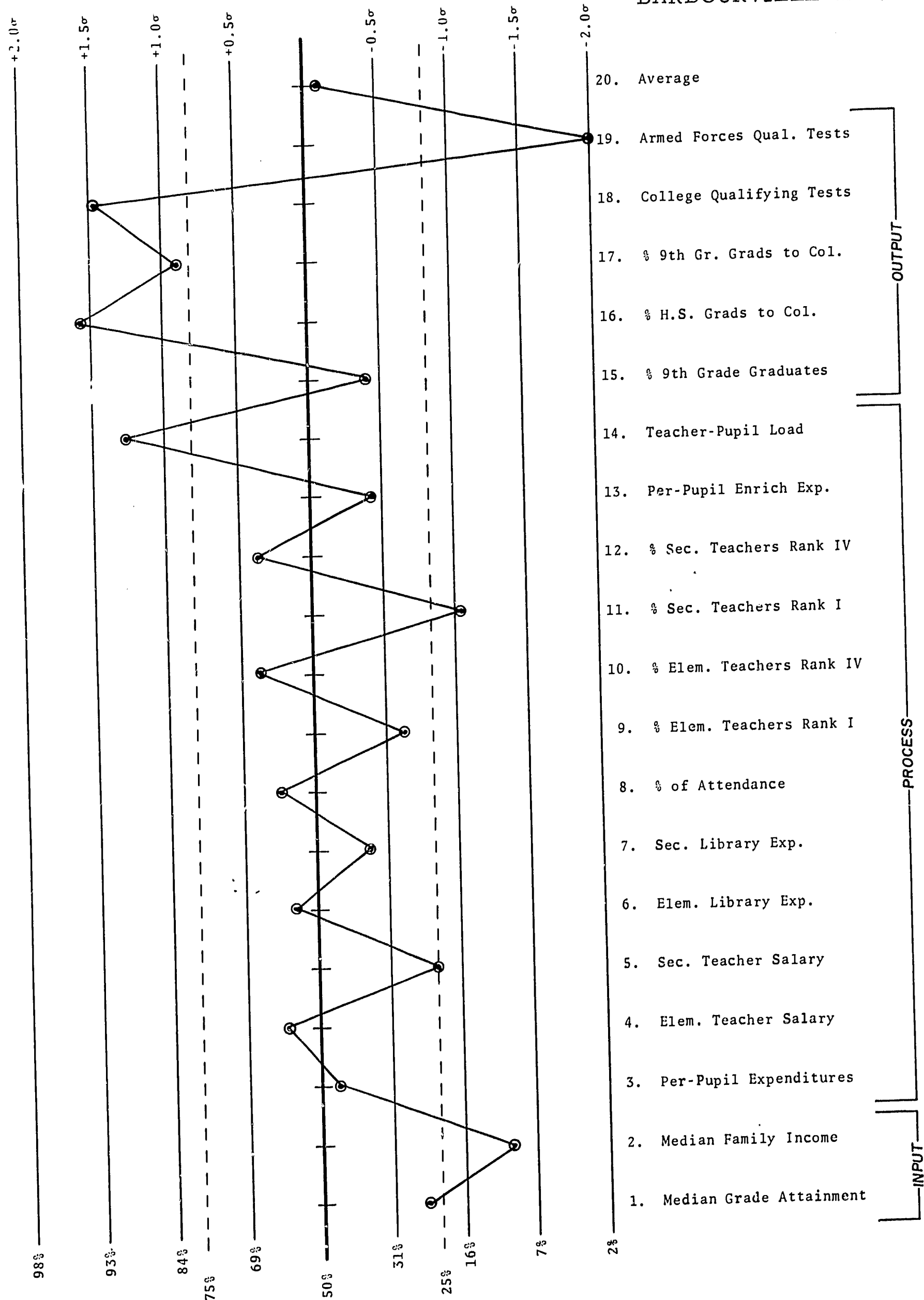
KNOTT CO.



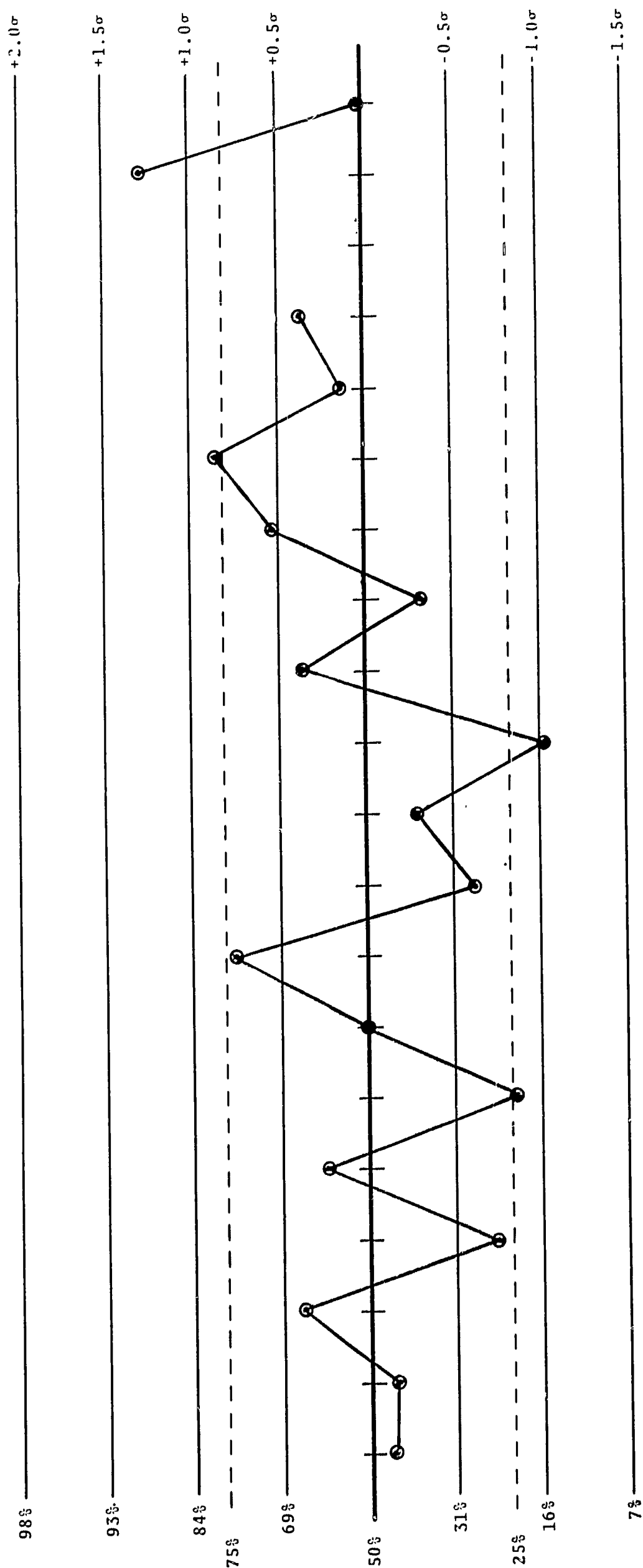
KNOX CO.



BARBOURVILLE IND.



LARUE CO.



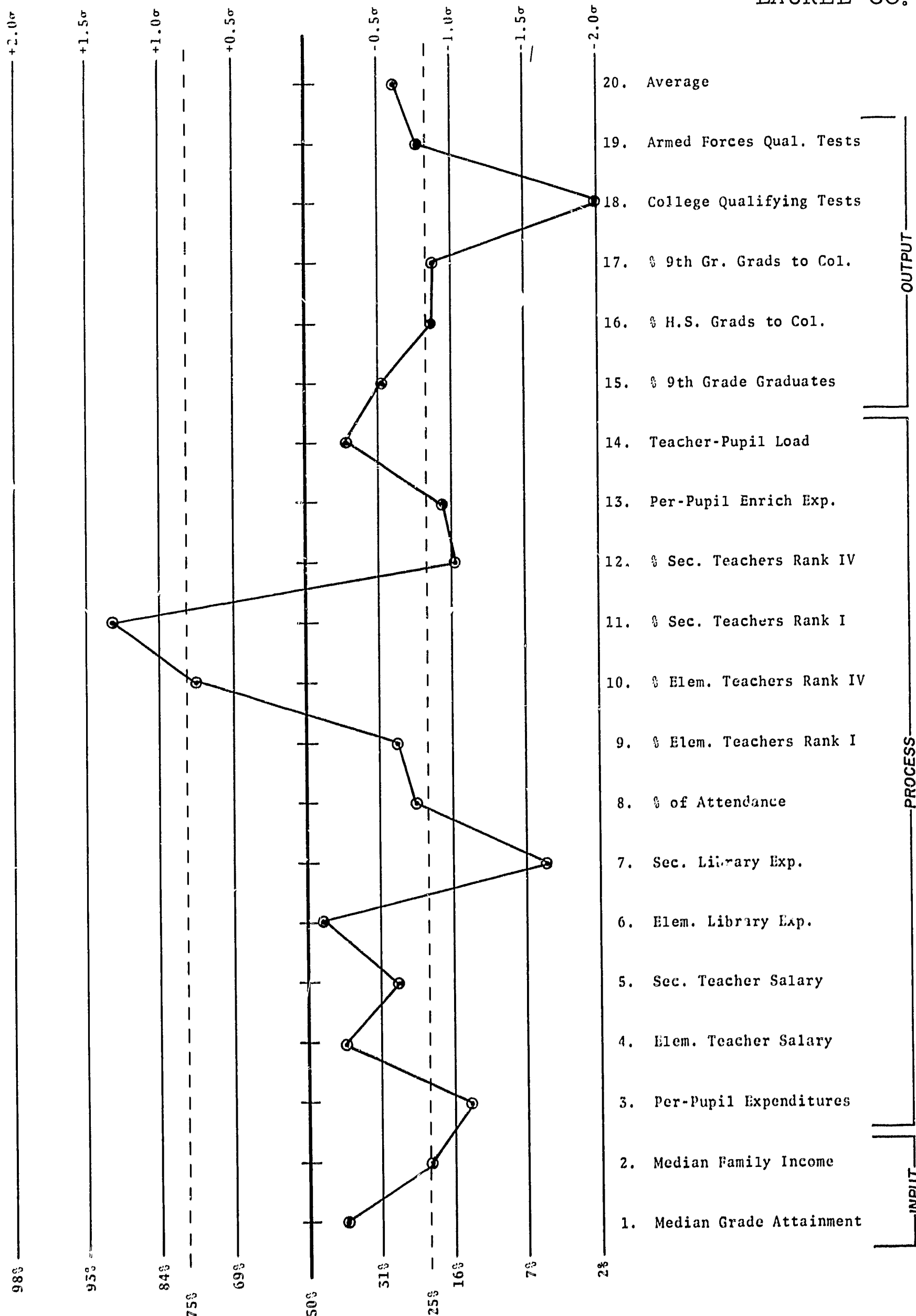
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

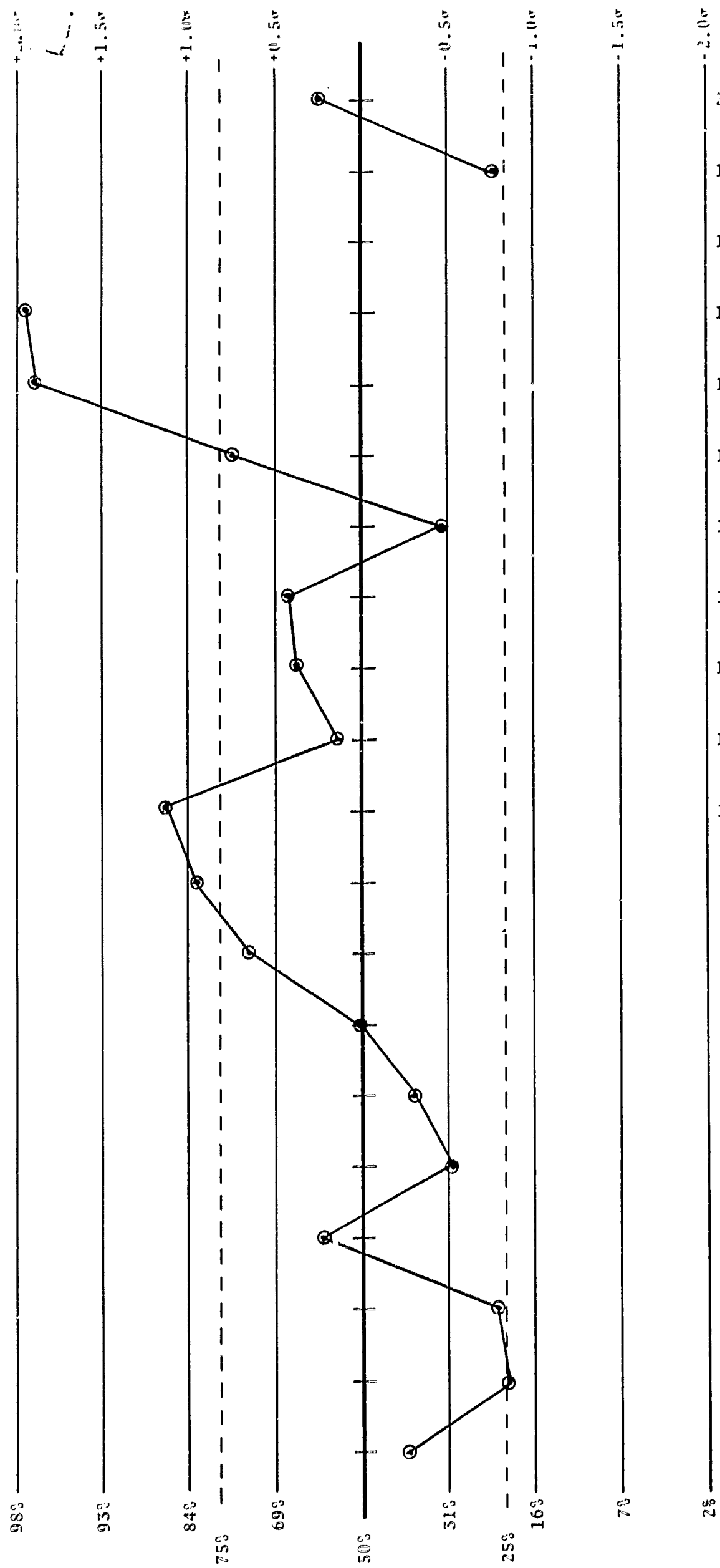
PROCESS

INPUT

LAUREL CO.



LONDON IND.



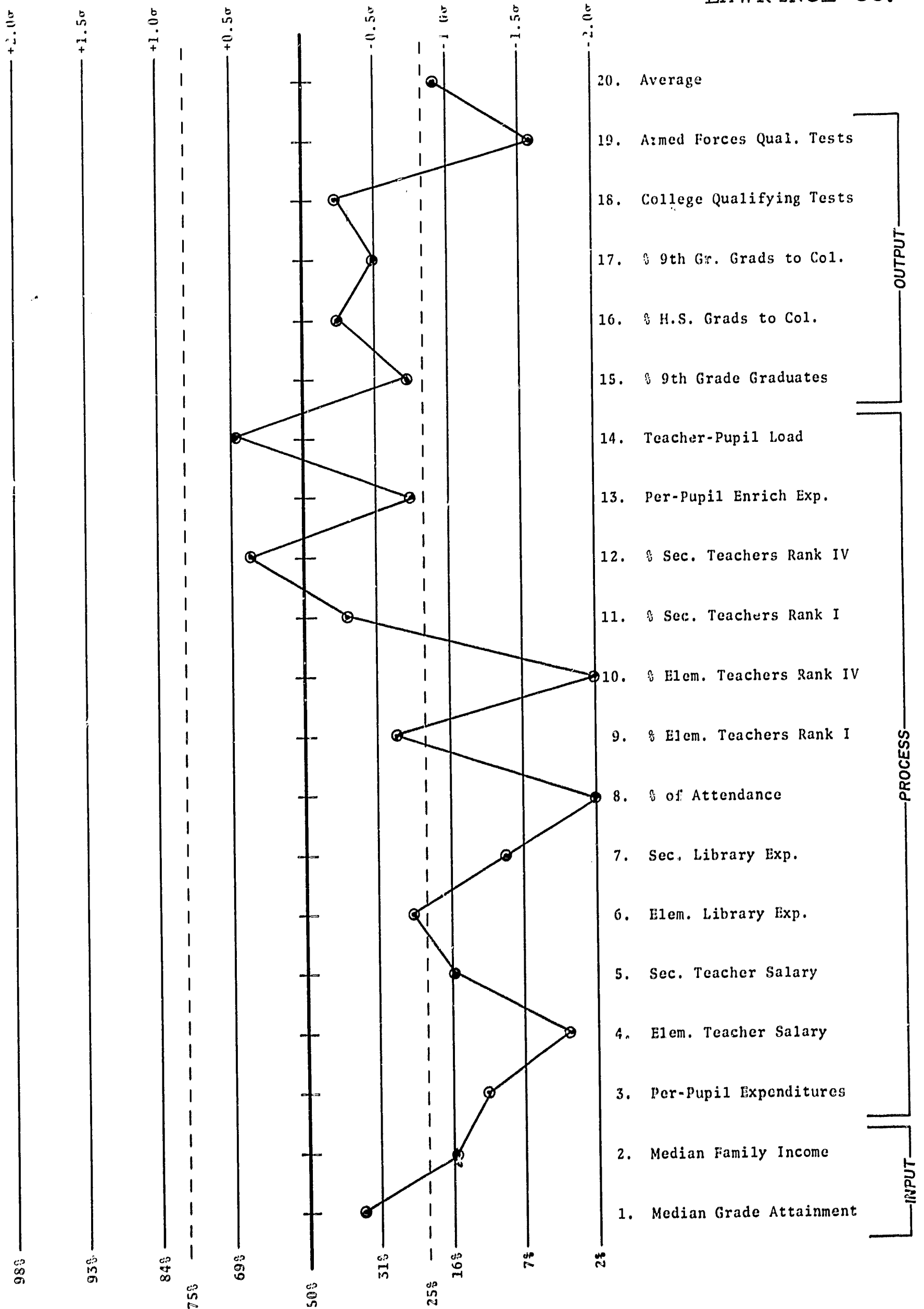
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank 1
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

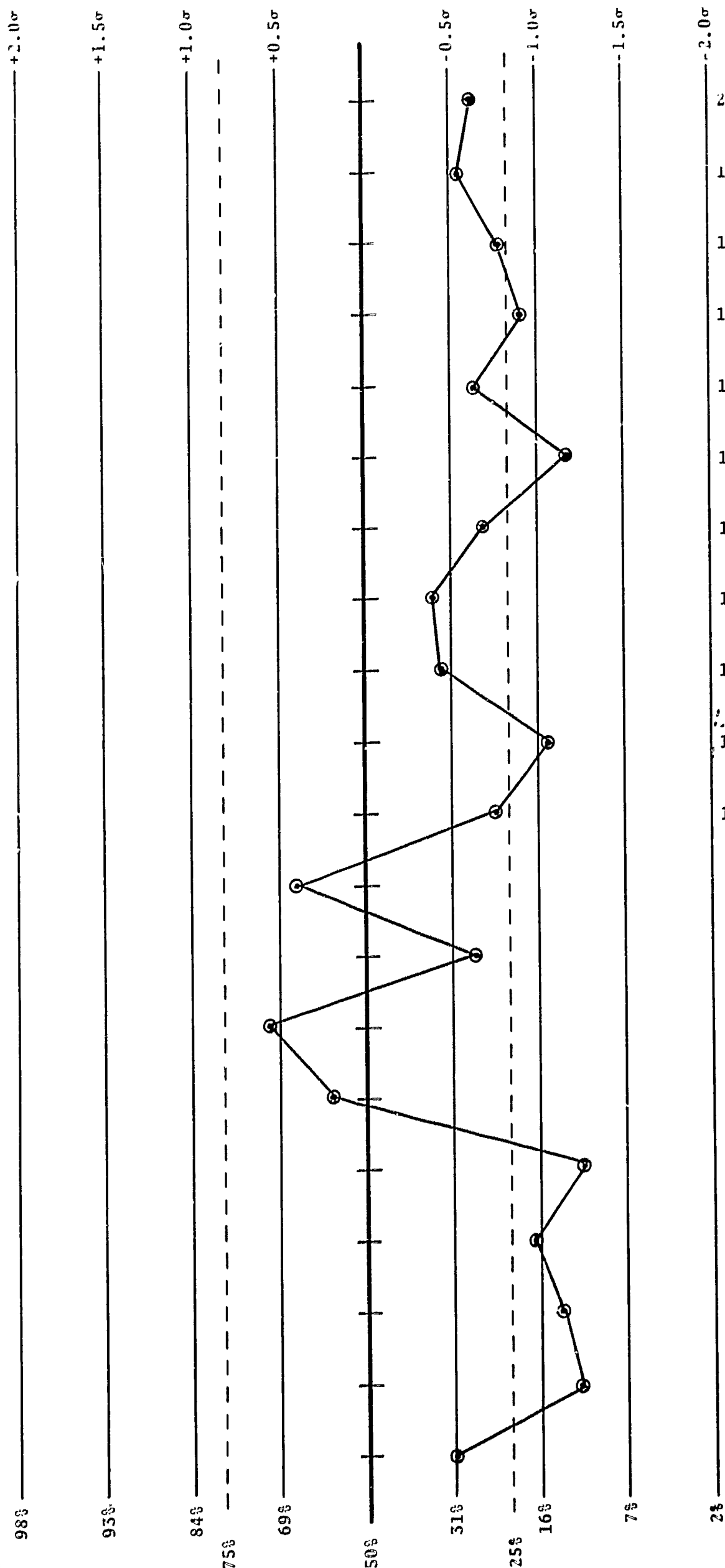
PROCESS

INPUT

LAWRENCE CO.



LEE CO.

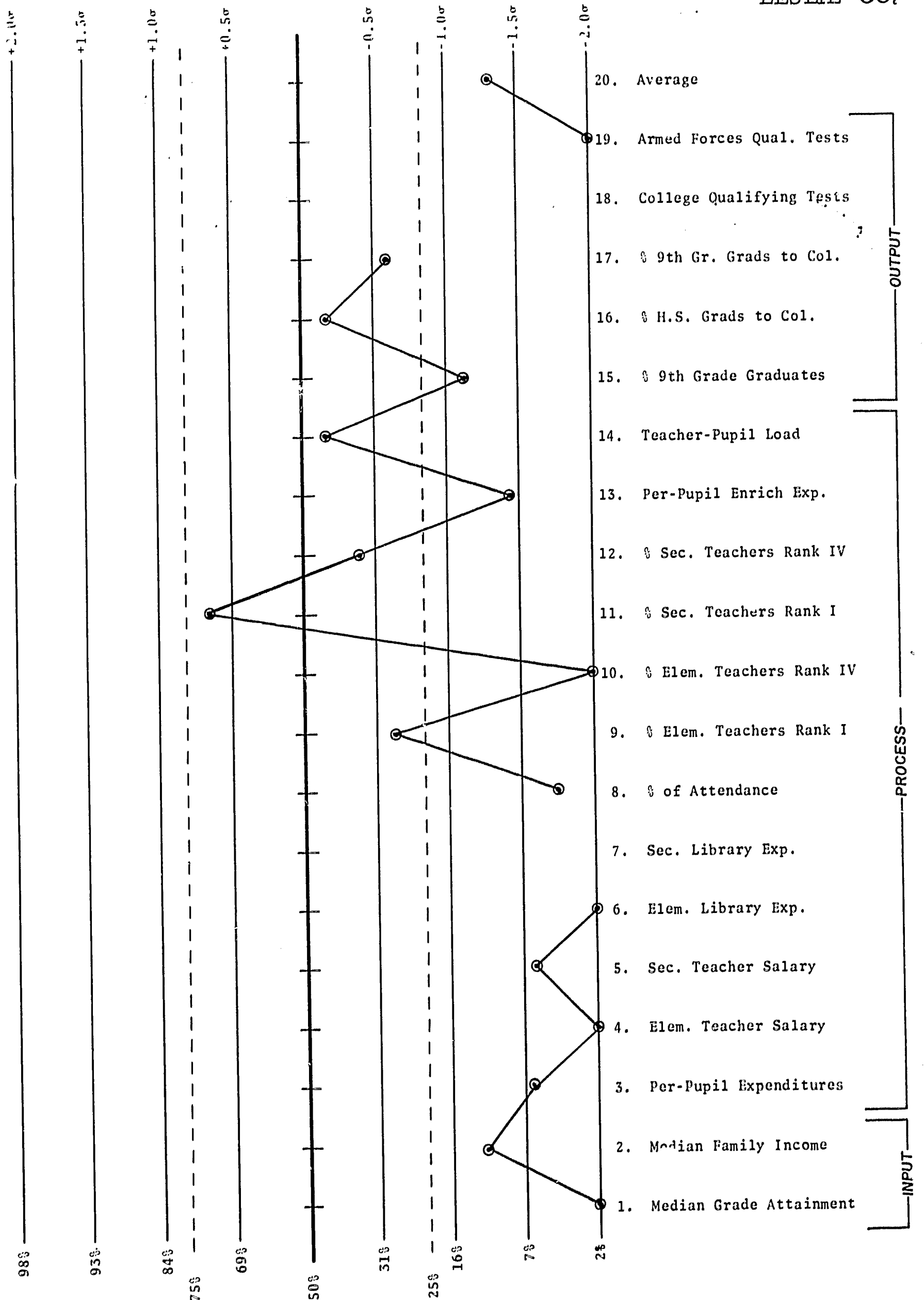


20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

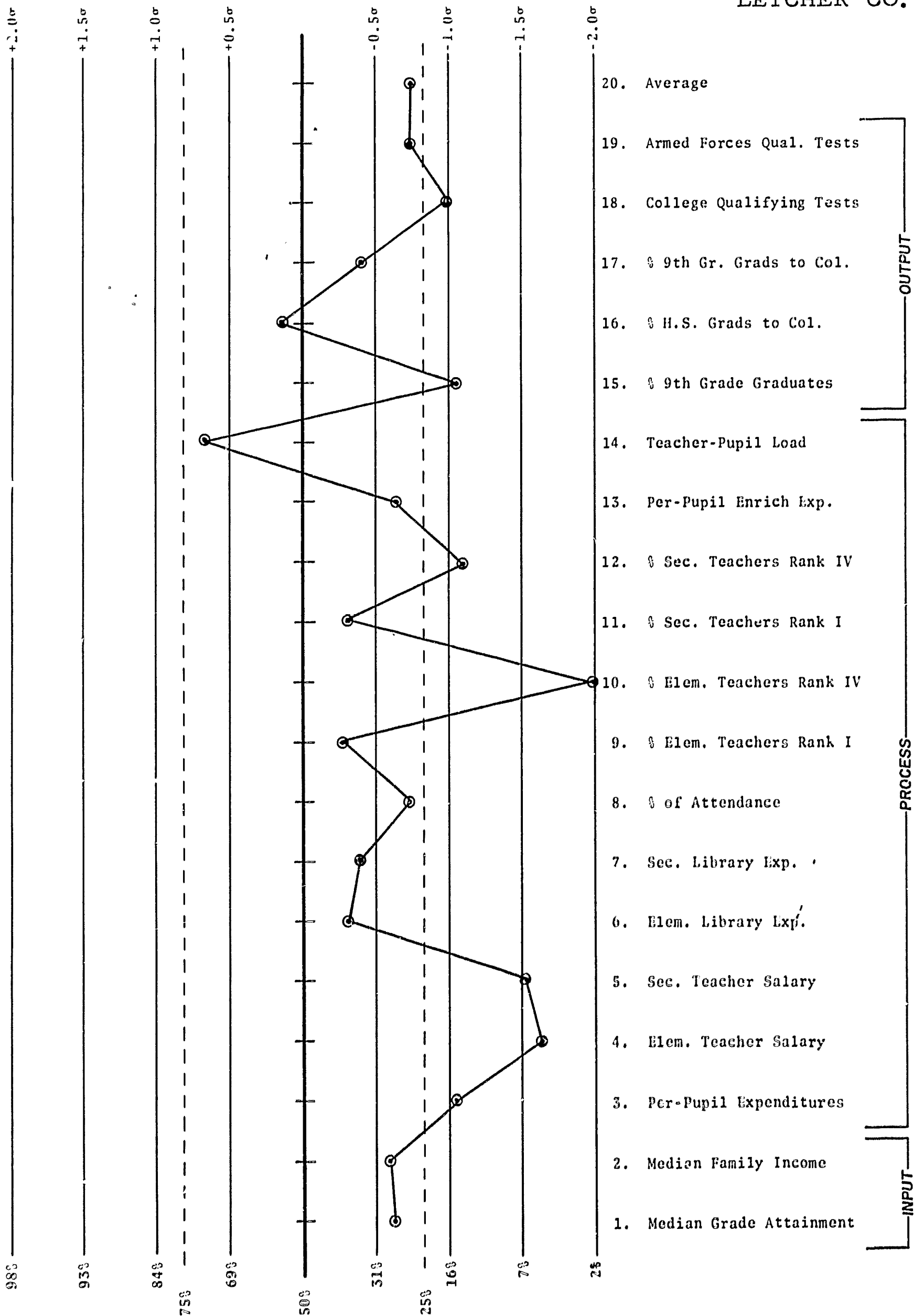
OUTPUT

PROCESS

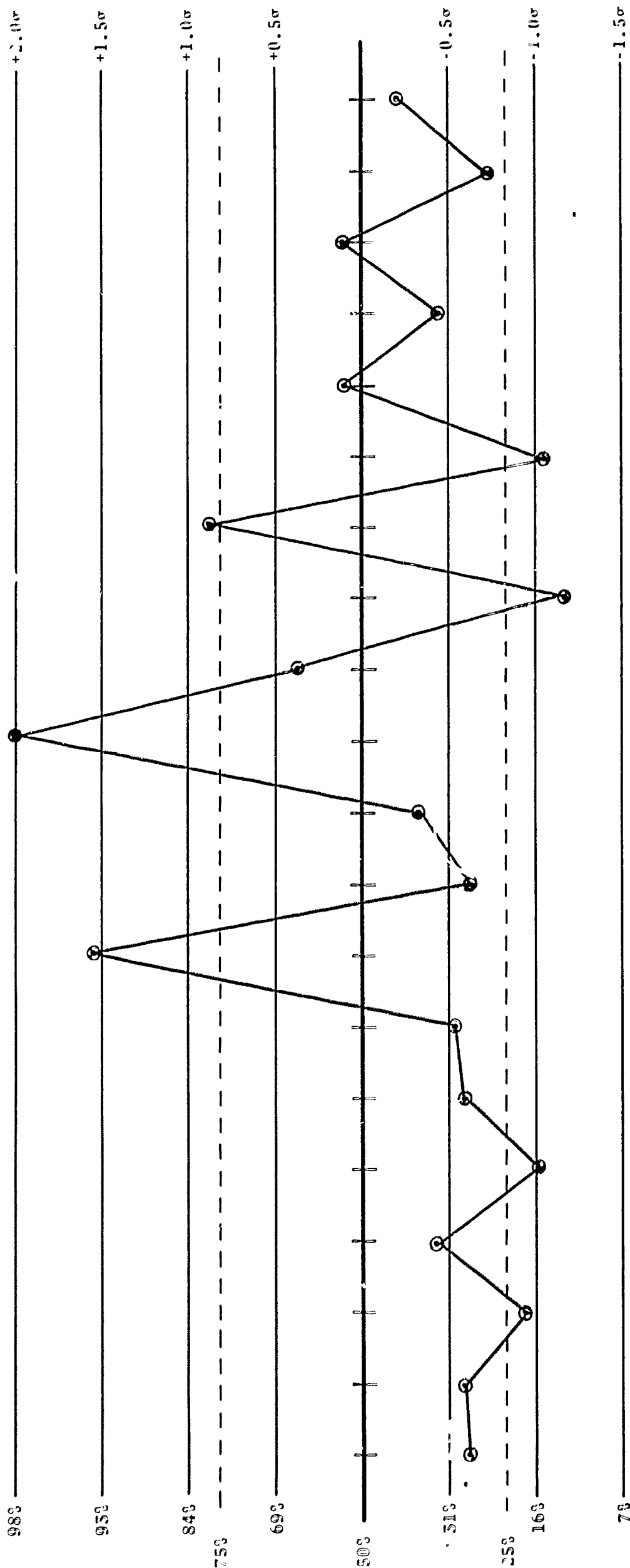
INPUT



LETCHER CO.



JENKINS IND.



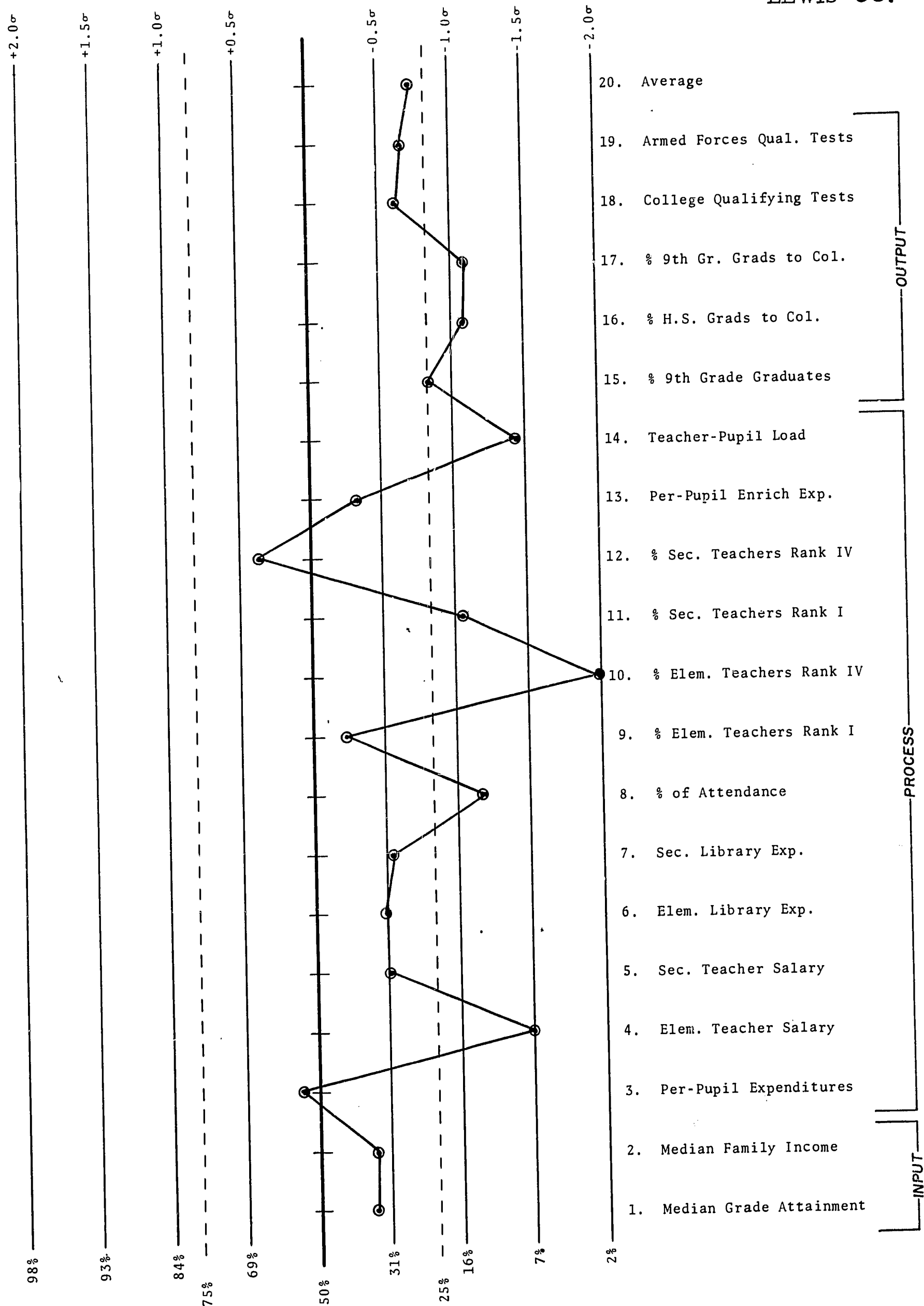
20. Average	
19. Armed Forces Qual. Tests	
18. College Qualifying Tests	
17. % 9th Gr. Grads to Col.	
16. % H.S. Grads to Col.	
15. % 9th Grade Graduates	
14. Teacher-Pupil Load	
13. Per-Pupil Enrich Exp.	
12. % Sec. Teachers Rank IV	
11. % Sec. Teachers Rank I	
10. % Elem. Teachers Rank IV	
9. % Elem. Teachers Rank I	
8. % of Attendance	
7. Sec. Library Exp.	
6. Elem. Library Exp.	
5. Sec. Teacher Salary	
4. Elem. Teacher Salary	
3. Per-Pupil Expenditures	
2. Median Family Income	
1. Median Grade Attainment	

OUTPUT

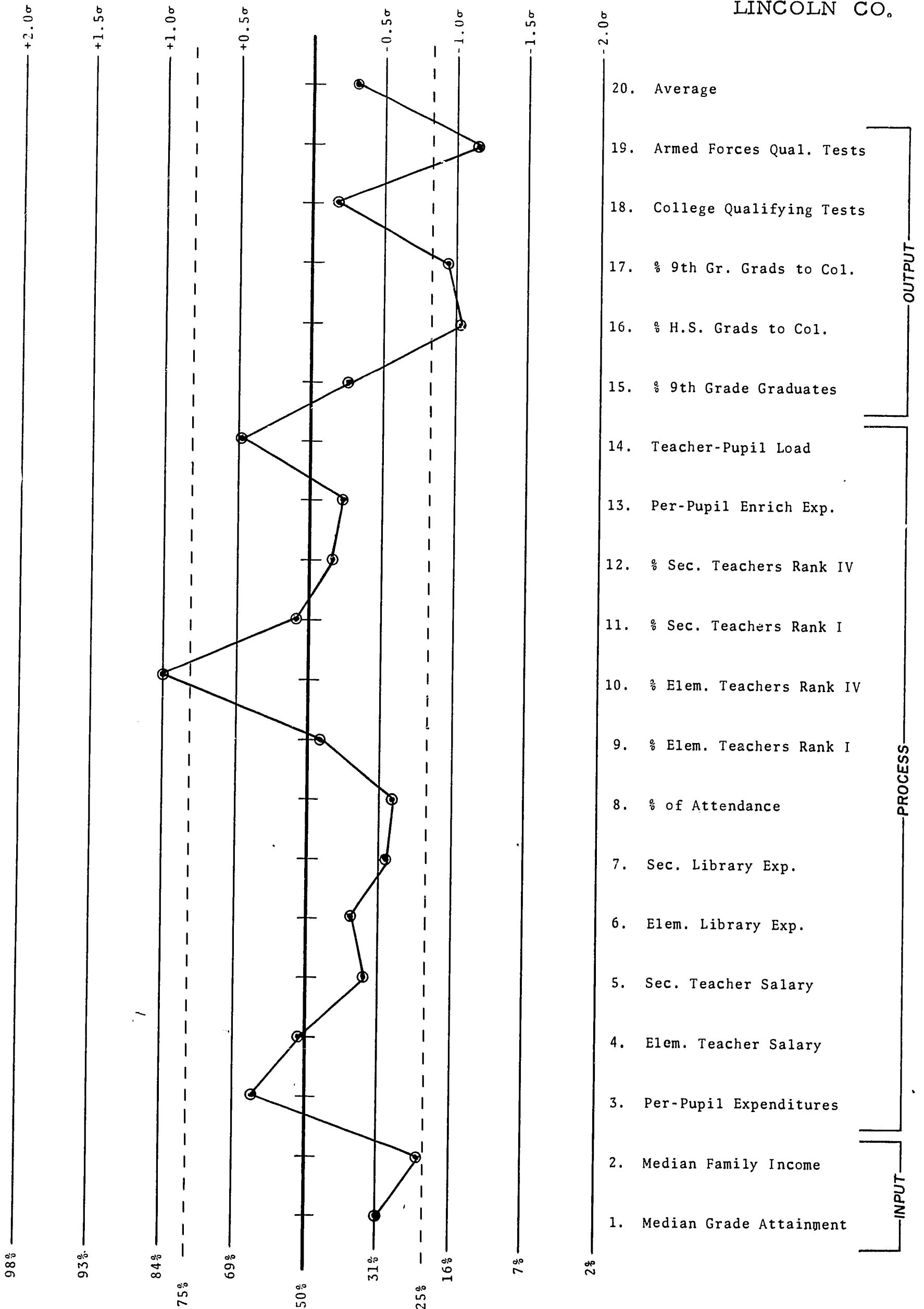
PROCESS

INPUT

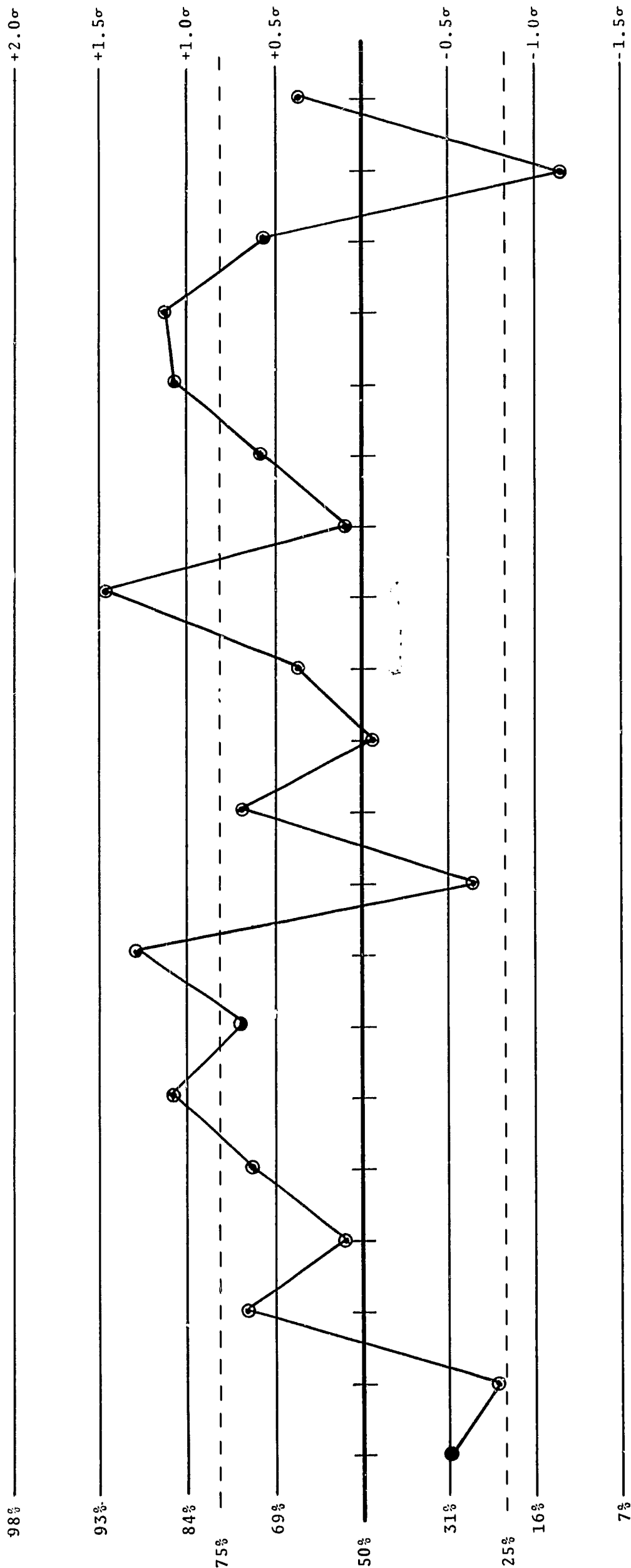
LEWIS CO.



