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ABSTRACT

This study was conducted to determine: (1) the stated criteria and priorities which the Illinois Vocational and Technical Education Division uses to determine the distribution of funds to districts, (2) how closely the actual distribution of funds match the stated criteria and priorities, (3) whether the actual distribution of funds reflect important observed characteristics such as unemployment rates and dropout rates, (4) whether certain types of districts are given disproportionate funding, (5) how the actual distribution of funds in Illinois compares to other states, and (6) whether alternative criteria and priorities for dispersal of funds would increase the cost-effectiveness of monies spent. Results of the study indicate courses with a low manpower priority will be curtailed or de-emphasized. The courses expanded by the State priorities are those with some manpower need and relatively high cost. The funding for high-cost courses will cause these courses to proliferate, and as they do, the funding available to lower costing, equal manpower need, and more efficient courses will decline. The course areas with high manpower need should be expanded, with lower cost courses receiving the greater level of funding. Utilization of the alternative priorities would achieve the same goals as the state priorities at a considerably lower cost. (SB)

An Analysis of the Process, Intent, Distribution and Effects of Priority Funding for Vocational and Technical Education in the State of Illinois

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A report of:

AN ANALYSIS OF THE PROCESS, INTENT, DISTRIBUTION, AND EFFECTS OF PRIORITY FUNDING FOR VOCATIONAL AND TECHNICAL EDUCATION IN THE STATE OF ILLINOIS

by James V. Koch and Randyl D. Elkin

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An Analysis of the Process, Intent, Distribution and Effects of Priority Funding for Vocational and Technical Education in the State of Illinois.

The purpose of this study is to provide answers to six questions:

I. What are the stated criteria and priorities which the Vocational and Technical Education Division uses to determine the distribution of funds to districts for purposes of vocational and technical education?

II. How closely does the actual distribution of funds match these stated criteria and priorities?

III. Does the actual distribution of funds reflect important observed characteristics such as unemployment rates, dropout rates, high youth unemployment, and percent of population on public assistance?

IV. Are certain types of districts given disproportionate funding?

V. Is the actual distribution of funds for vocational and technical education in the state of Illinois different from, or similar to, comparable programs in other states and nationally?

VI. Based upon evidence accumulated in relevent studies of vocational and technical education, what alternative set of criteria and priorities for the disbursal of funds would increase the cost-effectiveness of monies spent?

These six topics will be discussed in the above order. Each discussion will include a summary and conclusions section. The final section will contain recommendations for Illinois vocational and technical education. Supportive material will be presented in appendix form.

I. What are the Stated Criteria and Priorities Which the Vocational and Technical Education Division Uses to Determine the Distribution of Funds to Districts for Purposes of Vocational and Technical Education?

Each year the Division of Vocational and Technical Education of the Board of Vocational Education and Rehabilitation in consultation with the Illirois Advisory Council on Vocational Education prepares a State Plan designed to meet the requirements of the Vocational Education Amendments of 1968, Public Law 90-576. This State Plan constitutes the basis for the operation and administration of Illinois program of vocational and technical education. The criteria and priorities for the distribution of funds are set out in broad terms in the State Plan. The guidelines for the actual distribution of funds are established more concretely in bulletins, reports and memoranda issued by the Division. This part of the study examines the criteria and priorities changes in criteria and priorities for FY1971 and FY1972. For those readers who are unfamiliar with the relationship between the Vocational Education Amendments of 1968 and the State Plan, Appendix A provides the necessary information. The present analysis will begin by examining the Division of Vocational and Technical Education's derivation and administration of the criteria and priorities for fund distribution.

The actual operational funding bases and the percentage factor add-ons for FY1971 are contained in a letter to local educational agency administrators from Michael J. Bakalis dated March 24, 1971. The enclosed information sheets include, for the Division of Vocational and Technical Education, the "General Program Funding Policy for FY1971,", "Funding Policy Explanation FY1971", and "General Principles for Funding Policies 1972." These are reproduced in Appendix B.

The percentage requirements for funding of the handicapped were met both by initially funding at a higher base rate and by adding on 40% of the base rate for handicapped students. The 10% to 50% of Section 1.11-2 Part III of the 1971 Plan became a flat 40% in the actual funding. The percentage requirements for educating the disadvantaged were met through a flat 30% add-on to the base allotment for courses enrolling disadvantaged. No differentiation was made between regular and disadvantaged enrollment at the base level. Theoretically, the local education agency serving the disadvantaged would receive an indirect funding boost via the relative ability to pay factor since these agencies could be expected to have low relative ability to pay.

Funding of vocational education to meet the needs of those persons in the post-secondary education situation was met without any special factor add-on designations. Manpower priorities was translated from Section 3.14 Part I, "specifically new and emerging job needs and opportunities...," to mean "health occupations." These received dual emphasis through higher base funding and a flat 30% add-on. The sliding scales setup in Section 1.11-2 of Part III of the State Plan in each case, other than the incremental add-on for relative ability to pay, became flat percentage add-ons. Flat rate percentage factor add-ons were given for new vocational education programs. Special administrative organizations emphasing centralized programs for vocational education were encouraged through 30% add-on for area vocational centers and joint agreements between school districts. Further impetus toward centralization was achieved by funding area secondary centers at a higher than regular base rate.

The relative ability to pay factor utilized groupings of "per pupil assessed valuations" by type of district to arrive at a 0 to 80% add-on. Note the scale change from the 1971 Plan to this letter. The new top add-on is 80% not 100%.

The FY1972 operational funding criteria are contained in the "Report on Funding--Philosophy and Procedures FY1972 and FY1972" reproduced in Appendix C in full. The "Priority Listing of Programs and/or Courses for Funding Purposes for FY1972" is reproduced in Appendix C.

Each program, as identified by OE Code, is assigned to one of five classes for funding purposes. Each program is classified by its role in the preparation of persons for entry level employment and its role as an integral part of a segmented plan leading through career development to occupational competency. Thus, occupational training has the highest funding level, orientation and preparation for training a lower level, and the elementary program of occupational information the lowest funding base. Courses complementary to skill training and those not directly leading to a viable occupational end are not reimburseable.

The "maximum funding base" for each class is shown as the last column of "Approvable Programs, Services, and Activities for the Use of Voc/Tech Funds." The differential cost priorities are shown below:

Differential Cost Priority	Cost Level
A	Highest Cost
B	
C	
D	Lowest Cost

The manpower priority is set up as shown below:

Manpower Priority	Opportunity For Employment
A	Highest
B	
C	
D	Lowest

Priority Class 1, occupational training directly related to entry level employment, is delineated further on a priority basis. The courses, as shown in Appendix C, are rated From A, highest priority, to D, lowest priority, on the basis of differential cost and manpower priority. The former rating is performed by the Division Staff and the latter rating is done by the Illinois State Employment Service. The manpower priorities are established to reflect emerging occupations and those with excess demand. The program receives a rating for both priorities and them for funding purposes the two are given an overall average. The percentage of maximum base funding according to average priority is:

Average Priority	Percentage of Maximum Base Funding
A	100
B	60
C	30
D	0

The proper interpretation of these averages can be illustrated using OE Code 01.0100, course name "Agricultural Production": Based upon costs of offering the course relative to other courses and the demand for persons in agricultural production, the course is relatively

less expensive to offer (Cost Priority C) and its graduates face low demand for their services compared to occupations using other skills (Manpower Priority D). The course will be funded at 30% of base maximum (Average Priority C). As another example note OE Code 01.0301, "Agricultural Power and Machinery." It is a relatively high cost program to offer (Cost Priority A) whose graduates face low job opportunity potential (Manpower Priority D). It is to be funded at 60% of base maximum (Average Priority B).

The factor add-ons were preserved intact from 1971, with the exception of the relative ability to pay factor, which was revised. The schedule that appeared in the Division's, "Criteria for Program Approval and Financial Support," Bulletin No. 4-171-2, is reproduced in Appendix C.

The summary for FY1972, the formula utilized to allocate funds to local educational agencies for purposes of vocational education consists of a base amount set by type of training (for occupational training by cost and manpower priority ratings) with percentage factor add-ons.

The dollar additions to the base are for local educational agencies whose programs embody the characteristics thought by the Division to represent the requirements of the 1968 Amendments. The successfulness of these formulas in achieving an allocation which reflects this philosophy is treated in the next section.

II. How Closely Does the Actual Distribution of Funds Match the Stated Criteria and Priorities?

Given the priorities and criteria for funding local educational agencies to deliver vocational and technical education services as stipulated in the 1968 Amendments, the State Plans, and the in-house policy statements, did the actual dollar disbursements correspond to those criteria and priorities? This can be answered in part by a mechanical check of the allocations against the funding formula. At the time the data was gathered for the study the Division of Vocational and Technical Education was able to provide detailed data for FY1971 only. The data provided consisted of a computer printout titled "FY1971 Reimbursement Detail" and the working computer tape from which the "FY1971 Reimbursement Detail" was derived. Funding records for FY1972 were incomplete and unavailable to us as of May, 1972.

A printout from the tape indicated that the bases and factor applications for FY1971 were exactly as stated in the criteria and priorities philosophy. We assume that the federal and state audits have assured the accountability of the funds such that the figures on the stated "FY1971 Reimbursement Detail" are indeed the sums received by the local educational agencies.

For example, for the Abingdon School District OE Code 09.0203 enrolled seven (7) regular total units at a base level of $30.00 for a funded base of $210. With a relative ability to pay factor of .60, the factor one add-on was $18 per unit for another $126. The seven units were also in a new program which qualified them for a 30% of the base factor add-on of $9 per unit for an additional $63. None of the seven

was disadvantaged or handicapped so there were no dollar additions for those factors. The course was not part of a combined delivery system; hence, it did not qualify for the special organization factor. The course was not a health course and did not qualify for the manpower factor. The total formula funding for this course was a gross reimbursement of $399. Funds available to reimburse the Abingdon School District were insufficient to provide full reimbursement, and so it was reimbursed to the rate of 99.53% of gross for an actual reimbursement of $397.

More interesting analysis lies not in the accounting validity of the disbursements, but rather in whether the disbursements in effects carried out the stated FY1971 philosophy.

How important were each of the funding factors in the disbursement of funds? The answer to this question can be approached by means of standard partial regression coefficients.

Conceptually, regression analysis explains how one variable (here gross reimbursement for local educational agencies) is related to other variables (here base and factor add-ons for programs in each local education agency by training type: enrollment classed by disadvantaged, initial programs, manpower priority, special organization, and handicapped, and relative ability to pay factors). The values taken on for the gross reimbursement of a local educational agency (dependent variable) are explained by different magnitudes of the formula factors (independent variables). One form the regression equation might take on would be

$$GR = b_1R + b_2D + b_3I + b_4MP + b_5SO + b_6H + b_7RAP \text{ where}$$

GR is 1971 Gross Reimbursement for a local educational agency

R is the number of units in the program

D is the number of units classed as disadvantaged

I is the number of units classed as initial programs

MP is the number of units classed in manpower priority programs

SO is the number of units classed in special organization delivery systems

H is the number of units classed as handicapped

RAP is the percentage add-on for the agency based upon equalized assessed valuation

The b_i's would indicate how much Gross Reimbursement would change for a one unit change in the factor "i." For example, the coefficient b_1 would indicate for a base of \$30 that one additional disadvantaged unit would increase gross reimbursement by \$9 holding the magnitudes of the other factors constant. (i.e. $b_1 = 9$.) Notice however that the relative ability to pay factor is in different units than are the other factors. The RAP's are in percentage terms and the other factors are in credit hours or enrollment. Thus it is hard to calculate the relative importance of the two types of variables in explaining gross reimbursement. Fortunately, the problem can be overcome by a statistical technique which puts all of the independent variables on a common measurement basis (standardization). The new coefficients are called "standard partials" or "Beta coefficients."