LINCOLN CO.

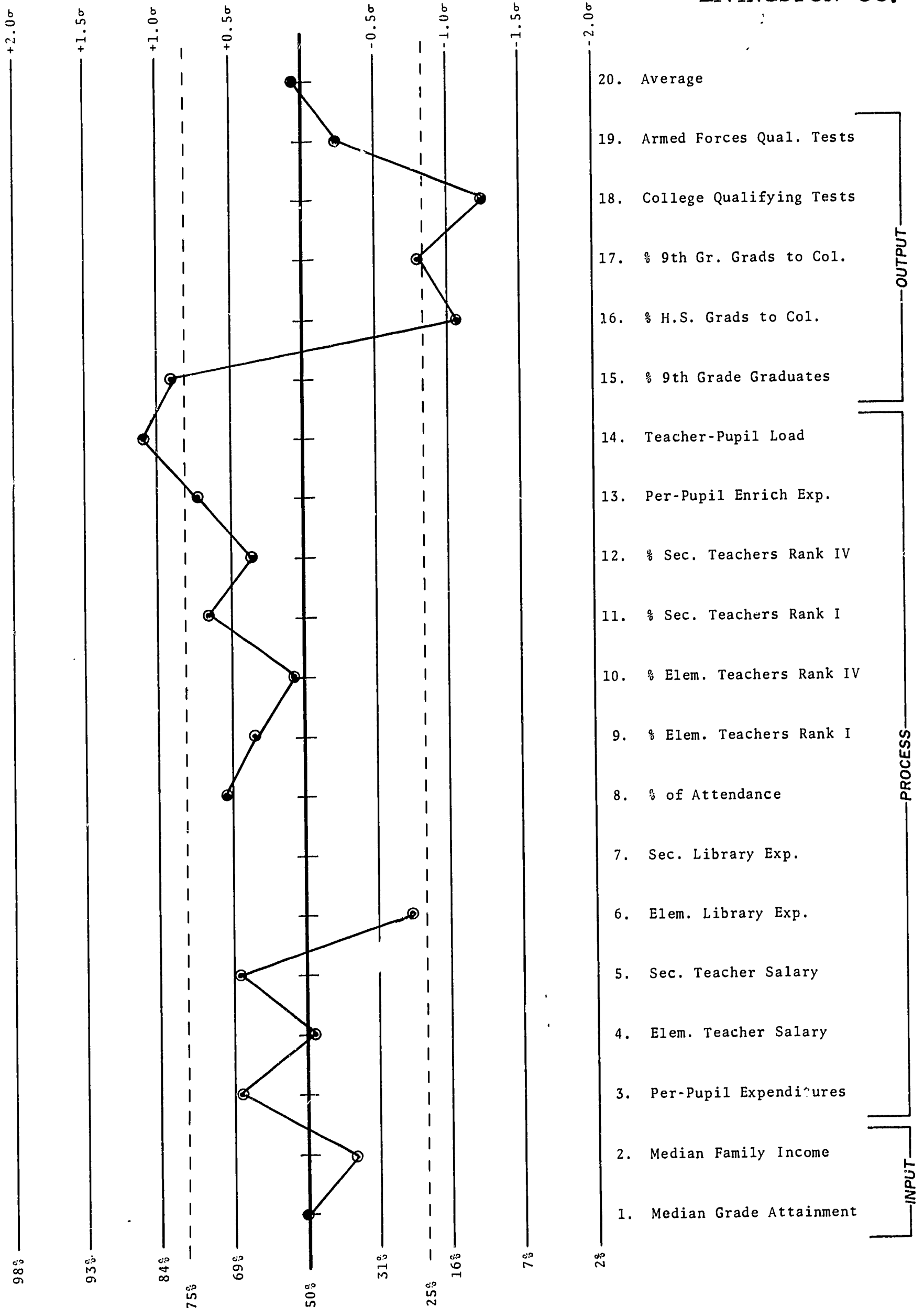


STANFORD IND.

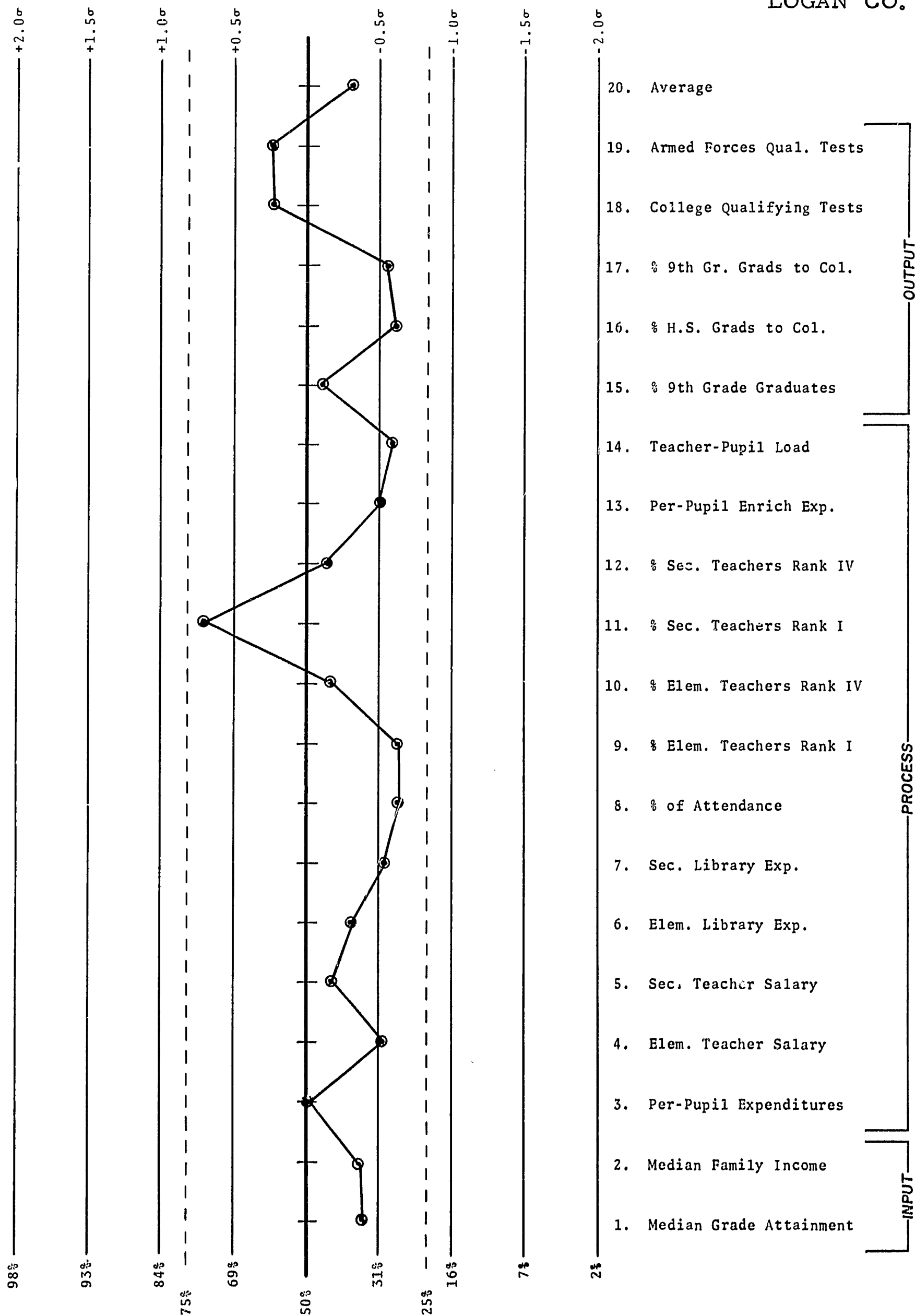


20. Average	
19. Armed Forces Qual. Tests	OUTPUT
18. College Qualifying Tests	
17. % 9th Gr. Grads to Col.	
16. % H.S. Grads to Col.	
15. % 9th Grade Graduates	
14. Teacher-Pupil Load	PROCESS
13. Per-Pupil Enrich Exp.	
12. % Sec. Teachers Rank IV	
11. % Sec. Teachers Rank I	
10. % Elem. Teachers Rank IV	
9. % Elem. Teachers Rank I	INPUT
8. % of Attendance	
7. Sec. Library Exp.	
6. Elem. Library Exp.	
5. Sec. Teacher Salary	
4. Elem. Teacher Salary	
3. Per-Pupil Expenditures	
2. Median Family Income	
1. Median Grade Attainment	

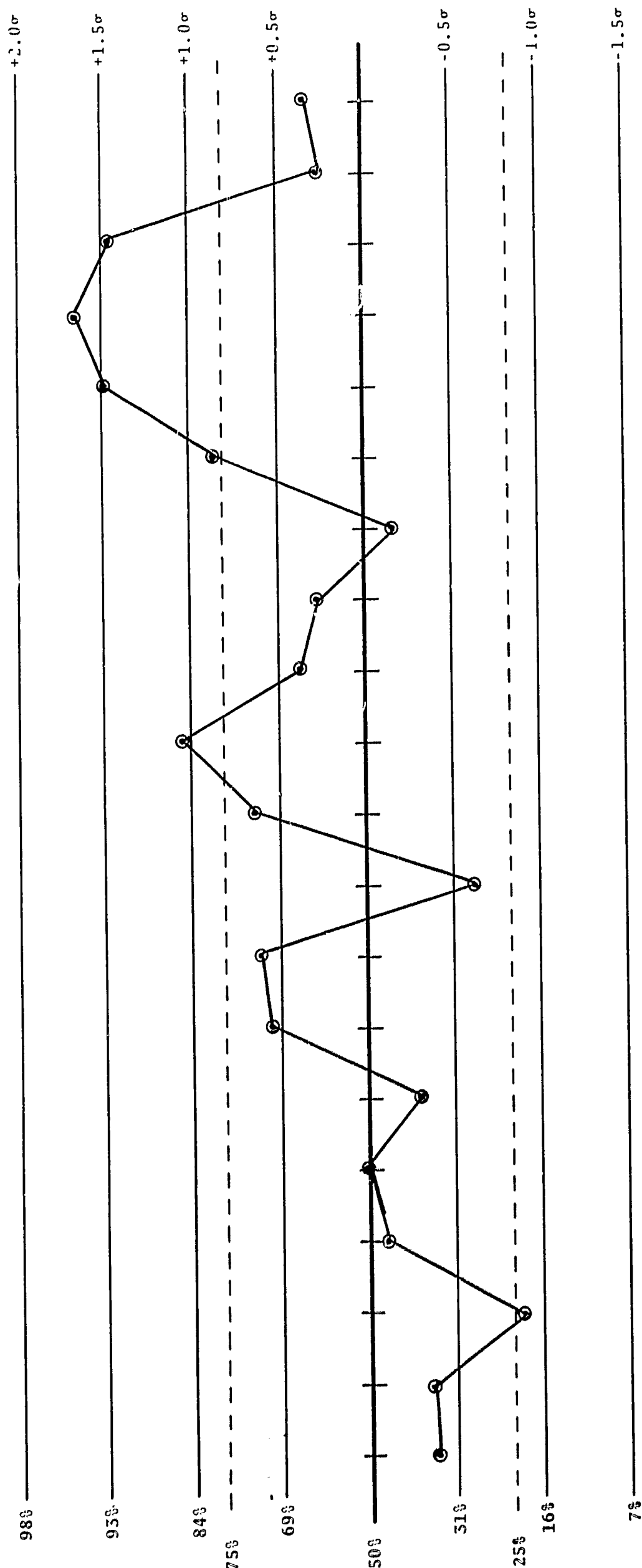
LIVINGSTON CO.



LOGAN CO.



RUSSELLVILLE IND.

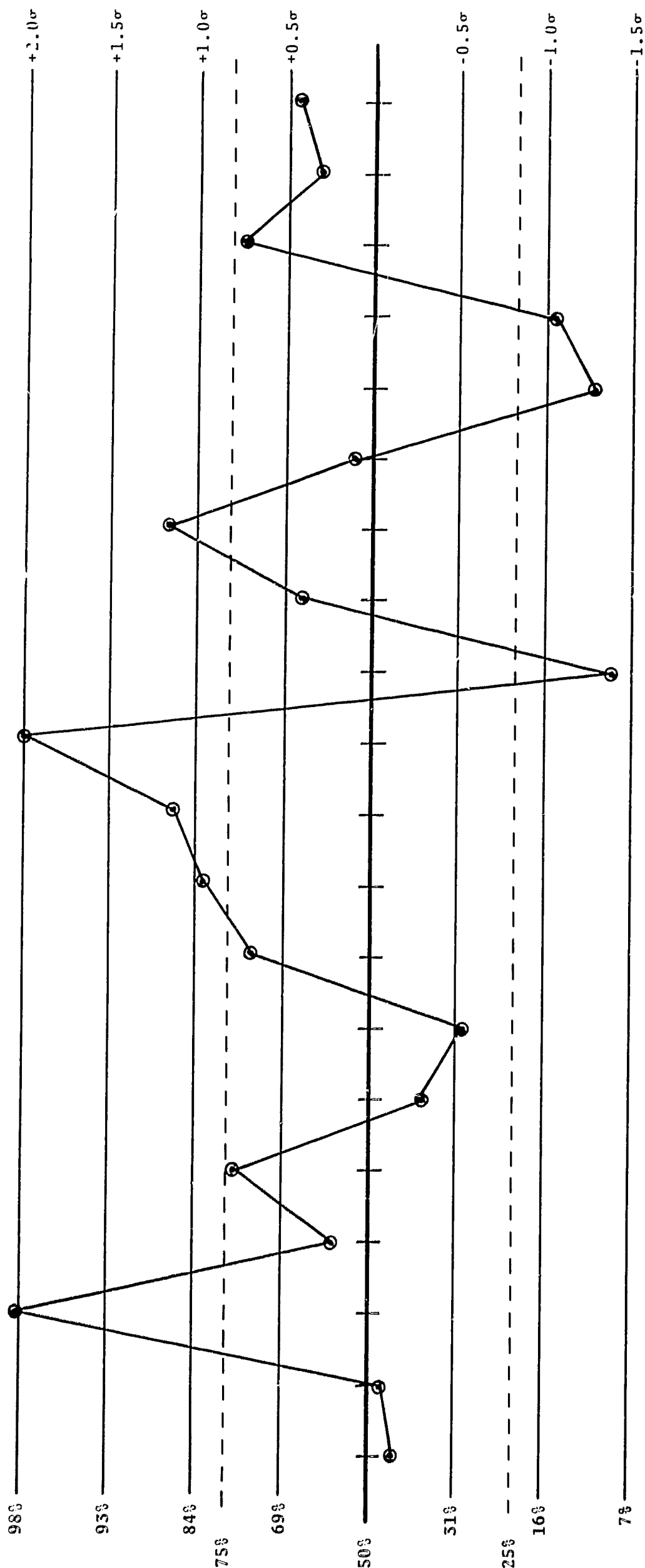


20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT



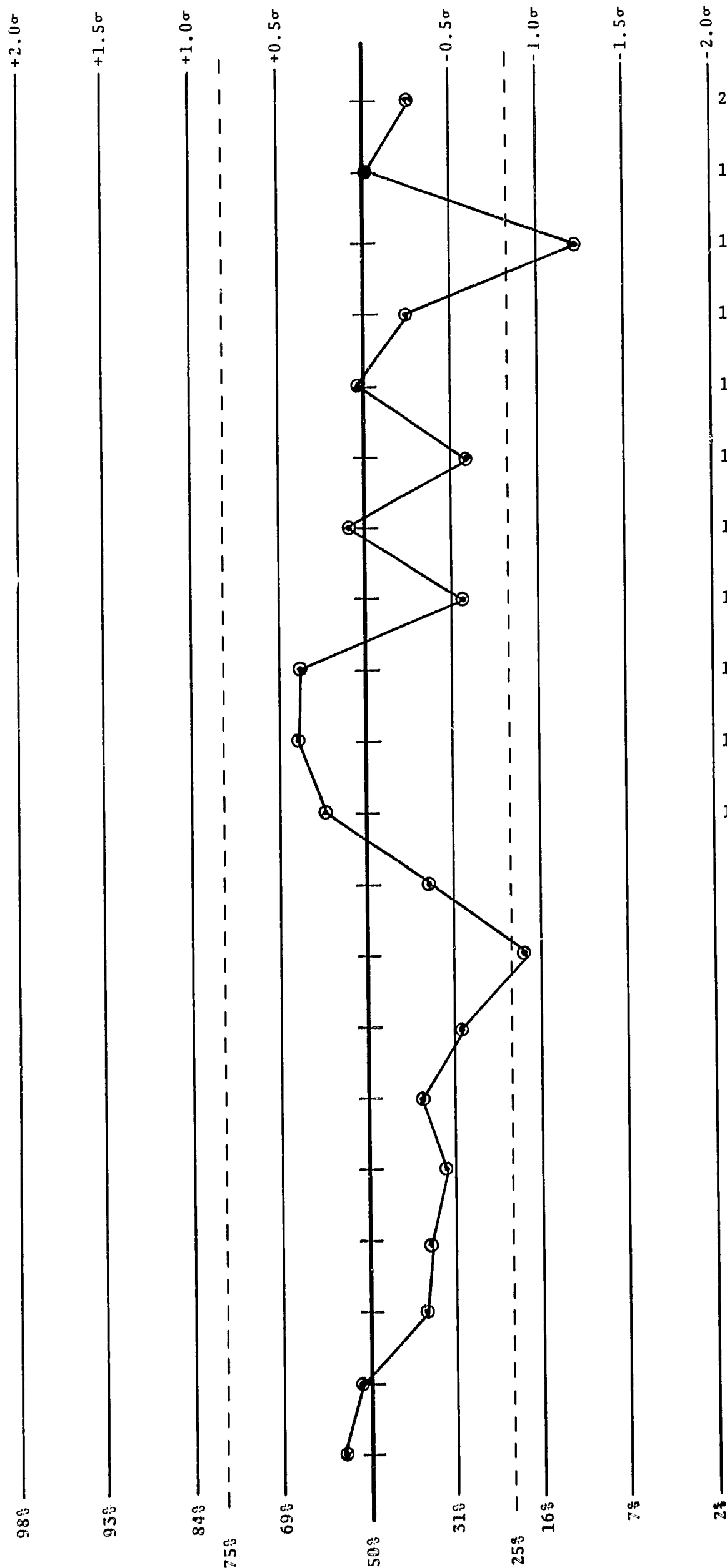
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

MADISON CO.



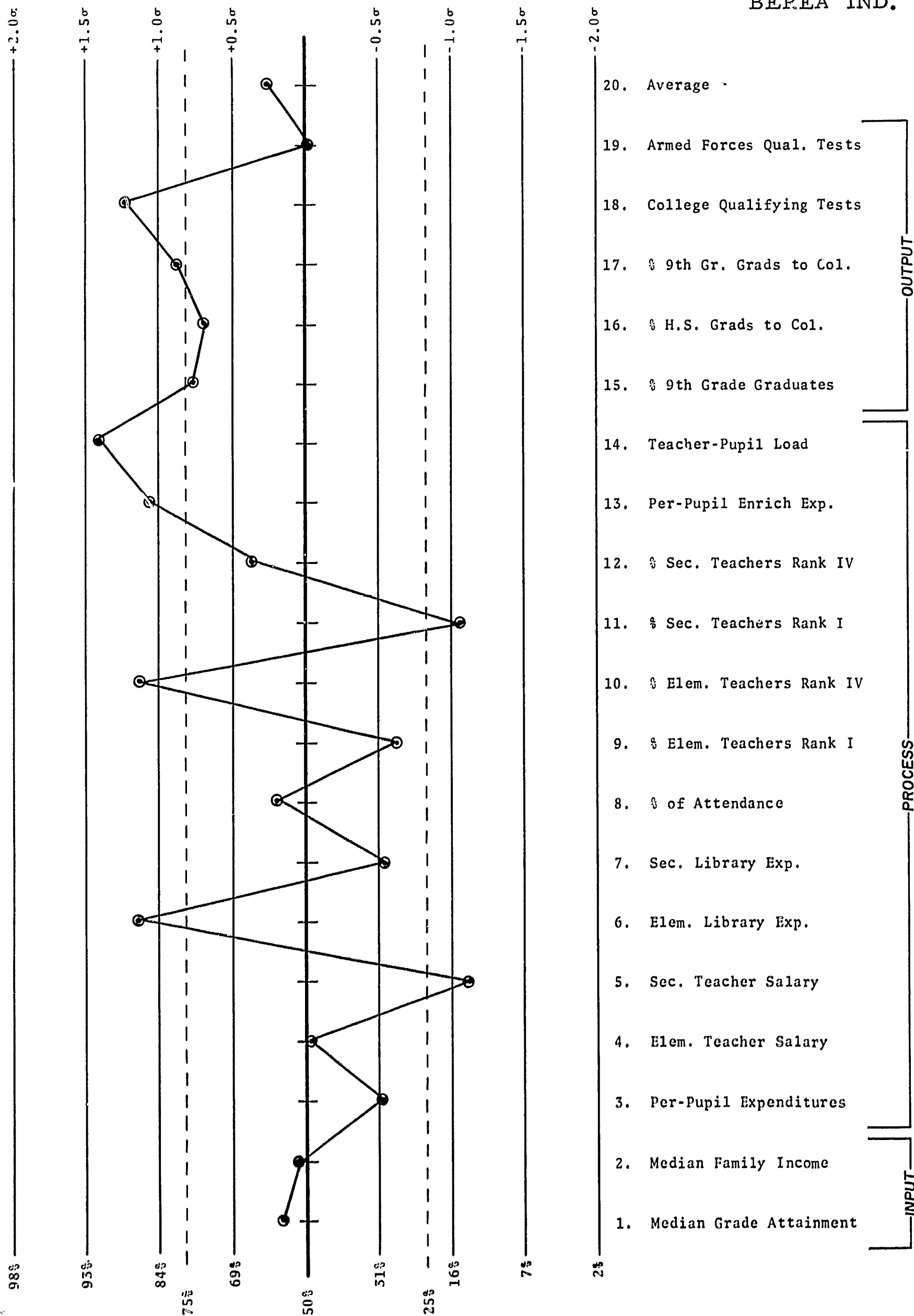
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

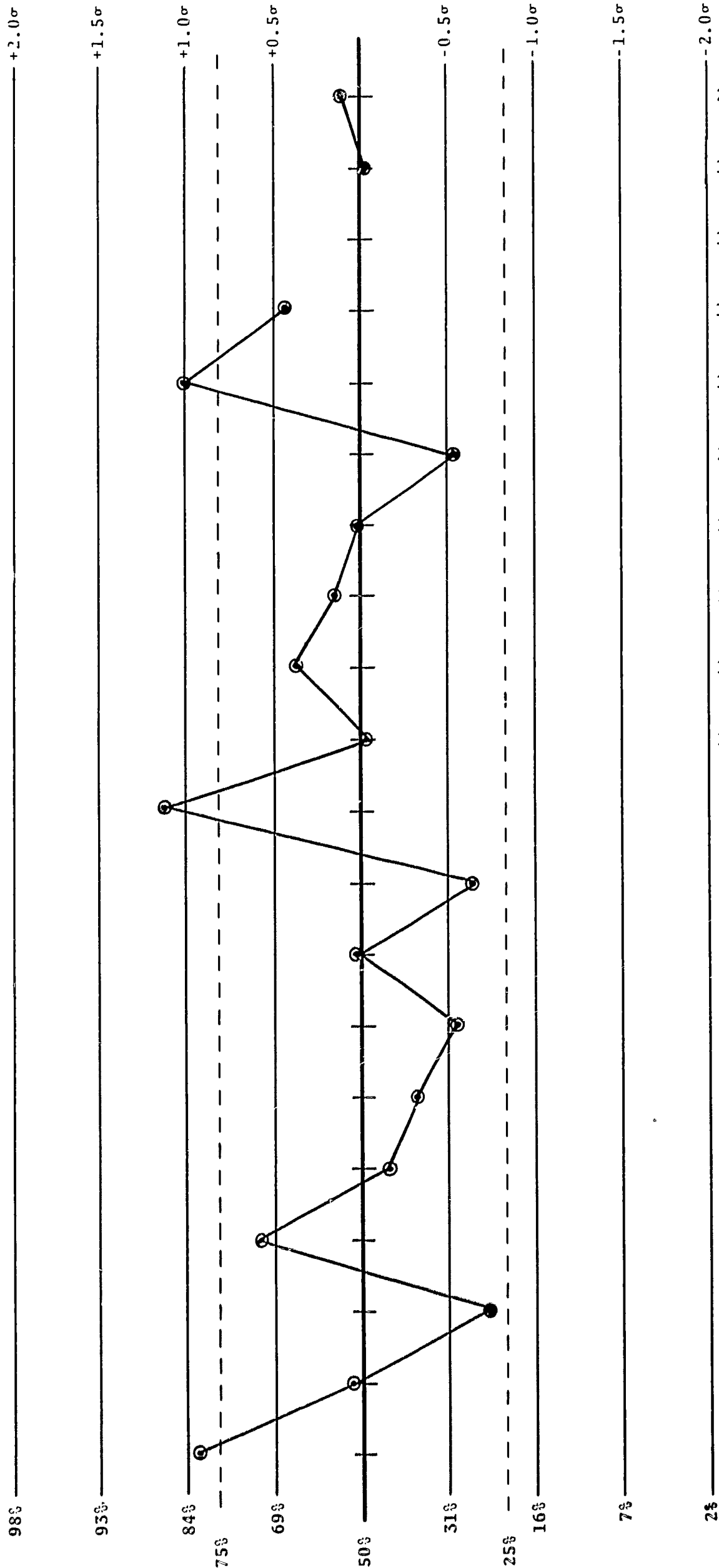
PROCESS

INPUT

BEPEA IND.



RICHMOND IND.



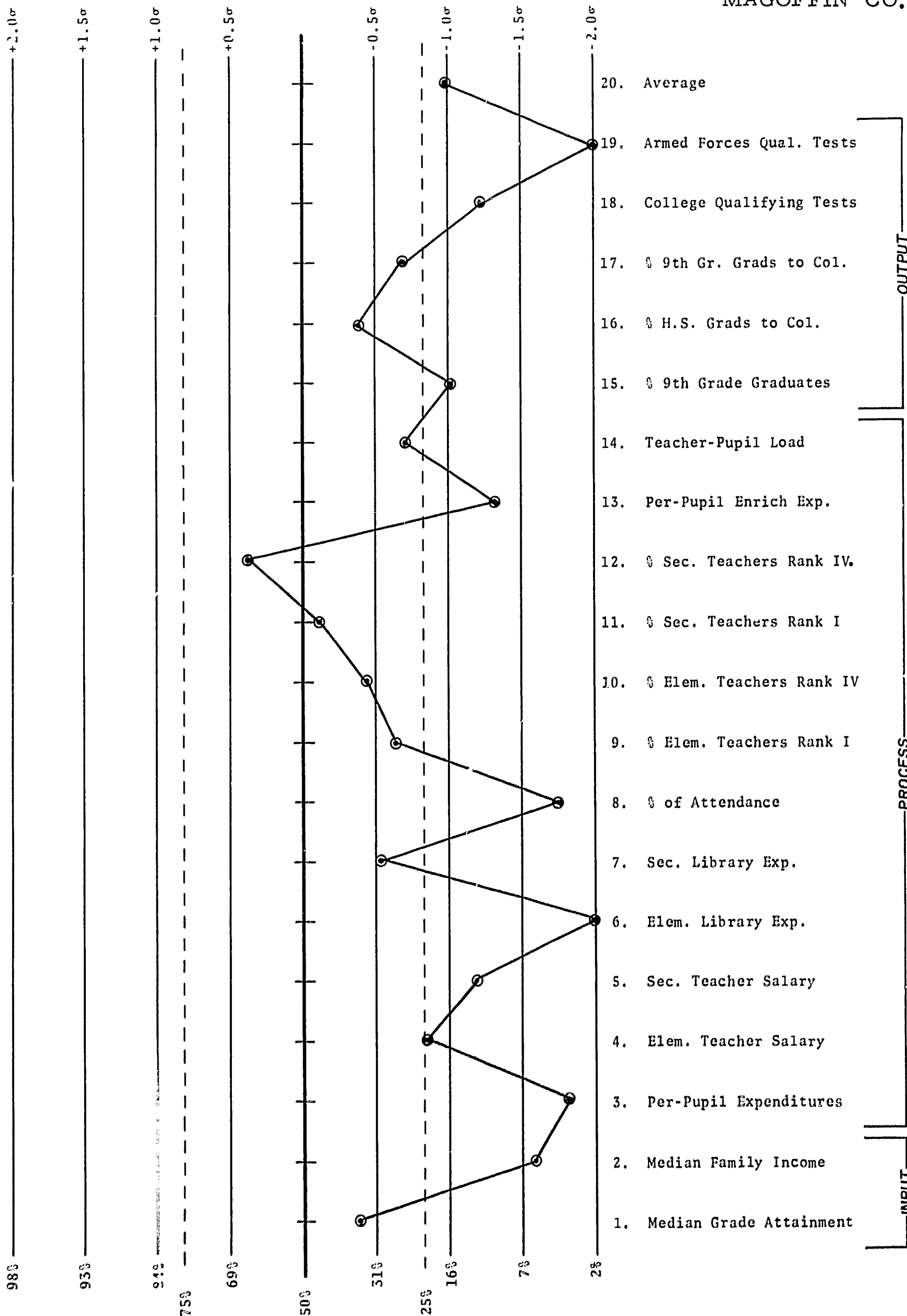
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19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

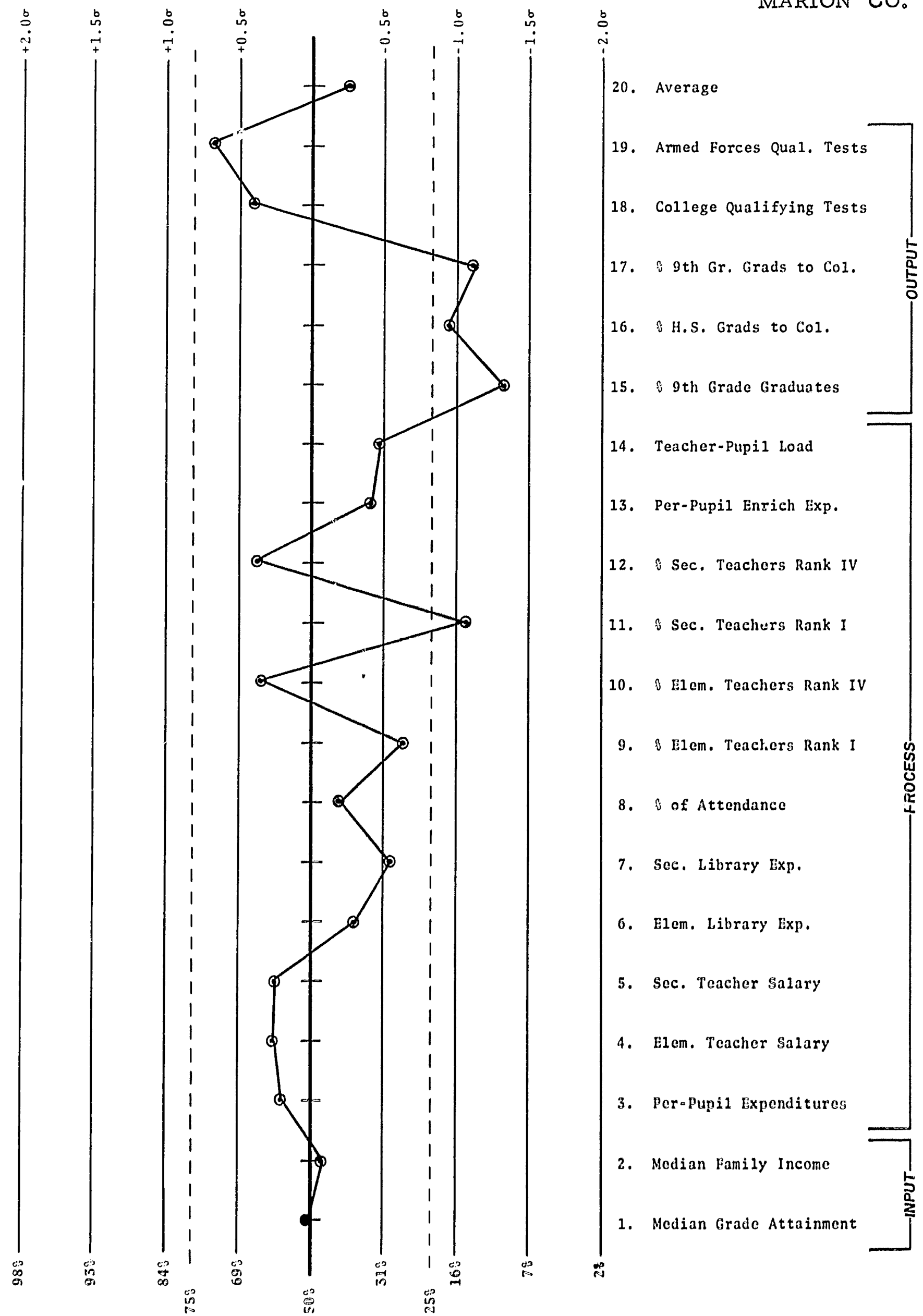
PROCESS

INPUT

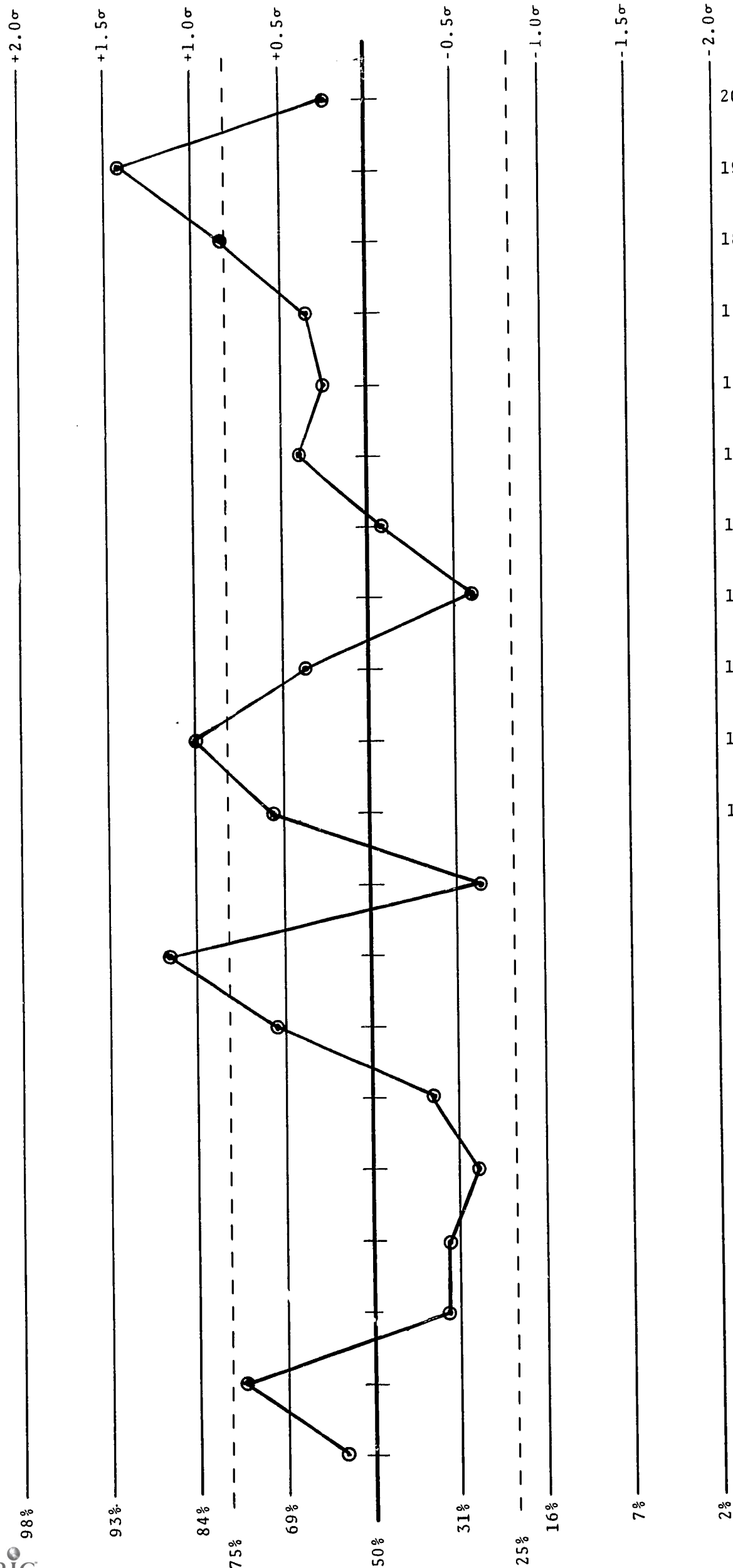
MAGOFFIN CO.



MARION CO.



MARSHALL CO.



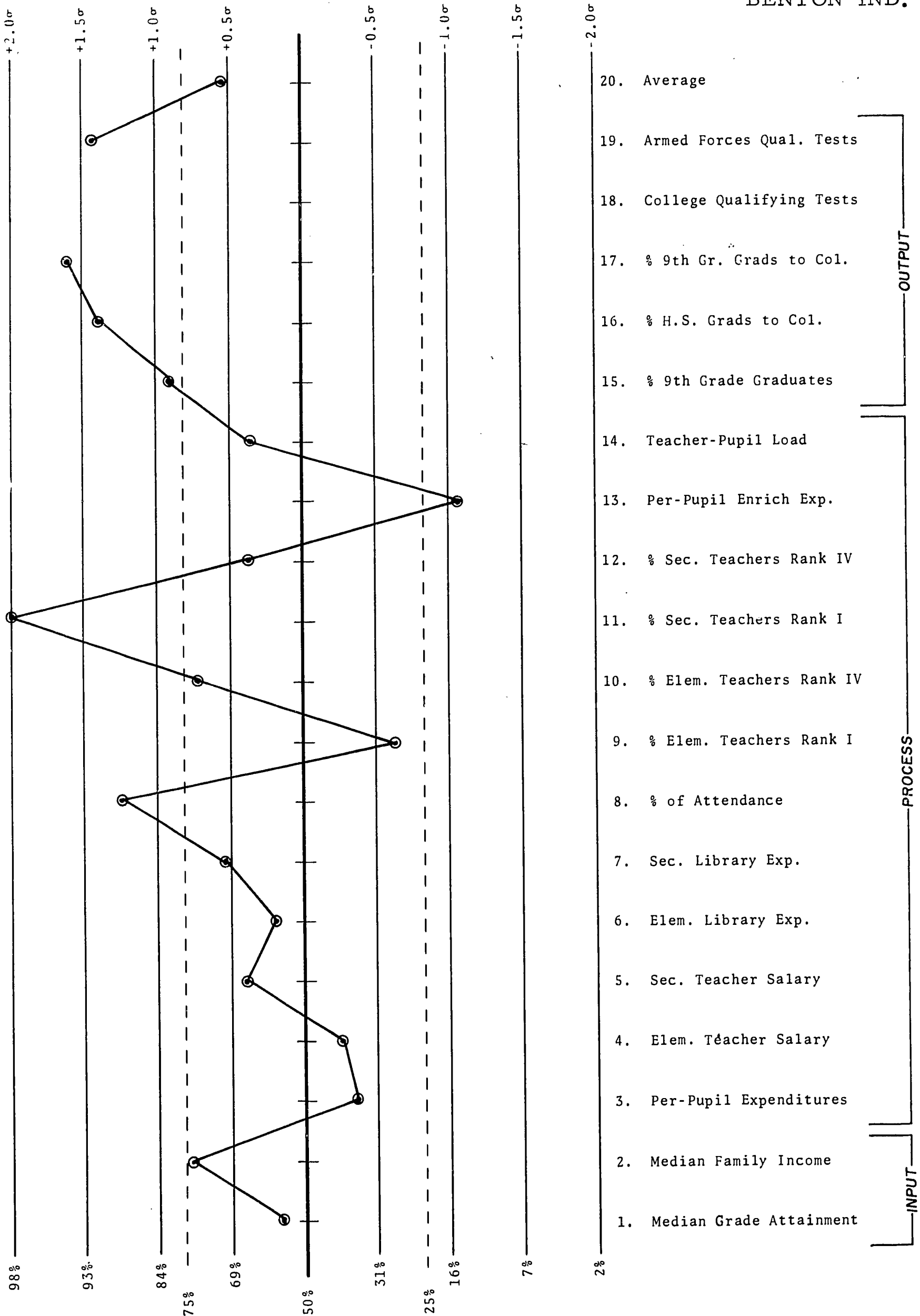
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

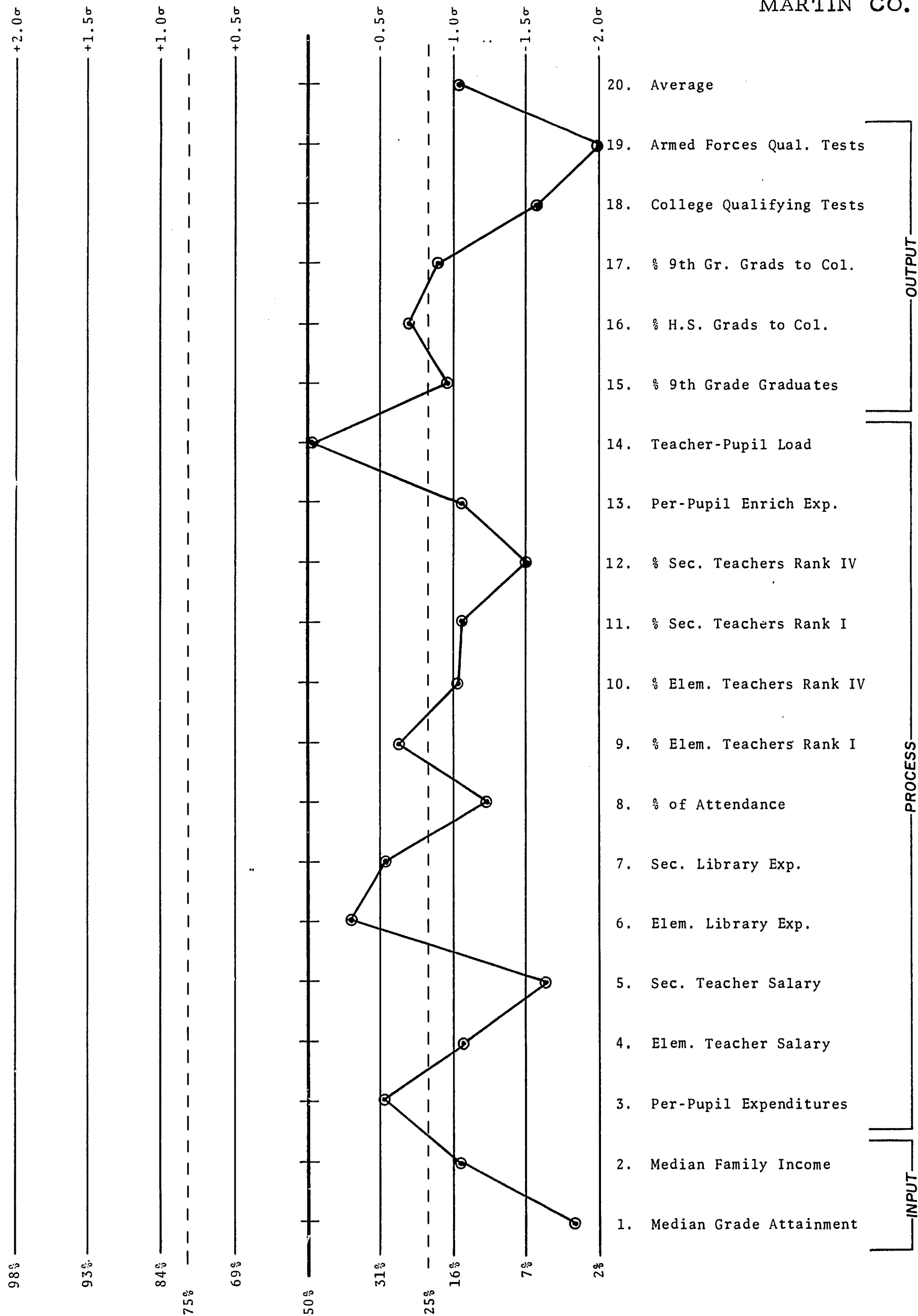
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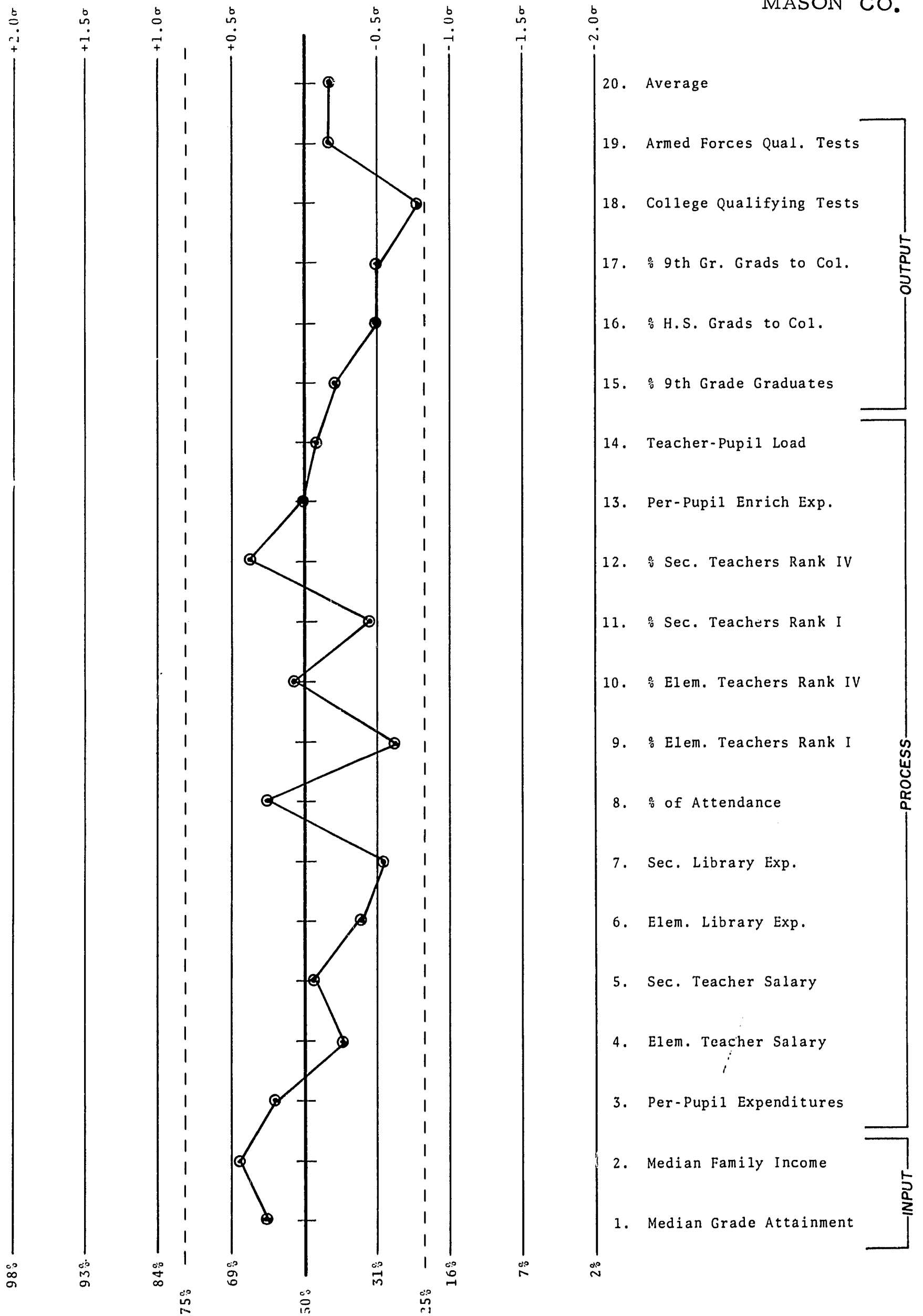
INPUT

BENTON IND.

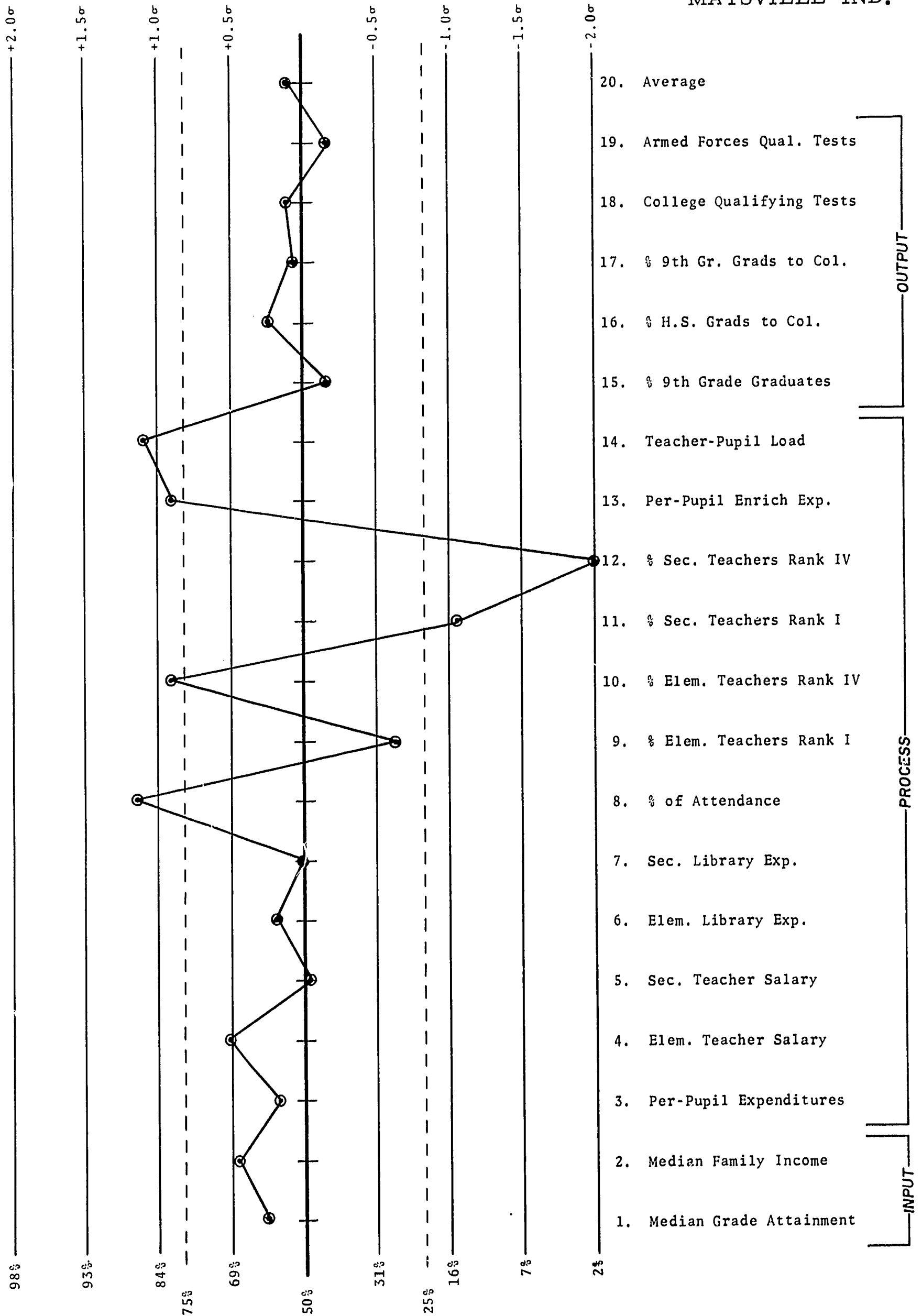


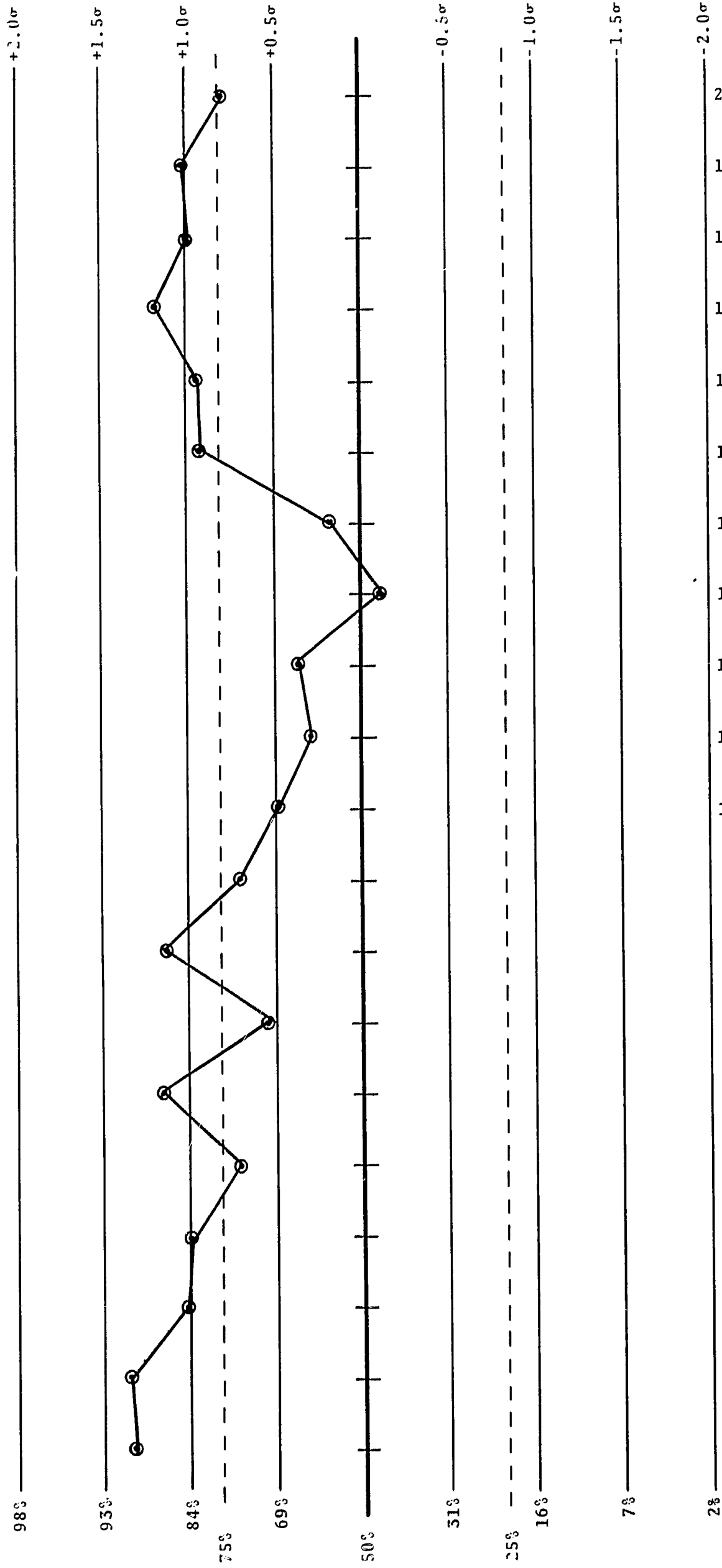
MARTIN CO.





MAYSVILLE IND.





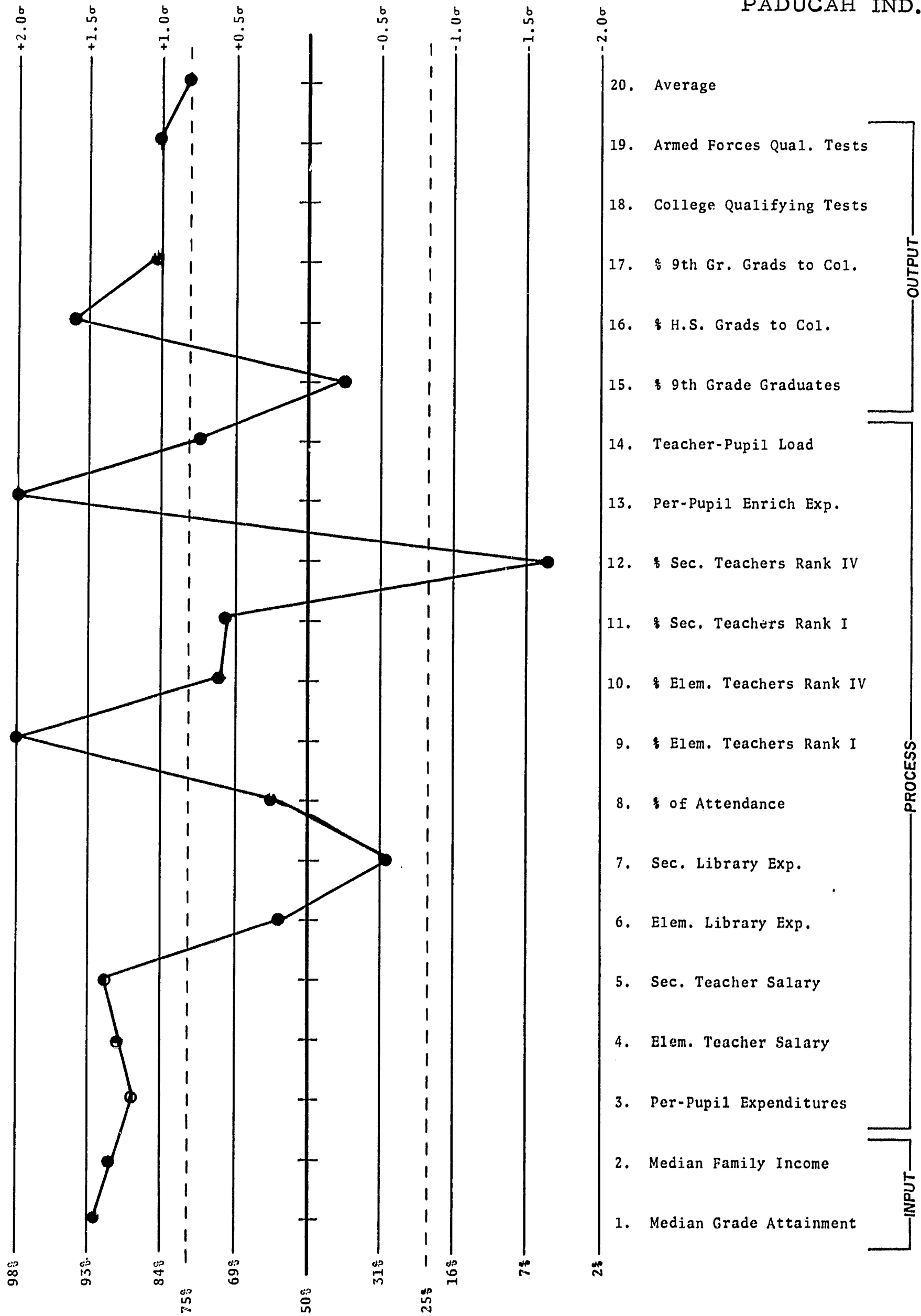
- 20. Average
- 19. Armed Forces Qual. Tests
- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
- 14. Teacher-Pupil Load
- 13. Per-Pupil Enrich Exp.
- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

OUTPUT

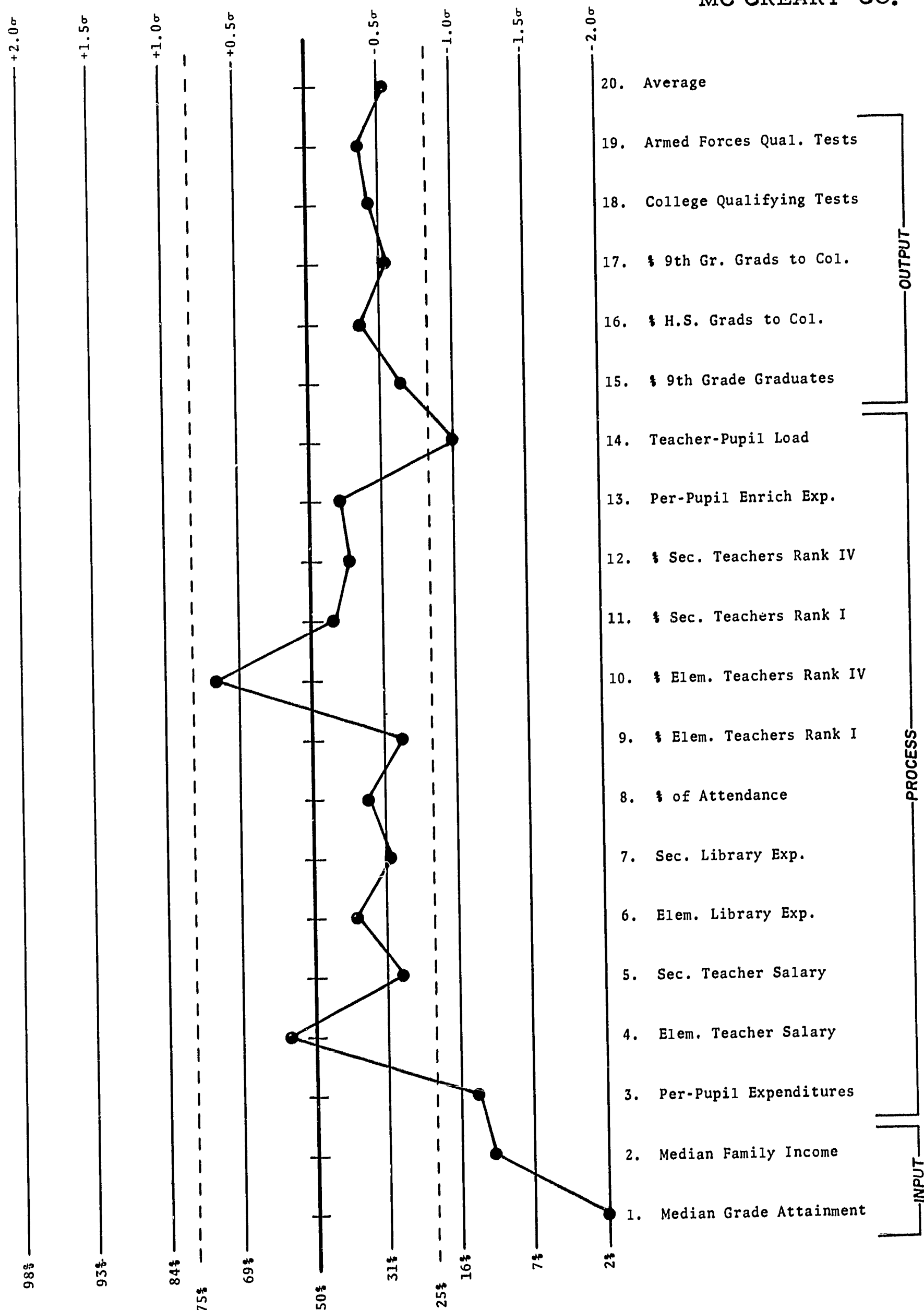
PROCESS

INPUT

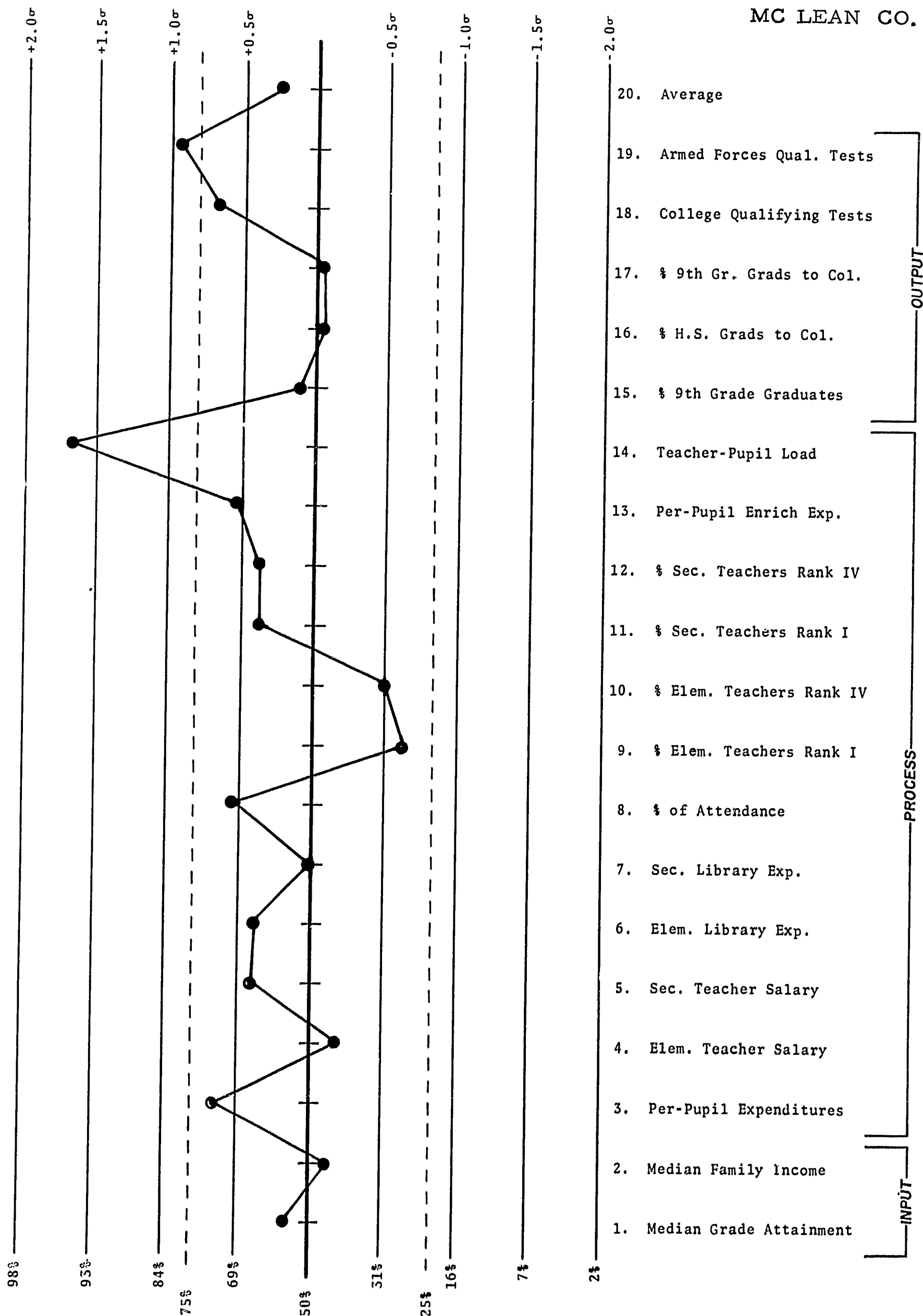
PADUCAH IND.

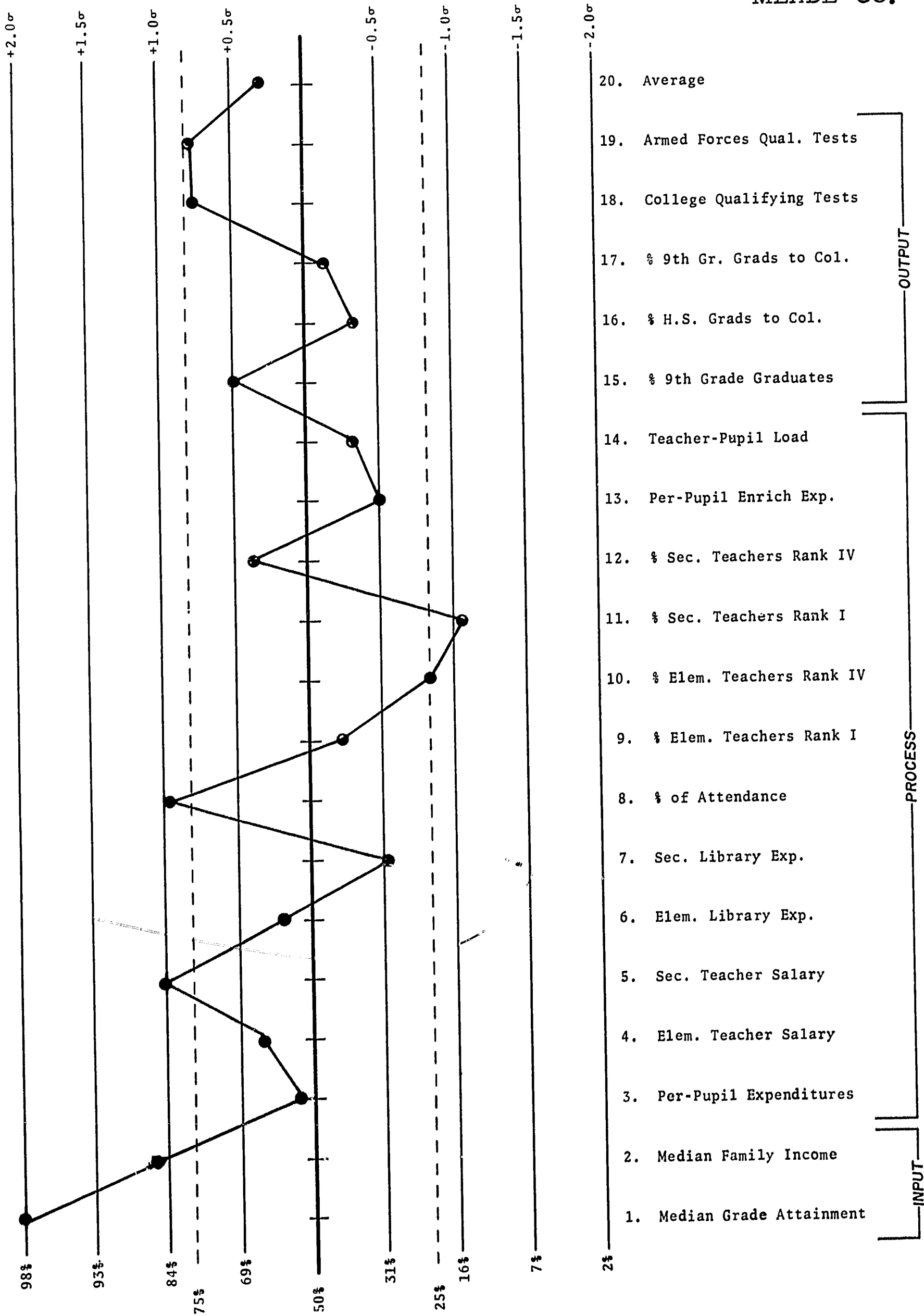


MC CREARY CO.

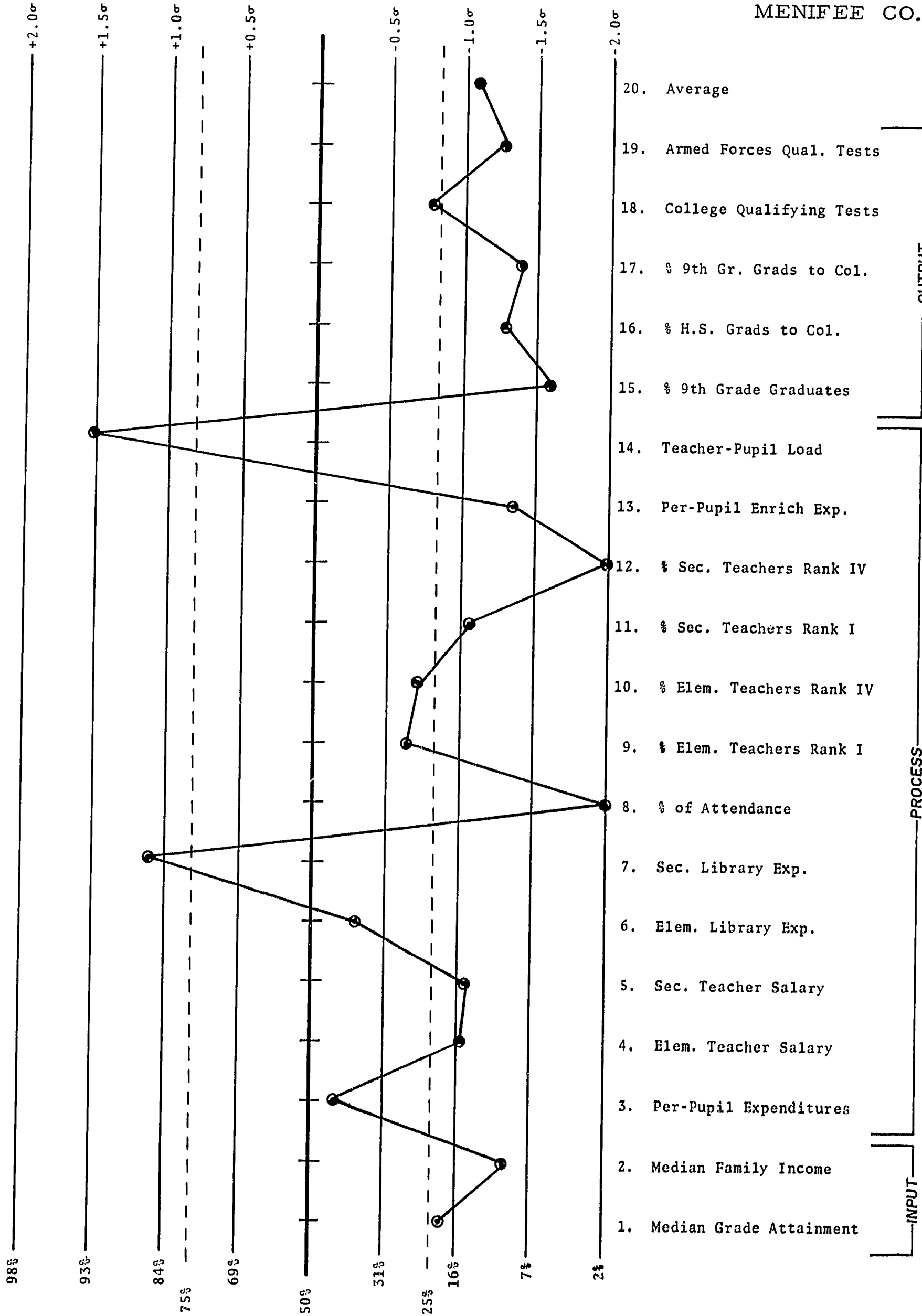


MC LEAN CO.

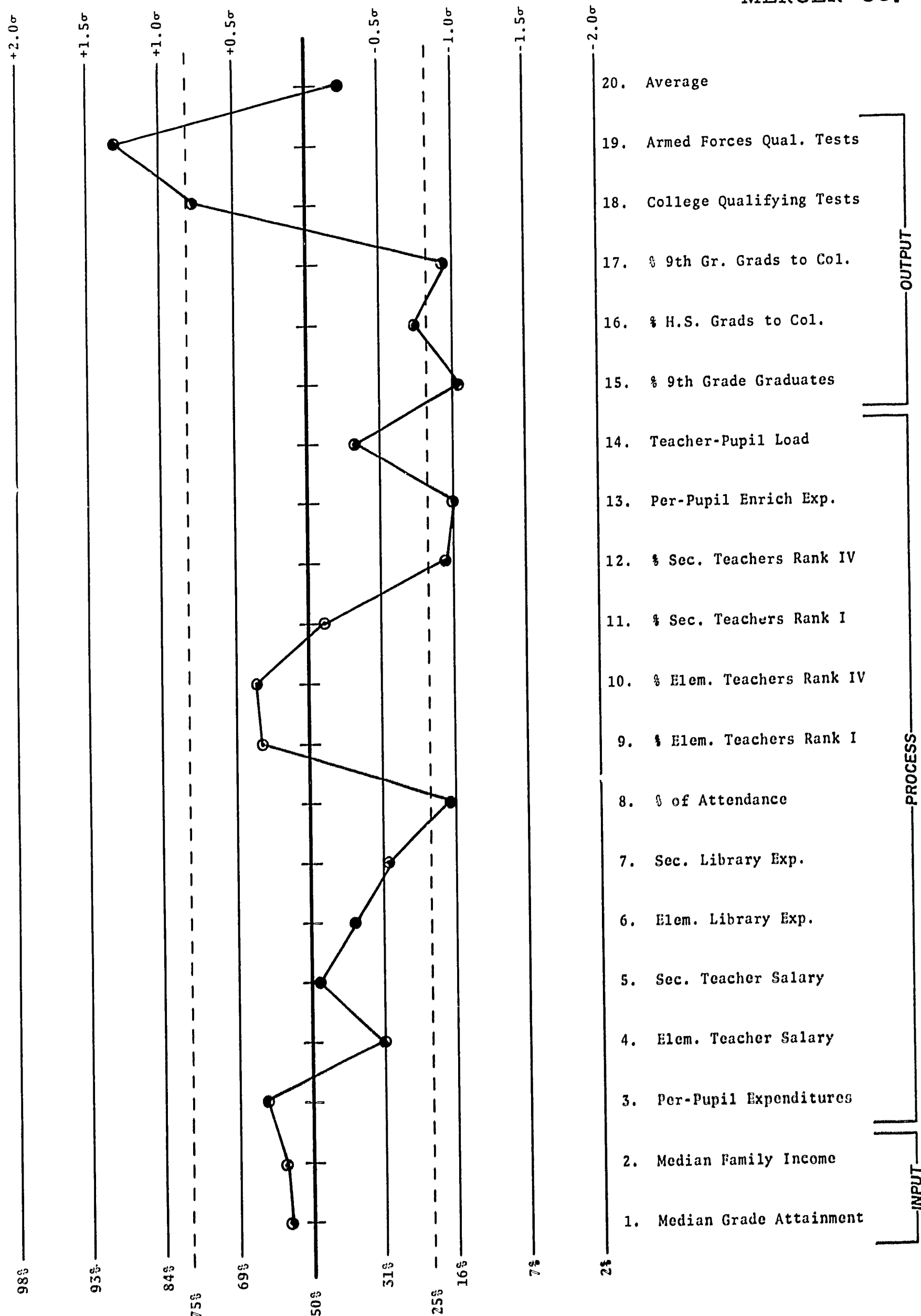




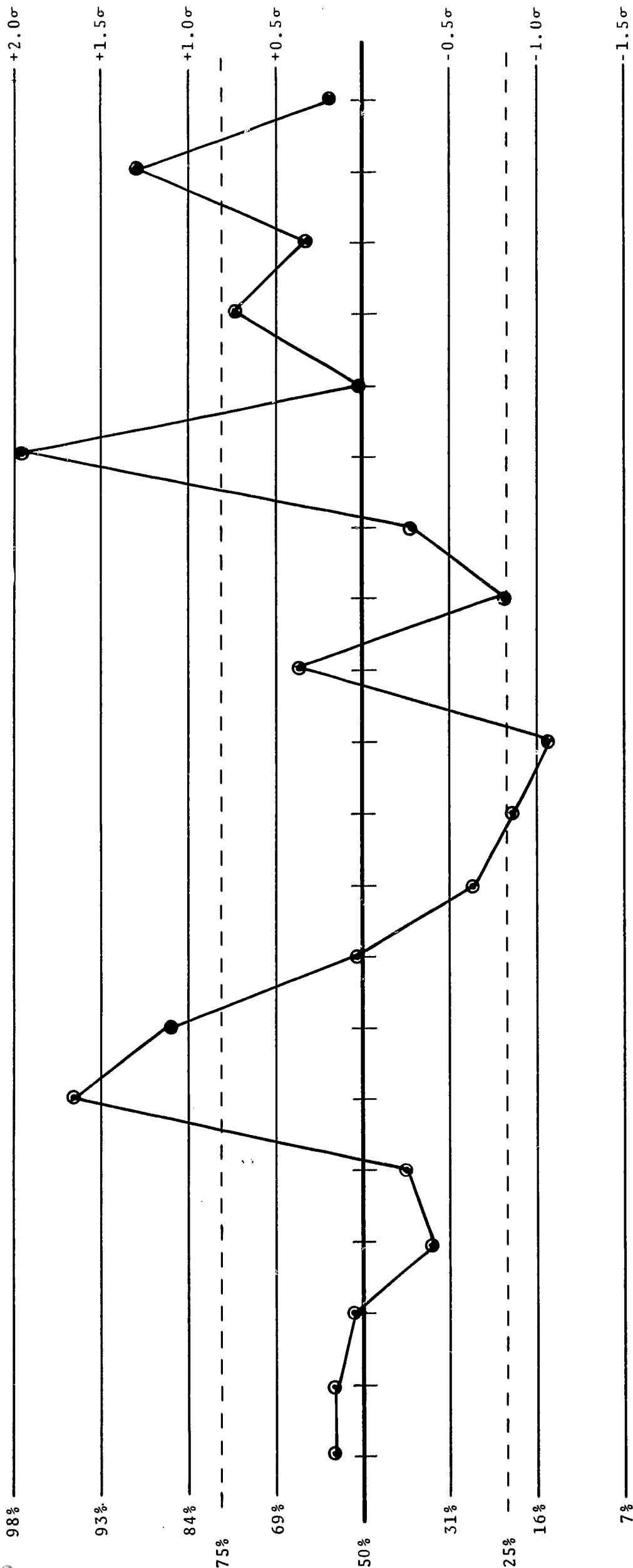
MENIFEE CO.



MERCER CO.



BURGIN IND.