Beta coefficients in linear regressions are indicators of the relative importance of each of the dependent variables in explaining the variation in the dependent variable. Further, they have the virtue of putting all of the independent variables in terms of common units of measure.

The rationale for such an approach stems from the carrot method of financing vocational and technical education. The establishment of a priorities system for fund allocation will not be an effective allocation device if the funds supplied on this priority basis are not demanded. For example, the existence of a 30% add-on for new programs have no funding impact if no new programs are developed by local education agencies to take advantage of the factor.

The form of the regression is shown below:

$$GR = \beta_1 R + \beta_2 D + \beta_3 I + \beta_4 MP + \beta_5 SO + \beta_6 H + \beta_7 RAP$$

The coefficients have been computed in a slightly different manner to allow for differences in units of measure of the variables.[1] The coefficient values are indicators of the relative importance the factors is determining the level of gross reimbursement.

For example, if $\beta_2 = .8$ and $\beta_3 = .4$, one would infer that the number of units of disadvantaged was twice as important in funding as was the number of units of new programs in determining the level of gross reimbursement.

In order to study the effectiveness of fund allocation on the priority formula basis the local educational agencies were split into three groups. The first group consisted of a simple random sample of 120 of the total number of local educational agencies operating under

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[1] Specifically, $\beta_1 = \frac{\sigma_I}{\sigma_D} b_1$ i.e. the beta coefficient is derived by multiplying the partial regression coefficient by the ratio of the standard deviations of the independent to the dependent variable. The common denominator of measure is the standard deviation of the dependent variable. A $\beta_2 = .5$ means that a one standard deviation change is the number of units of disadvantaged will cuase a movement of .5 standard deviations in Gross Reimbursement.

the priority funding formula.[1] The second group of interest consisted of all area vocational centers operating programs under the priority system. The third group consisted of all junior colleges offering programs under the priority funding formula. Separate analyses were conducted for each group.

The analysis of the effect of priority formula funding for each group utilized separate estimates for each major type of training offered by each group.

The data formulation used to estimate each regression is described below. Each local educational agency became one observation.

Variable	Measure
Total (GR)	Total dollar amount received by the local educational agency is FY1971 for major types of vocational education.[2]
Gross Reimbursement (Type of Training) (GR)	Total dollar amount received by the local educational agency in 1971 for that particular type of training.
Regular Units (R)	Number of units to which the base was applied for the programs offered by the agency.
Disadvantaged (D)	Number of units to which the factor add-on for disadvantagement was made.
Initial Programs (I)	Number of units for which the add-on factor for new programs was made.

[1]Those agencies delivering only elementary school programs were deleted from the sample base. These funds accounted for only 0.6% of the Federal FY1971 Funding. p. 56. Annual Report. FY1971.

[2]Excluding Elementary and Adult Non-Credit education.

Variable	Measure
Manpower Priority (MP)	Number of units for which the add-on factor for manpower priority (health) programs was made.
Special Organization (SO)	Number of units for which the add-on factor for special organization of programs was made.
Handicapped (H)	Number of units for which the percentage factor add-on for being handicapped was made.
Relative Ability to Pay (RAP)	Percentage adjustment of base made on the basis of equalized assessed valuation.

The results of the analysis are presented first for the sample inference for the Entire State Program followed by the analysis for the Junior Colleges and Area Vocational Centers.

Entire Program Analysis

Table One shows the regression analysis results for the representative sample for the entire program. The regressions were run for individual training types where the number of observations allowed: Adult Non-Credit, Secondary Orientation and Preparation, and Secondary Occupational Training. Post-Secondary and Adult for Credit programs had too few observations for regression analysis. They are included in the area vocational center and junior college analysis. The Beta coefficients for Adult Non-Credit programs indicate the major determinate of funding to be the number of regular units enrolled in the programs. However, note that manpower enrollment, second most important determinant of gross reimbursement, was half as important as the base allotment. Enrollment of handicapped was the third most important influence and was found to be about one-third as important as regular enrollment. The disadvantaged

Table One
Entire Program Results: Beta Weights
Dependent Variable - Gross Reimbursement For

Independent Variables	Adult Non-Credit	Orientation & Preparation	Occupational Training
Regular	.57	.96	.85
Disadvantaged	___[1]	-.04	.005
Initial	.03	.03	.02
Manpower	.28	___[2]	.16
Special Organization	.04	.07	.08
Handicapped	.20	.07	.05
Relative Ability to Pay	___[1]	.008	.003

[1]There are no values for these variables due to the low level of importance they have in the explanation of funding (i.e., the regression package did not add them because they did not exceed the F tolerance to enter: F = 0.01).

[2]No enrolled students in manpower priority courses.

initial, special organization, and relative ability to pay factors have minute influence on gross reimbursement. The coefficients for manpower and handicapped are misleading, however. The manpower coefficient stems from very heavy manpower priority course enrollments in only two large schools. The significance of the handicapped enrollment in the total program funding is derived from heavy enrollments in one large school and one smaller school.

Enrollment of the handicapped, the disadvantaged, and in special organization were interrelated. The few large schools which enrolled the handicapped also enrolled the disadvantaged and had special organizational delivery of courses. Summarizing the results for Adult Non-Credit vocational education for Illinois for FY1971, the base allotment for vocational training is easily the major determinant of gross reimbursement to the type of training. The six factor add-ons have only a minimal influence (around one-twentieth of the basic claim) on gross reimbursement. A few large schools have responded to the factor add-ons for the enrollment of handicapped and for manpower priority course enrollment. Those schools enrolling handicapped also enrolled disadvantaged and used special organizational course delivery. But the bulk of schools have not availed themselves of the supply of additional funds for these or other factor add-ons.

The Orientation and Preparation programs exhibit the expected heavy weighting of regular enrollment. No other factor weighs very heavily in the funding of these programs. For example, the next most important factors are special organization and handicapped and these are about one-fifteenth as important to district funding as is the base allotment.

Finally, for Secondary Occupational Training the beta coefficients indicate that there are three primary determinants for local educational agency funding: regular enrollment, manpower priority, and special organization. Training for manpower priority occupations was about one-fifth as important as regular enrollment in explaining gross funding of local educational agency programs. Special organization to deliver occupational training was half as important as training in manpower priority occupations and one-tenth as important as regular enrollment. The other factors had a minimal impact on local educational agency gross reimbursement for occupational training with the handicapped factor slightly more important than the rest.

There is a reservation associated with the above analysis. The weighting of the manpower priority factor is established on the basis of only five observations. Further it is very closely related to the credit hours in the disadvantaged and special organization factors. The separate influences of these variables on funding can thus not be determined with regression analysis. The raw data indicate the credit hours generated in the disadvantaged factor are the most important of the aforementioned three factors, followed by manpower and special organization credit hours. The actual weight of the three factors cannot be determined; however, they appear to be more important as a group than any of the other factors. The larger schools are most apt to be reimbursed for special factor credit hours.

In summary, regression analysis was used to analyze the result of the formula funding for Adult Non-Credit, Secondary Orientation and Preparation, and Secondary Vocational Training Programs. For each type of

program the primary determinant of gross reimbursement was the regular enrollment. Adult Non-Credit training has not generated credit hours in any factor add-on sufficient to be of much importance to local educational agency gross reimbursement for this type of training.

Secondary Orientation and Preparation for vocational training reflects no explanatory influence other than the regular base allotment in terms of impact on gross reimbursement for this type of training.

The Secondary Occupational Training Program analysis shows the inseparable influence of the disadvantaged, manpower and special organization factors to be of some importance to gross reimbursement. They are probably together less than a fifth as important as the regular credit hours generated in this program. The other factors have minimal influence on gross reimbursement to local educational agencies.

Junior Colleges

Forty-five junior colleges offered at least one type of vocational training in FY1971 under the priority funding system. The variables in the analysis are the same for junior colleges as for the entire sample. The junior colleges are considered to be local educational agency observations. Table Two summarizes the results by types of training for these schools where there was a sufficient number of observations to perform regression analysis.

Thirty-three junior colleges enrolled persons in Adult Non-Credit vocational educational programs. The most important variable in Adult Non-Credit funding was the regular reimbursement received by all students. The second most important variable was credit hours generated

Table Two
Junior College Results: Beta Weights
Dependent Variable = Gross Reimbursement For

Independent Variables	Adult Non-Credit	Adult For Credit	Post-Secondary
Regular	.92	1.06	.77
Disadvantaged	-.01	- .25	.13
Initial	.15	____[1]	.09
Manpower	-.03	.12	.12
Special Organization	-.04	0[2]	.04
Handicapped	-.03	0[2]	-.04
Relative Ability to Pay	.06	.006	.14

[1] Did not exceed the F tolerance to enter.

[2] Of the sixteen junior colleges offering Adult for Credit training none generated credits in Special Organization or Handicapped factors.

in new programs (initial). The new program influence was about one-sixth as important as the funding base in determining local educational agency gross reimbursement for junior colleges. Only ten schools generated hours in this factor, however. The relative ability to pay factor was about one-half as important as new courses in determining funding levels. Disadvantaged, manpower, special organization, and handicapped factors have minimal impact on the funding level of junior colleges for vocational education. The negative signs mean that junior colleges generating hours in these factors had slightly smaller total gross reimbursement than did those not enrolling students in these factors.

Sixteen junior colleges enrolled students in Adult for Credit training programs. Again as expected the regular base factor was the most important determinant of gross reimbursement.

The large negative coefficient on the disadvantaged factor is made on the basis of two observations and should not be accorded any significance. Manpower credit hours is based upon more observations and is about one-ninth as important as the base allotment for junior college funding. It is highly interrelated mined. The data would seem to indicate that the two influences are about equally important in determining funding for Adult for Credit training. The other factors have very little importance for junior college Adult for Credit training.

Junior colleges offering Post-Secondary Vocational Training number forty-five. Three factors are one-sixth as important as credit hours is the regular allotment: disadvantaged, manpower and the relative ability to pay. New programs are about one-eighth as important as the regular factors. Special organization and handicapped factors have minimal impact on funding.

In summary, the regular reimbursement base is the most important factor in junior college vocational education. Adult Non-Credit offered by thirty-three schools revealed that new programs (initial) are about one-sixth as important as the base credit hours and the relative ability to pay factor to be about one-half as important as initial program credit hours. Adult for Credit education offered by sixteen junior colleges showed manpower priority credit hours to be about one-ninth the base allotment in importance. Forty-five junior colleges offered Post-Secondary programs. Disadvantaged, manpower, and relative ability to pay factors are equally important at about one-sixth the weight of the base in funding. New programs were slightly less important.

Area Vocational Centers

Fifteen area vocational centers enrolled students in secondary vocational training courses. Table Three shows the regression results. Because all were special organizations, this factor assumed the maximum possible relative importance to the regular base credit hours: about one-third as important. This was followed by initial programs in importance - one-fifth as important. However, initial, disadvantaged, and handicapped are very closely related in credit hours generated and take on about equal weight. The raw data indicate that the disadvantaged factor has a heavier weighting than handicapped and in actuality probably exceeds the importance of initial programs. The manpower and relative ability to pay factors have minimal impact on funding.

Table Three
Area Vocational Center Results: Beta Weights
Dependent Variable = Gross Reimbursement For

Independent Variable	Secondary Occupational Training
Regular	.71
Disadvantaged	.09
Initial	.14
Manpower	.01
Special Organization	[1]
Handicapped	.10
Relative Ability to Pay	.01

[1] Special Organization was correlated +1.00 with the "regular" variable.

Conclusions

Assuming that the FY1971 Reimbursement Detail is correct, the actual fund distribution to local educational agencies follows the funding formula assiduously. Thus, on the face of it, the actual distribution of funds matches the stated criteria and priorities. It is informative and constructive to look at the criteria and priority funding in terms of its actual effects on funding distribution, however. This provides a much different perspective on the formula funding distribution to local educational agencies.

There is a distinct difference between recording credit hours generated in any factor by a percentage of the base and generating credit hours in any factor. It is futile to offer a thirty percent add-on for credit hours of education taken by disadvantaged persons if no disadvantaged are enrolled in a program.

The use of Beta coefficients in multiple regression analysis allows a determination of the relative importance of the individual factors in determining levels of funding for local educational agencies. If the effect of formula funding were a funds distribution the same as the formula then the weighting of the credit hours funded in each factor relative to regular credit hours would be the same as the percentage add-ons: thirty percent each for disadvantaged, initial, manpower and special organization; forty percent for handicapped and some average percentage for the relative ability to pay factor. Table Four summarizes the weightings of the factors relative to the regular base claim.

The inference drawn from the sample to the state program for Adult Non-Credit education is that the initial and special organization factors

Table Four
Special Factors Relative to the Base Claim

Factor	State Program			Junior Colleges			Area Vocational Centers
	Adult Non-Credit	Orientation & Preparation	Occupational Training	Adult Non-Credit	Adult For Credit	Post-Secondary	Occupational Training
	Percentage of Base Claim						
Regular (Base Claim)	100	100	100	100	100	100	100
Disadvantaged	0	- 4	15[3]	- 1	0[1]	17	13[4]
Initial	5	3	2	16	0[2]	12	20[4]
Manpower	L[1]	0[2]	S[3]	- 3	11	16	1
Special Organization	7	7	S[3]	- 4	0	5	30
Handicapped	L[1]	7	6	- 3	0	- 5	14[4]
Relative Ability to Pay	L[2]	1	0	6	1	18	1

[1]Expected program impact low except for a few large schools.

[2]Impact so low the regression program did not add the variable to the equation.

[3]Of some importance, but inspection of the raw data would seem to indicate at most the highest impact to be that of disadvantaged and is probably less for the others. A maximum estimate would be about 15 percent for the three of them.

[4]Inspection of the data indicates the disadvantaged factor to be most important followed closely by initial and somewhat more distantly by special organization. A maximum estimate would be twenty percent for each factor.

have had a small impact on local district funding; the other factors have not had great impact except in the case of a couple of highly funded schools. Statewide orientation and preparation for vocational education have responded at a low level to the special organization and handicapped incentives. The other factors have not caused much response on the part of local educational agencies. The state program of secondary occupational training has shown a more positive response to priority funding factors for disadvantaged, manpower, and special organization. The combined response is at most one-half of the maximum possible for any one factor. Incentive to enroll the handicapped indicates a small response. The rest of the factors show little incentive effect in FY1971.

Adult Non-Credit vocational education offered by junior colleges shows a fairly positive response to the initial incentive factor at about one-half of the maximum response possible. The relative ability to pay factor shows a small positive response. The rest of the factors show insignificant response. Junior college Adult for Credit courses indicate a positive response to manpower courses only. Post-Secondary vocational education in junior colleges shows positive response to initial, manpower, and disadvantaged incentives. These average about fifty percent of maximum response. The relative ability to pay factor has had a small influence on funding. Special organization incentive has a small positive influence. It is not clear that there has been a positive response to the handicapped incentive factor.

Area vocational centers are the most encouraging aspect of the priority funding assessment. Occupational training for the disadvantaged, the handicapped and in new programs (as expected along with special organization) are strong response factors. The relative ability to pay and manpower factors show almost no response.

III. Does the Actual Distribution of Funds Reflect Important Observed Characteristics Such as Unemployment Rates, Dropout Rates, High Youth Unemployment, and Percent of Population on Public Aid?

"Priorities shall be given to local education agencies serving depressed areas by application of Factors in 3.27 of the part."

"The plus weights of the appropriate factors in 3.27 as determined by consideration of (Manpower Needs and Job Opportunities, Vocational Education Needs, Relative Ability to Pay, Relative Costs of Programs, Services and Activities, and Other Criteria of the State) will place funding emphasis on depressed and/or high unemployment areas."[1]

If the funding formula approach has been effective, gross reimbursement to local educational agencies should reflect the prevailing need for vocational education. If there is an emphasis on serving depressed and/or high unemployment areas, this gross reimbursement should be strongly positively related to measures of depressed conditions and high unemployment. Therefore, the purpose of this section is to see how responsive the actual distribution of funds is to those factors which indicate environmental need.

The factors we have chosen are the same ones used by the Division to identify depressed and high unemployment areas. We have added an income variable. The method of analysis is a regression model using partial rather than standard partial coefficients. In otherwords, we will try to explain the level of gross reimbursement for a local educational agency by the

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[1]State Plan FY1971, p. 36.

environment in which it functions. The definition of the variables is presented below. The representative sample is the basis of our analysis.

The independent variables are:

1.	Assessed valuation (ASDVAL)	measured in assessed dollars per pupil in a school district.[1]
2.	Dropouts (DRPOUT)	measured as the percentage of students who drop out per year in a school district.[2]
3.	Unemployment (UNEMP)	measured as the percentage of the labor force unemployed in a country.[3]
4.	Aid to families of dependent children (ADC)	measured as the average number of children per 1,000 population by county who qualify for ADC during 1970.[4]
5.	Income (INCOME)	measured as the average income of the population of a district per pupil.[5]

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[1]State of Illinois, Office of Superintendent of Public Instruction, 1970 Assessed Valuations and 1971 Tax Rates, Descending Order, Illinois Public Schools, Circular Series A, No. 292, comp. from entire circular.

[2]State of Illinois, Office of Superintendent of Public Instruction, High School Dropouts from 1970-1971, Annual School District Report, comp. from entire report.

[3]State of Illinois, Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, A Proposed State Plan for the Administration of Vocational and Technical Education in Illinois, Map 2.1 (c), n. p.

[4]Illinois Department of Public Aid, Public Aid in Illinois, comp. from data, Jan. 1970 to Dec. 1970.

[5]Data received from computational work done by Dr. Alan Hickrod, Professor of Educational Administration, Illinois State University.

The dependent variable has been defined to pick up as much responsiveness to depressed and high unemployment conditions as possible. It has been left as gross reimbursement which is an absolute funding measure. A better measure would be a relative funding variable relating funding to the size of the population or number of students in school. For example, as we have it set up, assume that there are two school districts: one with a hundred students and one with a thousand students. The hundred student district has an unemployment rate of 2%, and the thousand student district 6 percent. If the funding level for the one hundred student school district were $10,000 and for the one thousand student district was $20,000, our formulation will show a positive funding response.

Table Five shows the regression results. The only variable showing a significant association with the level of gross reimbursement is number on AFDC per thousand. The other variables are not significantly different from zero allowing a five percent possibility of being wrong. Only a small part of the variation in gross reimbursement is explained by the variables (11 percent). Thus gross reimbursement to local educational agencies cannot be explained well by these environmental indicators of need.

The funding formula does appear to place relatively more funds into districts with relatively higher AFDC rates. AFDC rates are a proxy for vocational education need in depressed areas. The results show that on the average holding the unemployment rate, high school dropouts rate and assessed valuation per pupil constant, an increase in the AFDC rate of one more person per thousand in that district will increase gross reimbursement by $430.

Table Five
Funding Response to Need Measures

Dependent Variable: Gross Reimbursement of School District

Independent Variables	Coefficients
ASDVAL	- 0.0277
DRPOUT	-1445.
UNEMPD	- 25.03
AIDDPC	430.4 *
Constant	17740.

$F = 3.42$*

$\bar{R}^2 = 0.11$

*Significant at the 1% level.

Gross reimbursement does not appear to be responsive to equalized assessed valuation per pupil or the unemployment rate. If it were responsive the coefficient would be negative and significant for equalized assessed valuation per pupil (another indication that the relative ability to pay factor has little influence on local educational agency funding levels) indicating that as equalized assessed valuation per pupil rose (districts were more wealthy) the funding would decline. If it were responsive to unemployment levels, the coefficient for the unemployment rate would be positive and significant. This would indicate that as unemployment in a district rose, the gross reimbursement would also increase. The negative coefficient indicates just the opposite happens, but the coefficient is small, and it is quite statistically safe to say not significantly different from zero ($t = -0.13$). The dropout rate variable indicates the same sort of inverse relationship between it and gross reimbursement. Here the negative coefficient shows decreasing gross reimbursement as vocational education funding rises. The coefficient is not small and the standard deviation indicates a good deal of variation between school districts in the variable. There is a 25 to 50 percent chance the coefficient is not significantly different from zero ($t = -0.81$).

Average income per district is another proxy for depressed conditions. The data, however, was available for only sixty-two of the districts in the sample. Because of the smaller number of observations, a separate analysis was conducted including the income variable.

The results with respect to assessed valuation, dropout rates and unemployment are relatively unchanged. Statistically, they show no funding response to them. The signs are all reversed, so those associations

indicating a positive response now indicate a negative one for this subsample, but again none of them are close to being significantly different from zero statistically so their implications other than no response are highly tenuous.

The funding responsiveness for the local educational agencies in the subsample is somewhat smaller than in the larger sample, but is a significant positive response.

The per pupil average income coefficient is positive and statistically highly significant as a predictor of gross reimbursement. This means for the local educational agencies in the subsample there is a negative response to income. The higher is per pupil income (less depressed), the higher is gross reimbursement for an agency -- just the opposite of the desired effect. Seven of the nine largest agencies in the regular sample are excluded in the subsample so for the numerous small to medium gross reimbursement agencies, the responsiveness of gross reimbursement to low per pupil income is opposite the desired affect. The impact is to add one more regular credit funding per 16 dollar increase in average income per pupil.

In summary, the funding formula for reimbursing local educational agencies for vocational education expenditures does not increase funds to relatively high unemployment, low assessed valuation per pupil, or high dropout rate districts. It does show a significant positive response to districts with high AFDC rates. It shows a perverse response to average income per pupil by funding small and medium districts with relatively higher incomes at a higher gross reimbursement.

Table Six
Funding Responsiveness With Income Added

Dependent Variable: School District Gross Reimbursement

Independent Variables	Coefficients
ASDVAL	0.0996
DRPOUT	964.5
UNEMPD	24.86
AIDDPC	153.8 *
INCOME	3.080*
Constant	-25270.0 *

$F = 5.07^*$

$\bar{R}^2 = 0.26$

*Significant at the 1% level.

IV. Are Certain Types of Districts Given Disproportionate Funding?

The purpose of priority funding is to use the budget for vocational and technical education to meet as many needs as possible. This is an efficiency concept. The idea is to maximize the benefits to be derived from the fixed budget for vocational and technical education. Using this concept there are two cases in which districts might be disproportionately funded.

The first case would involve an evasion of the formula funding. Two schools would be exactly alike in terms of the formula funding factors, but receive different funding. This would involve a failure in the appropriate administration of the formula.

The second disproportionate funding situation would arise where schools having the same need for vocational training in terms of the population to be served, etc. would have different funding levels. For example, assume that there are two schools in districts virtually identical in terms of disadvantaged and handicapped populations, high unemployment, high school dropouts, assessed valuation per pupil, etc. Assume that both schools have $30,000 VTE reimbursements. One school does not generate any credit hours outside of the regular base claim. The other generated large numbers of credits by establishing programs for the handicapped, disadvantaged, etc. whose needs the State Plan emphasizes. The school enrolling only regular students is receiving a disproportionate share of the funding. This is a failure in the design of the funding formula and its administration and is a failure to respond on the part of the local educational agency.