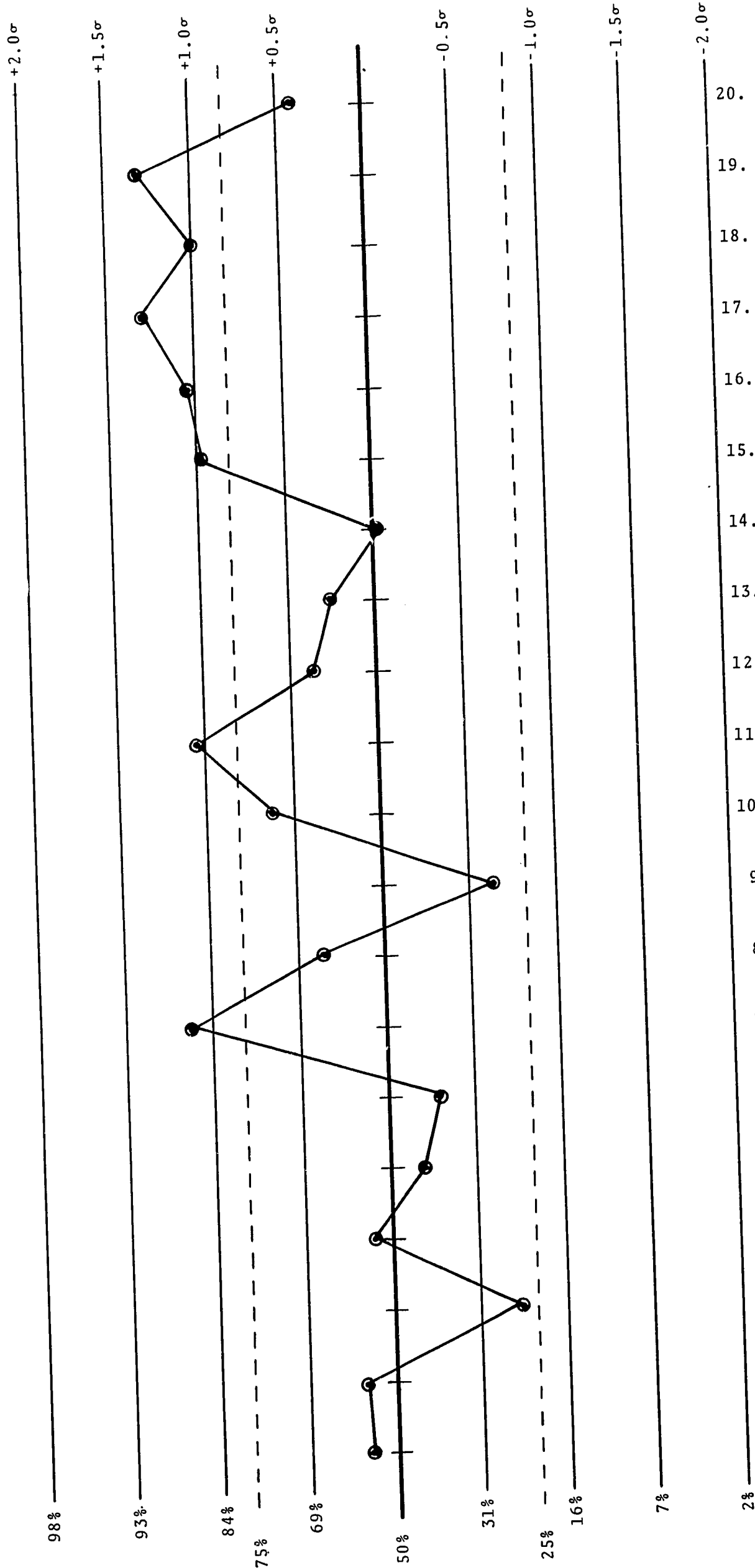
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

HARRODSBURG IND.

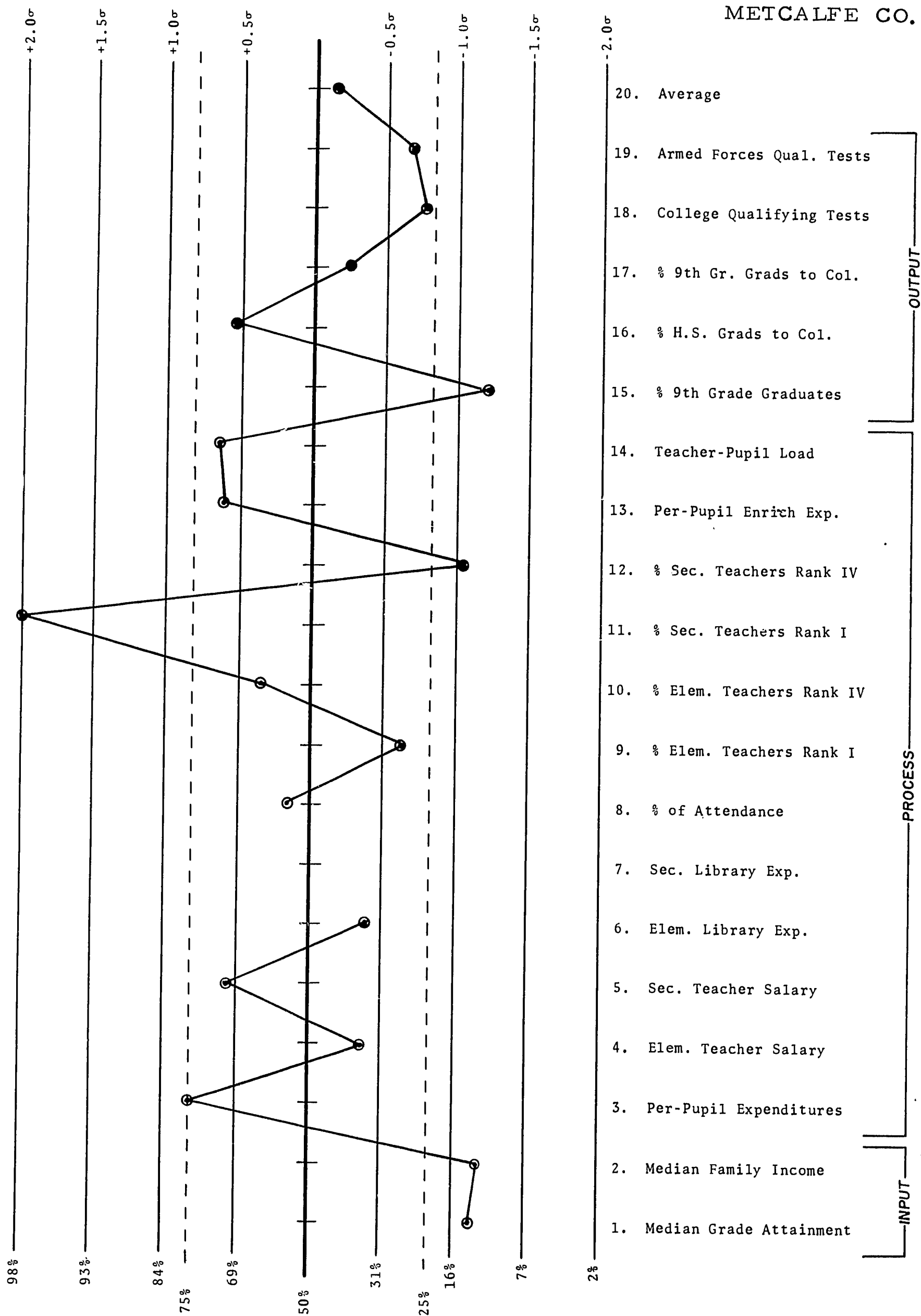


20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

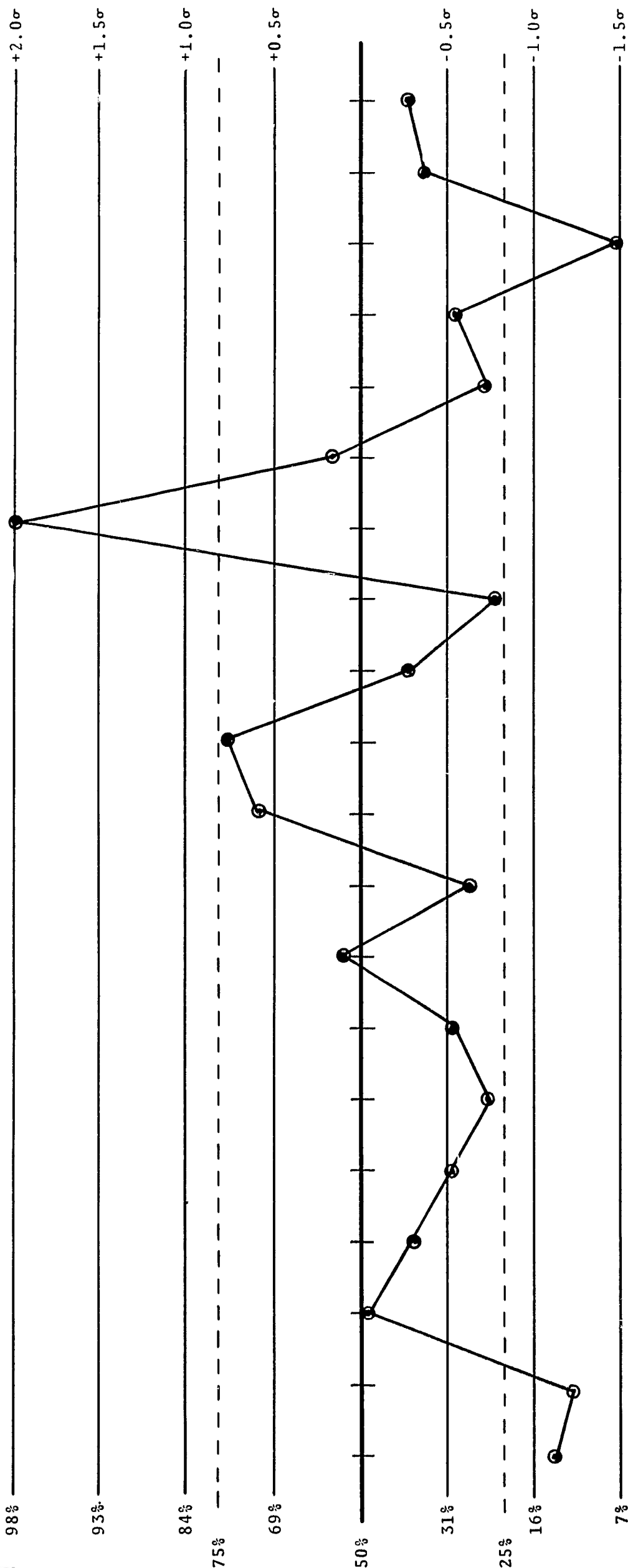
OUTPUT

PROCESS

INPUT



MONROE CO.



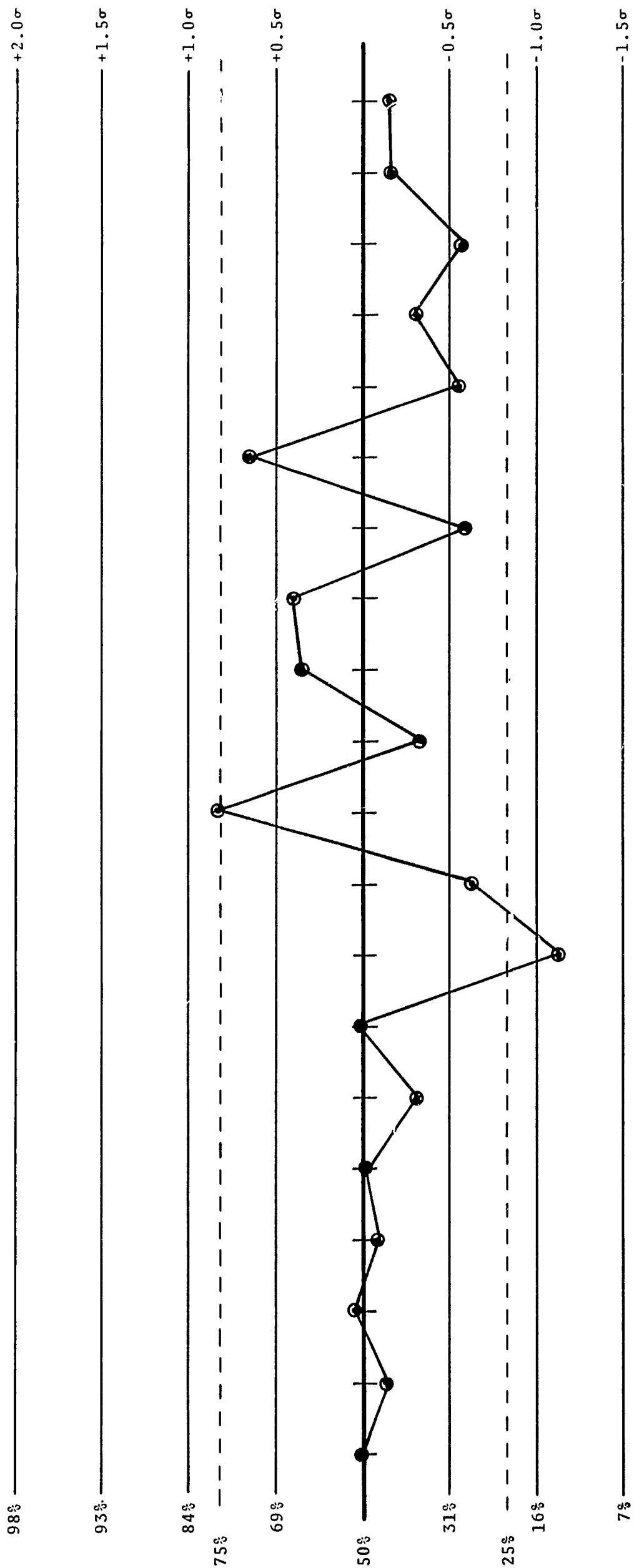
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

MONTGOMERY CO.



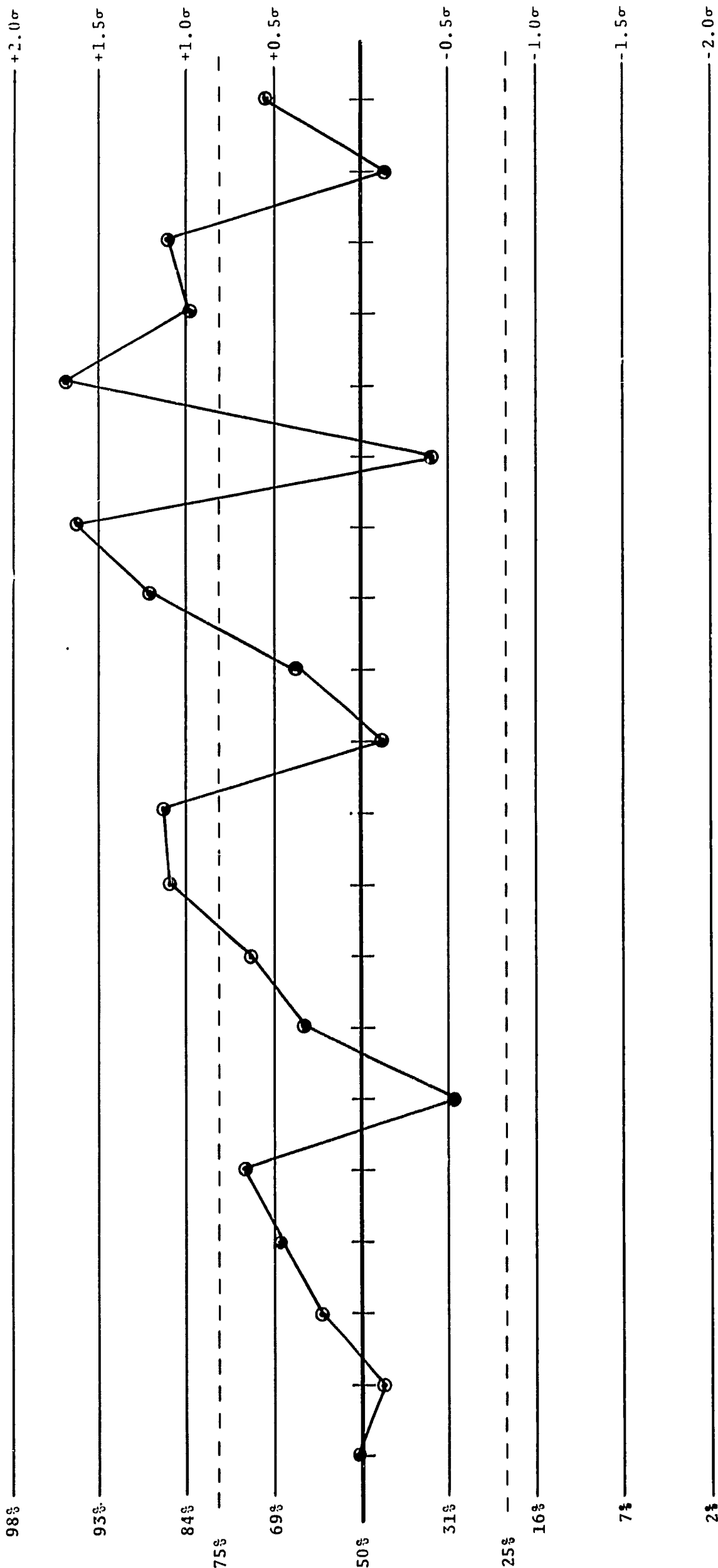
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
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11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

MT. STERLING IND.



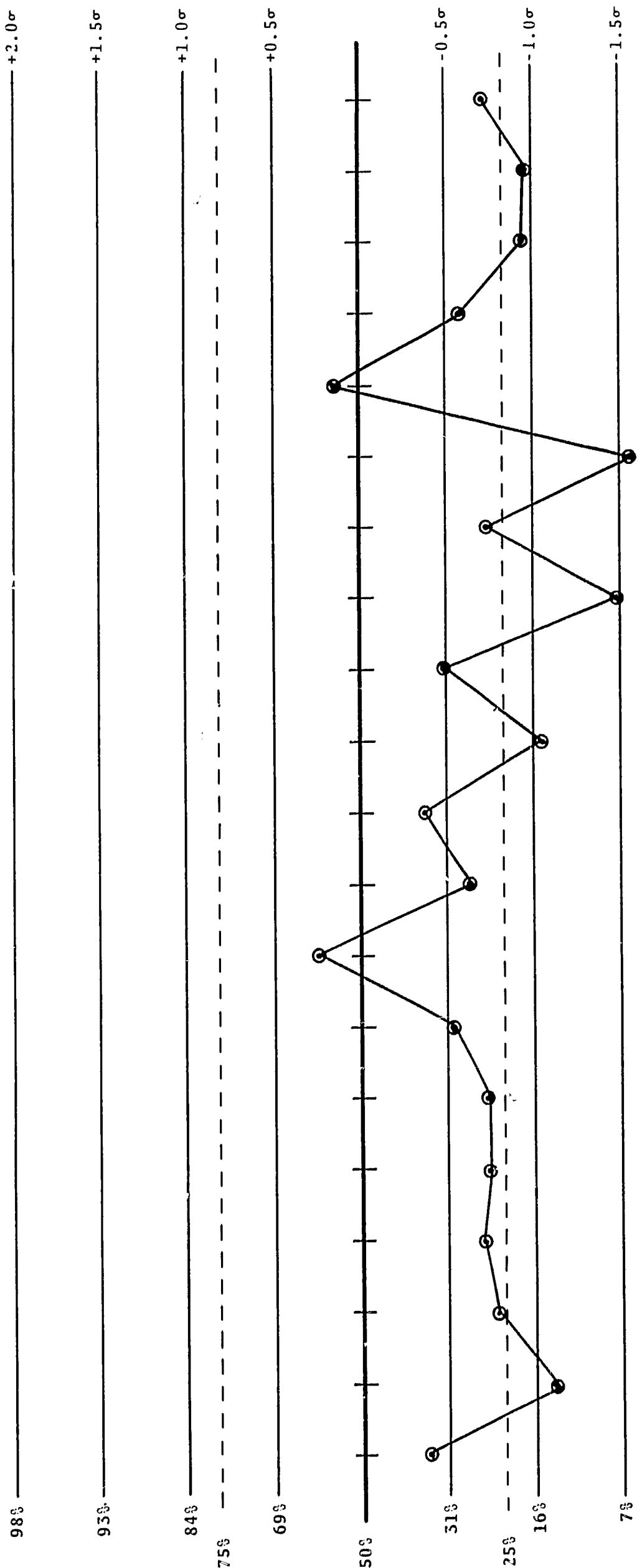
20. Average
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

MORGAN CO,



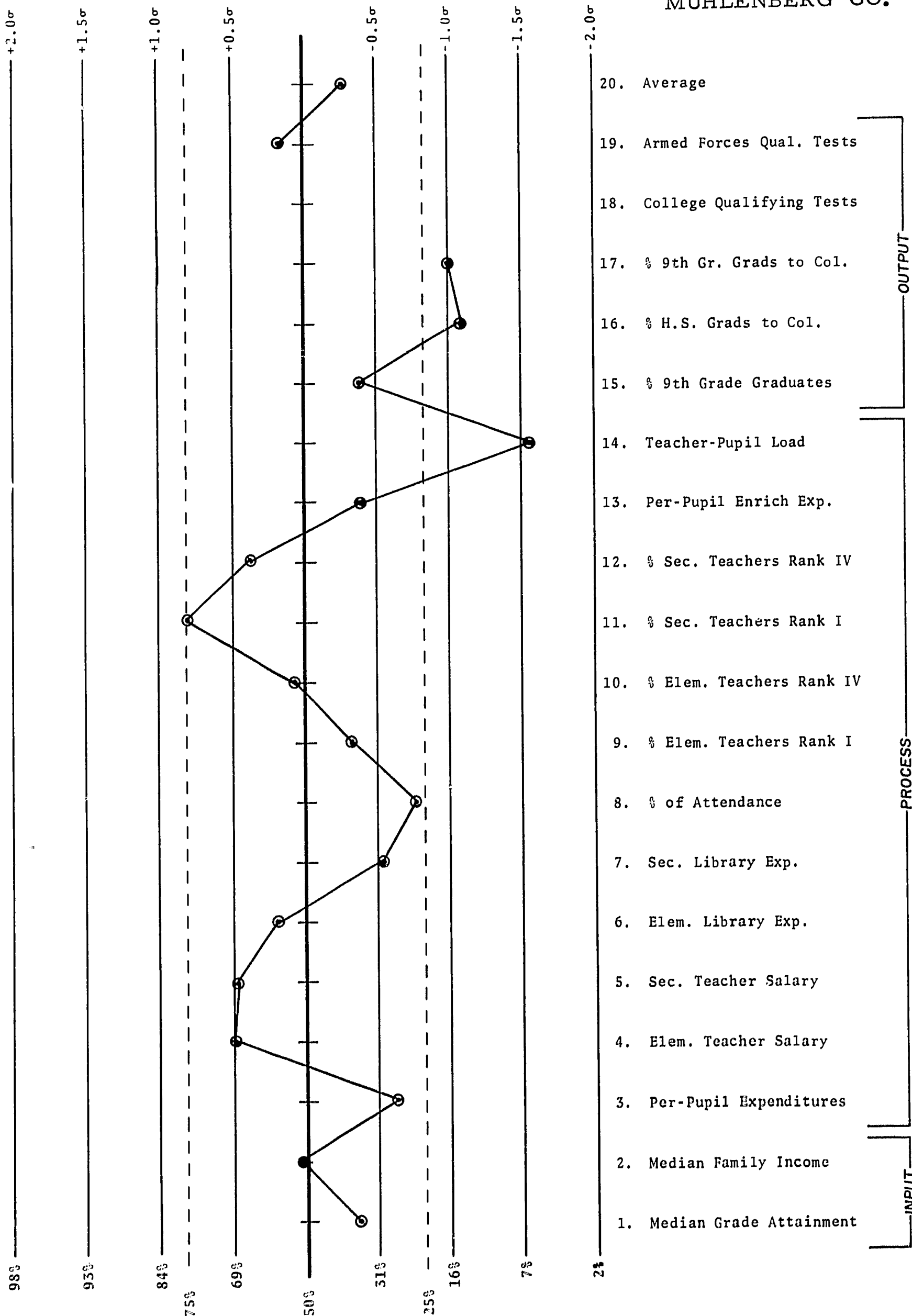
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

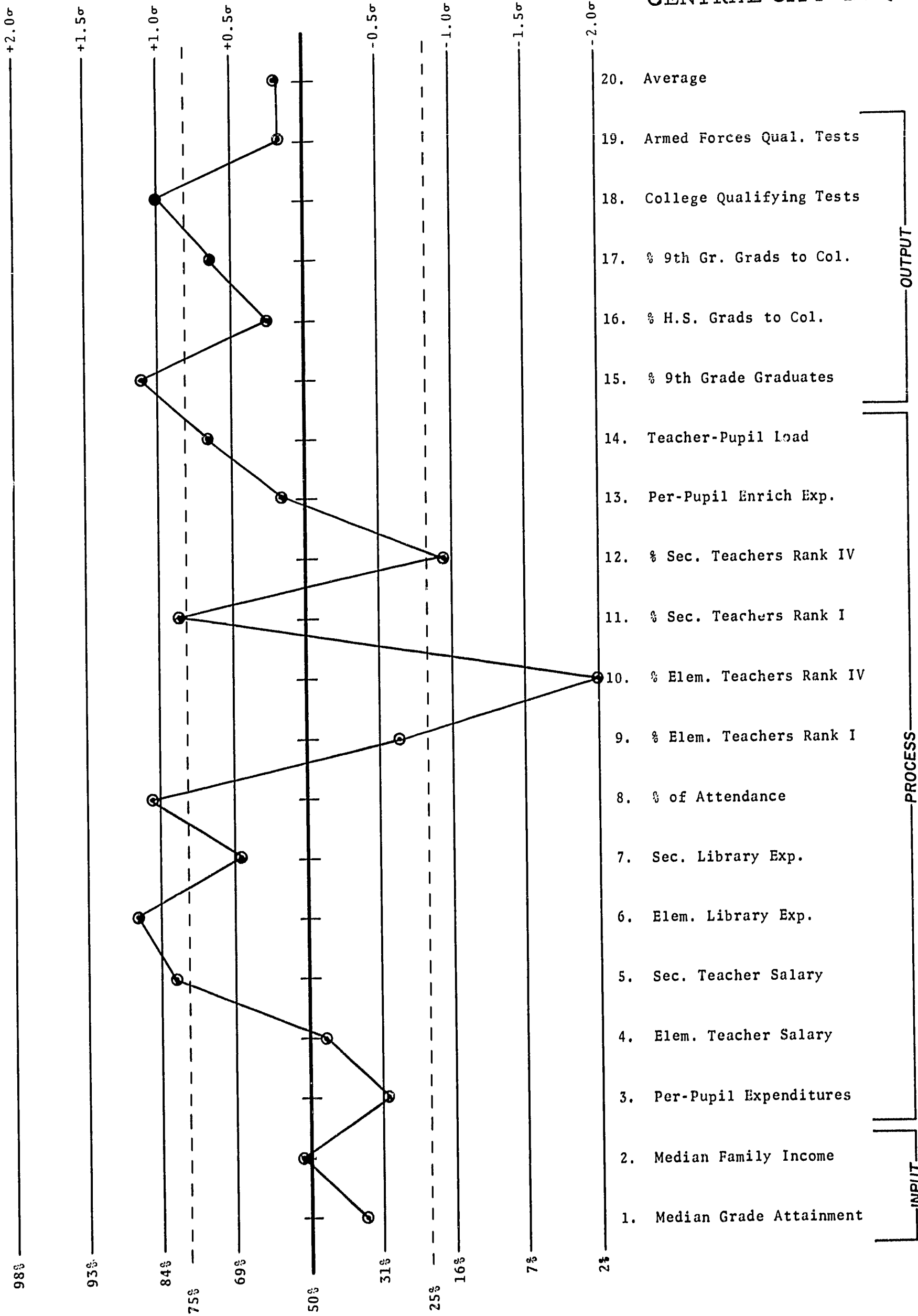
PROCESS

INPUT

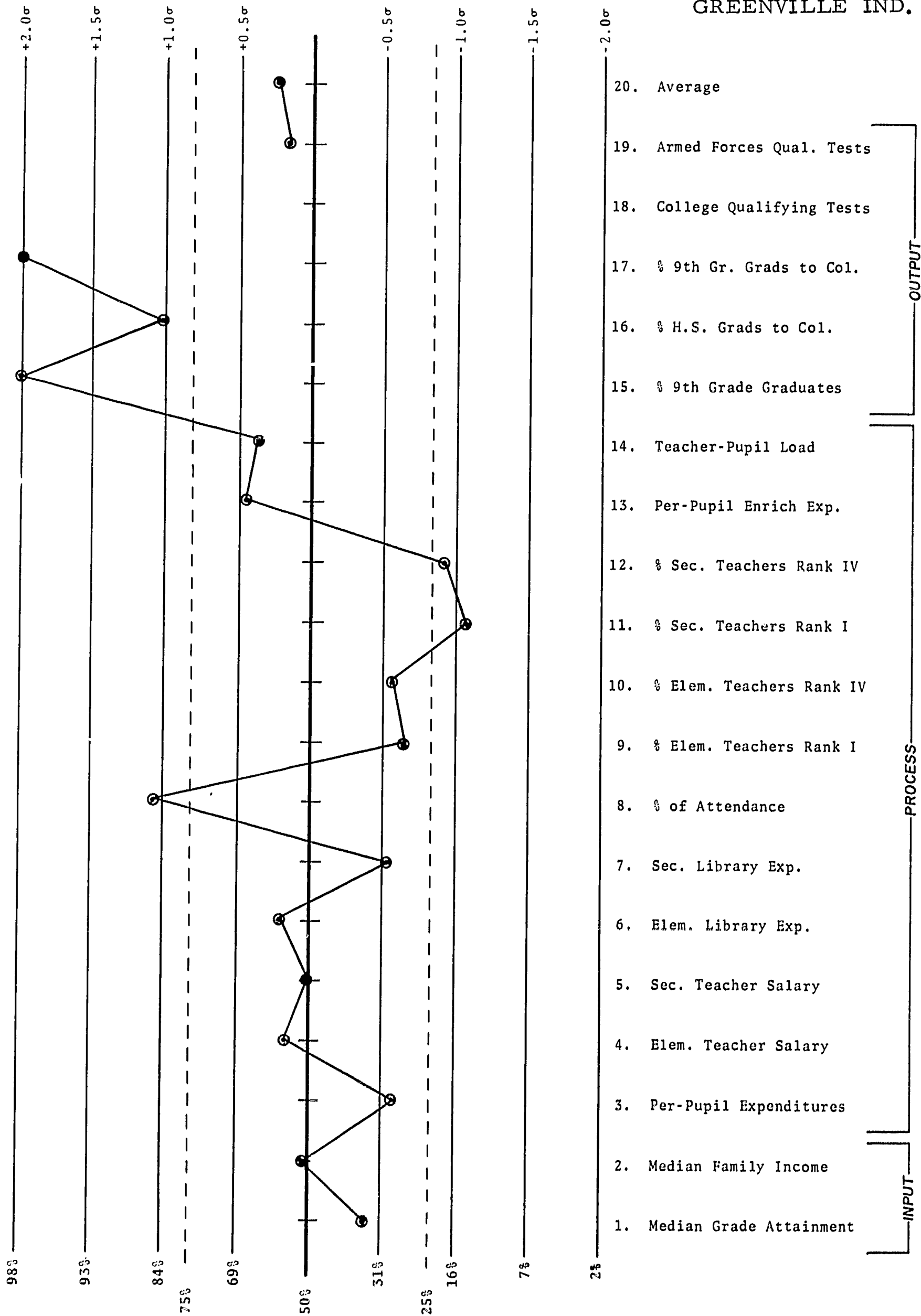
MUHLENBERG CO.



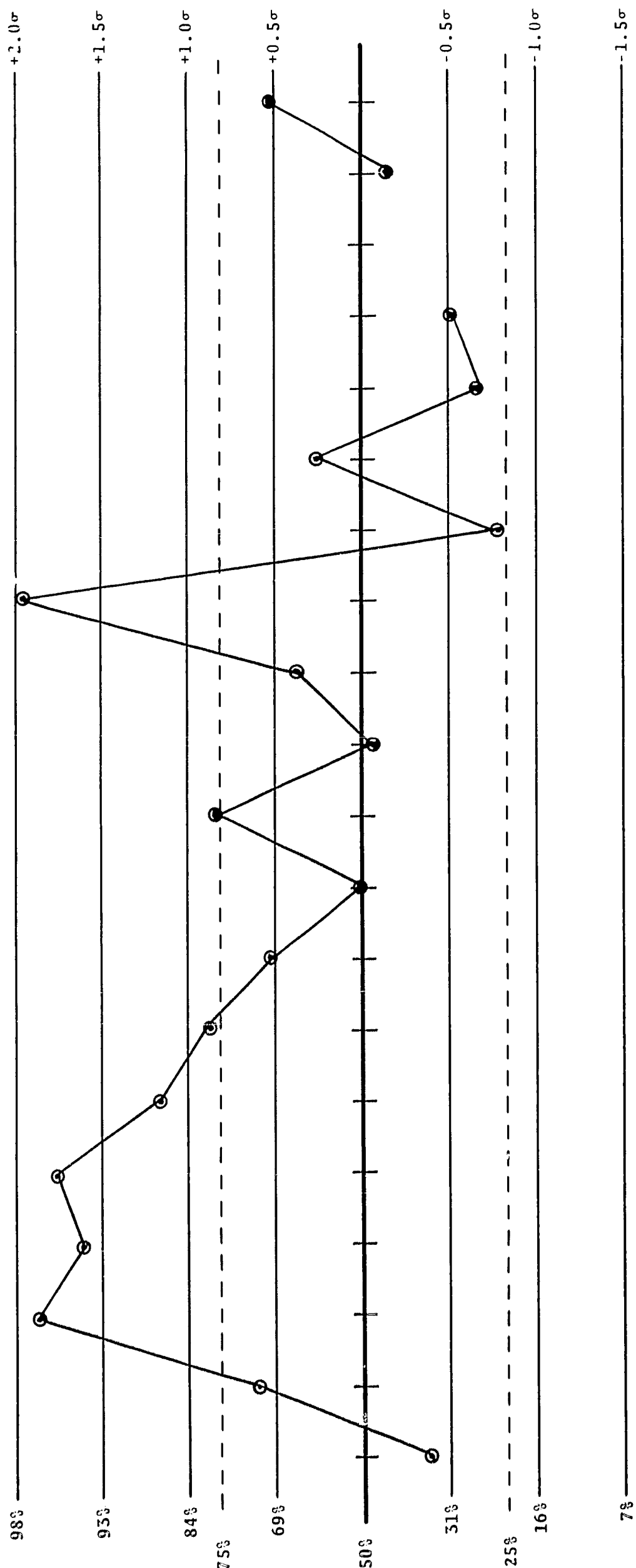
CENTRAL CITY IND.



GREENVILLE IND.



NELSON CO.



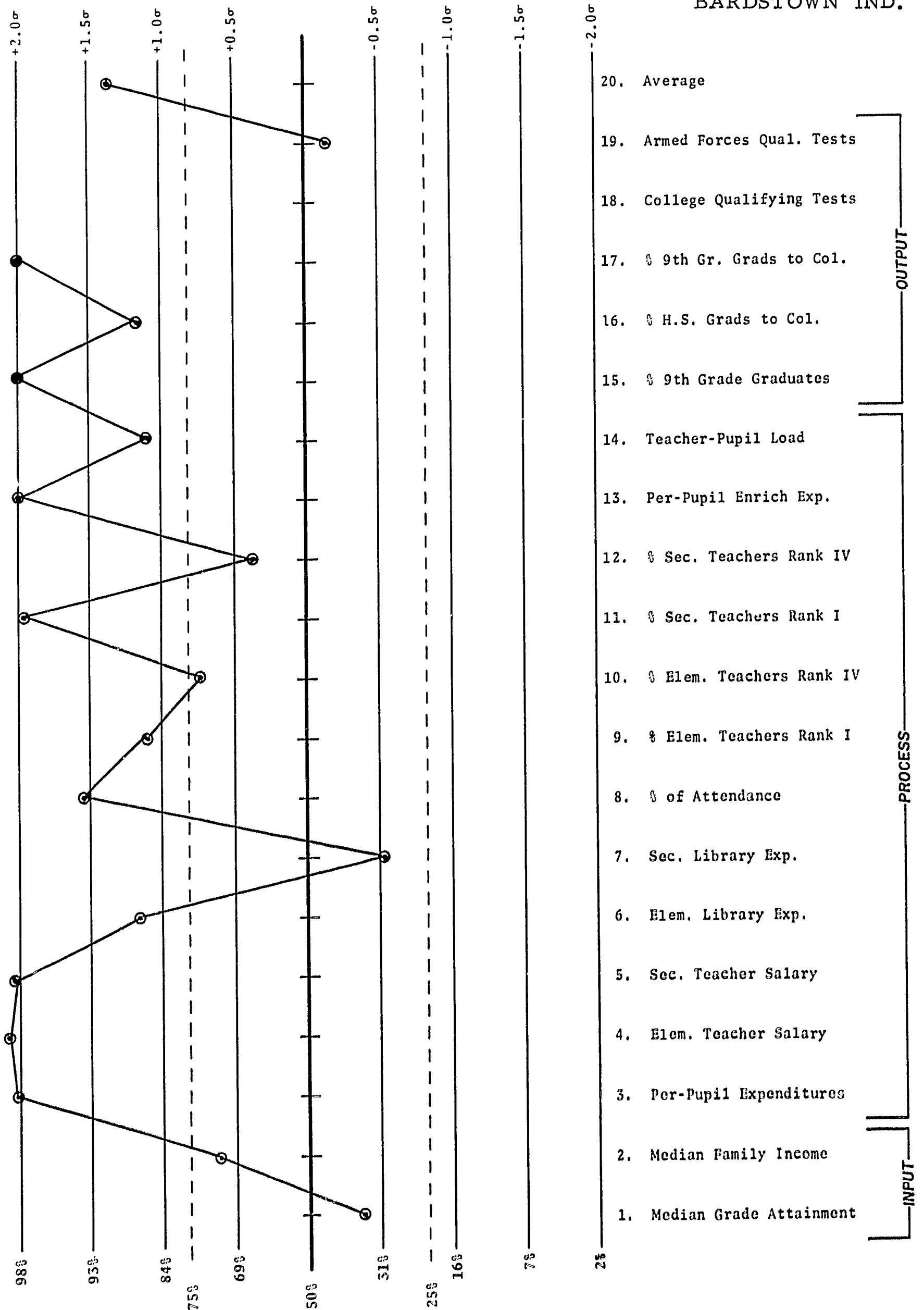
20. Average
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