The first case is one which we are not equipped to treat. We assume that the evaluations and audits have established that the FY1971 Gross Reimbursement Detail is correct. The amounts shown paid were paid as shown. We also assume that the wide latitude given the local educational agency in identifying the disadvantaged, handicapped, initial programs and other factors has not evoked misidentification to receive extra funds for unqualified students.

The degree to which there is disproportionate funding to schools not fulfilling the VTE criteria and priorities can be indicated by the results of two of the above questions.

The part of the study dealing with the matching of funding to the stated criteria has several implications for disproportionate funding. The relative ability to pay (RAP) factor is set by the VTE administration. It does not require responsiveness on the part of the local educational agency. "A sliding scale from 0 to 100% (Author's note: This has been changed to 80% in practice.) of the base amount will be added to more nearly equalize educational opportunities and becomes the adjusted base amount. (All districts qualify for the basic funds, but the least wealthy in any given category may qualify for double the basic reimbursement)."[1] This factor could be a very important variable in district funding differentials. It has a maximum add-on value of 80% of base in FY1971. It could make a significant difference in the differential funding received by local school districts. The percentage of base add-on is based upon

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[1]State of Illinois, Board of Vocational Education and Rehabilitation, Vocational and Technical Education Division, A State Plan for the Administration of Vocational and Technical Education in Illinois. Dec. 1970. p. 88.

equalized assessed valuations per pupil as shown in Appendix C. Thus the Division can decide for funding purposes how equal the "equal assessed value per pupil" really is and set its percentage factor add-on values accordingly.

The impact of the Division's current RAP factor has been minimal for the most part. In only two of the regressions was the relative ability to pay factor more than minimally important to funding. Post-Secondary training in junior colleges showed the relative ability to pay factor (RAP) to be about twenty percent as important to funding as the basic claim. Adult Non-Credit training showed six percent of base importance. In the rest of the vocational education programs the factor was of minimal importance. Table Seven shows why. In effect, the Division RAP schedule indicates little inequality in equalized assessed valuation per pupil. The average in each case is not as important as the variation in this factor. For example, if the RAP factor was 50 percent for every district it would make no sense to have an RAP factor at all. We could just add 50 percent of the base to each agency's reimbursement. Here the RAP factor would be important to the total funding level in each district but not to differences in such levels between districts, hence not "equalizing" relative ability to pay for vocational education at all.

On the other hand, suppose we had only two districts: a very wealthy one and a very poor one. If we set the RAP factor for the wealthy one at 0% and for the poor one at 100%, the average impact would still be 50% (a weighted average could be more appropriately be used but for explanatory purposes a simple average is useful) but, equalization impact is very much greater because the RAP percentage variation is greater. Further, there

should be no magic about a total add-on of 80% or 100%, the factor could be 200% for very poor schools and negative (subtraction from base funding) for very wealthy districts.

Thus, in Table Seven note that the RAP factor is important in explaining variation in total reimbursement only in the two cases where it itself shows greater variation. The total program results indicate that these three types of vocational training are conducted in schools slightly below the mid-range of wealth and that about 2½% of the districts get RAP add-ons of 80% and 2½% of the districts get add-ons of less than 15%.

Junior college programs are located in relatively more wealthy districts (low mean RAP) but they exhibit more variation in funding equalization. Only 2½% receive 80% add-on, but quite a number receive zero or close to zero add-on for relative ability to pay.

Finally, area vocational center programs in vocational training are in slightly less wealthy districts (higher RAP), but show very little variation at all. Only 2½% receive RAP add-ons over 65% or below 45%.

The conclusion is that for vocational educational programs the derivation and administration of the relative ability to pay factor promotes disproportionate funding. Few schools are classed as wealthy so high relative wealth makes little difference in reimbursement. Few schools are denoted as poor and therefore the schools on the lower end of the distribution do not receive much relative equalization. Most training is conducted in relatively wealthy districts (at or about the wealth mean) and according to the Division schedule there are few poor or rich districts.

Table Seven

Type of Training	Percentage of Base in Importance	RAP Mean	RAP Standard Deviation
Total Program			
Adult Non-Credit	0	.425	.190
Secondary Vocational Training	0	.488	.162
Secondary Orientation & Preparation	1.0	.487	.162
Junior College			
Adult Non-Credit	6.0	.342	.230
Adult for Credit	1.0	.384	.191
Post-Secondary	18.0	.347	.248
Area Vocational Centers			
Vocational Training	1.0	.547	.099

Whether there is disproportionate funding in terms of the other factors is harder to get at and can only partly be assessed by the formula effects analysis. If dollars are not going to the funding factors in the presence of high factor need, this will show up in the analysis of the responsiveness to environmental characteristics. It is interesting to note the skewed factor funding distribution at this point.

The representative sample of local educational agencies showed the largest nine percent (in terms of gross reimbursement) to receive forty-eight percent of the funds spent on vocational education for sixty-six percent of the regular enrollment. By way of contrast, the smallest twenty percent of local agencies (gross reimbursement) spent 1½% of the vocational education funds for 1½% of the regular units funded. The relative importance of the largest and smallest schools by gross reimbursement is shown in Table Eight.

The sample inference is that nearly half of the money for vocational education is going in large dollar amounts to a few local educational agencies. If we exclude junior colleges and area vocational centers from consideration and concentrate on the high school programs the importance of the funding formula incentive and its varied effects appear. The top fourteen high schools in terms of gross reimbursement for the representative sample is shown in Table Nine. Note the small number of credit hours generated in the incentive factors of disadvantaged through handicapped. And these are the local educational agencies generating almost all of the credit hours in these factors at the high school level.

Table Eight
Funding Concentration Contrast

Relative Funding Position	Total VTE Funds	Credit Hours						RAP Factor
		Regular	Disadvantaged	Initial	Manpower	Special Organization	Handicapped	
	Percentage							
Top 9%	48	66	41	37	89	71	55	.49
Next 9% - From Top	17	11	17	19	0	2	8	.54
Middle 62%	33.6	21.6	41.4	43.2	11	24.7	37	[1]
Next Highest 10% - From Bottom	.9	.8	0	.2	0	.3	0	.39
Bottom 10%	.5	.6	.6	.6	0	2	0	.29

[1] Not computed.

Table Nine
Top Fourteen High Schools

Name	Gross Dollar Reimbursement[1]	Funded Units In						
		Regular	Disadvantaged	Initial	Manpower	Special Organization	Handicapped	RAP
Mt. Prospect	295,000	10,100	304	146	0	0	84	.6
Midlothian	184,000	4,720	708	0	36	0	50	.8
Franklin Park-Leyden	134,000	6,150	1,110	0	0	0	201	.3
Quincy	122,000	3,340	1,130	39	0	225	912	.4
Calumet-Thornton	121,000	3,110	60	51	0	0	29	.7
Wheaton	78,000	1,950	564	472	12	0	60	.6
Lane Tech	73,100	2,790	179	0	0	0	0	.5
Kennedy	72,900	1,950	500	0	0	0	0	.5
Downer's Grove	72,200	2,290	109	118	0	0	14	.6
Moline	64,900	2,450	0	0	0	0	0	.5
Centralia	50,600	1,460	394	356	0	0	70	.7
Morgan Park	48,800	1,330	483	0	0	0	0	.5
DeKalb	45,500	1,330	97	78	0	105	40	.4
Bogan	44,000	1,560	346	0	0	0	0	.5
						Weighted RAP Average		.56
Lowest 20 Schools	50,410	2,360	98	52	0	113	0	.35

[1]This excludes elementary and Adult Non-Credit dollars which are a small percentage of total gross reimbursement.

An instructive example is the case of Mt. Propsect and Centralia. Mt. Prospect has almost six times the funding for seven times as many students. Yet Centralia with six times less funds nevertheless funded almost one-third more disadvantaged (only 3% of Mt. Prospects regular credits were in this category). Centralia also started almost $2\frac{1}{2}$ times more new programs than did Mt. Prospect (Mt. Prospect's new program credits were 1.5% of the regular enrollment). Centralia also funded vocational education for very nearly the same number of handicapped as did Mt. Propsect (Mt. Prospect generated less than 1% of its regular credits in the handicapped factor.). Even more disproportionate fundings is indicated by the fact that Mt. Prospect has a higher relative ability to pay (low RAP factor), almost 50% greater assessed valuation per pupil than Centralia, a high school dropout rate only 40% of Centralia's, and 40% of Centralia's unemployment rate. It does have an AFDC rate higher by 80% than Centralia's. Average income per pupil data is not available for Mt. Prospect, but if it were to be imputed from gross reimbursement data Mt. Prospect could have a significantly higher income per pupil. Thus there appears to be a rather large disproportionate allocation to Mt. Prospect given the need factors and the virtually zero response to priority incentives on the part of Mt. Prospect.

Another indication of disproportionate funding can be gathered from the relationship between the formula factors and the need factors. It has already been shown that the formula funding has been positively responsive to any statistically significant degree for the AFDC rate only. This indicates disproportional funding in itself since other indicators of need elicit no significant response. This further highlights the

Table Ten
Top Fourteen High Schools
Need Characteristics

	Gross Dollar Reimbursement[1]	Equalized Assessed Valuation Per Pupil Dollars	Dropout Rate %	Unemployment Rate %	#AFDC Per 1,000 Number	Average Income Per Pupil Dollars
Mt. Prospect	295,000	61,593	1.76	3.7	128.7	NA
Midlothian	184,000	36,165	6.13	3.7	128.0	NA
Franklin Park-Leyden	134,000	138,701	6.37	3.7	128.7	18,125
Quincy	122,000	25,336	2.19	4.9	47.8	13,822
Calumet-Thornton	121,000	44,841	0.57	3.7	128.7	NA
Wheaton	78,000	60,288	0.37	3.7	6.7	NA
Lane Tech	73,200	26,002	11.40	3.7	128.7	16,482
Kennedy	72,900	26,002	11.40	3.7	128.7	16,482
Downer's Grove	72,200	57,967	3.34	3.7	6.7	NA
Moline	64,900	18,653	3.59	6.2	39.5	13,504
Centralia	50,600	43,700	4.29	9.0	71.6	9,168
Morgan Park	48,800	26,002	11.40	3.7	128.7	16,482
DeKalb	45,500	24,511	5.02	3.9	9.3	17,996
Bogan	44,000	26,002	11.40	3.7	128.7	16,482

[1]This excludes elementary and Adult Non-Credit dollars which are a small percentage of total gross reimbursement.

general impotency of formula funding. What remains to be seen is whether the formula factors show a response tc need factors even though in terms of dollar gross reimbursement they have minimal impact. There is further disproportionate allocation of funds if even those few factors that generated what few credits they did, do not show a response to need criteria. Table Eleven shows gross measures of the strength of the relationship between the formula funding factors and the need factors.

The correlation coefficients can vary from -1.00 to + 1.00. A perfect relationship between two variables, where a one unit increase in one variable is associated always with constant increase in the other variable, would have a value of +1.00. A -1.00 would indicate a perfect inverse relationship: a one unit increase in one variable is associated with a constant value decrease in the other variable. A value of zero indicates no relationship.

The more observations (local education agencies) one has, the less it is likely that even a perfect relationship will result in a +1.00 value because of random variations and because we have a sample, not the whole population (all local agencies). Thus we can have a statistically significant relationship between two variables at a lower level value of the correlation coefficient. The table indicates which correlaticns are statistically different from zero.