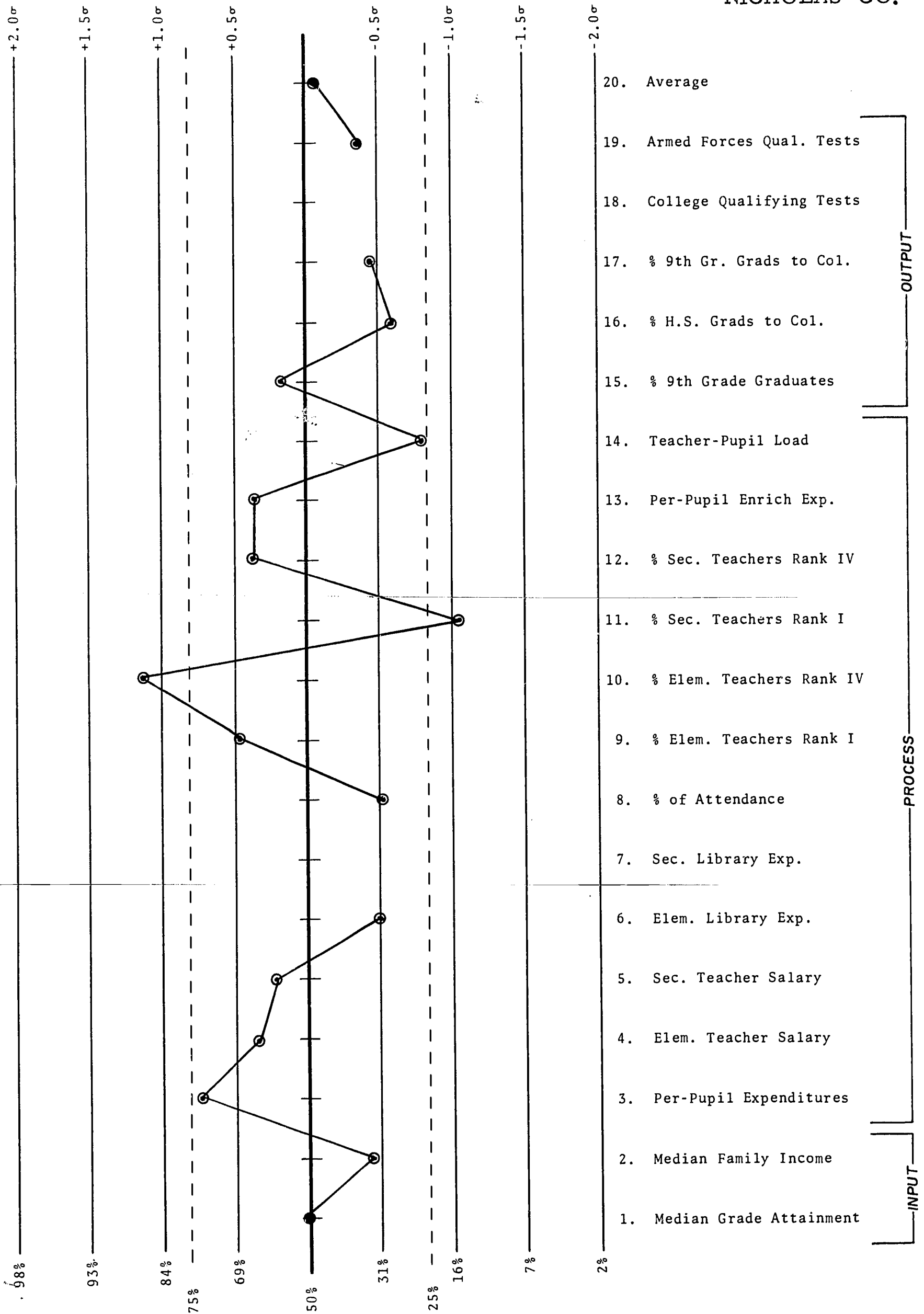
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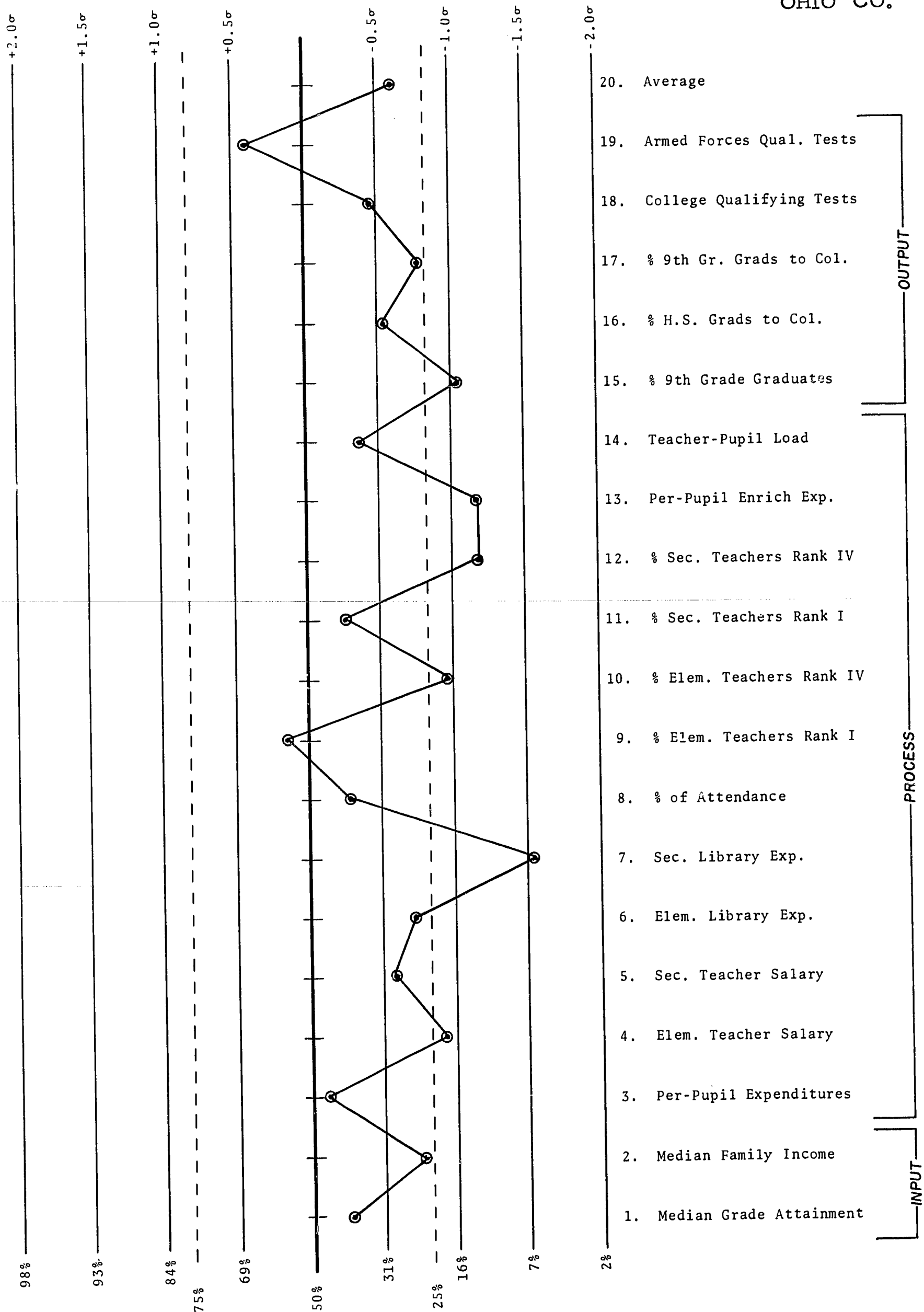
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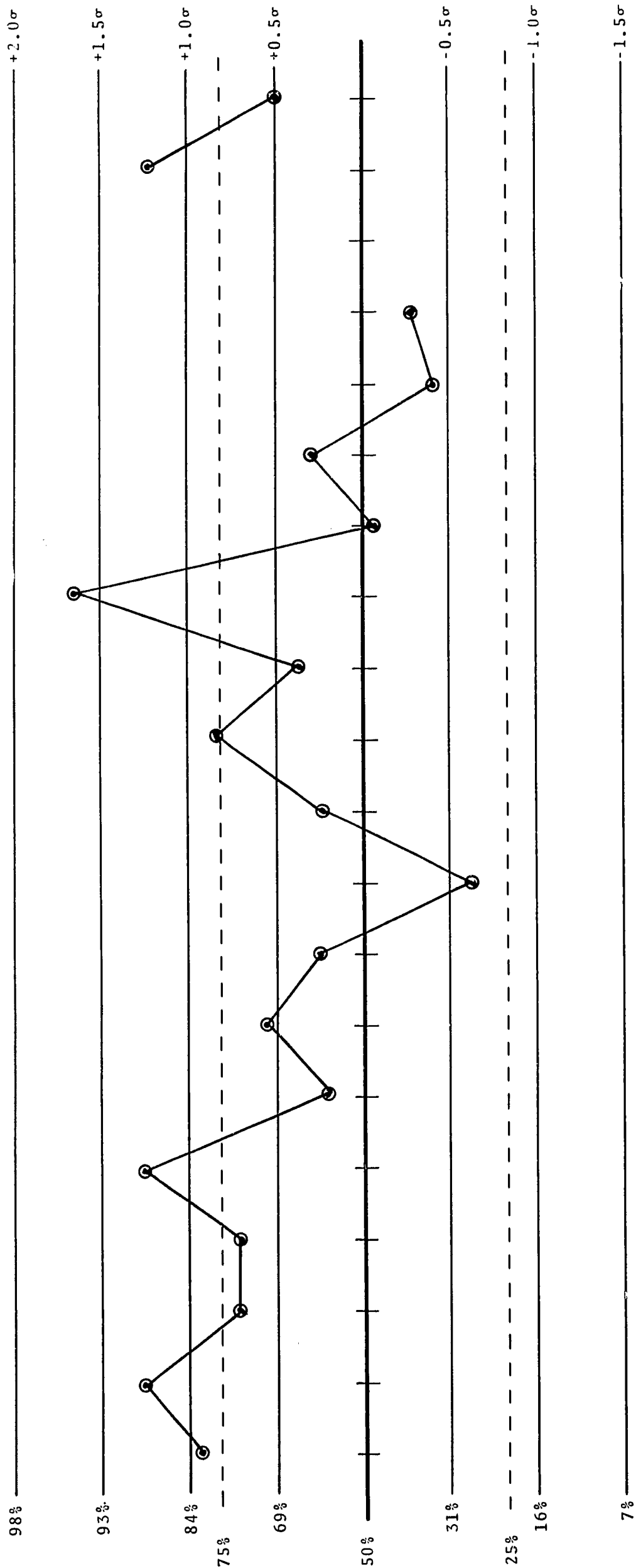


NICHOLAS CO.

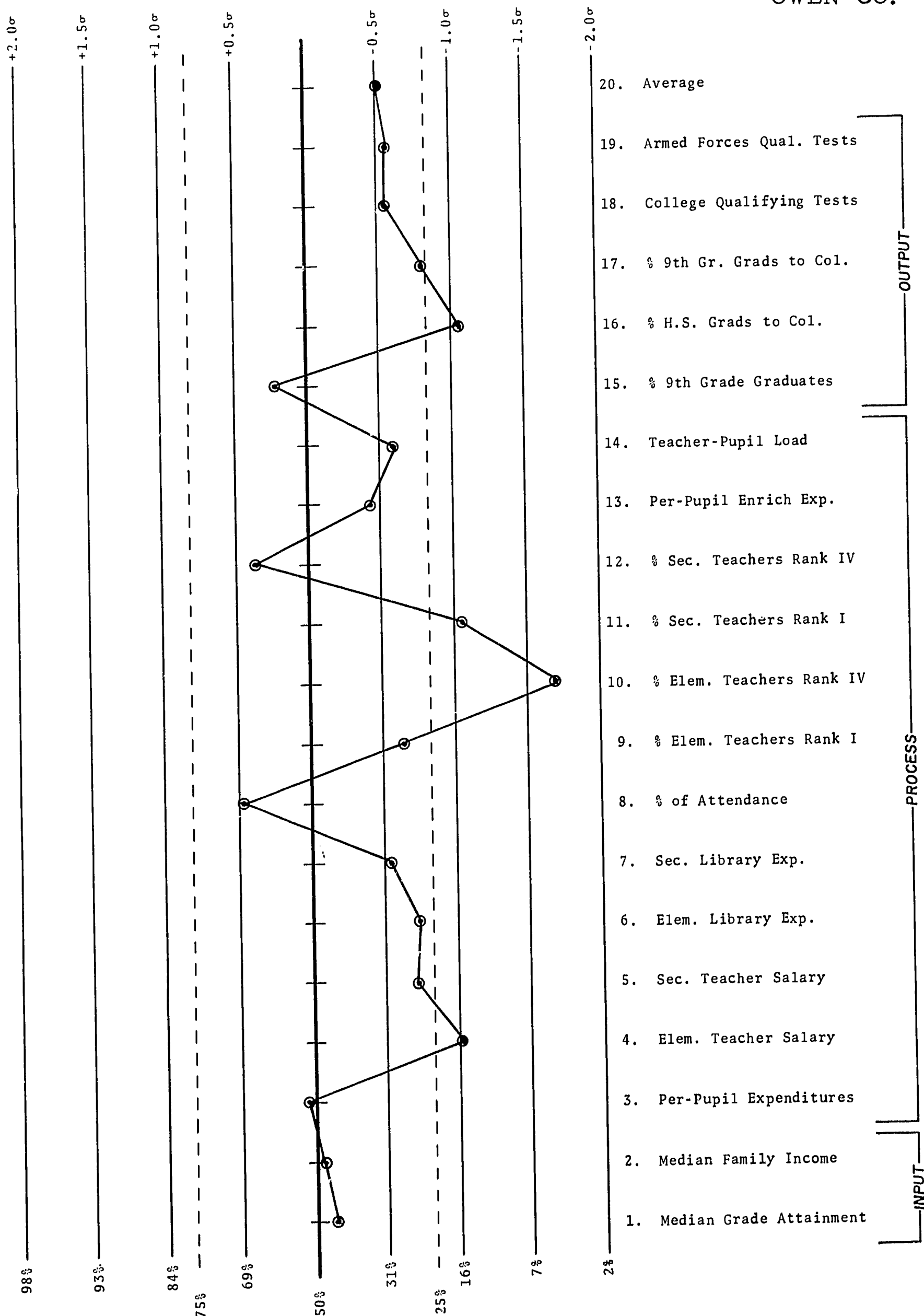


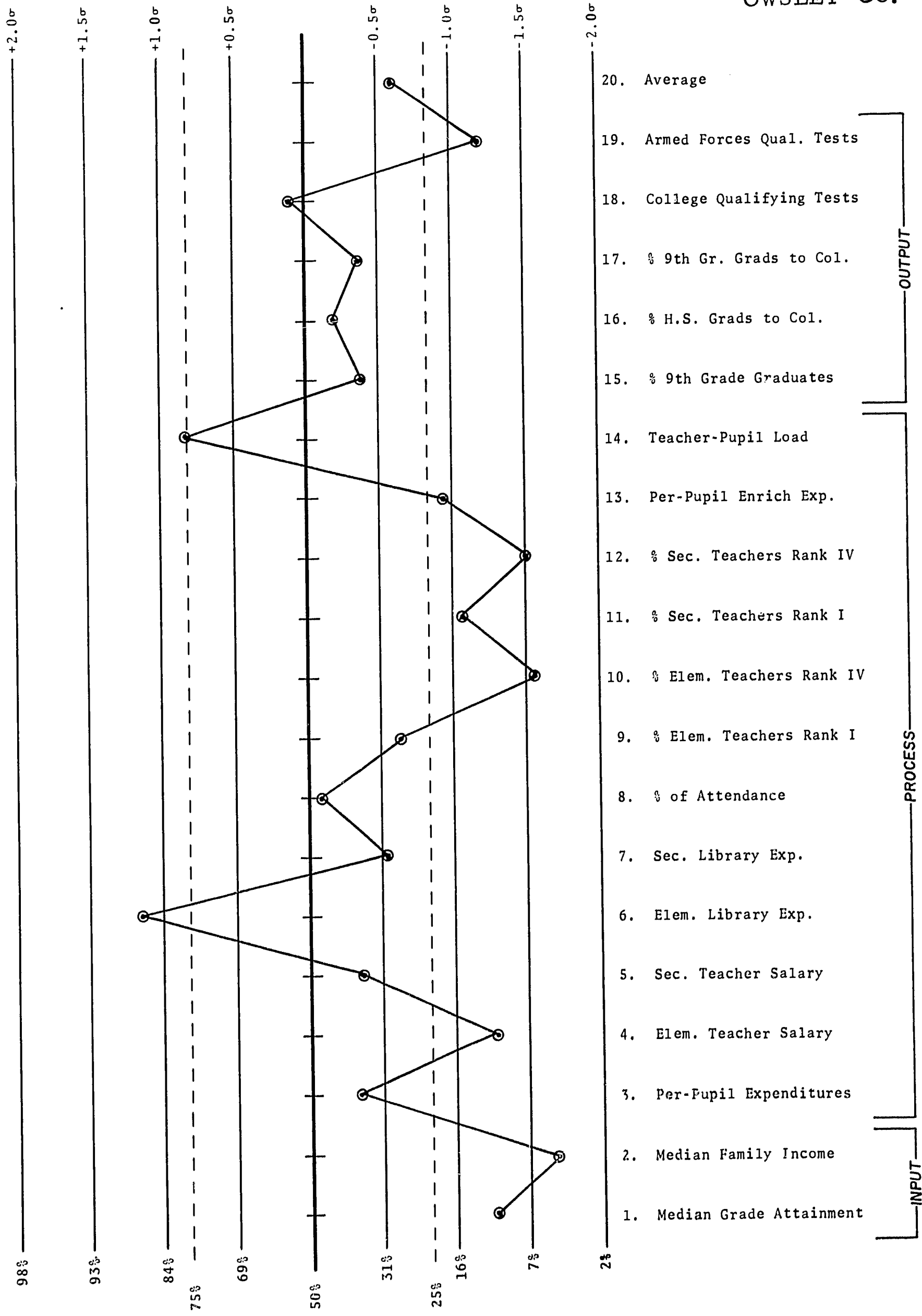


OLDHAM CO.

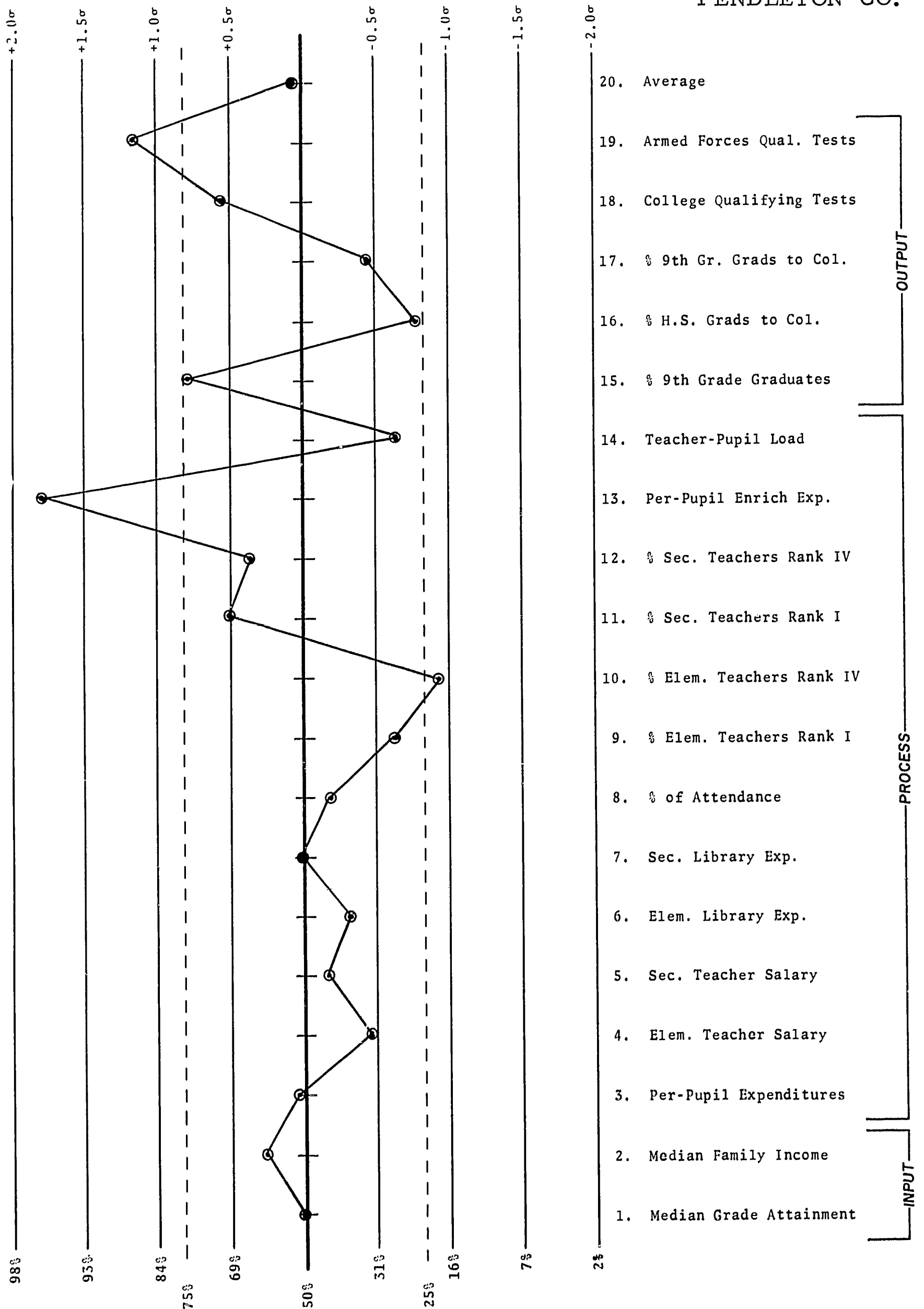


OWEN CO.

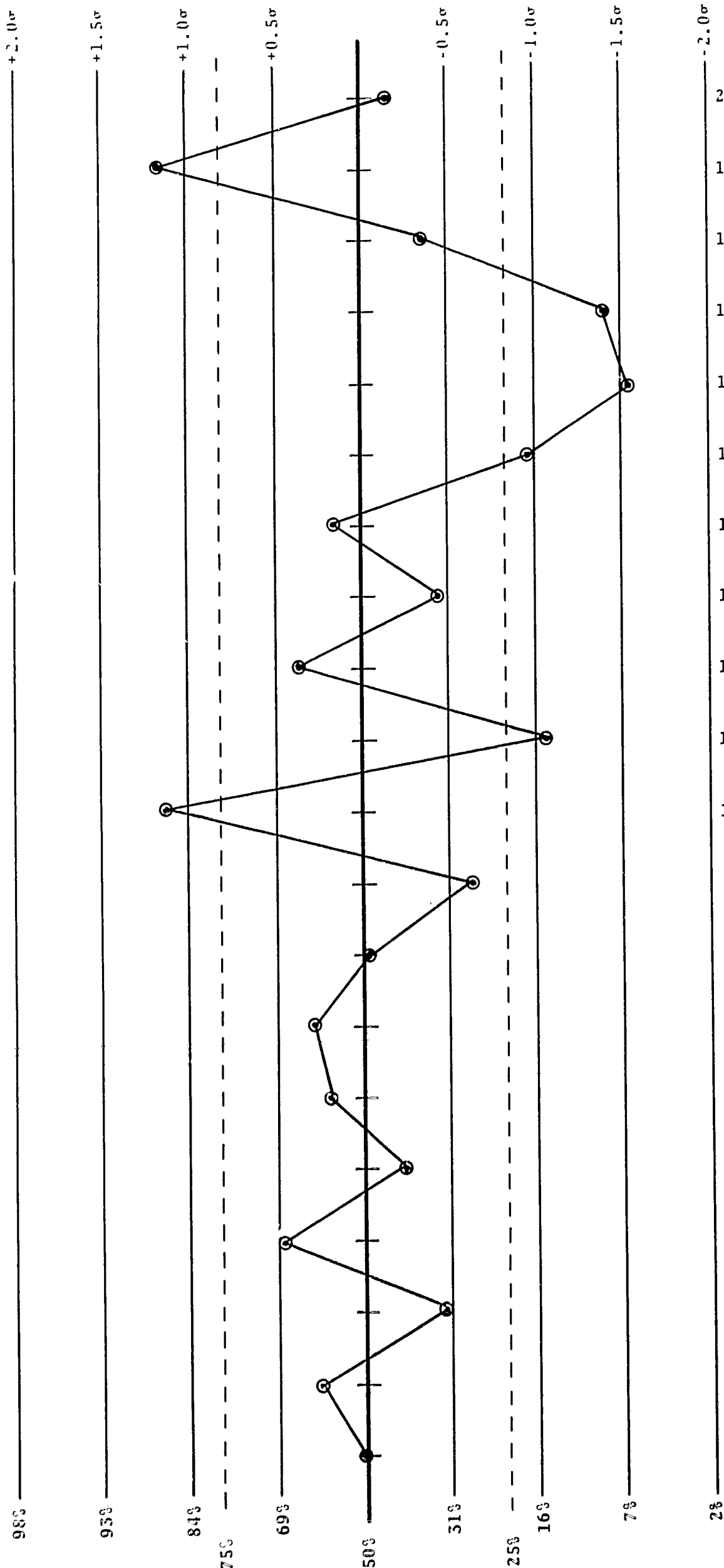




PENDLETON CO.



FALMOUTH IND.



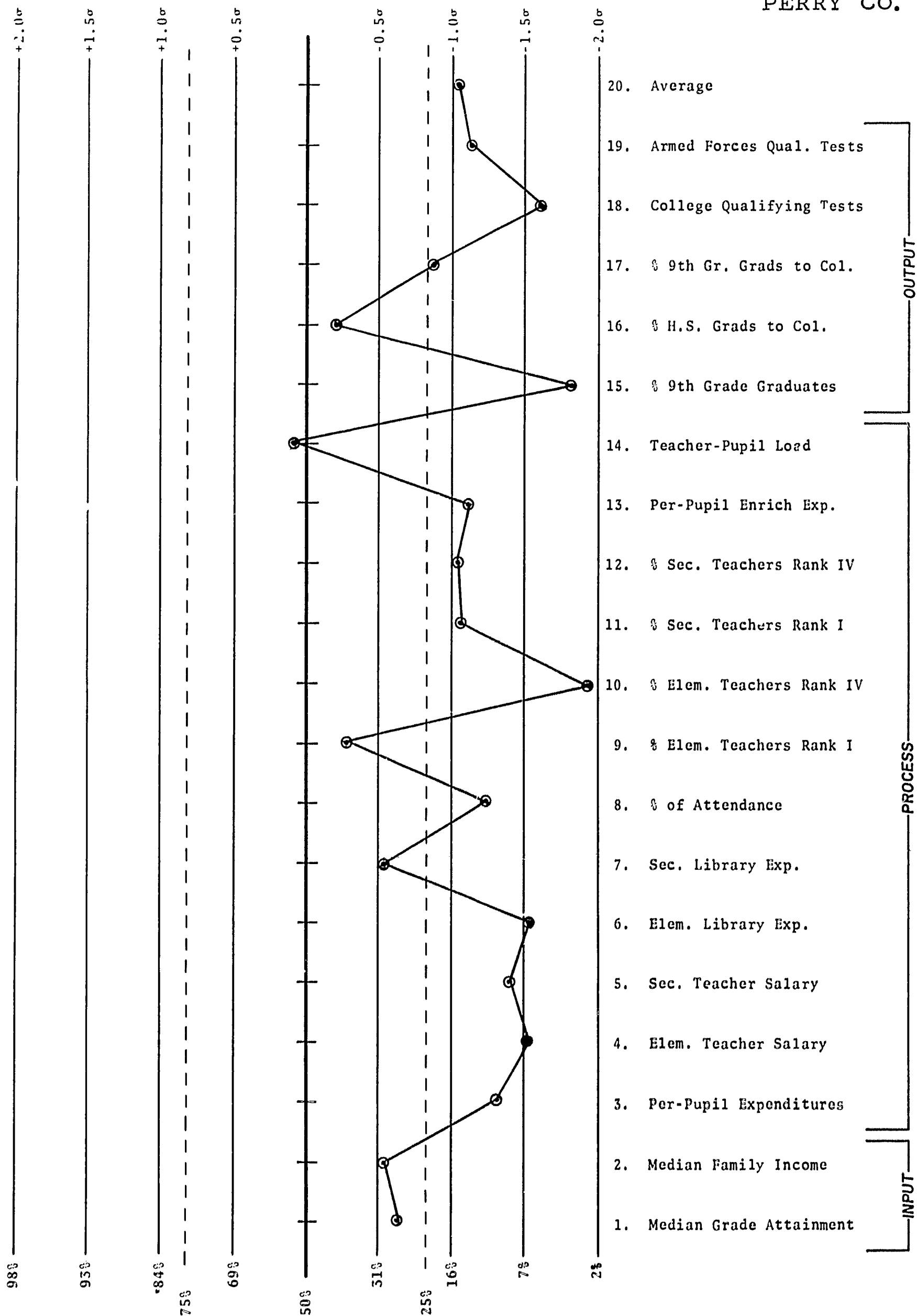
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

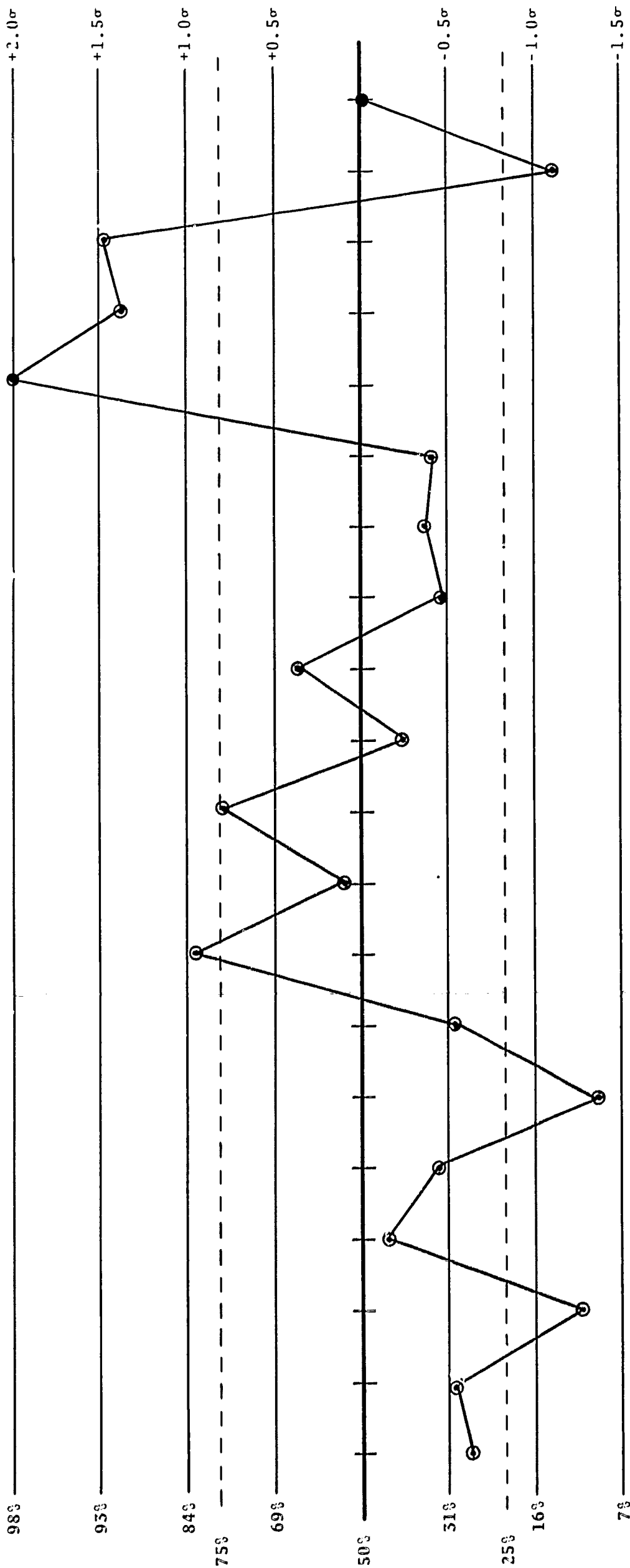
PROCESS

INPUT

PERRY CO.



HAZARD IND.

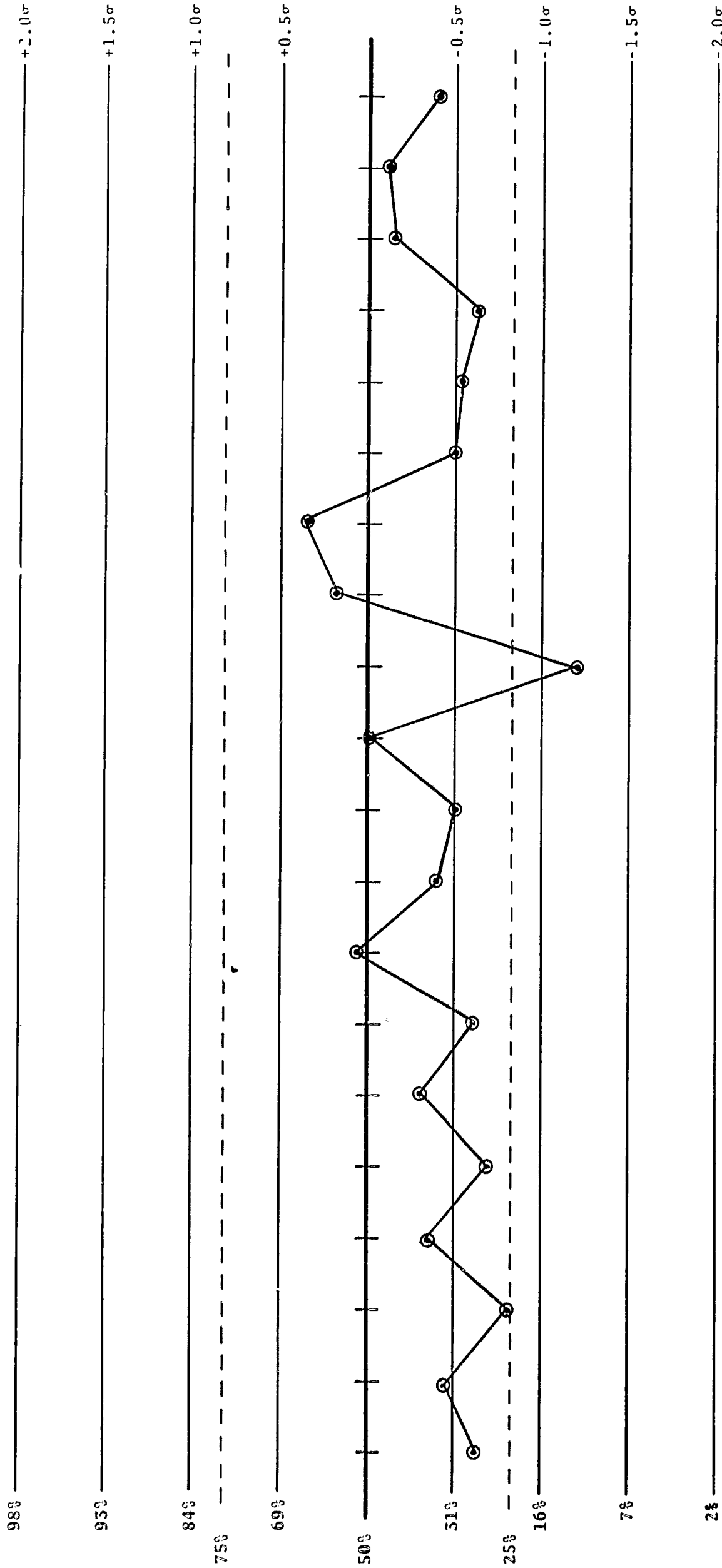


20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
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11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT



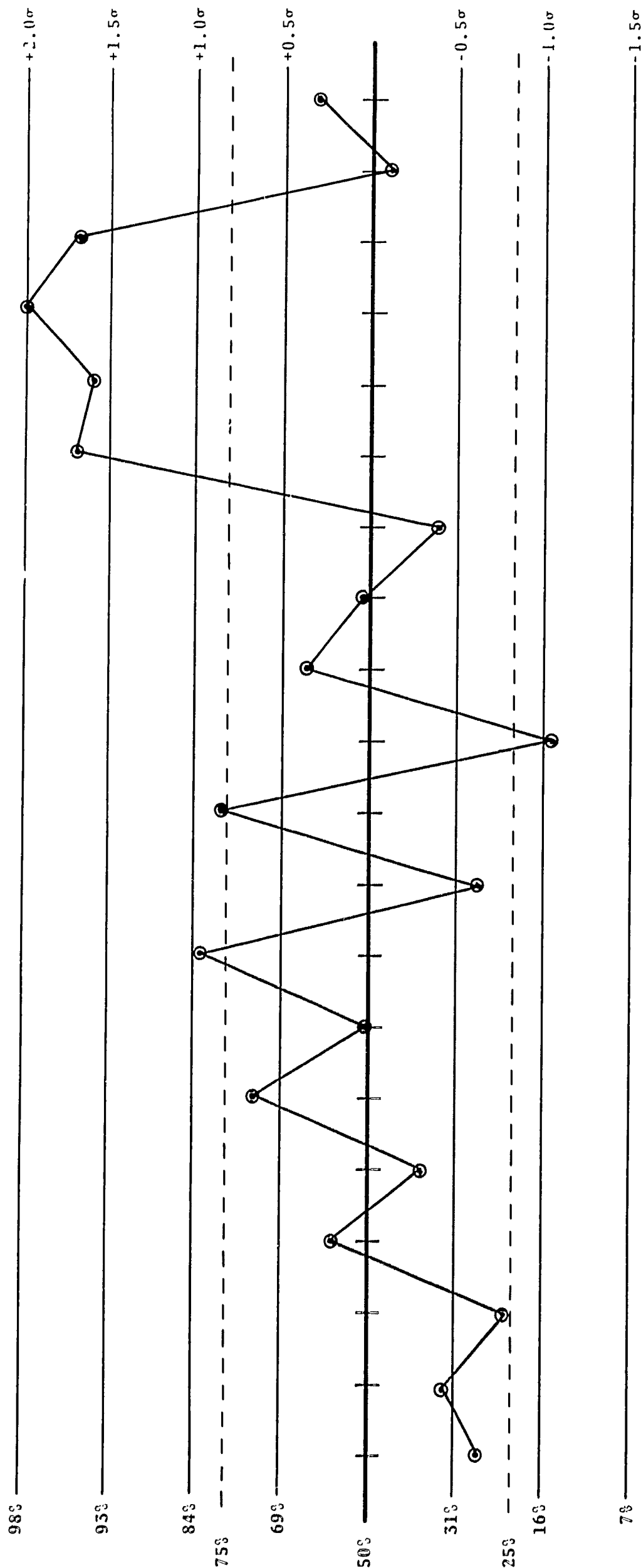
- 20. Average
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- 18. College Qualifying Tests
- 17. % 9th Gr. Grads to Col.
- 16. % H.S. Grads to Col.
- 15. % 9th Grade Graduates
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- 12. % Sec. Teachers Rank IV
- 11. % Sec. Teachers Rank I
- 10. % Elem. Teachers Rank IV
- 9. % Elem. Teachers Rank I
- 8. % of Attendance
- 7. Sec. Library Exp.
- 6. Elem. Library Exp.
- 5. Sec. Teacher Salary
- 4. Elem. Teacher Salary
- 3. Per-Pupil Expenditures
- 2. Median Family Income
- 1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

PIKEVILLE IND.



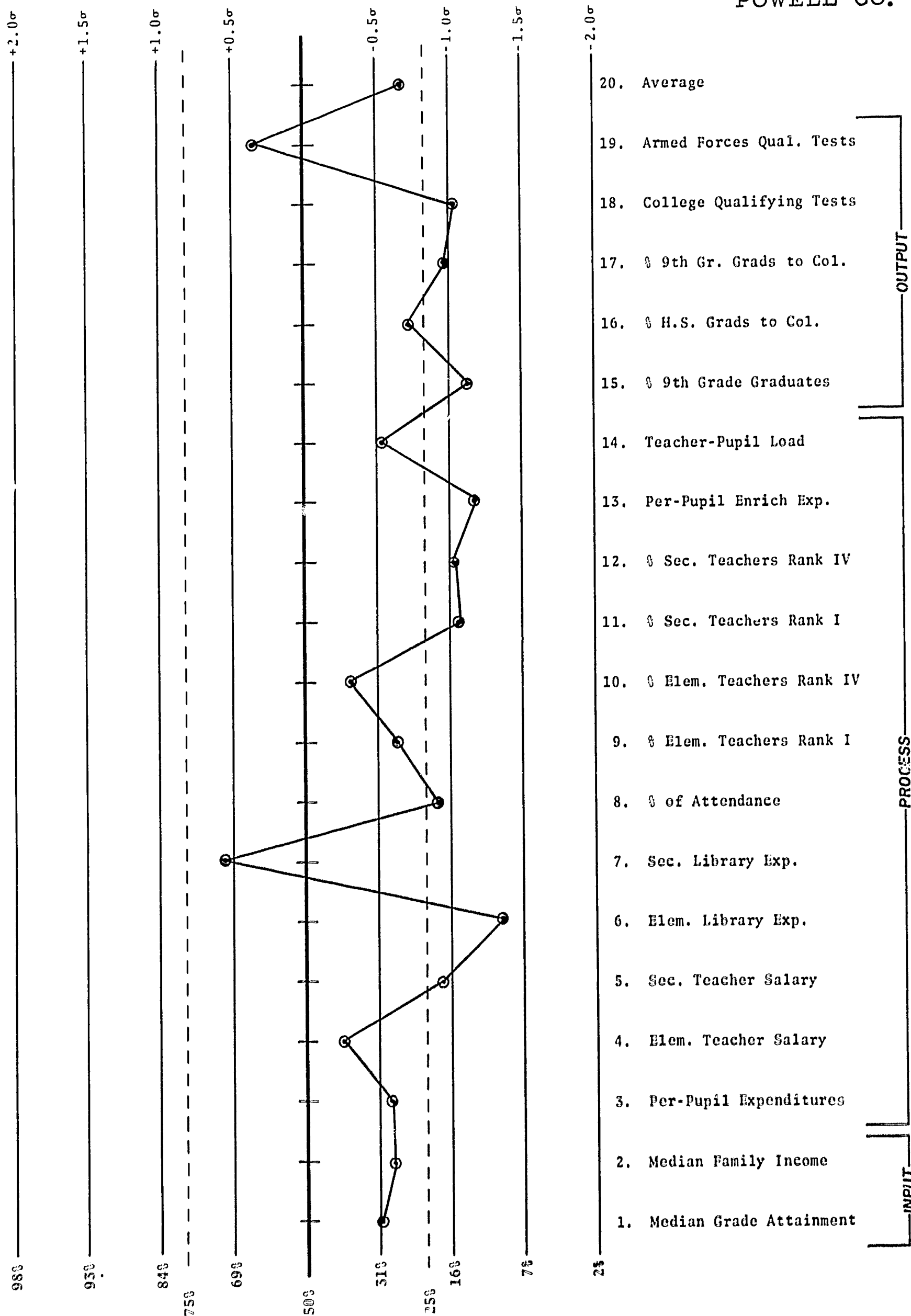
20. Average
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

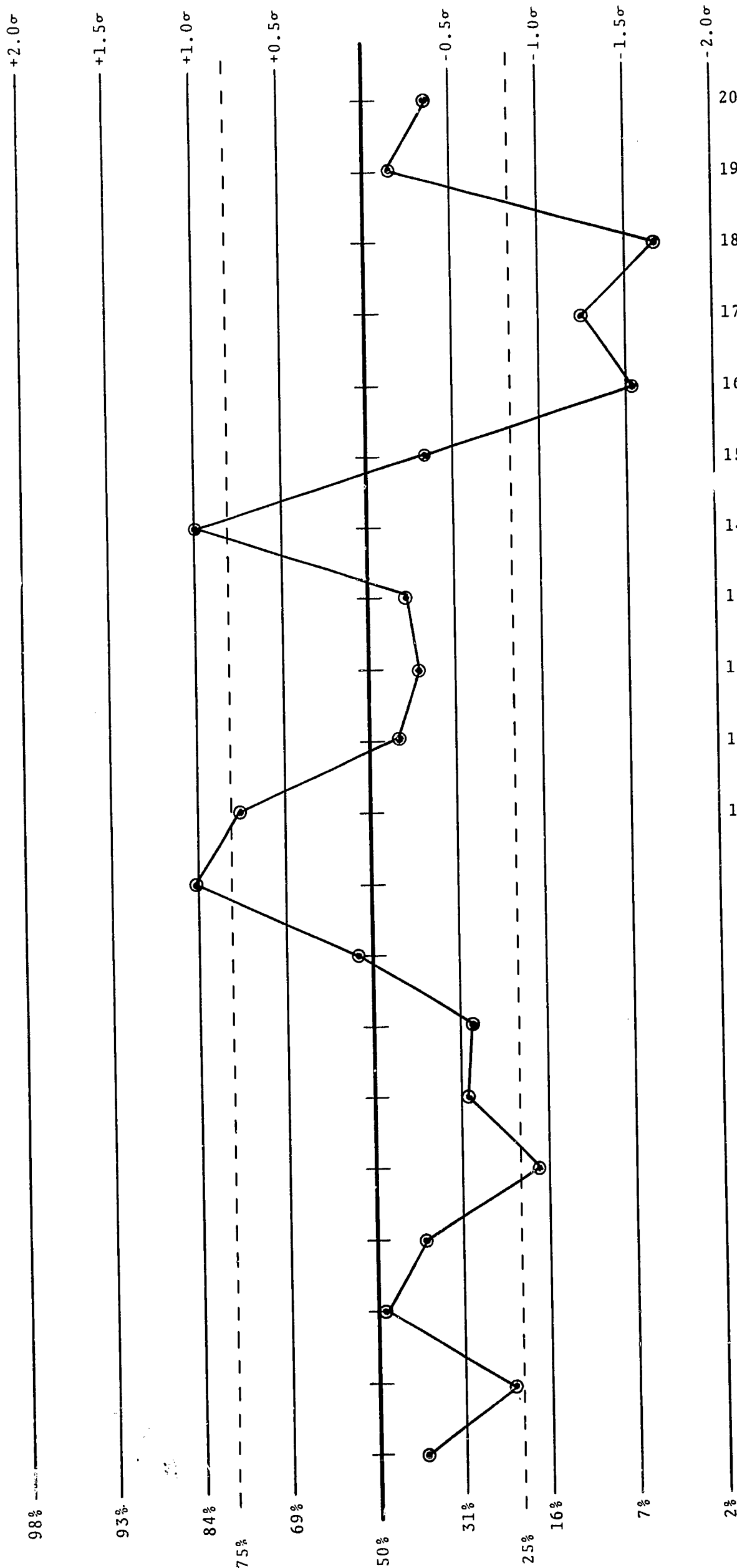
PROCESS

INPUT

POWELL CO.