There is a significant relationship between the number of credits generated in the disadvantaged factor and the high school dropout rate and AFDC rate. As these two measures of need rise so does the local agency response. The same is true of the special organization factor in response to higher rates of AFDC per thousand persons. The relative ability to pay factor is also significantly higher for districts with

Table Eleven
Relationship Between Funding and Need Factors

Simple Correlation Coefficients

Funding	Need Factors			
Factors	DRPOUT[1]	UNEMPD[1]	AIDDPC[1]	INCOME[2]
REGULR	-0.18	-0.05	0.14	0.45*
DISADV	0.22**	0.02	0.33*	0.30*
INITAL	-0.01	0.05	0.15	-0.01
MANPWR	-0.11	-0.02	0.18	0.08
EXPLORG	0.25**	-0.03	0.16	0.20
HANDCP	-0.04	-0.02	0.11	0.21
RELABP	-0.02	0.06	0.27*	0.02

** Significant at the 0.05 level.

* Significant at the 0.01 level.

[1] Computed using the full sample: 92 observations.

[2] Computed using the reduced sample: 61 observations.

higher AFDC incidence. These are encouraging signs of effective response in direction but not magnitude. The income and the unemployment results are not encouraging. Regular and disadvantaged funding units are positively related to average income per pupil. None of the factors show a significant response to the unemployment rate.

In summary, the relative ability to pay factor has minimal impact upon funding differentials between local education agencies with other factors held constant. The bulk of the schools are clustered about the 50% add-on value and show little variation in value. The sample average RAP factor was near 0.5, area vocational centers were located in less wealthy districts and junior colleges in much wealthier districts on the average, but there is a significant variation in the RAP factor only for junior colleges. The overall impact is to encourage a disproportionate funding in favor of the wealthier districts.

It is more difficult to pick out individual cases of disproportionate funding. A school by school comparison would be necessary. Nonetheless, the example given questions the relative level of funding for two schools and indicates poor use of the funds received. The funding factor-need factor relationship indicates positive response of the disadvantaged factor to dropout and AFDC rates; the special organization factor to the dropout rate and the relative ability to pay factor to the AFDC rate. Perverse response by the regular and disadvantaged factors to income is indicated for the smaller sample. No funding factors responded positively to the unemployment rate, nor was there a relationship between the rest of the funding and need factors not enumerated above. The income variable

then indicates a disproportionate factor funding toward higher average income level per pupil for the small and medium funding level districts. The other dropout rate and AFDC rate factors show a desirable factor response.

V. How Are Funds Distributed in Other States?

The manner in which other states dispense their VTE funds varies widely. Few generalizations can be made, as the following specific examples demonstrate.

The vocational educational funding used by the state of Hawaii operates from a completely centralized educational system. In this system state general funds, rather than local funds, are distributed under the auspices of a state board of education. There are separate levels for secondary schools and universities. Forty percent of the federal funds are distributed to the secondary level and below. The Department of Education allocates these funds as they see fit. The aim of the programs is to reach all youth and adults who will profit from the employment opportunities created by vocational and technical education. The state board seeks to meet and anticipate labor demand. Special consideration is given to depressed areas, areas of unemployment greater than six percent, areas of high youth unemployment which in Hawaii are highly correlated with the depressed areas and areas of high unemployment, areas with high dropout rates and areas of high population density are sought as locations for vocational schools.

The Kentucky Plan of funding is determined by the state's manpower needs and job opportunities, the vocational education needs and job opportunities, the vocational education needs of the people, a reasonable tax effort by local school districts, and the relative costs of programs,

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[1]Letter from George Ikeda, Executive Secretary, State Advisory Council on Vocational and Technical Education, August 29, 1972.

services, and activities. The Kentucky state plan states "Since no one knows exactly what are the manpower needs and job opportunities or the vocational education needs locality by locality in the state, the following basic assumptions have been made with regard to the use of data: (1) that manpower needs and job opportunities will be greatest where existing employment is greatest or where business is greatly concentrated: (2) that vocational education needs are greatest where the concentration of people is greatest; (3) that additional weight needs to be given to low-income people because they are in the greatest need, per capita, for vocational training, and that the handicapped are greatly distributed among the population."

II. Regular Mathematical Formula[a]

$$\frac{(1)\text{District Measure of Manpower Needs and Job Opportunities} + (2)\text{District Measure of Vocational Education Needs} + (3)\text{District Measure of Reasonable Local Tax Effort} + (4)\text{District Measure of Relative Cost of Programs, Services, and Activities}}{\text{Divided by } 4.}$$

= (5)District Measure; (then) (6)Add all of the district measures to get a "Total for the State"; (then) $\frac{(7)\text{District Measure}}{\text{Total for the State}}$ = (8)District Apportionment Factor for Part B Purposes (Public Law 90-576)

[a]Equal weight is given to the four elements in the formula.

How to Calculate Each Part of the Formula

1. District Measure of Manpower Needs and Job Opportunities

   [a]County Measure of Job Opportunities = $\frac{\text{County Total of Nonprofessional Workers}}{\text{State Total of Nonprofessional Workers}}$

(b) District Share of County Measure = Total District School Population / Total County School Population

School population in a county and in a school district within a county is considered to be a reliable statistic in estimating the total population on the basis of "persons per school child." It is relatively stable within a county.

(c) District Measure of Job Opportunities = County Measure of Job Opportunities 1(a) X District Share of County Measure 1(b)

School district measures summed for all districts within a county will add to the county measure; county measures summed for all counties within the State will add to 1, which is the State total.

2. District Measure of Vocational Education Needs

(a) Steps Involved

(1) Estimate of the Need of High School Students for Vocational Education = High School Student Population in the District X Proportion of High School Students Going Into Vocations

(2) Estimate of the Need of Unemployed Adults for Vocational Education = General Unemployment Rate for the County X Total District Adult Population, 20 to 65

(3) Estimate of the Need of Unemployed Youth for Vocational Education = Youth Unemployment Rate for the County X Total District Youth Population, 15 to 19

(b) Estimate of the Total Vocational Education Needs for a District =

2(a)(1) + 2(a)(2) + 2(a)(3)

(c) Estimate of the Adjusted District Vocational Education Needs = Estimate of the Total Vocational Education Needs for the District X State Median Income / County Median Income

(d) Add the "estimate of the adjusted district vocational education needs" for all districts to get the estimate of the State total vocational education needs.

(e) District Measure of the Vocational Education Needs = Estimate of the Adjusted District Vocational Education Needs 2(c) / Estimate of the State Total of Vocational Education Needs 2(d)

A school district's measure of the vocational education needs is the proportion of the total State vocational education need accruing to it.

3. District Measure of Reasonable Local Tax Effort

District Measure of the Reasonable Local Tax Effort = District Allotment of Funds under the Basic Foundation Program Calculation / State Allotment of Funds under the Basic Foundation Program Calculation

4. District Measure of Relative Cost of Programs, Services, and Activities in Relation to Average Daily Attendance

(a) District Equalized Current Expenses = District Current Expenses ÷ Per Pupil Current Expenses / State Average per Pupil Current Expenses

(b) District Measure of Relative Cost of Programs, Services, and Activities = District Equalized Current Expenses / State Total Equalized Current Expenses

III. Mathematical Formula for the Disadvantaged

In allocating Part B funds for the disadvantaged, the regular formula for allocating Part B funds will be used with one additional district measure for school dropouts added. The criteria explained in 3.12 will be used in addition to the other criteria used for Part B purposes. Local school districts eligible for support are shown in Part II, Section 2.1. The formula for the disadvantaged is:

(1) District Measure of Manpower Needs and Job Opportunities + (2) District Measure of Vocational Education Needs + (3) District Measure of Reasonable Lo- +

(4) District Measure of Relative Cost of Programs, Services, and Activities + (5) District Measure of School Dropouts

Divided by 5

= (6) District Measure for Disadvantaged; (then) (7) Add all district measures to get the State total for the disadvantaged'

(then) (8) $\frac{\text{District Measure for Disadvantaged}}{\text{State Measure for Disadvantaged}}$ = (9) District Apportionment Factor for the Disadvantaged under Part B (Public Law 90-576)

District measures 1, 2, 3, and 4 are calculated here exactly the same as they are in the regular formula. The district measure of school dropouts is calculated as follows:

(5) District Measure of School Dropouts

$$\text{District Measure of School Dropouts} = \frac{\text{Number of School Dropouts for District}}{\text{Number of School Dropouts in all Districts}}$$

In making allotments to local school districts, the State Board may supplement the Federal funds allocated to a local school district under the formula with State funds so that each school district will be allotted a total amount which is not less than last years allotment for the same programs, services, and activities provided. However, if there is a reduction in the overall appropriation of Federal funds for Part B purposes, the amount allotted to each local school district will be reduced on a pro rata basis.[1]

The Iowa program gives special consideration to two counties which are classified as depressed. Other counties get special consideration if youth unemployment is greater than 12 percent and if total unemployment is greater than four percent. The state's philosophy notes that no provision is made for under employment. Counties receive further special attention if their dropout rate is greater than the 2.45 percent state average and if the counties are areas of the greatest population density. The target populations are the handicapped and disadvantaged. Target areas are the counties referred to above. The program emphasis is on those occupations for health, environmental

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[1] Kentucky State Plan, pages 55-58.

control, job services (especially para-professionals), recreation, and natural resources. A 100 point system is used. Twenty points are allocated for manpower needs for job opportunities, and for a relative ability to pay factor; forty points are allocated for population needs.

3.26 Criteria for Determining Relative Priority of Local Applications

The State Board will determine the relative priority of local applications and the relative priority of career education programs, services, and activities for each of the population groups referred to in 3.15 of the State Plan in terms of the criteria specified in 3.26-1 through 3.26-5 of the State Plan. For purposes of securing reasonable manpower information, the state will be divided into not more than 16 regions or areas.

3.26-1 Manpower Needs and Job Opportunities

In allocating funds among local educational agencies, the State Board will give due consideration to information regarding current and projected manpower needs and job opportunities, particularly new and emerging needs and job opportunities.

The State Board will give particular consideration to those local educational agencies whose proposed career education programs are best designed to fulfill current or projected manpower needs in existing occupations at the local and state level or to fulfill new and emerging manpower needs at local, state and national levels.

The manpower needs and job opportunities will be identified annually through research and surveys conducted by the research unit of the Planning and Support Services Section, State Employment Service, any other State agencies so involved, and the advice of the State Advisory Council.

The evaluations of the State Advisory Council, the Career Education Division staff, and the local advisory committee will be used. Placement of graduates and the reactions of graduates to their training will be reviewed in light of changing occupational patterns.

The annual review of the regional employment predictions will be checked in light of the annual reports from the State Employment Service.

3.26-2 Career Education Needs

In allocating funds among local educational agencies, the State Board will give due consideration to the relative career education needs of all the population groups referred to in 3.1 of the State Plan in all geographic areas and communities in the state, particularly disadvantaged persons and handicapped persons. The State Board will identify the career needs, including the need for special career education programs,

services, and activities for disadvantaged and handicapped students through surveys, studies conducted by local agencies, appropriate sections of the Career Education Division, state agencies, and other pertinent sources. In identifying these needs, consideration will be given to the state and communities of how they relate and their relationship to the necessary input and output of vocational trained personnel; to the capabilities of the various applying educational institutions to provide the occupational training needed, and to the long-range projections in light of information regarding current and projected manpower needs and job opportunities.

Periodic evaluations will be conducted by local educational agencies and State staff to determine, insofar as possible, if the local educational agency is in fact meeting the identified career education needs.

3.26-3 Relative Ability to Pay

In allocating vocational funds among local educational agencies, the State Board will give consideration to the relative ability of the local educational agencies to provide the resources necessary to meet the career needs in the area. Due consideration will be given to depressed areas with high rates of unemployment, designated by Employment Service, U.S. Department of Commerce and State Office of Economic Opportunity. Relative ability to pay will be determined on the basis of a "wealth-per-student" factor. This factor will be computed on assessed property valuations for local tax purposes on an enrollment basis; the data being updated annually by the Administration and Finance Division of the State Department of Public Instruction.

3.26-4 Relative Costs of Programs, Services, and Activities

In allocating funds among local educational agencies, the State Board will give due consideration to the cost of the programs, services, and activities these local educational agencies provide which is in excess of the cost which may be normally attributed to the cost of education in such local education agencies. Data concerning the cost of education on an average daily attendance basis for each school district is available in the State Department of Public Instruction. The source of these data is an annual financial and statistical report filed by the local educational agency. Primary consideration will be given to unusual costs or costs of a special nature for the career education program or service which is not considered to be a normal cost of education.

3.26-5 Other Criteria of the State

Does not apply.

3.27 Application of Criteria in Determining the Relative Priority of Local Applications

3.27-1 The State Board will consider the following criteria in allocating Federal funds to local educational agencies:

-Manpower needs and job opportunities
-Population needs
-Relative ability to pay
-Excess costs

The specific criteria and the weighting procedures are described in the following material:

Criteria	Possible Points
Manpower Needs	20
Population Needs	40
Relative Ability to Pay	20
Excess Costs	20

Each of the merged areas (not more than 17) will be weighted for each criteria from which a state average for each criteria will be determined. After each merged area has been weighted for each criteria and assigned total points, a state average for total points will be determined. The spread from the low point below the average to the high point above the average will be quartiled with a possible 20% reimbursement differential from high to low. This will allow 5% variations per quartile for reimbursement.

Each application will be weighted and the allocated points will determine priorities.

3.27-11 Manpower Needs

The weighting procedure will encourage career education programs that meet the manpower objectives in the state according to the following criteria:

-Meeting the needs based on employment expansion
-Producing skilled manpower in areas of high manpower need
-Meeting a higher percentage of the total labor market demand

Local educational agencies will be given weight according to the manpower needs being met to obtain criteria score.

3.27-12 Population Needs

The weighting procedure will encourage local educational agencies to meet the population needs for career education. Local educational agencies will be weighted on each of the following needs to obtain criteria score:

-Secondary needs
-Postsecondary needs
-Disadvantaged needs
-Handicapped needs

3.27-13 Ability to Pay

The following will reflect the ability of local educational agencies to support the cost of career education programs.

The local educational agencies will be ranked according to the assessed valuation per student in the area and/or K through twelve to determine criteria score.

3.27-14 Excess Costs

The weighting procedure will consider the variations in cost of programs in all areas based on the following:

-Construction costs
-Equipment costs
-Wage costs
-Unusual costs to program--transportation, rent

The local educational agencies will be given weight in terms of the above to determine criteria score.[1]

Oklahoma follows a policy of reimbursement to the limit of funds dependent upon the state plan priority and the demands of effort by the local school district. Oklahoma has a general policy not to reimburse duplicate technical programs at comprehensive high schools and junior or community colleges in the same town. They also pursue a yearly on sight evaluation program of 20 percent of the state's Vo-Tech programs annually. If the programs are not judged satisfactory, reimbursement is dropped. Provisions are made for depressed counties, county dropout rates, population density, youth unemployment, and adult unemployment. The Secretary of Commerce designates the areas as redevelopment or economically depressed communities. Areas of high unemployment are determined on a county-wide basis with additional state agencies being used to help determine if unemployment is greater than six percent or the median family income in the areas is not more than 40 percent of the national median family income. This data is updated annually. To be designated as a special youth unemployment area, the counties youth unemployment rate for 16 to 19 year olds must be greater than the 12 percent overall state average. Special consideration is given to certain counties with large numbers of migrant workers. The migrant workers are not counted in determining the unemployment rate.

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[1]Iowa State Plan, Sections 3.26 and 3.27

3.27 Application of Criteria in Determining the Relative Priority of Local Applications

The State Board will use a weighted systems approach in determining the relative priority of local applications, in the event that the State Board is unable to meet all bonafide requests for vocational programs due to lack of funds. This weighted systems approach will include manpower needs, vocational needs, ability of the school district to pay, and excess costs. Other factors may be considered from time to time as the situation and conditions demand.

The weighted systems approach will also be used by the State Board in determining the percentage amount of the Federal share of vocational-technical programs. Following is a description of the approach:

3.27-1 Weighted Systems Approach

A. The weighted systems approach involves the use of a series of scales where the local educational agencies are ranked. From this the scales may be divided into six portions and values of 0 to 5 assigned. The four factors and their relative weights are as follows:

(1) Manpower Needs
Weight: 5 Points Possible: 25

The local educational agencies are ranked on the basis of criteria outlined in 3.26-1 of this section. If a local educational agency is ranked in the second level (2nd of six levels) of the scale, its total points for this factor would be 20 (5 x 4=20).

(2) Vocational Education Needs
Weight: 5 Points Possible: 25

Types of data as outlined in 3.26-2 of this section will be considered to obtain a scale of rank the local educational agencies. Those local educational agencies which rank highest in this scale would receive the most points. A local educational agency ranking in the fifth level (5th of six levels) would have a point total of 5 (5 x 1=5).

(3) Relative Ability to Pay
Weight: 3 Points Possible: 15

The criteria outlined in 3.26-3 of this section will be used to achieve a ranking of local educational agencies by their ability to pay. Those local educational agencies having the least ability to pay will be given the most points.

(4) Excess Cost
Weight: 2 Points Possible: 10

The criteria outlined in 3.26-4 of this section will be used to achieve a ranking of local educational agencies. Those local educational agencies having the highest costs will be given the most points.

B. Additional Considerations:

Local education agencies will not be denied opportunity to participate in vocational education programs due to an inability to provide local matching funds. Additional consideration will be given to those agencies which in areas considered to be economically depressed. An additional eight points may be awarded local educational agencies located within economically depressed areas.

To help assist local educational agencies which are located in areas considered to be high dropout areas or high youth unemployment areas, projects from those agencies may be awarded an additional seven points.

Projects that have special features which are considered to be demonstration or pilot in nature and which help to meet special needs of the State program may be awarded an additional ten points.

C. Application of the Factors:

The State will review each local application in terms of the rank it has on the State scales and the combined total of each local educational agencies' points. The maximum possible point total would appear as follows:

(1) Manpower Needs Wt. 5 Pts. 25
Scale of 5

(2) Vocational Education Needs
Scale rate of 5 Wt. 5 Pts. 25
(3) Relative Ability to Pay
Scale rate of 5 Wt. 3 Pts. 15
(4) Excess Costs
Scale rate of 5 Wt. 2 Pts. 10

Additional Considerations:

Economically depressed areas	Pts. 8
Schools in high dropout of youth unemployment areas	Pts. 7
Demonstration or pilot projects	Pts. 10

Total Points Possible: 100

D. Each local educational agency will be ranked following the above process and those local educational agencies with the highest point total will achieve highest priority for funding. Those local educational agencies having a low point total will have lowest priority for funding.

3.27-2 Federal Funds to be Paid to Local Educational Agencies

It will be the intent of the State Board to see that persons of all ages in all communities of the State have ready access to training or retraining.

The range of differences among the amounts received by each local educational agency will not necessarily be wide or great. The State School Laws provide aid equalization to all schools, thus enabling a school in a low-valuation area to have a vocational program as easy as a school having a high valuation; therefore, the amounts received by the various local educational agencies will be along the following lines:

A. Secondary high schools--A maximum of $123 per month for each approved vocational program to supplement the basic State aid provisions for teachers' salaries. The range of differences for Federal funds disbursement may be:

Top 16 2/3% of schools with most priority points	$125 per month
Second 16 2/3% of schools with most priority points	100 per month
Third 16 2/3% of schools with most priority points	95 per month

Fourth 16 2/3% of schools with most priority points	$ 80 per month
Fifth 15 2/3% of schools with most priority points	65 per month
Sixth 16 2/3% of schools with least priority points	50 per month

B. Area Vocational-Technical Schools--Federal funds in an amount equal to 25 percent of the total costs of a program will be granted to area vocational-technical schools that offer approved programs that rank in the top 50 percent utilizing the Weighted Systems Approach. If sufficient funds are available, increased reimbursement may be made based on the number of points added for reasons listed under Additional Considerations. A reduction of 25 percent of the Federal funds may be made for each 10 percentile below the State median.

3.27-3 Junior Colleges and Technical Institutes

The priority for the funding of vocational-technical education programs in the State supported colleges and technical institutes shall be based on the Weighted Systems Approach outlined in 3.27-1.

Each program will grade a total number of points. The points of all programs will be added to determine a grand total. The funding of the program will be based on the number of points it is rated over the total points outstanding times the dollars available. For example: Suppose 100 programs carry a total of 8,000 points and there is a total of $400,000 available, the reimbursement of a program having 85 points would be computed as follows:

$$\frac{85}{8000} \times \$400,000 = \$4,250,000$$

3.27-4 Adult Education - Part-time Training

The priority for funding approved part-time adult vocational education programs shall be based on the Weighted Systems Approach outlined in 3.27-1.

Each program will grade a total number of points. The points of all programs will be added to determine a grand total. The funding of the program will be based on the number of points it is rated over the total points outstanding times the dollars available. (See example in 3.27-3.)

In no case would the funding for a program exceed the rate of pay of the instructor of the program. In order to receive the appropriate rate of funding, 12 students must complete the class--a student leaving the class to accept employment in the occupational area for which the training is offered shall be considered a completion. If fewer than 12 students complete the course, the approved rate of funding will be prorated according to the number of students completing the course. For example, if six students complete the course, funding will be made at 50 percent of the approved rate. In case of a critical need of trained personnel in limited numbers in a geographic area, application for waiver of the above criteria may be submitted and approved by the State Board.

3.27-5 Adult Education - Full-time Training

The priority for funding approved full-time adult vocational education programs shall be on the Weighted Systems Approach outlined in 3.27-1.

Each program will grade a total number of points. The points of all programs will be added to determine a grand total. The funding will be based on the number of points it is rated over the total points outstanding times the dollars available. (See example in 3.27-3.)[1]

Some of the states exhibit programs with great state control and inspection of VTE programs to assure certain requirements set by the state are adhered to. Strenuous attempts are made to ensure the quality of all state funded programs. Oklahoma and New Jersey have plans to measure the cost and benefits of individual programs. This information could then be used to expand those programs with the lowest cost to benefit ratio. Agencies are also planned to research adequate data for the decision makers regarding unemployment, handicapped, disadvantaged, income, dropouts, and any other data the funding agency needs to reach a funding decision. Provisions are also made for the continual revision of the data. These agencies are also given the responsibility of projecting the employment

[1]Oklahoma State Plan, Section 3.27.

conditions for various occupations. These data-generating agencies are accountable only to the planning and funding agencies of VTE to assure that correct information is available for the funding decisions.

VI. What Alternative Set of Criteria and Priorities for the Disbursal of Funds Would Increase the Cost-Effectiveness of Monies' Spent?

The Division's method of determining priorities for funding is a simple form of benefit-cost analysis. Student and social benefits anticipated from funding are approximated by the degree to which a particular skill or occupation is in manpower need throughout the state of Illinois. This need is determined by Illinois State Employment Service (ISES) on the basis of past, present and projected job vacancy counts and unemployment rates. Costs of programs are considered to be those costs actually expended upon the program by the local educational agency in question. We will pursue the appropriateness of the benefits measure and costing procedure shortly. We will now devote time and attention to the manner in which the benefit and cost information is utilized by the Division.