PULASKI CO.



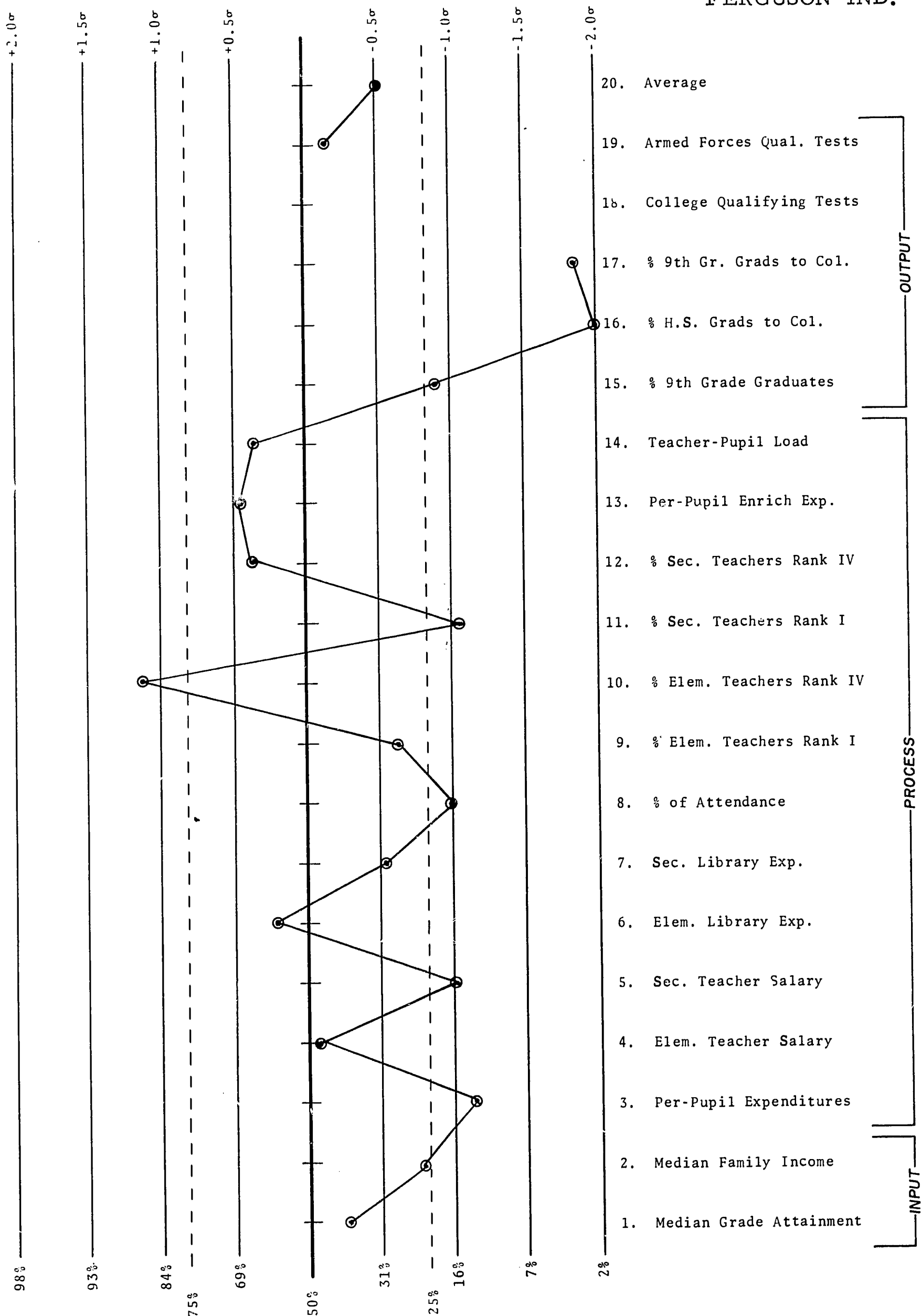
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16. % H.S. Grads to Col.
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4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

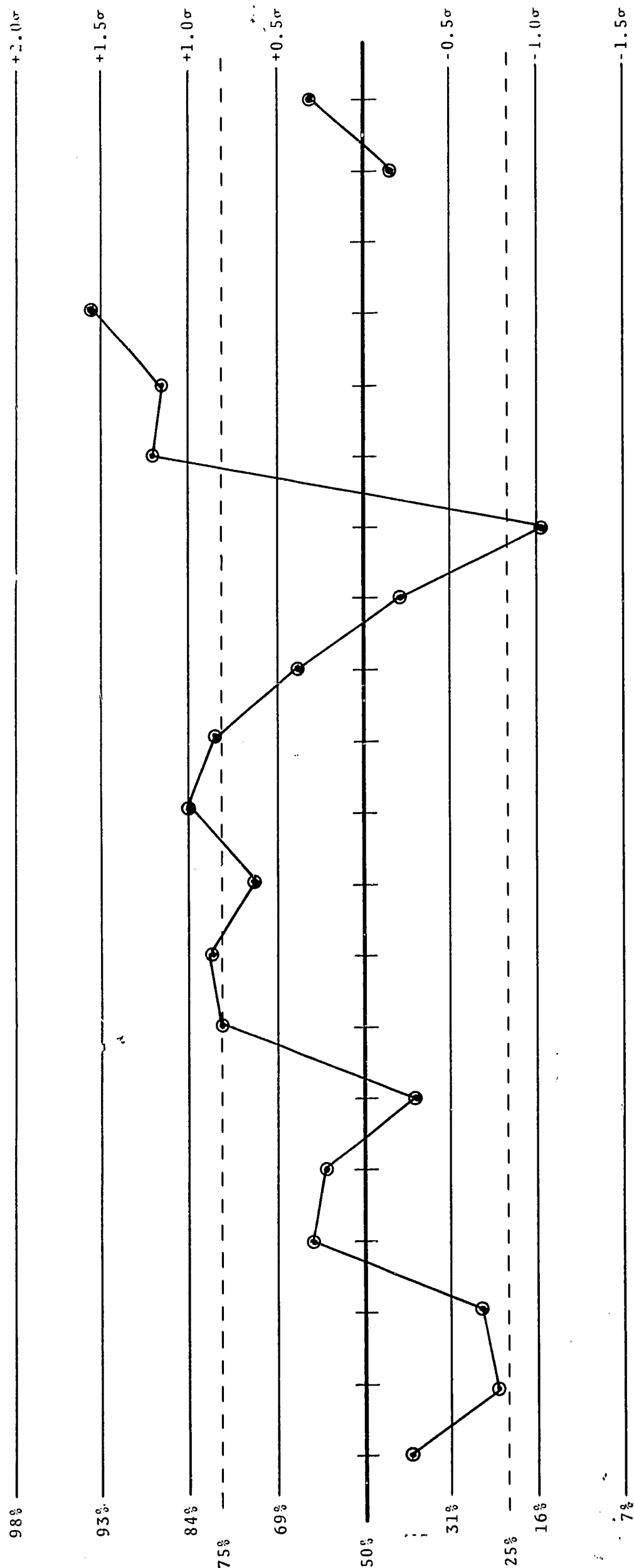
PROCESS

INPUT

FERGUSON IND.



SOMERSET IND.



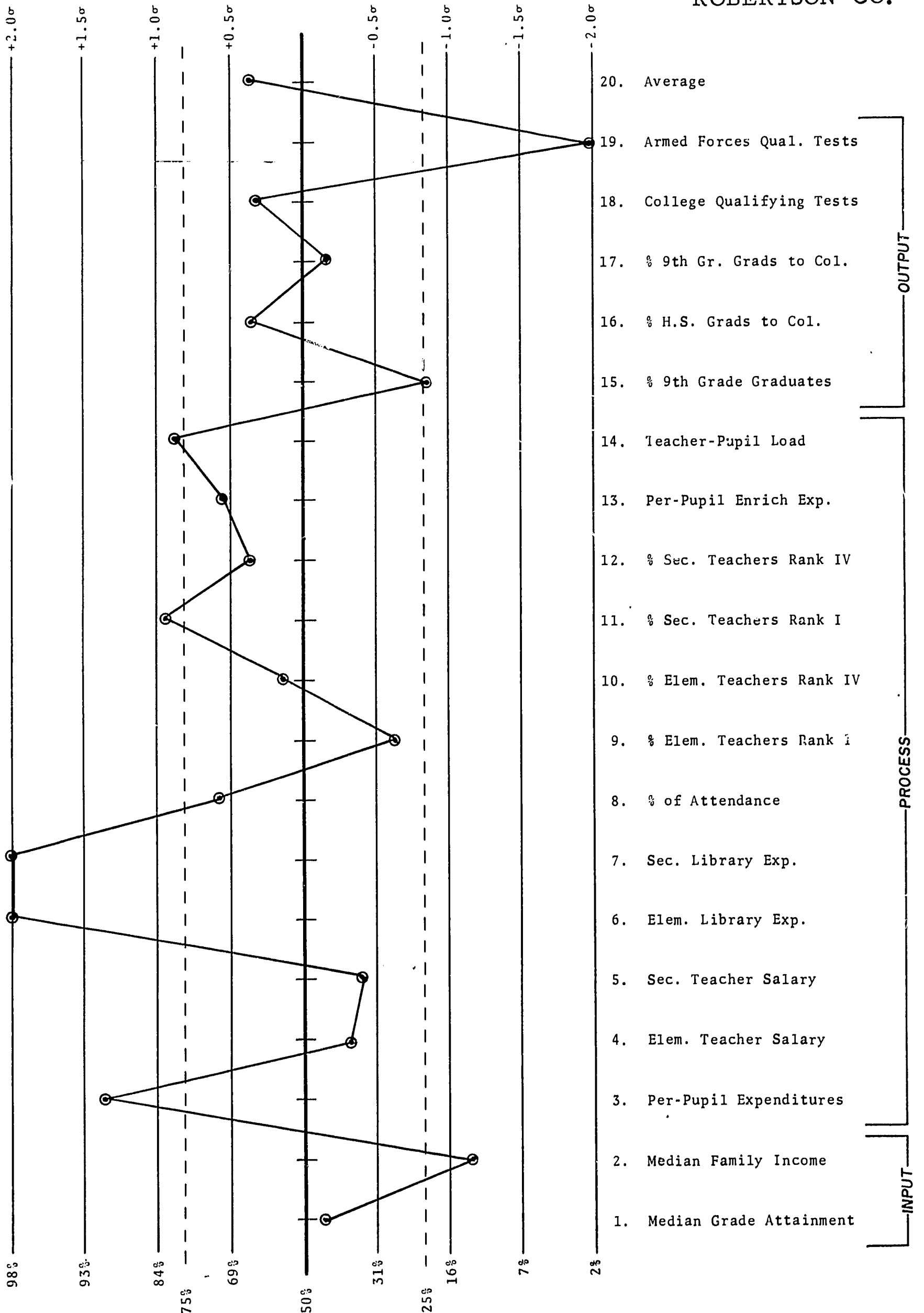
20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
14. Teacher-Pupil Load
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12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

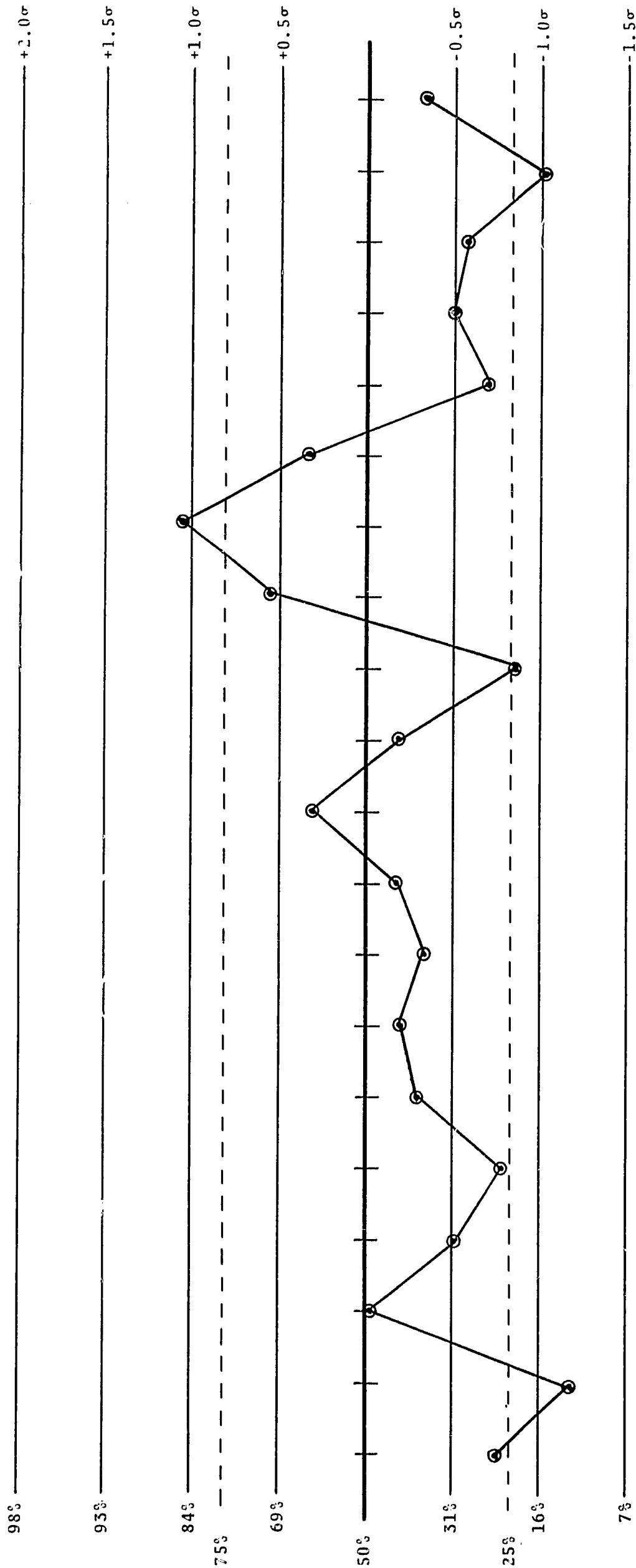
PROCESS

INPUT

ROBERTSON CO.



ROCKCASTLE CO.



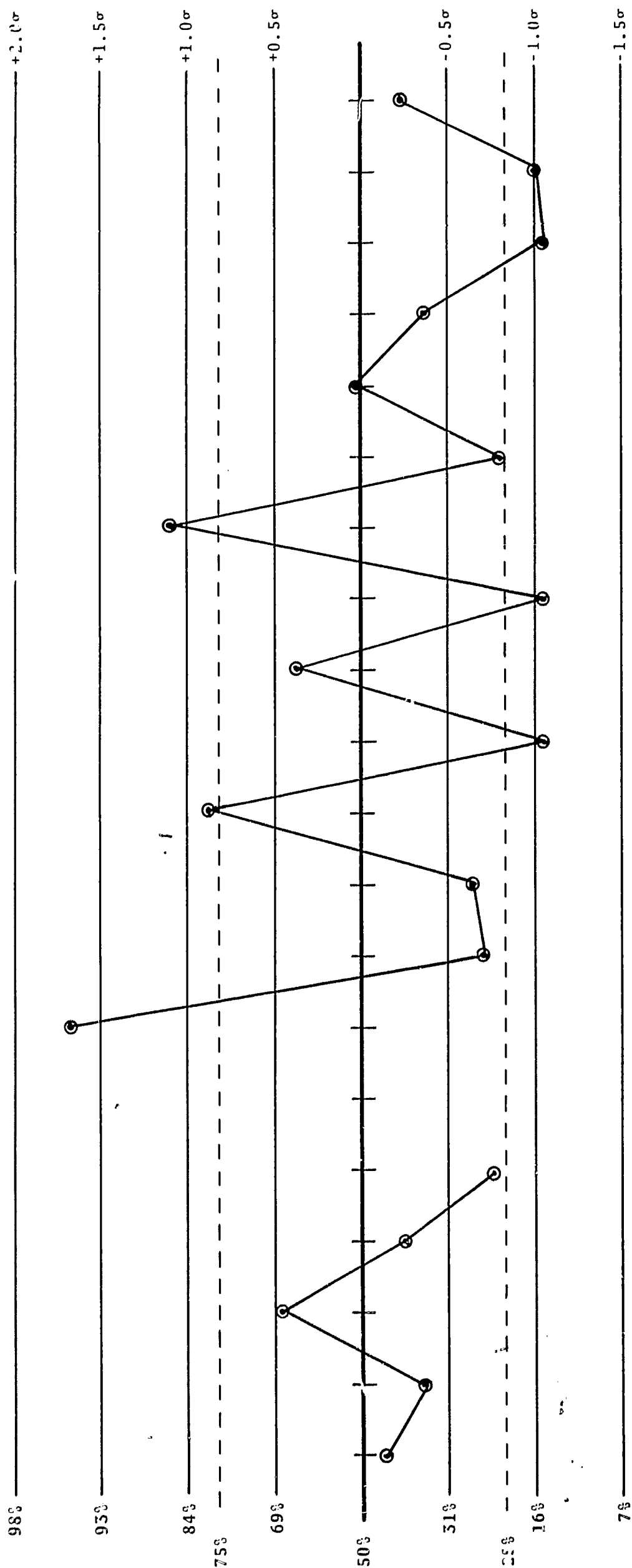
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
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8. % of Attendance
7. Sec. Library Exp.
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5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

ROWAN CO.



20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

17. % 9th Gr. Grads to Col.

16. % H.S. Grads to Col.

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

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8. % of Attendance

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5. Sec. Teacher Salary

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3. Per-Pupil Expenditures

2. Median Family Income

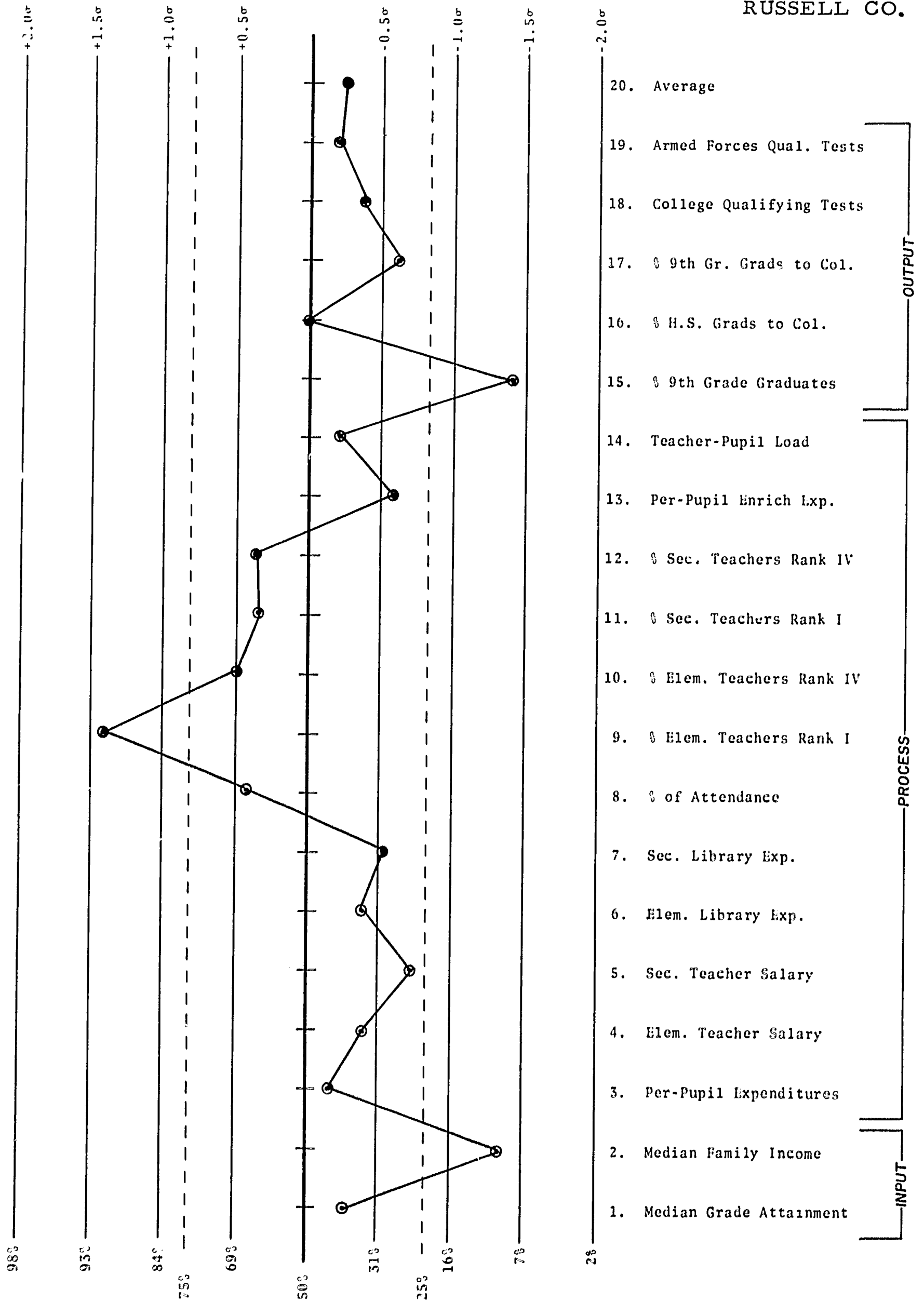
1. Median Grade Attainment

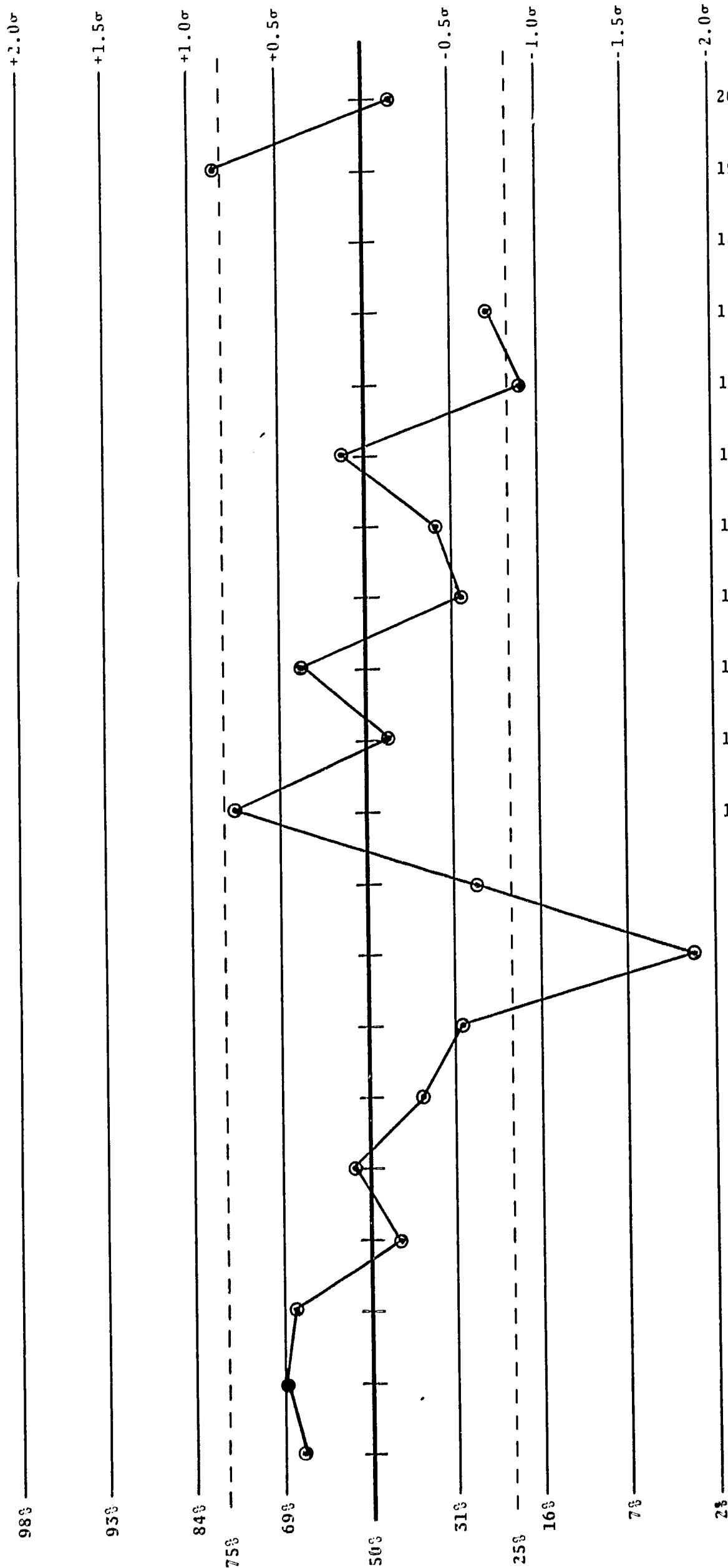
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RUSSELL CO.





20. Average

19. Armed Forces Qual. Tests

18. College Qualifying Tests

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16. % H.S. Grads to Col..

15. % 9th Grade Graduates

14. Teacher-Pupil Load

13. Per-Pupil Enrich Exp.

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8. % of Attendance

7. Sec. Library Exp.

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5. Sec. Teacher Salary

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3. Per-Pupil Expenditures

2. Median Family Income

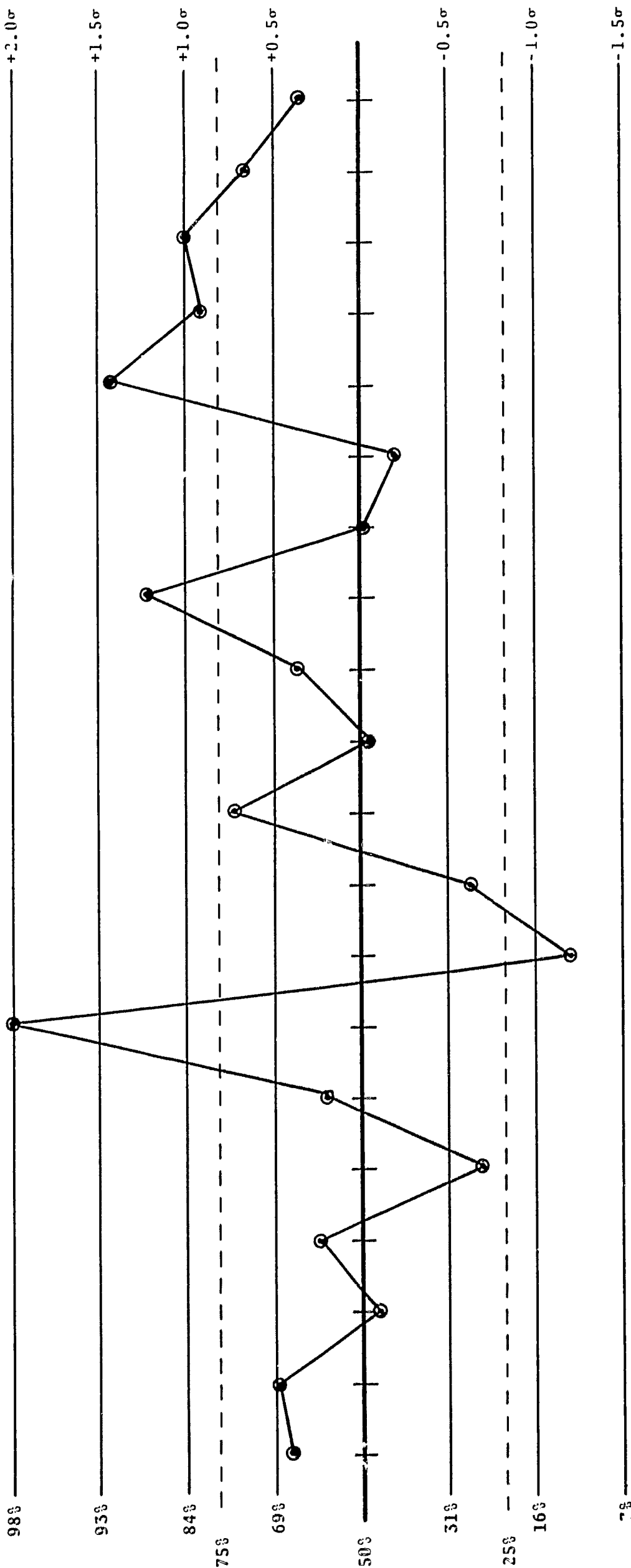
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

GEORGETOWN IND.



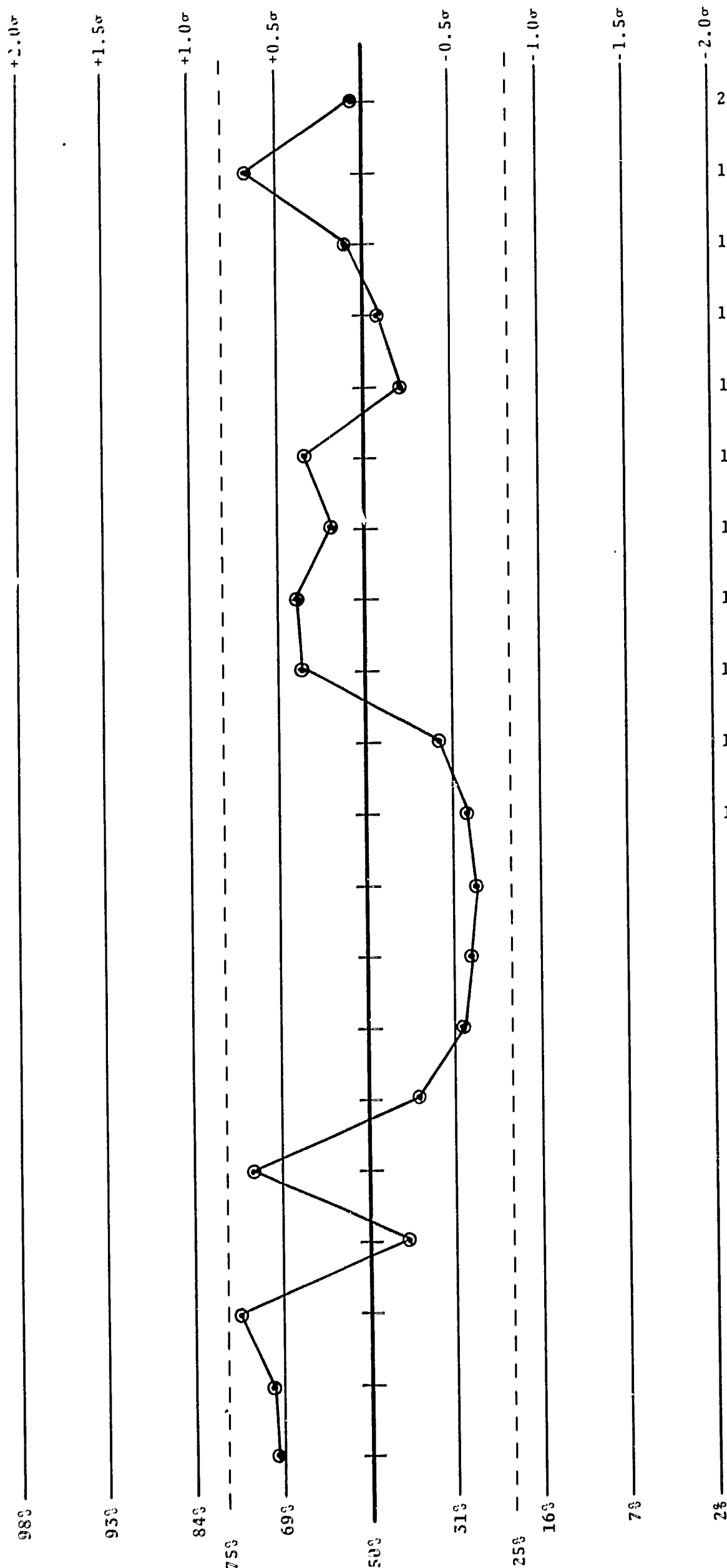
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16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
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8. % of Attendance
7. Sec. Library Exp.
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5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

SHELBY CO.



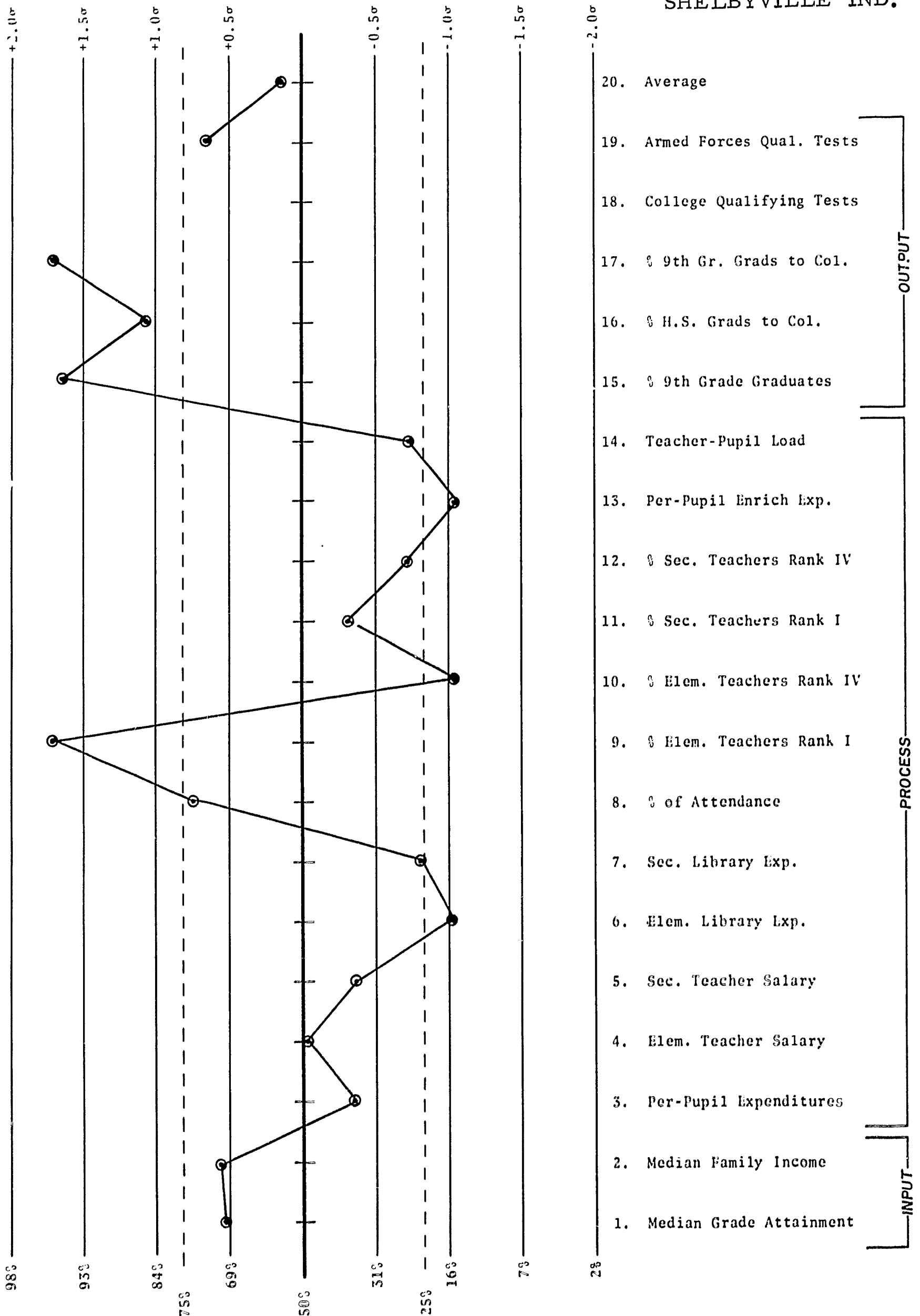
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15. % 9th Grade Graduates
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10. % Elem. Teachers Rank IV
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8. % of Attendance
7. Sec. Library Exp.
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3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