Assuming that manpower shortages correctly approximate the benefits which will be derived from a given allocation of funds, the Division correctly concludes that greater manpower shortages mean greater benefits will probably be obtained when funds are spent where the shortages are greatest. There is little to quarrel with here. Similarly, we can hardly disagree with the fact that the Division considers those programs to be most expensive which (according to their calculations) actually are most expensive.

The fault which we find with the funding procedure relates to how the benefit and cost measures, once obtained, are used. The Division chooses to give highest priority (see "Philosophy and Procedures" in Appendix C) to the funding of programs which exhibit: (a) high manpower need; and, (b) high cost. We agree with their manpower priority ranking

but not with their priority ranking of cost. The ratio of benefits to cost (benefits per dollar spent) will be maximized when the cheapest projects are selected (given any level of manpower need), not when the highest cost projects are selected.

An example will help to drive home the preceding point. Suppose that we have two projects, A and B, in which to invest $100 of available funds. Projects A and B both have the highest manpower priority possible. Project A, however, is twice as costly as Project B, and costs $100. Under its current system, the Division will choose to fund expensive Project A on the grounds that it is expensive (given that both projects are high manpower priority). Paradoxically, the same benefits could be obtained by funding cheaper project B and $50 would be left over to fund still other ventures (perhaps even partially funding Project A). That is, if project B were funded instead of Project A, then the $50 remaining could be used to increase benefits and welfare elsewhere.

The previous example reveals that funding practices of the Division do not typically maximize the benefits obtained, given whatever funds they have available to spend. This is equivalent to saying that their funding practices do not minimize the cost of achieving their goal of stimulating vocational-technical education in order to alleviate critical manpower shortages.

Since the passage of the Manpower Development and Training Act (MDTA) in the year 1962, the Department of Labor has funded literally thousands of manpower and training projects and has funded about the same number of benefit-cost analyses of these and similar projects. The aim of the benefit-cost analyses is to determine the economic efficiency of the projects and of the expenditures. Efficiency in these projects has always

meant attempting to get the most from any given amount of funding.[1] In the context of the Division's activities, this would mean getting the most benefits from whatever monies the Division has available to spend. The Division's current funding policy, however, does not encourage, in fact it discourages, getting the most from the least. It tends to do just the opposite by rewarding expensive programs in preference to cheaper programs which promise the same benefits. One need not be much of a businessman to know that when two machines of the same quality will do the same job, but one machine is cheaper to purchase than the other machine, the efficient choice is to purchase the cheaper machine. The Division's present method of applying their benefit-cost estimates unfortunately comes close to reversing the usual concepts of efficiency.

The Division argues in defense of their procedures that they must fund expensive programs in order to get the programs offered. This may be true; however, like any good thing, the cost of high priority manpower programs can become prohibitive. The Division should not fund expensive programs instead of or before cheaper programs which promise to yield the same benefits. The Division may find that it will be most economic and most efficient to fund some programs of less than highest manpower priority simply because the benefits gained per dollar of expenditure there are greater than the benefits gained per dollar of expenditure upon the

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[1]See, for example, Michael E. Borus and William R. Tash, Measuring the Impact of Manpower Programs: A Primer (Ann Arbor, Michigan: Institute of Labor and Industrial Relations, 1970); also, John S. Worley, et. al., Federal Evaluation Policy (Washington, D.C.: The Urban Institute, 1970).

expensive high priority programs which the current funding procedures favor.[1] The focus should be upon getting the most per dollar and not upon making certain that expensive programs are offered.

We will now shift emphasis and discuss the measure of benefits currently being utilized, namely, the relative severity of manpower shortages. A more comprehensive measure is needed. Consider the following hypothetical situation involving two occupations in order to see why. Occupation A is assumed to involve being a Good Humor ice cream man and selling ice cream on the street. One hundred vendors might be needed, but only 80 currently exist. Hence, a 20 percent relative shortage exists. Occupation B involves being a tool and die maker. One hundred tool and die makers are needed, but only 80 exist. Once again, a 20 percent relative shortage exists. Needless to say, the benefits which society will realize from eliminating such shortages will probably be greater if the shortage of tool and die makers is erased. A simple reflection of this is the fact that tool and die makers earn considerably higher incomes than Good Humor street vendors. Society, via the market mechanism, is signalling that the need for additional tool and die makers is more severe and more urgent than the need for additional ice cream vendors.

The previous example illustrates the fact that the measure of benefits used must take into account the additional incomes earned by students

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[1] If the Division is correct, then the highest priority programs will sometimes not be offered because no funding is forthcoming. This is not necessarily bad, however, since the benefit-cost ratio on such programs may be low. Further, the funding of expensive programs could lead to a ballooning of program costs in school districts since such extravagance will enhance their chances of being funded under the Division's present policies.

or trainees who are enrolled in vocational-technical educational programs.[1] That is, the benefit rankings which are utilized must be weighted by the income factor. Otherwise, they may well not accurately indicate what manpower society really needs.[2] One could add further sophistication to the benefits measure by including such things as a measure of the reduced unemployment benefits paid by society, the reduced welfare expenditures which result, and the increased tax payments to government which are attributable to the vocational-technical education.[3] These latter adjustments represent fine-tuning of the benefit measure; the income consideration, however, is basic to the accurate computation of benefits.

Attention must also be given to the cost figures utilized by the Division in determining program and funding priorities. We have argued above that the cost figures are being used in the wrong fashion. Independent of this assertion, however, is the question of whether or not the cost figures themselves are representative of the actual costs incurred in the programs. The cost figures used by the Division tend to

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[1] Income benefits were computed in a recent study for the State of Illinois Advisory Council on Vocational Education performed by James V. Koch, entitled, A Benefit-Cost Analysis of Vocational-Occupational Training at Selected Junior Colleges (Springfield, Illinois: State of Illinois Advisory Council on Vocational Education, 1972).

[2] Note, however, that we are here looking only at the benefit side of the picture. The training of tool and die makers may be very expensive and must be kept in perspective by means of a benefit-cost ratio of some kind.

[3] One of many, many examples of studies in this genre is Einar Hardin and Michael E. Borus, Economic Benefits and Costs of Retraining Courses in Michigan (East Lansing, Michigan: School of Labor and Industrial Relations, Michigan State University, 1969).

be the out-of-pocket costs of the programs; other costs relating to the use of buildings, equipment, and machines are also incurred but are largely ignored because they are not visibly paid out. The fact that the costs are not really met by payments does not mean that they are not incurred. The inclusion of such costs might represent a very fundamental reform, but should nevertheless be considered. As a first step, recipients of funds might be asked the amount and age of fixed assets used in the programs, the estimated original and current value of those assets, and the duration of usage of those assets during the vocational-technical education programs. Such information would be needed to impute a cost which would represent the resource usage of the essentially fixed items listed above.

We will now use the FY1971 data to illustrate the impact of priority systems of funding. First, we will use the Division's FY1972 funding priorities as established in the "Philosophy and Procedures" memorandum to reallocate the funds in FY1971 as if they had been spent under those priorities. Then, we will reallocate the FY1971 monies using our own modification of those priorities. Both sets of funding priorities achieve the same benefits as did the FY1971 program, but do so at a lower cost. Our modification of the Division's priorities is the most efficient of the two (least cost).

Because of the extensive computational work involved and the illustrative nature of the results, a simple random sample of 50% of the original sample was collected. The results from the smaller sample will provide a good approximation of the impact of the FY1972 and our revised FY1972 priorities.

The FY1971 Gross Reimbursement Detail provides the number of formula factor funding credits by OE Code for each local educational agency. We used this and each individual set of priorities to compute the money which each district would receive under that priority set.[1] This means we are holding the demand for VTE dollars constant and varying the cost of achieving that given demand. Or, again, we are holding the need or benefits constant and seeing which funding procedure achieves this for the least money.

Our revised set of priorities reverses the cost component of the Division's FY1972 priorities. We rank relatively lowest cost courses A and procede B, C to a D classification which encompasses the courses with relatively the highest cost. The two schemes are presented in Table Twelve.

The results of this reallocation are encouraging from an efficiency standpoint. The use of the FY1972 Division priorities could have met the same vocational training needs for FY1971 with an average expenditure of $4032 less per district. Using the authors' revised priorities the savings would have been $4253 per district. Keep in mind this understates the cost savings.

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[1]Some OE Codes funded in FY1971 were not to be found in the priority list established by the Division. We were informed that these are set by the Division on an ad hoc basis when the local applications are received and as not written down.

In this case we excluded the OE Code from funding under all three funding schemes so that the differences in funding reflect only those courses that we know for certain what the priority listing was. Thus the true difference between the 1971 expenditures and the two priority expenditures is understated.

Next we explored the potential impact this would have on the responsiveness of the occupational training programs to environment needs.[1] The difference in cost between the FY1971 expenditures and the two priority schemes became dependent variables. We also used the cost differential between the Division's 1972 priorities and our revised set. These and the independent variables used are explained below. In these regressions, the dependent variables are:

1. The difference of the 1971 funding and the 1972 priority funding (71-72)	measured in the actual dollar difference derived by subtracting the amount of the 1972 priority funding from the 1971 funding for each school district.
2. The difference of the 1971 funding and our reallocated priority funding (71-RR)	measured in the actual dollar difference derived by subtracting the amount of reallocated priority funding from the 1971 funding for each school district.
3. The difference of the 1972 priority funding and the reallocated priority funding (72-RR)	measured in the actual dollars difference derived by subtracting the amount of reallocated priority funding from the 1972 priority funding for each school district.

The independent variables are:

1. Assessed valuation (ASDVAL)	measured in assessed dollars per pupil in a school district.[2]
2. Dropouts (DRPOUT)	measured as the percentage of students who drop out per year in a school district.[3]

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[1]The author's would like to thank William Komarek for the aid given to this part of the analysis.

[2]State of Illinois, Office of Superintendent of Public Instruction, 1970 Assessed Valuations and 1971 Tax Rates, Descending Order, Illinois Public Schools. Circular Series A, No. 292, comp. from entire circular.

[3]State of Illinois, Office of Superintendent of Public Instruction, High School Dropouts from 1970-1971, Annual School District Report, comp. from entire report.

Table Twelve
Summary of Components and Course Priority

Division FY1972 Differential Cost Component	Authors' Reallocated Differential Cost Component	Division & Authors' Reallocated Manpower Component	Reassigned Course Priority
A. High Cost	A. Low Cost	A. High Need	A. High Funding
B.	B.	B.	B.
C.	C.	C.	C.
D. Low Cost	D. High Cost	D. Low Need	D. Low Funding

3.	Unemployment (UNEMP)	measured as the percentage of the labor force unemployed in a country.[1]
4.	Aid to families of dependent children (ADC)	measured as the average number of children per 1,000 population by county who qualify for ADC during 1970.[2]
5.	Income (INCOME)	measured as the average income of the population of a district per pupil.[3]

Table Thirteen summarizes the regression of the difference between level of 1971 funding and the anticipated 1972 priority funding on the district's assessed valuation per pupil, the district's rate of dropouts per year, the district's average gross income per pupil, the county's yearly average unemployment rate, and the county's yearly average of the number of ADC recipients per 1,000 population as independent variables. Only dropouts and the number of ADC recipients per 1,000 are significant at the .05 level. The dropout coefficient of 1794 indicates, all other variables being held constant at their average value, a one percent increase in the district's dropout rate would raise the amount of the difference in funding that district would receive by almost $1800. Similarly, if the county's yearly average number of ADC recipients per 1,000 population increased by one person, the difference in funding going to that county would be just over $100. These positive values indicate the 1971 funding is higher than the derived simulated 1972 priority funding.