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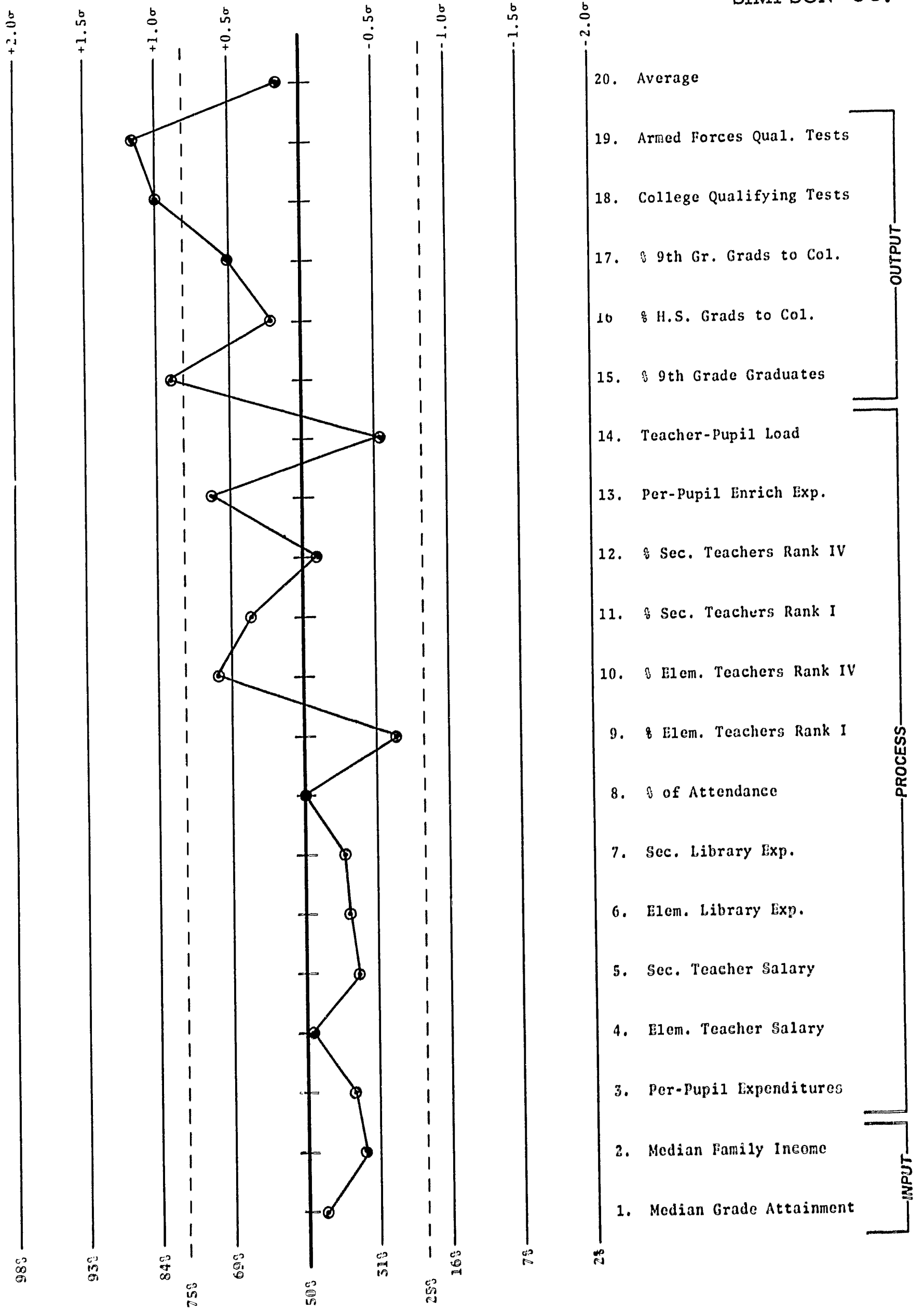
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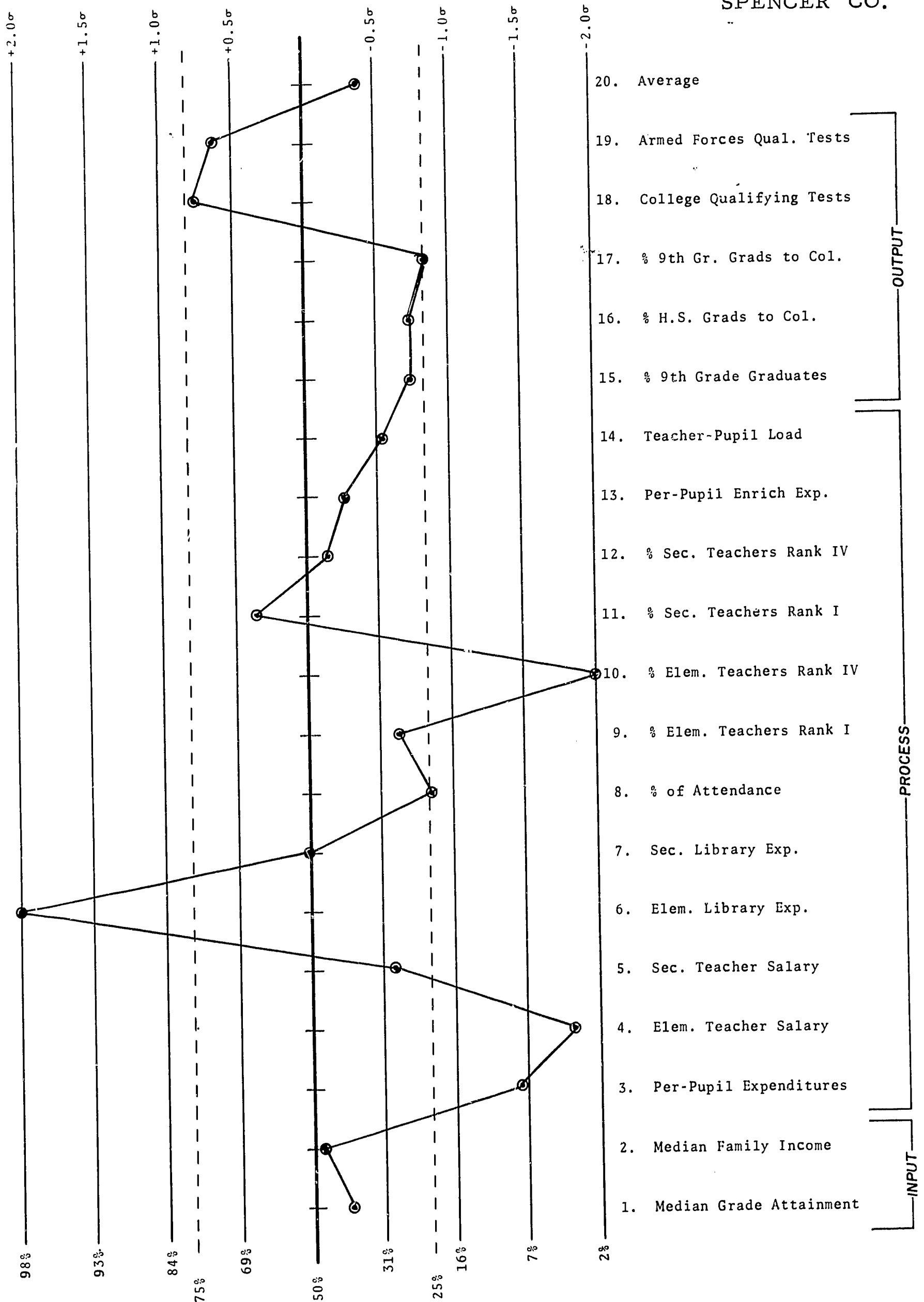
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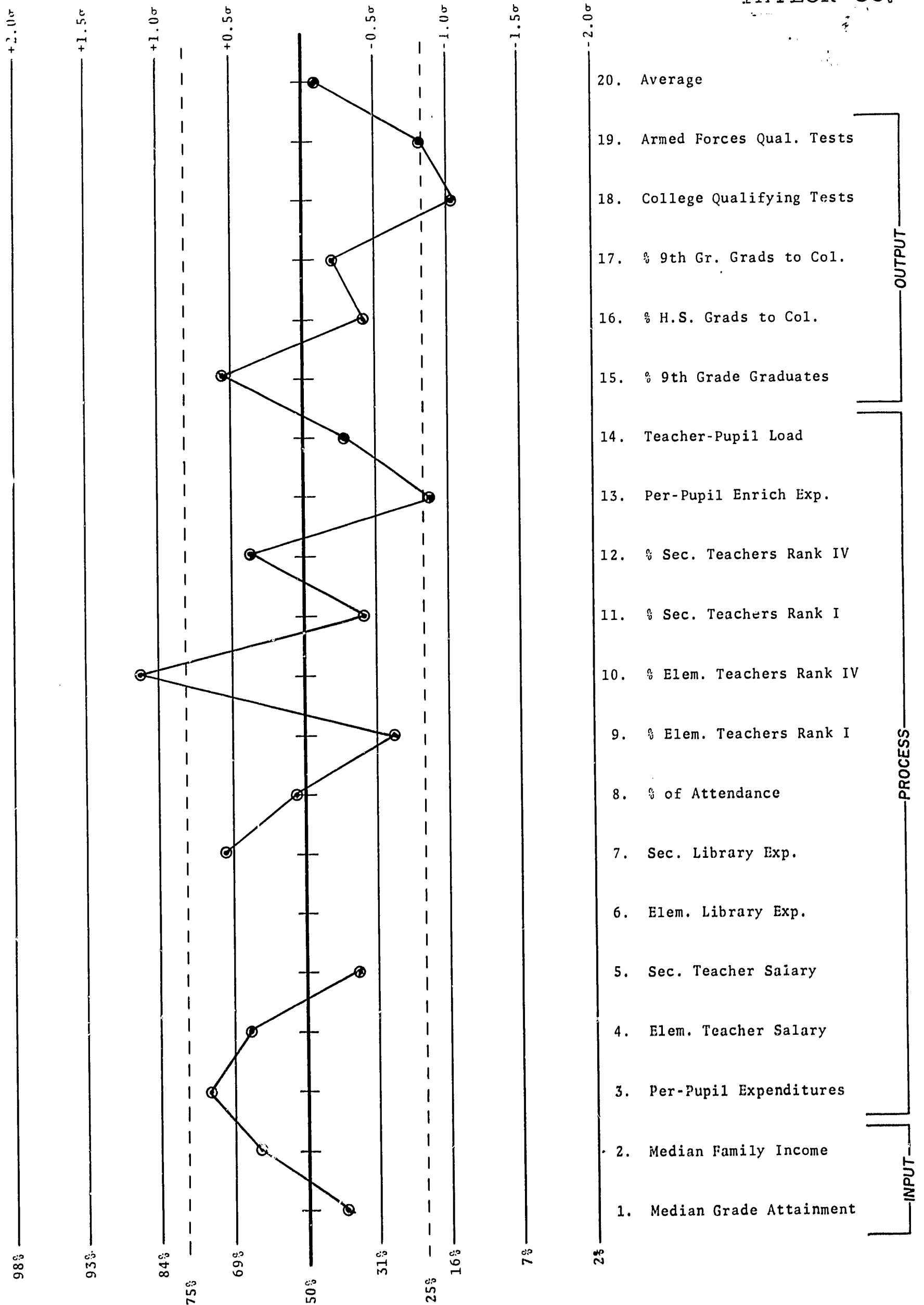
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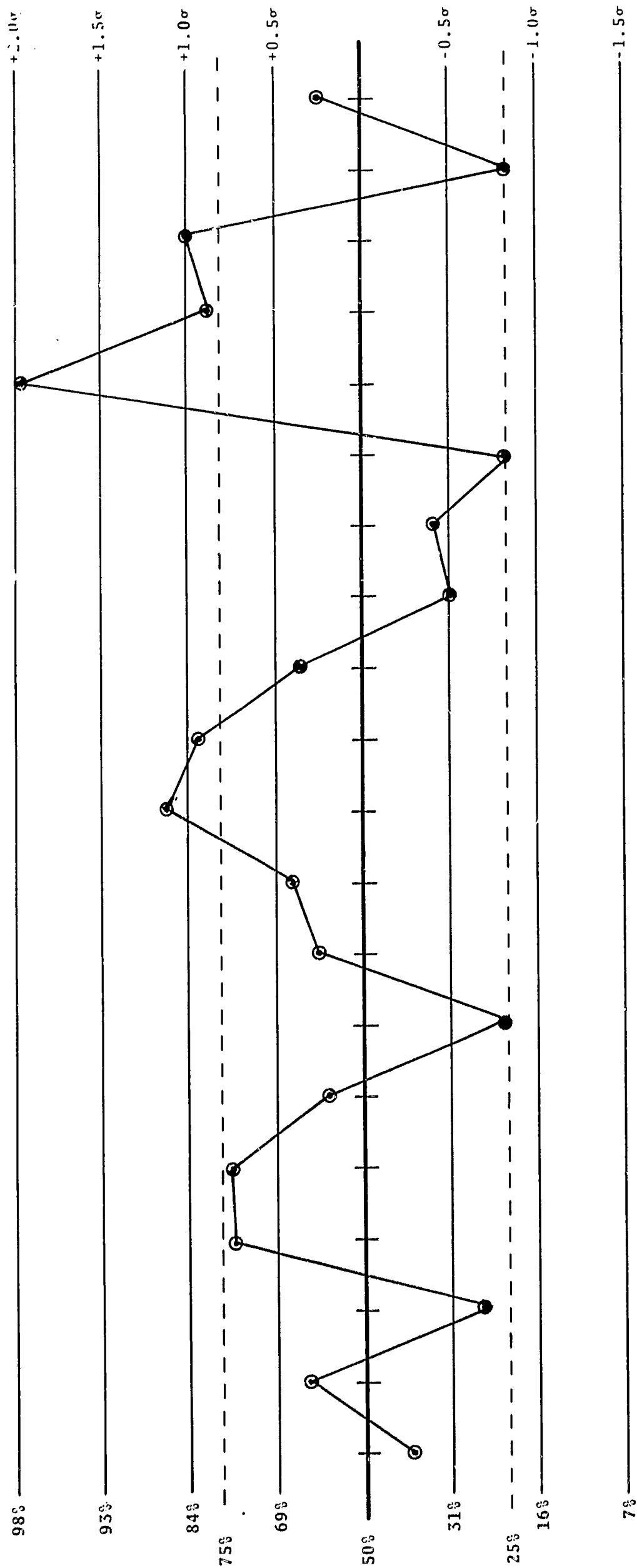
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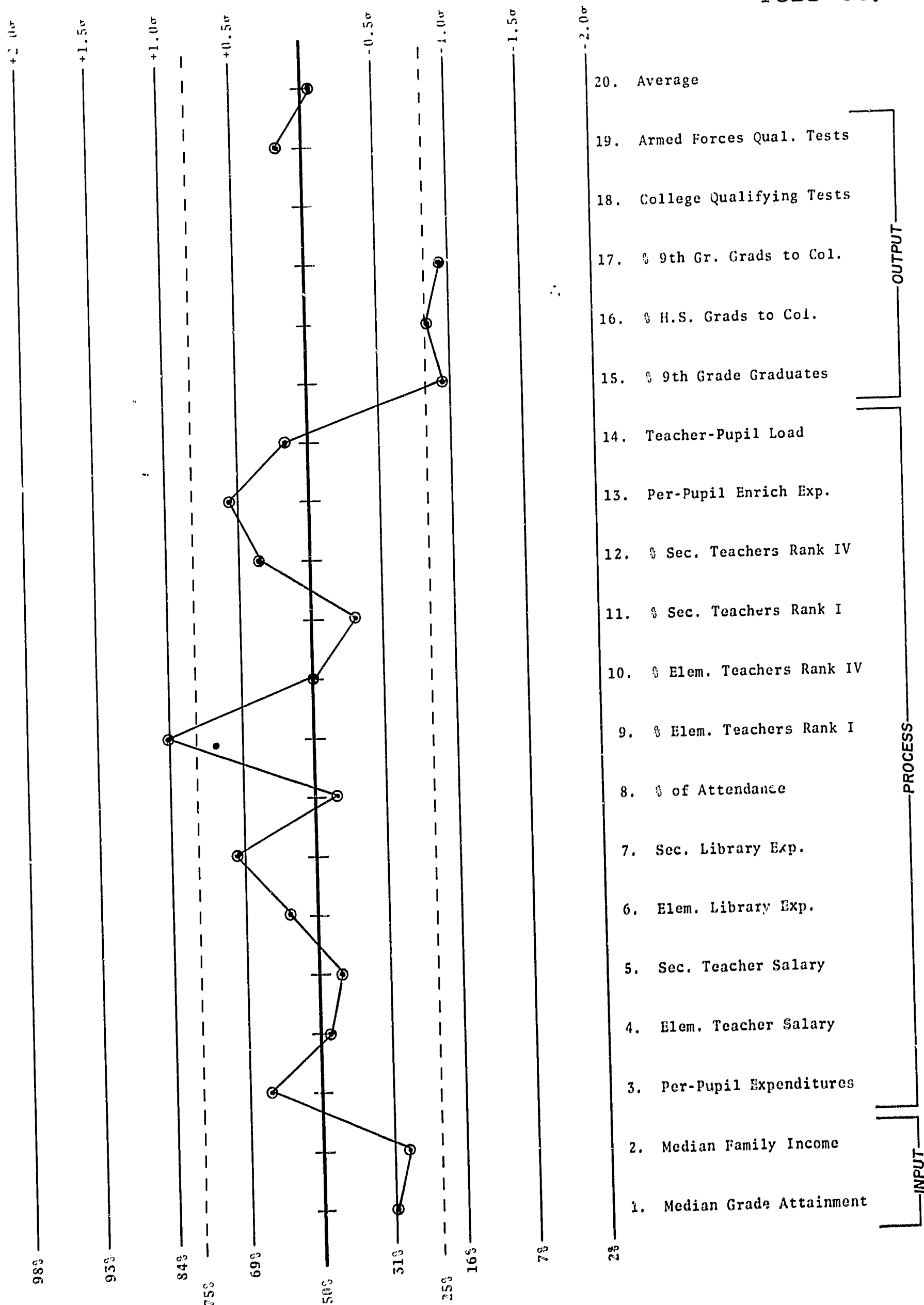
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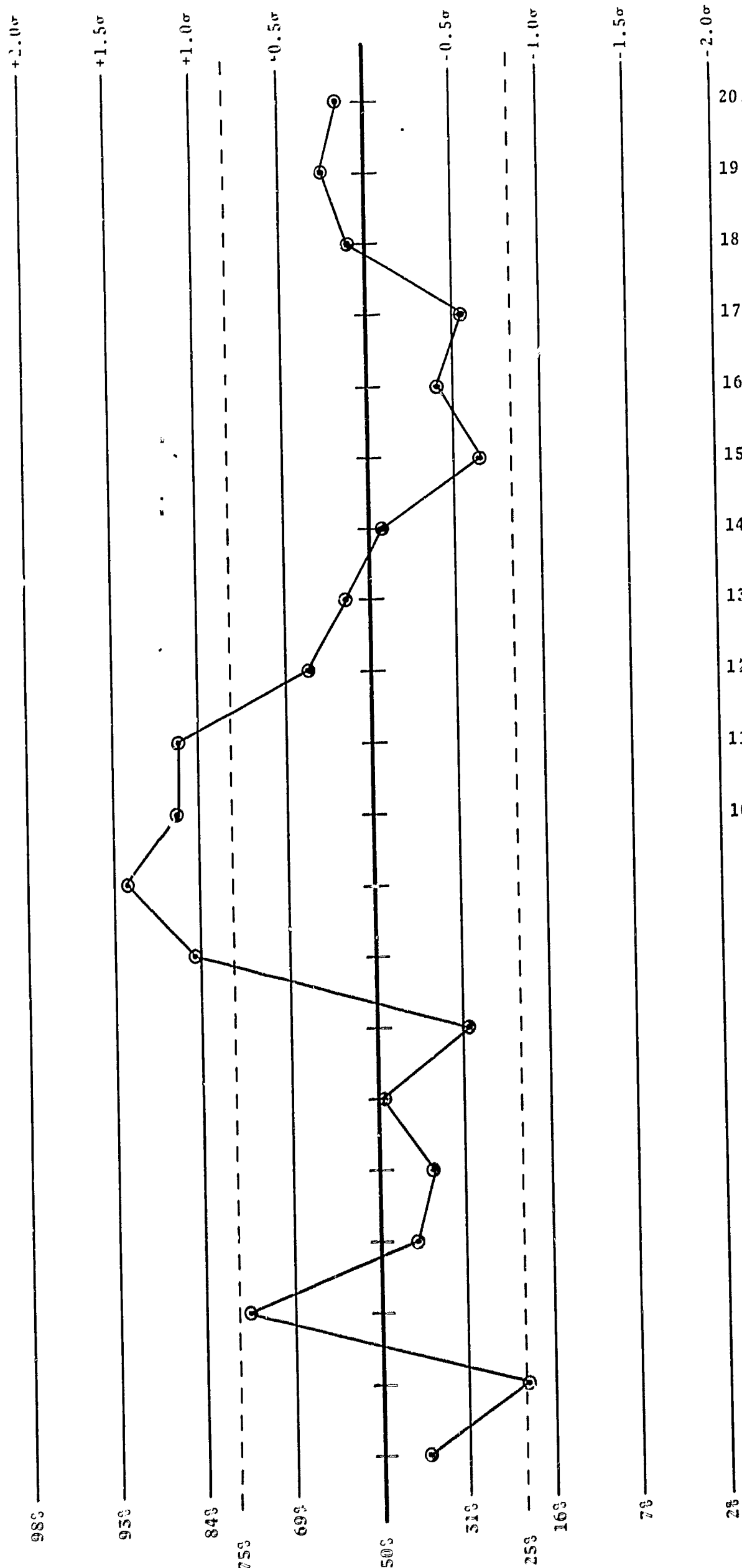
CAMPBELLSVILLE IND.



20. Average
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18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
9. % Elem. Teachers Rank I
8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment



TRIGG CO.

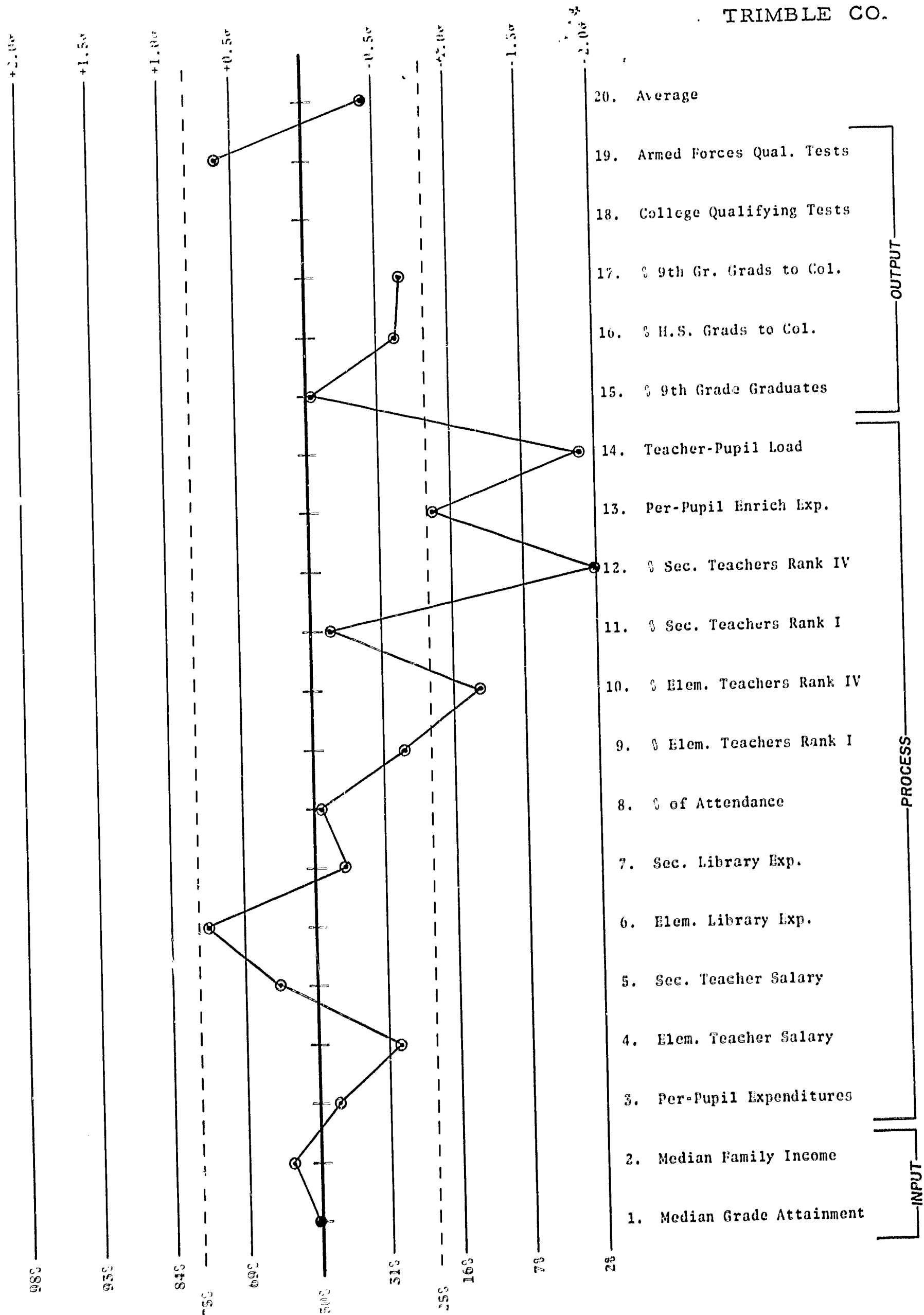


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15. % 9th Grade Graduates
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10. % Elem. Teachers Rank IV
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8. % of Attendance
7. Sec. Library Exp.
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4. Elem. Teacher Salary
3. Per-Pupil Lxpenditures
2. Median Family Income
1. Median Grade Attainment

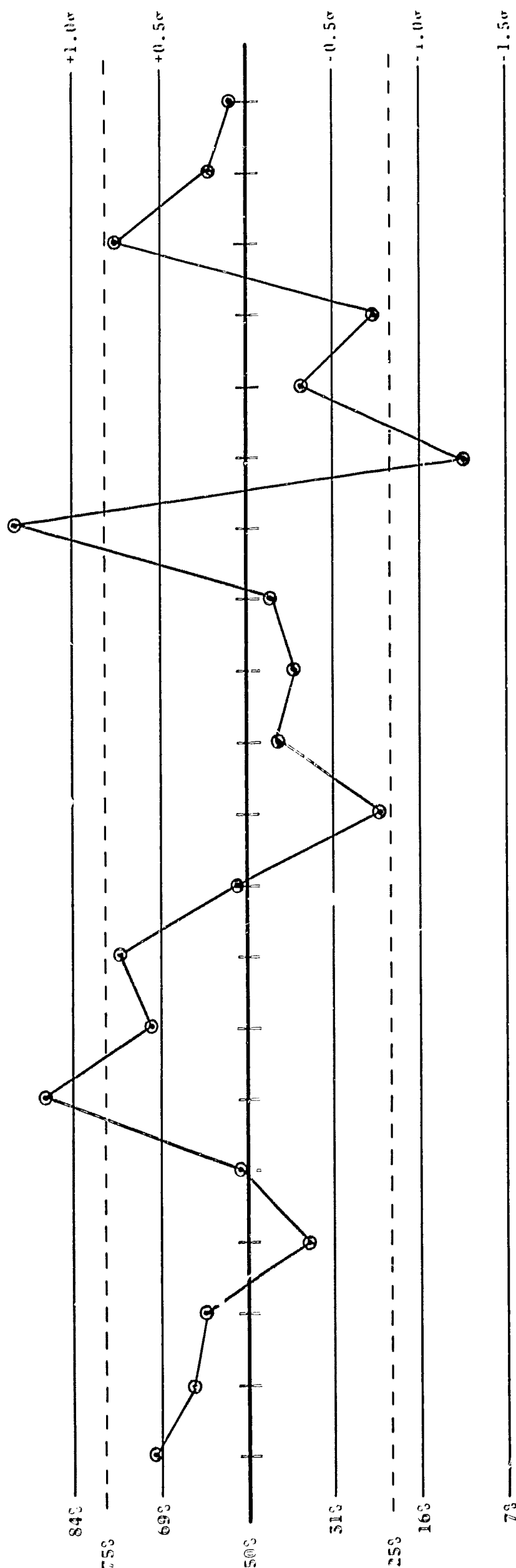
OUTPUT

PROCESS

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UNION CO.



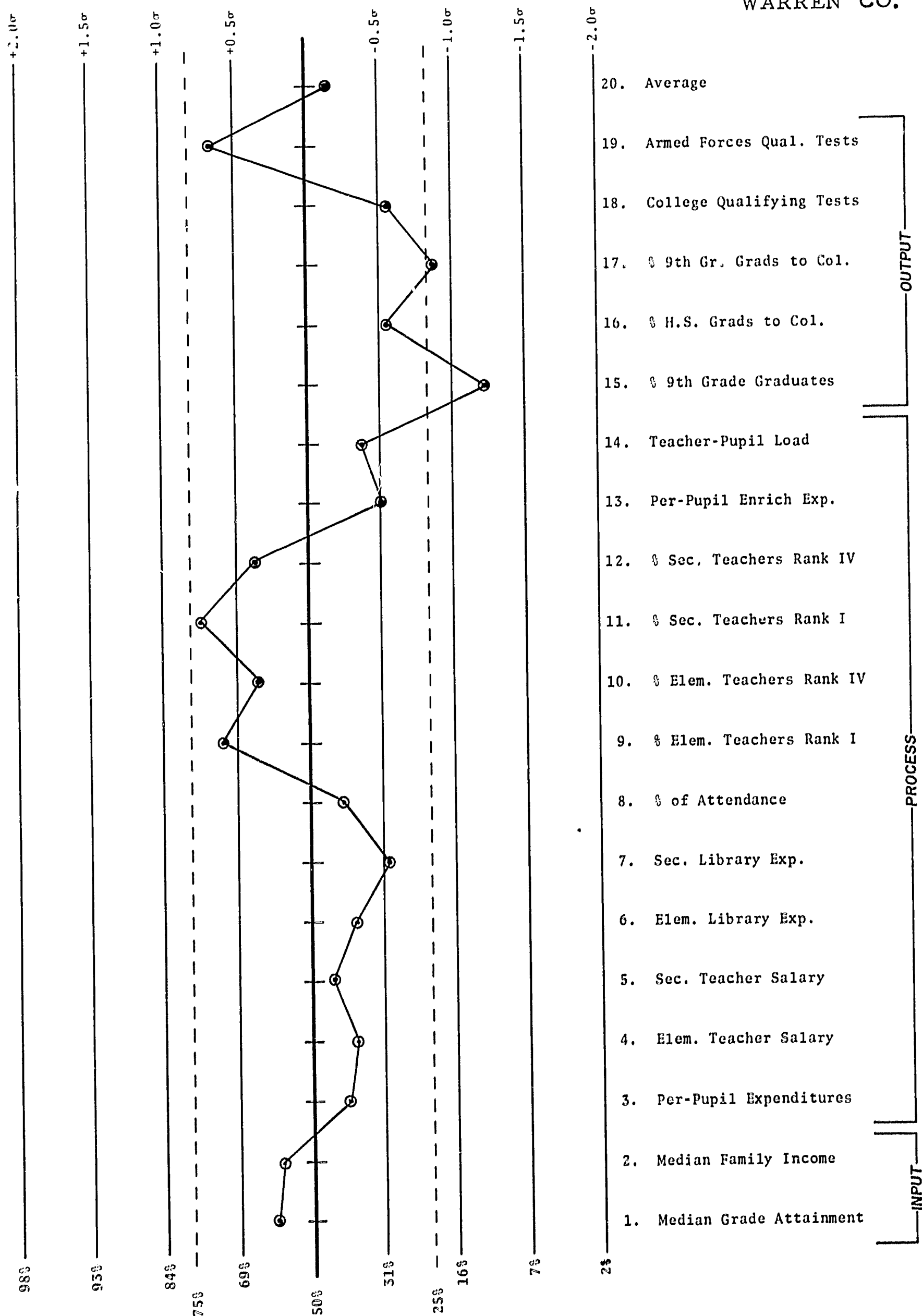
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18. College Qualifying Tests
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16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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10. % Elem. Teachers Rank IV
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8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

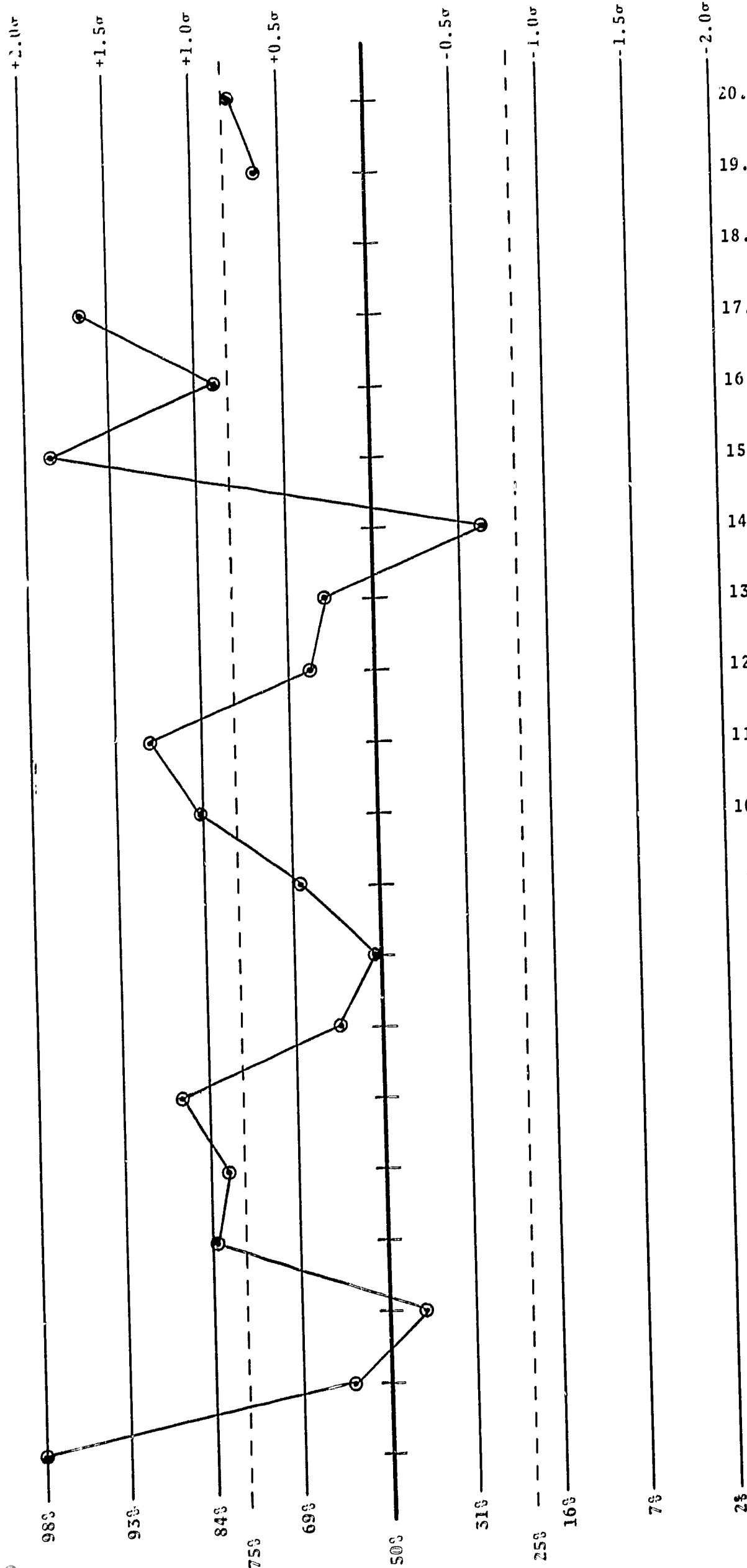
PROCESS

INPUT

WARREN CO.



BOWLING GREEN IND.



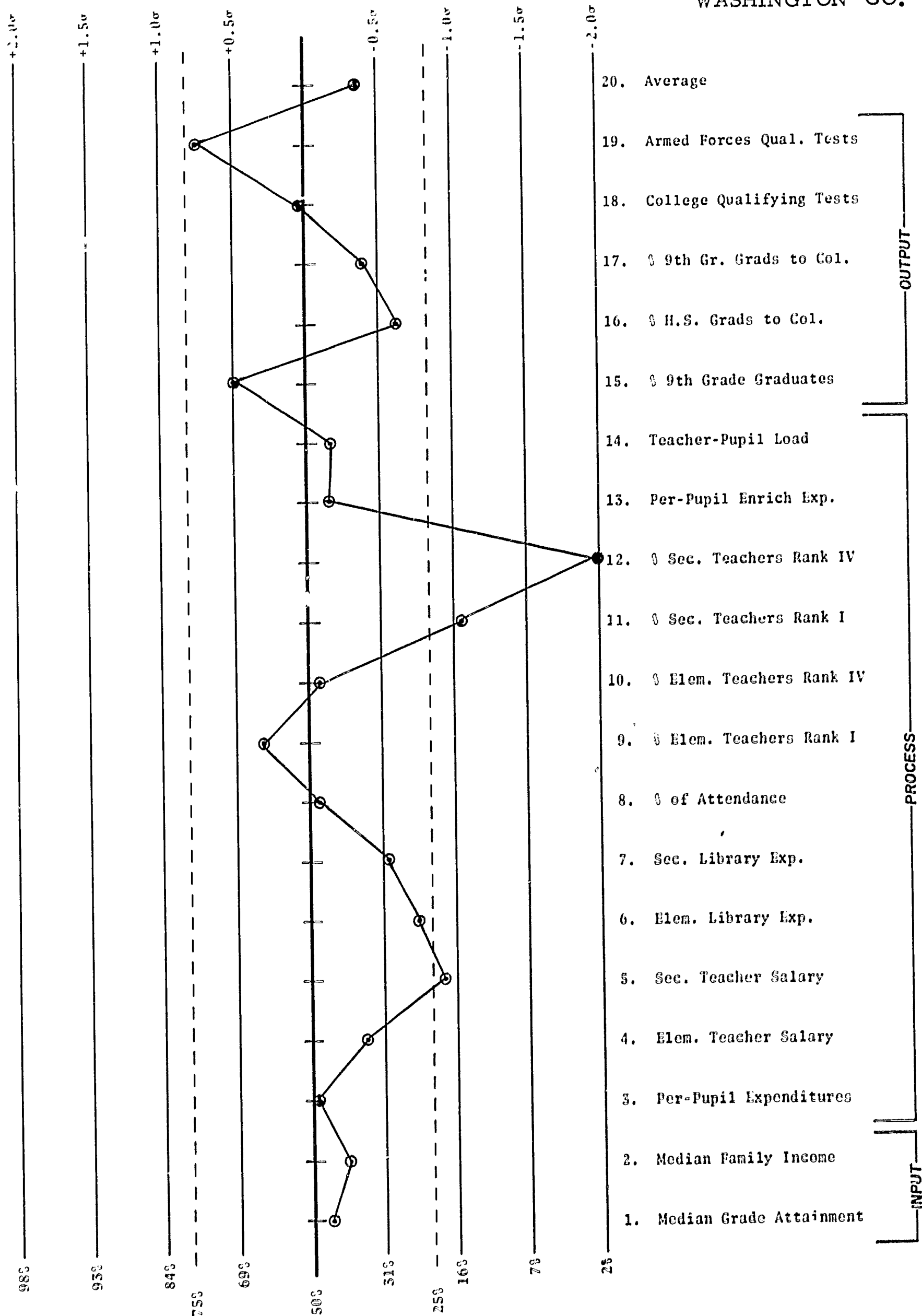
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16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

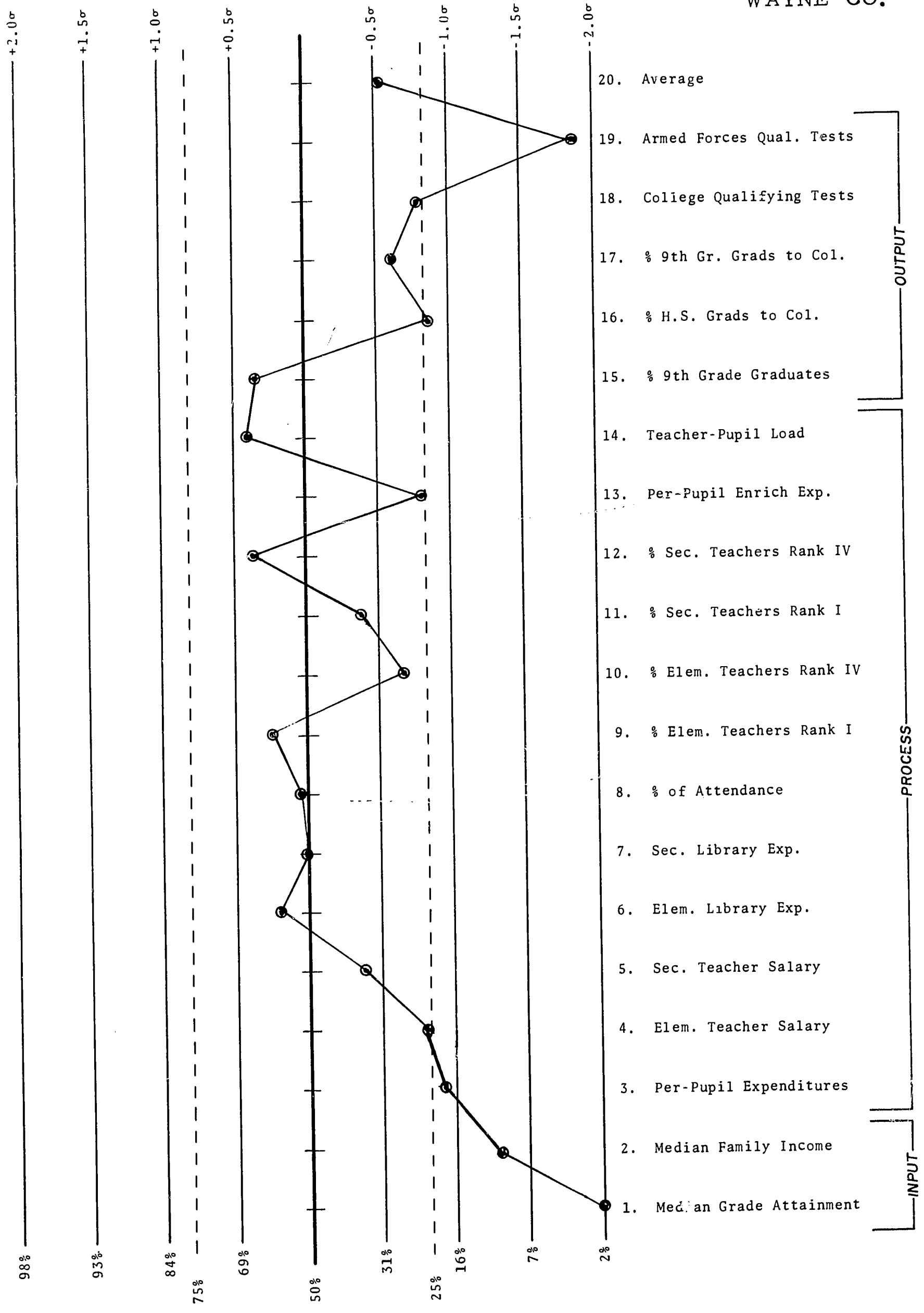
PROCESS

INPUT

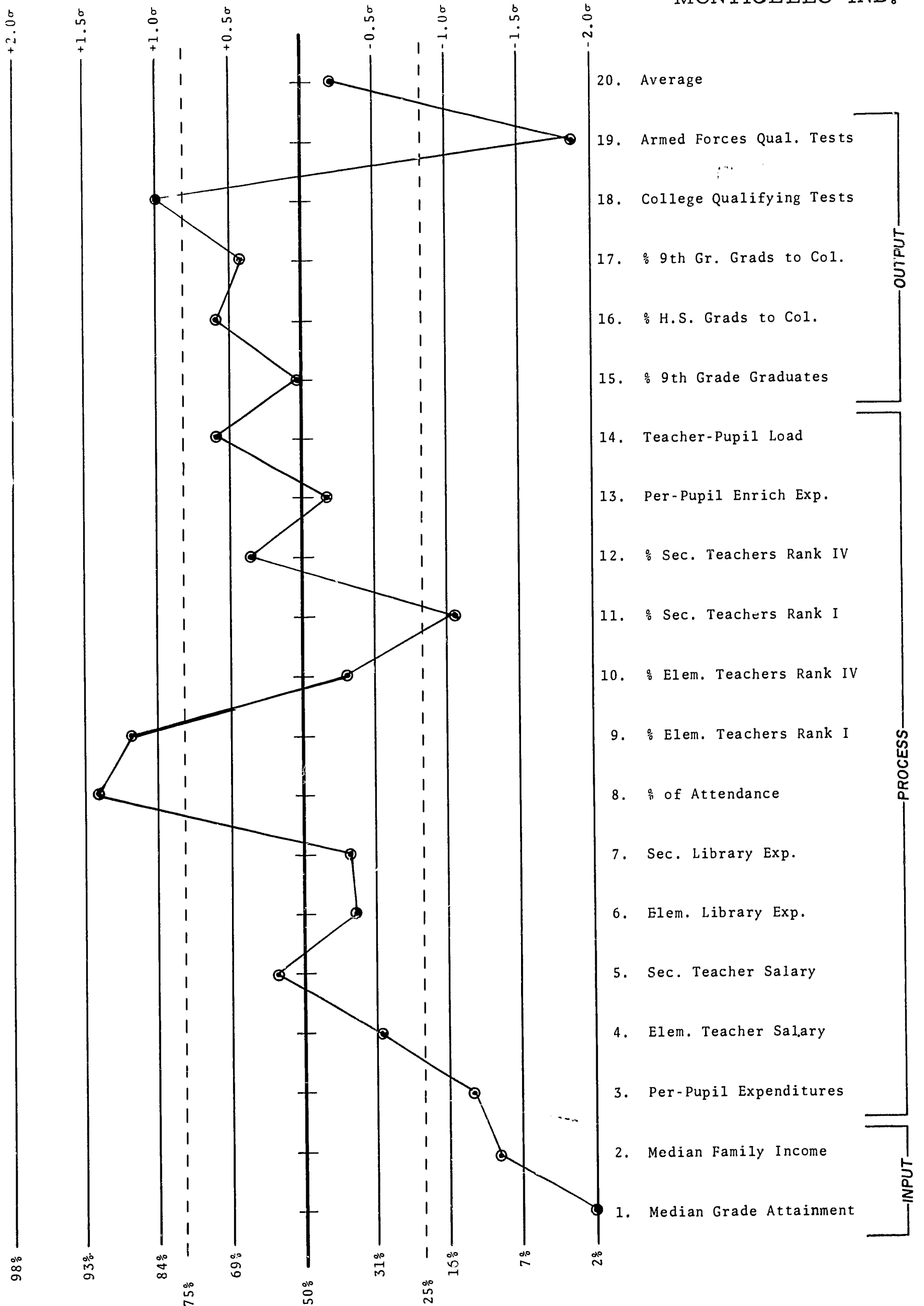
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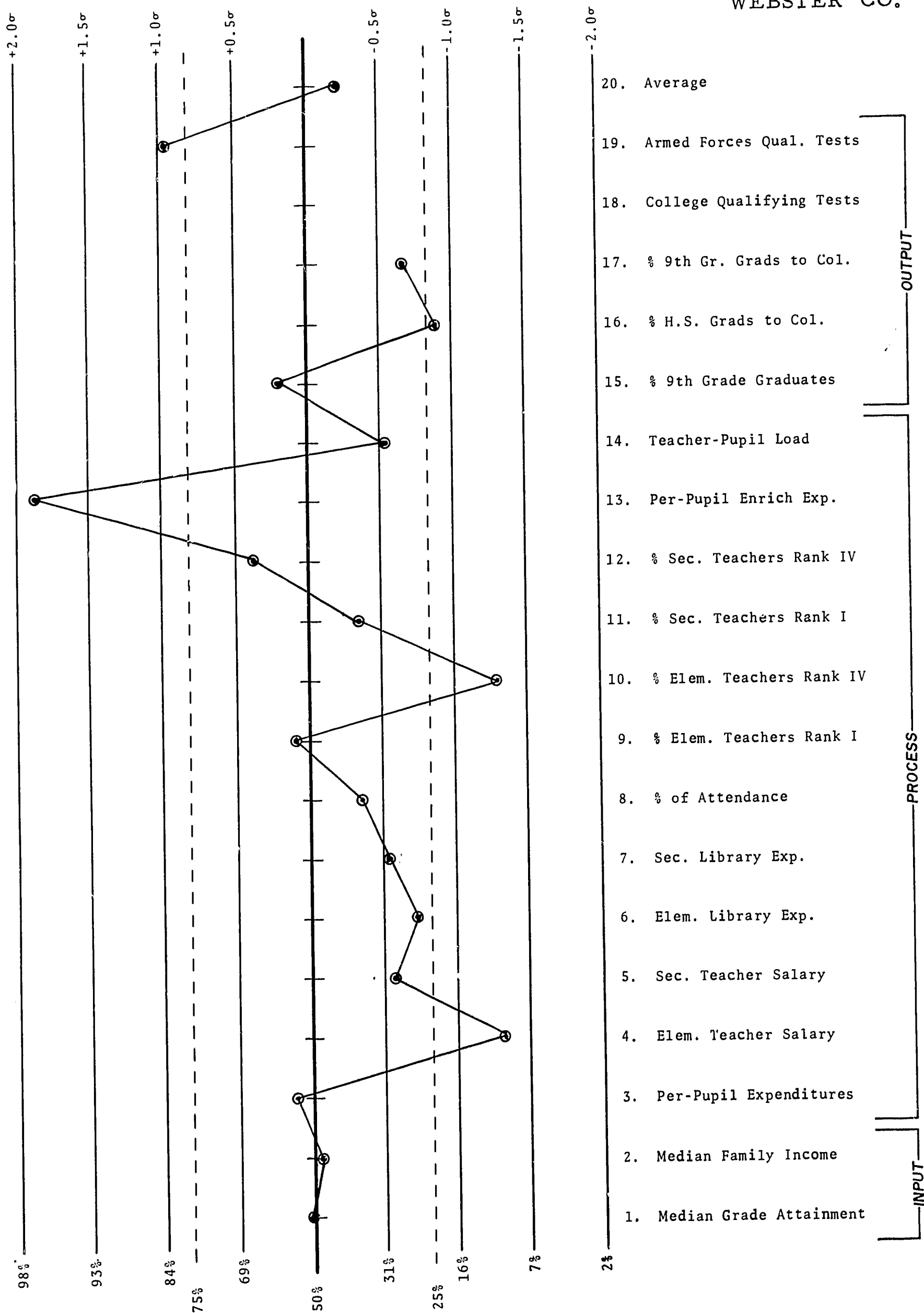
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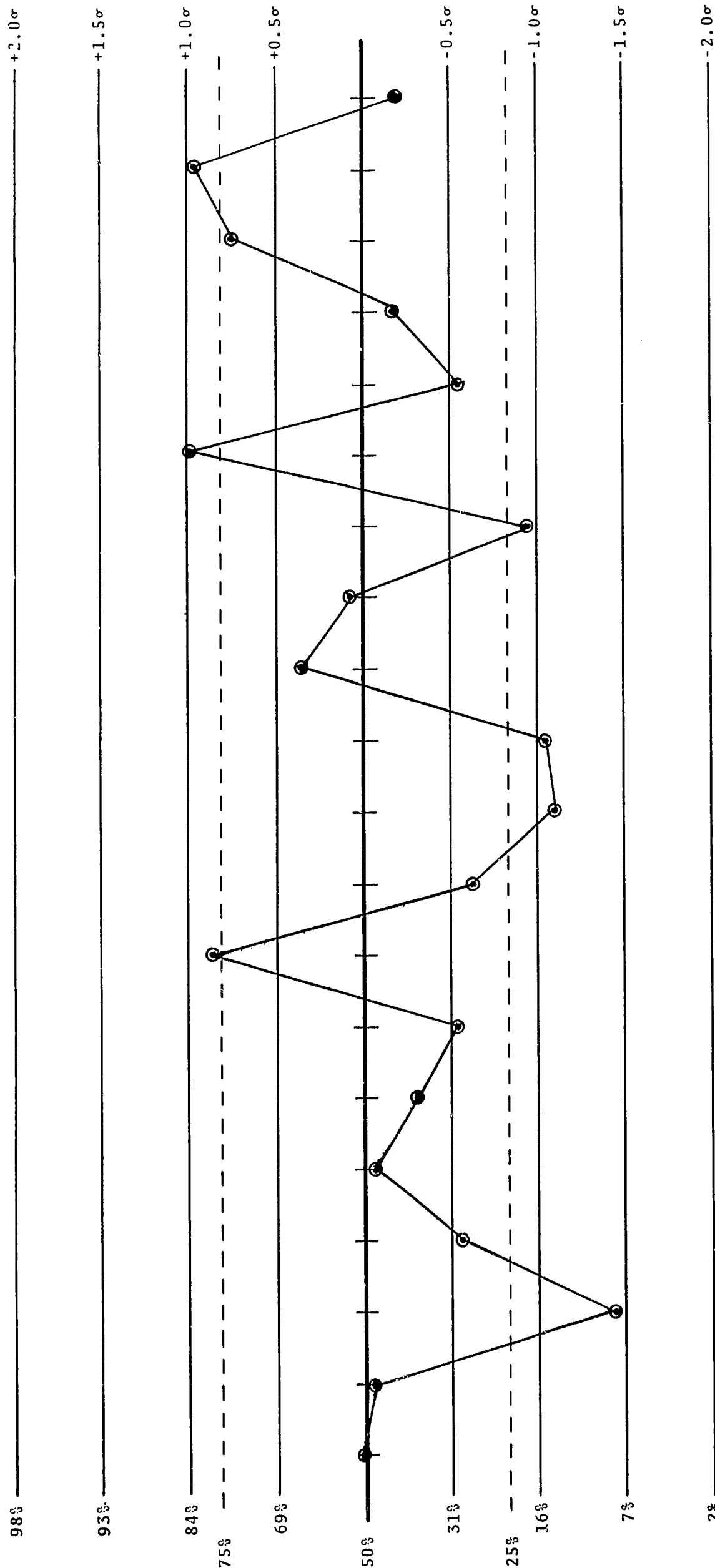
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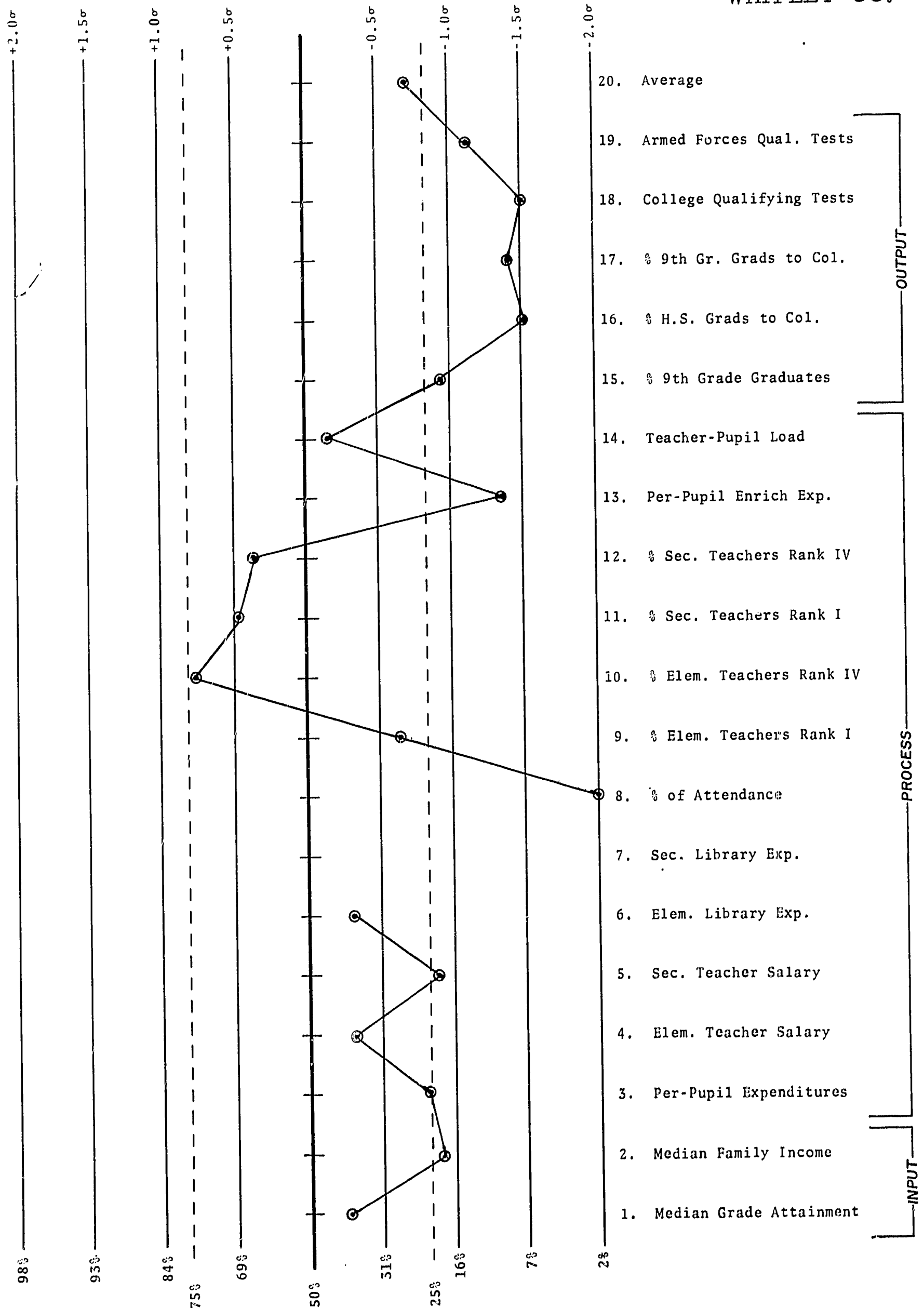
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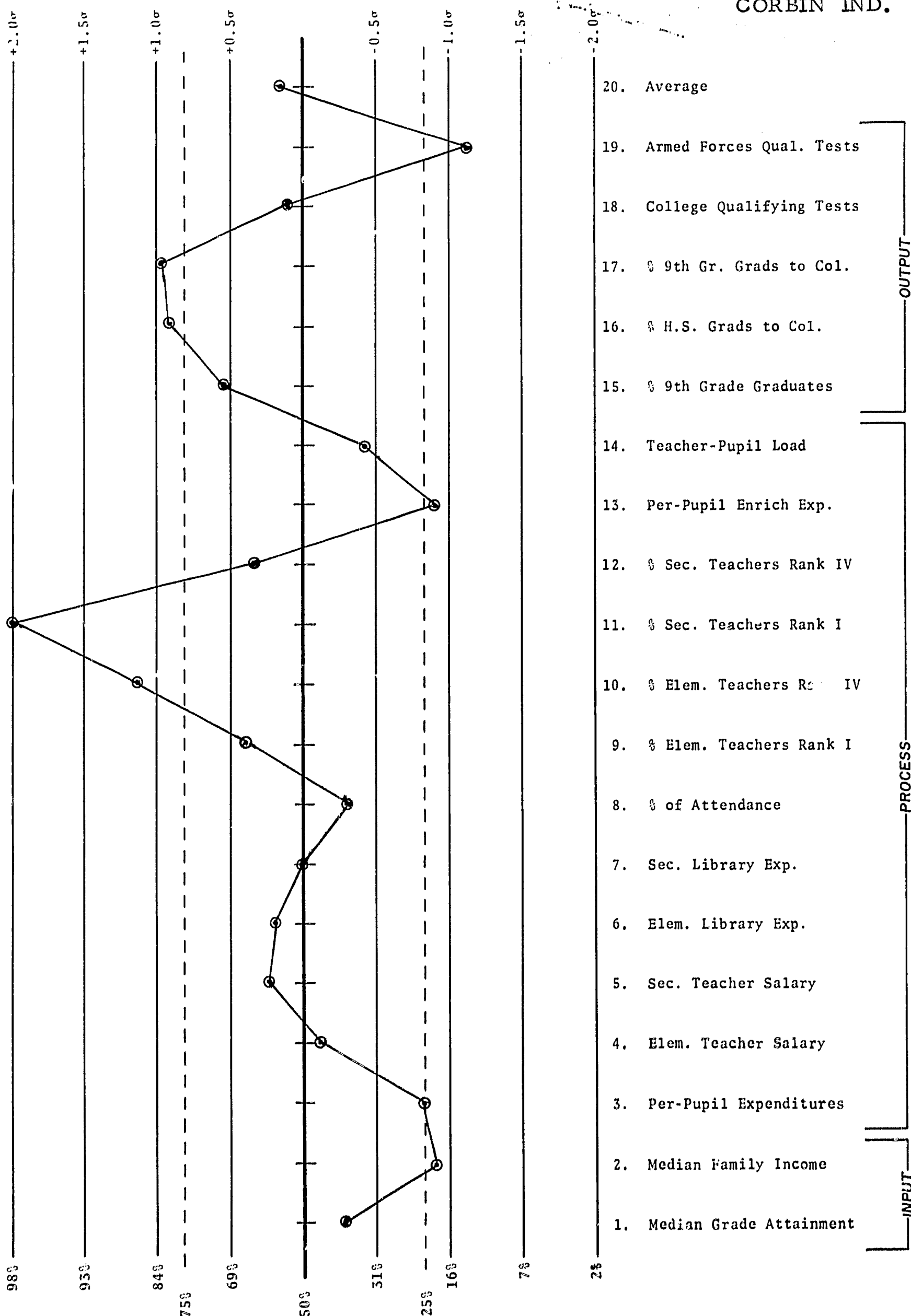
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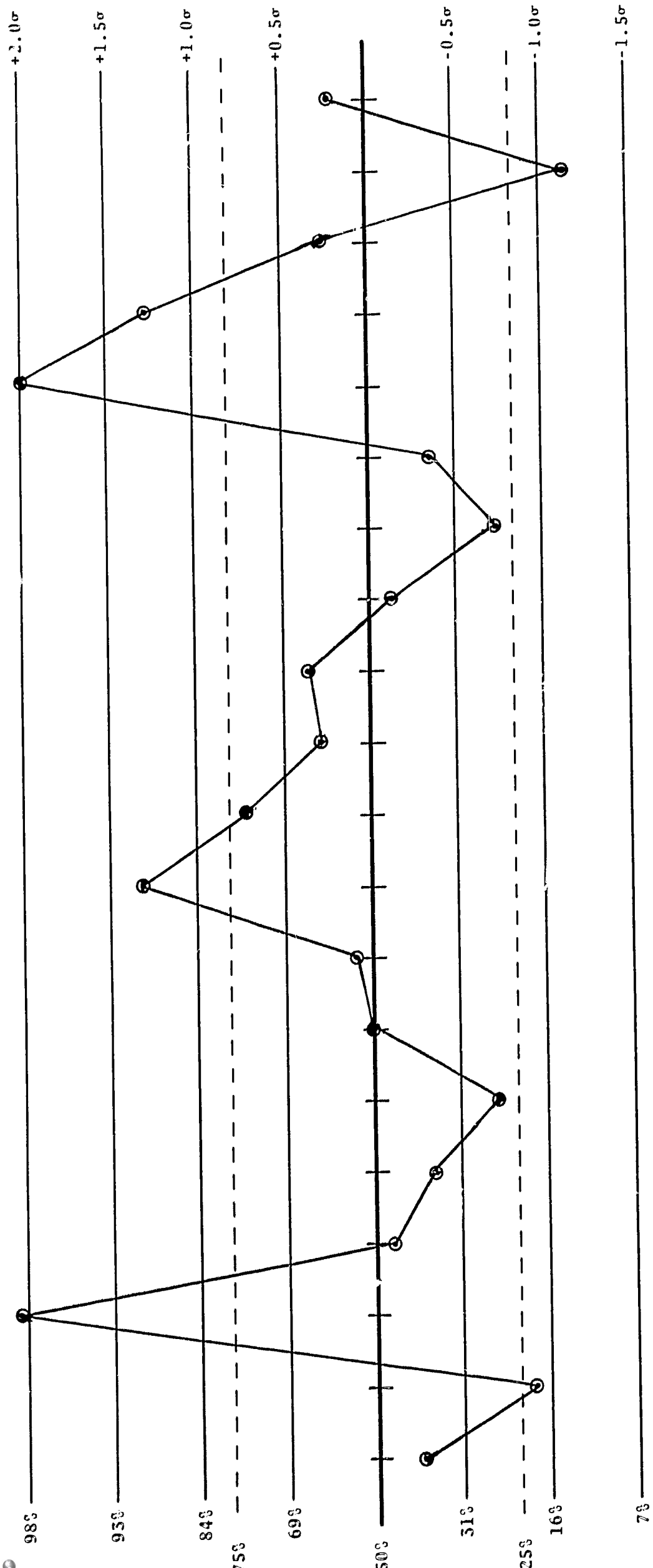
WHITLEY CO.



CORBIN IND.



WILLIAMSBURG IND.

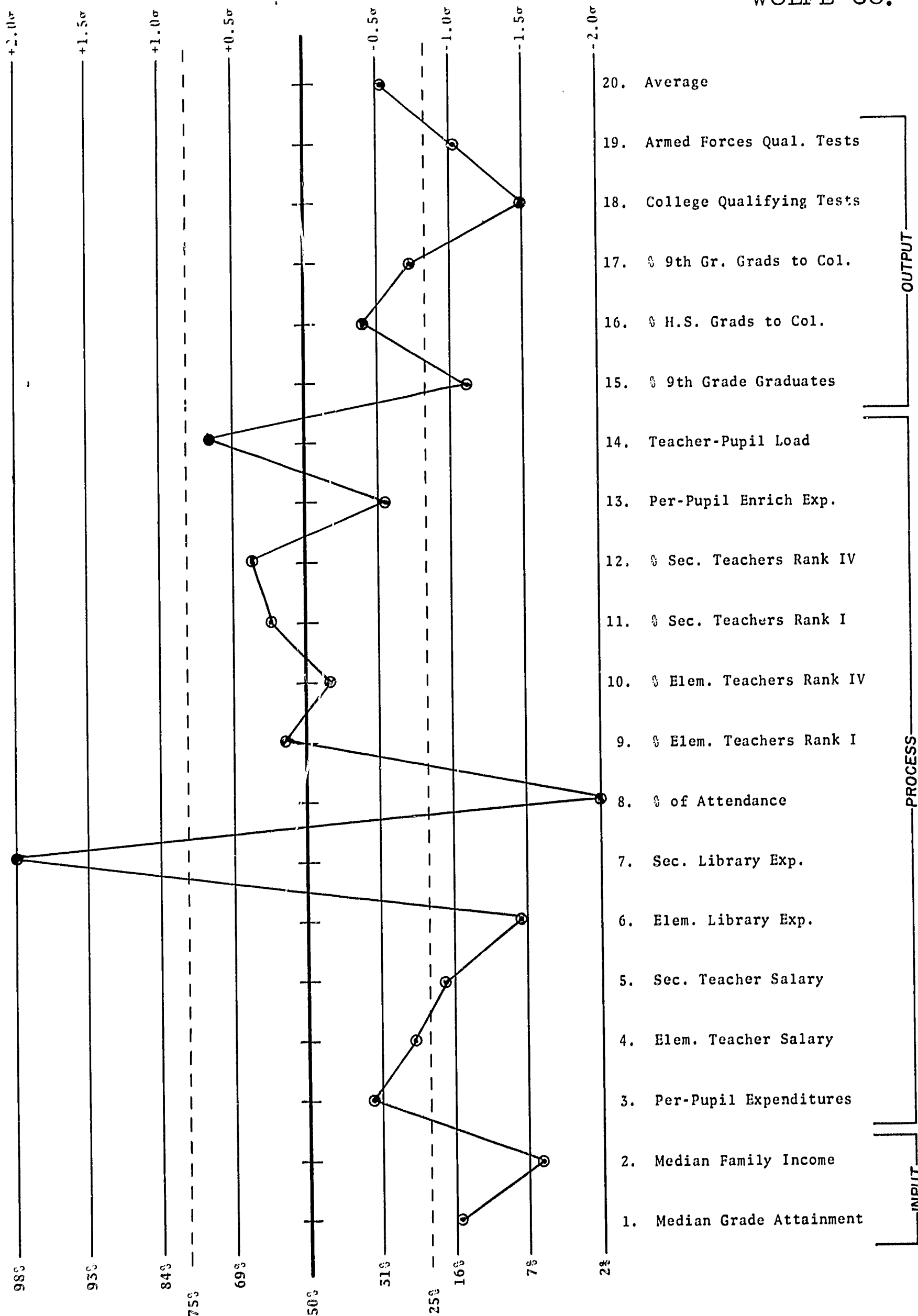


20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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13. Per-Pupil Enrich Exp.
12. % Sec. Teachers Rank IV
11. % Sec. Teachers Rank I
10. % Elem. Teachers Rank IV
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8. % of Attendance
7. Sec. Library Exp.
6. Elem. Library Exp.
5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

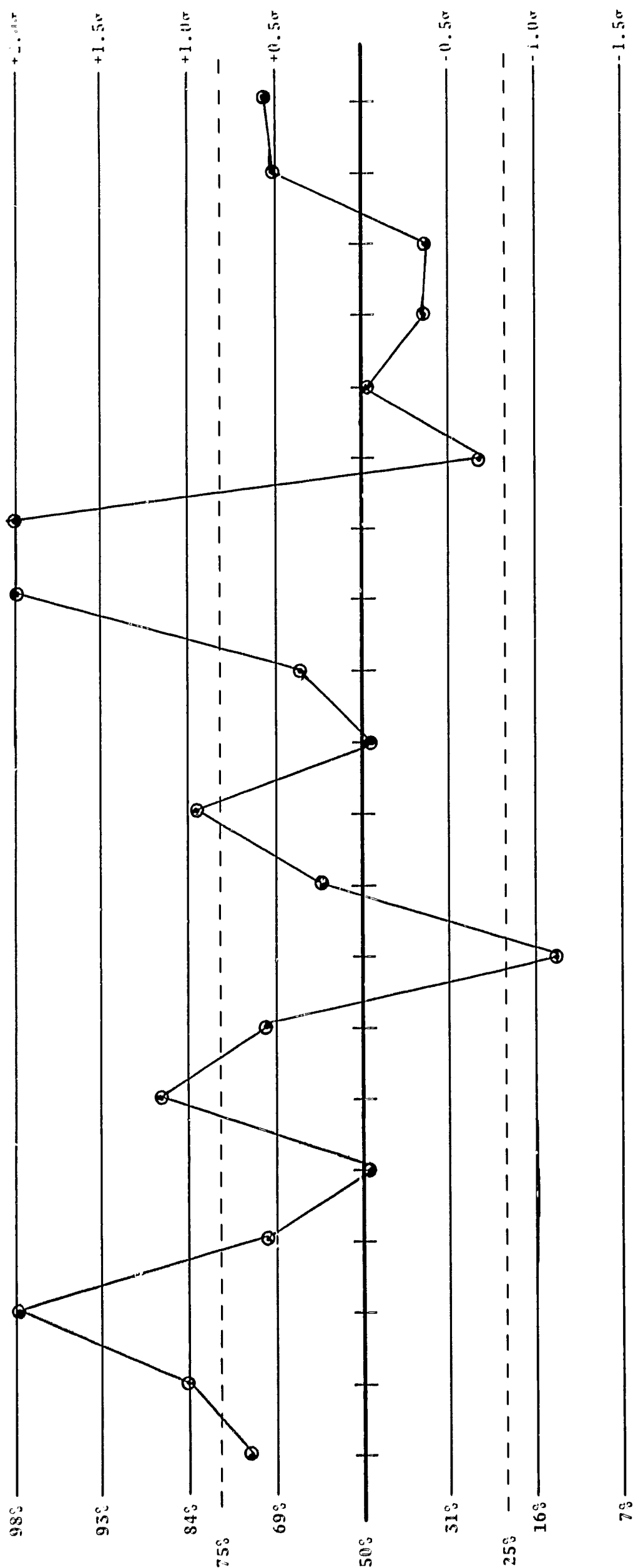
OUTPUT

PROCESS

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WOODFORD CO.



20. Average
19. Armed Forces Qual. Tests
18. College Qualifying Tests
17. % 9th Gr. Grads to Col.
16. % H.S. Grads to Col.
15. % 9th Grade Graduates
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8. % of Attendance
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5. Sec. Teacher Salary
4. Elem. Teacher Salary
3. Per-Pupil Expenditures
2. Median Family Income
1. Median Grade Attainment

OUTPUT

PROCESS

INPUT

APPENDIX A

Review of Related Kentucky Literature

The 1956-57 school year marked the first year of full implementation of the Minimum Foundation Program for financing education in Kentucky public schools. This legislative milestone prompted a series of studies concerned with the status and quality of education in the state. Interest was intensified when the Twenty-Fourth Annual Meeting of the Kentucky Association of Colleges, Secondary, and Elementary Schools, held at the University of Kentucky in October, 1959, adopted as its theme Quality Education Present and Future. College, secondary, and elementary educators in attendance concluded that an excellent staff, individualized programs, adequate facilities, and improved methods were essential for providing quality schools. The Conference, involving both professional and lay people, also recommended (1) changes in the organization of the State Department, (2) additional revenue for schools, and (3) better qualified teachers.

On February 11, 1960, the House of Representatives of the General Assembly created a special committee to study ways of strengthening the State Department of Education. This group, chaired by Harry M. Caudill of Hazard, recommended the following steps to upgrade education in Kentucky: (1) improvement of local school administration, (2) dismissal of inferior teachers, (3) revision of the Tenure Law and installation of a merit system, (4) wiser utilization of the State Department of Education, and (5) removal of politics from local school systems. The Committee pointed to the need for strengthening teacher education advised a shift from "soft" to "hard" subjects; and finally concluded that the ultimate criteria for judging the quality of a school system were its products; and that the greatest assurance for quality products were quality teachers.²

The managerial consultant firm of Booz, Allen, and Hamilton conducted a study of selected aspects of Kentucky public school education under the sponsorship of the Kentucky Commission of Public Education. Concentrating on the improvement of existing structures and services, this 1961 study recommended: (1) reorganization of the State Department of Education, (2) consolidation of schools, (3) improvement of school buildings, (4) more ade-

quate pupil transportation. The consultant firm emphasized that its major purpose was to assist the Commission on Public Education and the public schools of Kentucky to achieve improved educational results with the funds available, pointing to the fact that the median educational level in Kentucky was well below the national average (8.2 as compared to 10.6) and that a well-trained work force was vital to attracting industry to the state. The study concluded that a sound economy, a well-educated population, the financing of education, and an improved system of public education are mutually interdependent.³

Closely following the above study, the Commission on Public Education appointed a Curriculum Study Committee to undertake an in-depth study of the elementary, junior high, and secondary curriculums of the state's schools. The 1961 Curriculum Study Committee consisted of six professors representing the arts and sciences, two professors of education, one sociology professor and three classroom teachers.⁴ The expressed objective of this committee was to study the curriculum of the public schools of Kentucky, or "informally look at the way in which a child spends his day."⁵ The group emphasized that its study was directed at assessing the general status of the curriculum in Kentucky's public schools and was not an attempt to evaluate individual teachers, schools, or school systems.

The Curriculum Study Committee studied curriculums and curricular practices, grades one through twelve, of some 273 schools which were visited by alternate teams of committee members. Several specific recommendations were made regarding: (1) curriculum content, (2) school reorganization, (3) teacher preparation, (4) consolidation, (5) transportation, and (6) buildings. While a general effort was made to observe and record evidences of superior teaching, good classroom organization, and curriculum; no assessment of system quality and no comparative ratings of school systems were attempted.⁶

The Commission on Public Education was created by the 1960 Kentucky General Assembly to provide for continuous study and evaluation

of the Commonwealth's system of public education. It is composed of nine members appointed by the Governor, not more than four of whom could be educators, and all of whom should be persons known for their interest in and knowledge of the state's education system. The legislature directed that:

The Committee shall study the problems and evaluate programs of public education within the Commonwealth. Such studies and evaluations shall include but not be limited to present policies concerning public school transportation, free textbook programs, school personnel, and public school physical plants. The Commission shall submit an annual report to the Governor and such special reports on its findings as the Governor may require.⁷

The Commission was authorized to employ a staff and was given an appropriation of \$75,000 for each year of the 1960-62 biennium. Additional funds were made available from the Governor's Emergency Fund.

The Commission on Public Education has sponsored several studies, including the program Evaluation Study and the Curriculum Study, reviewed in this survey. In an evaluation of these studies, the Commission made some 28 recommendations running the gamut from reorganization of the State Department of Education to specific items such as length of school term, amount of library expenditures, ranking of teachers, and the like. The general findings of the Commission's Study were optimistic and pointed to the increased interest evidenced in education by the willingness of many districts to increase financial support to improve education, the improvement in teacher salaries, and a corresponding upgrading of teacher preparation in the State.⁸

A 1963 report of the Bureau of School Service entitled Where Does Your Community Stand⁹ presents a comparison of Kentucky school districts in several areas related to financial support, income, expenditures, teacher preparation, holding power, and the educational level of the community. The data taken from various State Department of Education, U. S. Census, and National Education Association reports also permit some comparisons between Kentucky and other states

and reveal the low rank position of Kentucky in: (1) teacher salaries, rank 45, (2) draft rejectees, rank 41 with 35.9 percent of registrants being rejected, (3) personal income, Kentucky ranked 46th and (4) ranked 31st with an 84.7 percent enrollment of school-age children.

This study, while assuming that money does not necessarily provide good schools, suggests that comparisons between districts that are somewhat similar in resources may be meaningful and significant. Certain basic conclusions emerged from the study. Among these were: (1) financial support for Kentucky schools is so far below the rest of the nation that fluctuations in price levels and cost of living could account for only a small part of the difference; (2) evidence exists that the general educational efficiency of the state is related to this low level of support; (3) Kentucky does make an effort roughly comparable to her economic position; many wealthier states do less proportionally; however, all those ranking below Kentucky in economic ability do more proportionally; and (4) the range of ability to support schools is wide among the several states and also among the various school districts of Kentucky.

The Bureau of School Service of the University of Kentucky devised a "Guide to the Evaluation of School Systems." This 1964 instrument provided a checklist and criteria for measuring the quality of schools and listed the following six essential areas for evaluation: (1) programs, (2) staff, (3) administration, (4) finances, (5) school plants, and (6) school transportation. Patterned somewhat along the lines of the Evaluative Criteria, the guide and checklists established a comprehensive set of measures for self-appraisal and planning for the district. The data provide schools using the instrument with an opportunity for projections and comparisons with Kentucky districts and national averages over a ten-year period, and subheadings under each major area list necessary components for measuring the quality of a school.¹⁰ This effort by the Bureau of School Service was not a study, but was a service publication providing evaluative guidelines for Kentucky school districts.

The managerial consultant firm of Cresap, McCormick and Paget completed what is probably the best-known attempt to date to evaluate the quality of education in Kentucky. This 1964 study identified the ten highest and the ten

lowest rated districts in the state, as judged by an expert panel consisting of 98 school superintendents, officials within the State Department of Education, and other educators in the state. (A year earlier this same firm, in a study of the administration and organization of the Kentucky State Department of Education, recommended that the department should channel its primary efforts each year toward assisting the local districts to improve their educational outputs.)¹¹

Cresap, McCormick and Paget, while acknowledging the fact that quality education entails many diverse factors, utilized findings of previous research on quality education. Variables used were: (1) current expenditures, (2) teachers' salaries, (3) financial effort, (4) size of class, (5) teacher travel, (6) cost of education index, (7) age of staff, (8) school dropouts, (9) attendance, and (10) achievement test scores. Through comparisons of the ten highest and ten lowest districts in Kentucky, eight factors were selected and validated statistically for final inclusion in the evaluation system. These included: (1) annual current expenditures per average daily attendance, (2) average annual salaries, (3) percent supplemented by district for teacher salaries, (4) percentage of teachers holding master's degrees, (5) percentage of ninth graders completing high school, (6) attendance, (7) local financial index, and (8) cost per pupil for educational supplies and books.¹²

In validation of the selected factors, the study made comparisons of each factor among the districts selected as the highest and lowest. In 1962-63, annual current expenses per pupil averaged \$276 while the figure for the ten lowest districts was \$238. The better districts spent more per pupil than the state's average and all but one of the lower-rated districts were under the state average. The study concludes that this factor relates closely to the quality of education in the local districts of Kentucky.¹³

For "average annual salaries for teachers," factor two, the selected highest ten districts averaged \$4,975, while the state average was \$4,347. The average for the lower-rated districts was \$3,685.50.

On the third factor of district supplement for teachers' salaries, which is closely related to factor two, the ten highest-rated districts in Kentucky ranged from a low of 16 per-

cent to a high of 73 percent, with an average supplement of 33.6 percent. For the ten lowest-rated districts, the supplement ranged from a low of 1 percent to a high of 8 percent, except for one district which had a supplement of 23 percent. The average supplement for the lower-rated districts was 6.9 percent. The study concludes that salaries and percentage of supplements by districts have real validity in identifying the highest and lowest-rated districts in Kentucky.¹⁴

In factor four--percentage of teachers holding a master's degree or higher--the selected higher rated districts averaged 33.1 percent, while the state averaged 14 percent. For the lower-rated districts, the average was 9.8 percent.¹⁵ This factor at that time had some significance; however, due to the rapid improvement in teacher training and salaries it was becoming less useful for comparisons.

Factor five--the percentage of ninth graders completing high school (school holding power)--was also used to judge the quality of the district. The study acknowledged that other school and community factors played an important role in determining this factor--school holding power. The highest rated systems averaged 68.7 percent with a range of 93.9 to a low of 56.6 percent. Some of the top-rated districts had dropout rates higher than the state average of 40.0 percent, pointing to the fact that other variables are involved in this factor.

The range in attendance--factor six--was not great; however, other studies have indicated that low attendance is an indicator of poor school districts, and decreasing attendance leads to dropouts.¹⁶ Attendance in the top-rated districts ranged from 96.55 to 91.55 percent, with an average of 94.15 percent. (The state average attendance was 93.28 percent.) The lowest districts ranged from 93.53 to 89.42, with an average of 91.33 percent. The study concluded that these differences had statistical significance at the time, but in the future this factor would lose its significance if attendance leveled off and became fairly uniform.¹⁷

Factor seven--effort index--refers to the percentage of local support divided by the tax rate of equated evaluation. The highest-rated districts averaged 0.94 per pupil in attendance, the state averaged 0.80, and the lowest-rated

districts averaged 0.41. This factor along with the tax rate equated by the Minimum Foundation Law computations, could be compared to decide which would be the most practical procedure to use for the state.¹⁸

The final factor--cost for supplies and books per pupil in average daily attendance (ADA)--compares the highest and lowest districts, finding a range from \$3.42 to \$14 per pupil for the top districts and from \$0.71 to \$6.22 for the lowest ones.¹⁹ The state average was \$3.77 per pupil.

In summary, the study outlined a plan of action consisting of: (1) an analysis of school districts of the state on the basis of the eight statewide statistical factors outlined above, to identify local districts that might be in need of special help in improving their educational systems; (2) a statewide achievement testing program, the data from which would be utilized to establish statewide norms and relate each district to these norms; and (3) a management audit of the educational and business management of those districts that had been identified as having special problems.

The Fantus Report (1965) created great interest and concern regarding the quality of school systems and education in Kentucky. This group was engaged by the Economic Development Commission to devise an industrial action program for the Commonwealth. Its findings included: (1) the dropout rate was too high, (2) guidance programs were weak, and (3) graduates of Kentucky high schools had problems in gaining admission to the more "prestigious" colleges and universities. Citing the importance of good schools in attracting industry to an area, the Fantus Report singled out the schools of the western area of the state for special comment. This area had a higher retention rate than did the other two economic areas identified in the study, graduating six of every ten students in urban high schools and four of ten in the rural high schools. The western area also had a higher median grade attainment in the recruitable labor force with more than 50 percent having had ten or more years of schooling.²⁰

Recommendations of the Fantus Report Study for improvement of the quality of Kentucky school districts included: (1) accreditation of all schools, (2) more honor and gifted programs, (3) more diversified curriculums in

the area vocational schools, (4) consolidation of smaller districts with other districts and (5) improvement of guidance programs and counseling.²¹

In June, 1966, the Kentucky Superintendent of Public Instruction initiated a three-man study of the State Department of Education. This study was to complete a summary of the seven special studies which had been made on state school administration in the 1960-64 period and to recommend a concise blueprint for improvement with emphasis upon an immediate program of action.

The study procedures concluded the formulation of criteria for evaluating the state department; and for a series of interviews with staff members, department heads, district superintendents, and leaders of various professional organizations. A review of Kentucky school law, and school publications, and analyses of previous studies of the state department were also considered as integral aspects of the process or procedure.²²

The report included 25 recommendations, among which were: (1) an expanded budget, (2) selection of the state superintendent of public instruction by a state board of education, (3) increased salaries for state department staff, (4) involvement in vital social issues such as Civil Rights, (5) assuming role in extending education downward to age four, (6) giving leadership to developing adult education, (7) developing an evaluative instrument for local school districts, (8) trying to better meet the needs of individual pupils, (9) continued research, and (10) improved in-service education.²³

Conclusions From the Survey of Literature

The following conclusions have emerged from the survey of national and Kentucky literature pertaining to studies of quality education.

1. The majority of studies of quality education have concentrated upon an individual school or student approach and have dealt primarily with sample schools or school systems within a region or state. The literature surveyed in this study does not reveal any efforts at comprehensive state-wide assessments of school district quality.

2. A large number of factors related to quality education and school system quality have been identified by researchers and investigators. A total of 186 variables are listed in the 42 studies reviewed in the survey of the literature.
3. Quality education studies have emphasized three categories of factors: (1) those identified as community variables, (2) those identified as school system variables, and (3) those that are products or results of interrelationships between various community and school system variables. These factors are classified for this study as input, process, and output variables--a classification scheme also used by the Metropolitan School Study Council and the Institute of Administrative Research, Teachers College, Columbia University, New York City. This distinction has not always been clearly delineated due to the fact that under certain conditions various factors may be classified into one or more of the three categories.
4. An analysis of the literature on the basis of content and emphasis reveals the following subject matter concentration: (1) twenty studies deal with factors related to school staffs, programs and associated subjects, (2) fifteen studies focus upon financial factors and cost-quality relationships, and (3) seven studies concentrate on output factors. These three major areas of concentration include additional factors that can be identified as community, school system, or output variables.

A breakdown by category of the total number of individual factors which appear in the various studies is revealed by the following data: 132 factors related to school program and staff, 73 to financial and cost-quality factors, 51 to output factors, 40 to community factors, 21 to legal and related aspects, and nine related to "adaptability."
5. The survey of related literature indicates holding power and student a-

chievement are the variables most often used to measure output. Input variables considered the most reliable are median grade attainment of the adult population and median family income. Other variables in this category are size, type, and location of the community, wealth and public attitudes of support.

A combination of school system ("process") variables have been used in quality education studies. The most reliable, according to the literature reviewed, are certain financial factors such as per-pupil expenditures, teacher salaries, enrichment expenditures* and local tax efforts. Among other school factors are staff training and experience, staff size, individual travel, size of the teacher's personal library, and place of birth and location of the institution where the teacher received his degree.

6. The review of literature discloses the interesting fact that a vast majority of major studies and research in quality education have used multiple regression analysis as the primary statistical method. The New York City Quality Education Measurement Project, the Pennsylvania Study, the California Study by James, and Project Talent reviewed in the larger study are examples of extensive and important studies of quality education in which regression analysis was utilized. Likewise, the Kentucky study is using the University of Kentucky Computer Center's Stepwise Multi-regression Program in its assessment of quality education in 197 Kentucky public school districts. In addition, this study is using the 7040 and 360 model computers as well as the 1620 model.
7. In summary, the Kentucky study of quality education resembles some assessments of quality education in using similar variables; it differs, however, in emphasis and approach in the entire state school system.

*These variables are used in the Kentucky quality study.

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College of Education
University of Kentucky
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