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[1]State of Illinois, Board of Vocational Education and Rehabilitation, Division of Vocational and Technical Education, A Proposed State Plan for the Administration of Vocational and Technical Education in Illinois, Map 2.i (c), n. p.

[2]Illinois Department of Public Aid, Public Aid in Illinois, comp. from data, Jan. 1970 to Dec. 1970.

[3]Data provided by Dr. Alan Hickrod, Professor of Educational Administration, Illinois State University, Normal, Illinois.

Table Thirteen
Regression Coefficients of the Differences Between
The 1971 Funding and the Anticipated
1972 Priority Funding

Independent Variable	Regression Coefficient	T-Value
DRPOUT	1794.	2.555**
UNEMP	-722.	-.7173
ADC/TH	103.4	2.308**
INCOME	.5597	1.525
ASDVAL	-.0235	-.4181
CONST	8552.	-1.244

$\bar{R}^2 = .41$

$F = 4.01*$

** Significant at the .05 level

* Significant at the .01 level

Table Fourteen summarizes the regression of the differences between the 1971 funding and the reallocated priority funding. Again only the dropout rate and the number of ADC recipients per 1,000 are significant. An increase of one percent in a district's dropout rate, all other variables constant, will bring forth a $3056 increase in the difference of funding to the district. With the same assumption, an increase of one ADC recipient per 1,000 in the county would increase the difference in funding to the district $183.50. Both variables are significant at the .01 level. The 1971 level of funding is greater than the reallocated priority level to do the same job.

Table Fifteen summarizes the regression of the difference in funding created by shifting from the assumed 1972 priority funding to the reallocated priority funding on the independent variables. Again, the most significant variables in explaining this difference are the dropout rate and the number of ADC recipients per 1,000. An increase in the district's dropout rate with all other variables constant increases the funding differential to that district by $1261. If the county's number of ADC recipients per 1,000 increases by one, the funding differential increases by $80, all the other variables constant. The positive values indicate a greater amount of funding for the anticipated 1972 priority funding than the author's reallocated funding to do the same job of meeting vocational education needs.

Table Sixteen compares the significant regression coefficients for the equations relating the differences in funding. The first row describes the funding difference between the two funding formulas listed at the top of the column for a one percent increase in the district's

Table Fourteen
Regression Coefficients of the Differences Between the 1971 Funding and the Authors' Reallocated Priority Funding

Independent Variable	Regression Coefficient	T-Value
DRPOUT	3056.	3.071*
UNEMP	-1634.	-1.145
ADC/TH	183.5	2.890*
INCOME	.5262	1.012
ASDVAL	- 0162	-.2034
CONST	-12,420.	-1.275

$\bar{R}^2 = .46$

$F = 5.04*$

* Significant at the .01 level

Table Fifteen
Regression Coefficients of the Differences
Between the 1972 Priority Funding and the Authors'
Reallocated Priority Funding

Independent Variable	Regression Coefficient	T-Value
DRPOUT	1261.	3.387*
UNEMP	-911.8	-1.707
ADC/TH	80.07	3.370*
INCOME	-.033	-0.1718
ASDVAL	.0073	.2450
CONST	-3872.	-1.062

$\bar{R}^2 = .49$

$F = 5.56^*$

* Significant at the .01 level

Table Sixteen
Comparison of the Significant Coefficients
For the Difference Equations

For 71-72		For 71-RR		For 72-RR	
Ind. Var.	Regression Coefficient	Ind. Var.	Regression Coefficient	Ind. Var.	Regression Coefficient
DRPOUT	1794.	DRPOUT	3056.	DRPOUT	1261.
ADC/TH	103.4	ADC/TH	183.5	ADC/TH	80.7

dropout rate when all other variables are kept constant at their average level and the needs met by both fundings are identical. For the same met needs initiated by the one percent increase in the dropout rate, the anticipated 1972 priority funding would spend $1794 less than the 1971 funding. The identical needs can be obtained by spending $3056 less for the authors' priority funding rather than on 1971 funding, and $1261 less would be spent by using the authors' reallocated funding rather than the anticipated 1972 priority funding. The second row describes the funding difference between the two funding factors listed at the top of the column, for a single person increase in the county's number of ADC recipients per 1,000 population when all other variables are kept constant and the needs met by both fundings are identical. Similar results occur from a one person per 1,000 population increase in county ADC recipients. This increase generates the identical effect with the anticipated 1972 priorities saving $103.40 relative to the 1971 funding. The authors' reallocated priority savings is $183.50 relative to the 1971 funding. The reallocated priority would save $80.70 relative to the anticipated 1972 state priority funding. These savings result from efficiency in allocation. These funds which result from better allocation of VTE occupational training funds can be used to expand the efficient occupational training programs or used to expand other VTE programs since the smaller amount of funds meets the same needs met by the more expensive 1971 funding.

To bring these implications home, if assume that there are two school districts and that one has a 1% higher dropout rate than the other. The FY1972 priorities would meet the same needs met by occupational

training for 36 more regular funding credits in high cost, high manpower priority programs. In that same county, had the authors' revised priorities been used, the 1971 needs could have been met by spending $3,056 less and this money would have funded 61 more regular funding credits in occupational training in low cost, high manpower priority programs.

Finally, an analysis of the FY1971 program expansion has implications for the priority system. Table Seventeen below shows the direction of program expansion for vocational education. It gives the cost, manpower and resultant average funding priorities for funded Initial credits for FY1971 using the 1972 priorities. The data is broken down for the sample, junior colleges and area vocational centers.

Junior colleges accounted for the bulk of new program offerings. The expansion into new program areas has therefore been the greatest in Post-Secondary and Adult Vocational education. Looking at the cost and manpower priorities two things are evident. The expansion has to a large extent taken place in high cost - high manpower priority programs. There was almost no low cost - low priority expansion in FY1971. The high manpower priority expansion is an encouraging trend. Note the particularly high value for AVC programs. The high cost priority indicating high cost program expansion is a less desirable trend depending upon what associated manpower priority these courses have. Unfortunately the exact relationship between cost and manpower priorities cannot be shown here. The average priorities for funding gives some indication of this relationship but also obscures it since two B priorities can give the same funding priority as an AC or AD priority relation between cost and manpower priority.

Table Seventeen
Priority Nature of Program Expansion
1972 Priority of Initial Credits in FY1971

	Number of Initial Credits	Cost				Manpower				Funding			
		A	B	C	D	A	B	C	D	A	B	C	D
		Percentage											
Entire Program (Sample)	3,443	58	25	17	0	48	14	34	4	39	46	14	1
Junior Colleges	58,768	42	30	28	0	50	25	20	5	39	39	22	0
Area Vocational Centers	2,540	35	50	15	0	65	24	11	0	30	58	12	0

The grouping of average funding priority with the B and C classes implies that a substantial part of the high cost courses are associated with lower manpower priorities. This is also supported given the Division's predilection to weigh courses more by cost than manpower priority in achieving the average funding priority.

The area vocational center data indicates at least a moderate pairing of high manpower priority courses with above average cost new programs rather than high cost programs.

In conclusion, previous sections' analyses have shown junior college and area vocational center responsiveness to the initial factor incentives. These account for most program expansion. Analysis of the expansion shows a skewness toward higher cost programs and high manpower priority program expansion. Whether high cost priority programs are also high manpower priority programs is obscured by the averaging process, but many high cost programs appear to be also lower manpower priority programs. Expansion along a high manpower priority - low cost priority path would be encouraged by revising the formula to reverse the present cost priorities.

VII. RESULTS AND CONCLUSIONS

Results of the study indicate courses with a low manpower priority will be curtailed or de-emphasized. The Illinois State Employment Service and the staff of the Division of Vocational and Technical Education are the two agencies which establish these priorities. Their assessment of the future manpower needs of the state will channel and direct local district activity toward or away from any particular occupation. If the assessment and course priorities are accurate only those courses not needed will be curtailed.

The courses expanded by the state occupational training priorities are those with some manpower need and relatively high cost. These courses are funded in greater amounts than other courses with the same manpower need and lower costs. The short run funds could better be allocated so as to have a greater impact. The long run effect is far more serious to VTE occupational training. The funding formula encourages the development of new courses and experimentation in new courses through the initial and special organization factors. This funding and the hope of continued state funding for high cost courses will cause these courses to proliferate. As they do, the funding available to the lower costing, equal manpower need, and more efficient courses will decline. The logical long term conclusion is that the VTE occupational training program will fund high cost programs to the exclusion of the low cost programs which meet the same state need.

The course areas with high manpower need should be expanded. If two courses exhibit the same manpower need, the lower cost course should receive the greater level of funding. The special organization

and initial factors would have the long run effect of encouraging the development of courses which meet the state labor demand, have a high manpower need, and a low cost.

Relative to the 1971 funding the priority funding of the state does indicate a necessary and substantial reallocation of resources. Rather than fund occupational training courses alike, the priority funding attempts to allocate resources to those occupations which hold the greatest possible benefit in the future for those so trained. The establishment of a system of VTE occupational training which classifies occupations suggests this. The beta coefficient associated with the regular factor reflects this reallocation. An earlier section shows how important this is. The priority funding formula's regular component incorporates manpower need into its determination. Since the base more accurately reflects the needs of the state and since it is a term in all the funding factors, the impact of better establishing the base is to substantially reallocate resources.

The regression equations using priority funding differentials demonstrated the ability of the priority funding to reflect the national mandates for vocational and technical education. The positive values of the equations show the same needs can be met through priority funding with less cost. These differences can be explained by the proxy variables indicating need. The factors of the funding formulas themselves reflect the federal requirements to deal with emerging educational needs, socio-economic handicaps, physical handicaps, the ability of the local district to pay, and the cost of programs. Since these are factors in the actual funding formula, the state priority plan if effective in incentive could

reflect the national goals.

The impact of the alternative priorities would be to achieve the same goals as the state priorities at a considerably lower cost. The funds saved through the reallocated priorities could be used for other VTE occupational training programs or for other VTE programs. The long run economic benefits and the viability of the VTE occupational training program surely reside in the funding of low cost courses relative to high cost courses given the same manpower need.

The present program expansion is in high cost and high manpower priority directions. While a substantial portion have both priorities, the averaging prices indicate lower manpower priorities for a good share of the high cost programs. This trend could be changed toward high manpower - less cost programs with a revised set of priorities.

APPENDIX A

Explanation of Relevent Passages of National and State Documents Pertinent to the Setting of Priorities and Criteria by the Division of Vocational and Technical Education.

The Vocational Education Amendments of 1968 authorize funds for Part B-State Vocational Education Programs in Title I, Part A, Sec. 102.(a). Under the same title and part the uses of these funds is described in Sec. 122.(a) (1)-(8).

Paraphrased, these are: vocational education for

(1) high school students including programs designed to prepare them for advanced or highly skilled post-secondary vocational and technical educatior;

(2) persons who have completed or left high school and who are available for study in preparation for entering the job market;

(3) persons (other than those already receiving training allowances under other Acts) who have already entered the labor market and who need training or retraining to achieve stability or advancement in employment;

(4) (A) persons (other than those designated as "handicapped") having academic, socioeconomic, or other handicaps preventing them from succeeding in the regular vocational education program;

(B) handicapped persons;

and for the purposes of

(5) construction of area vocational education school facilities;

(6) vocational guidance and counseling for persons enumerated above;

(7) training through arrangements with private vocational training institutions where the private institution can make a significant contribution, is more efficient or provides services not obtainable in the public sector;

(8) ancillary services and activities to assure quality in all vocational education programs from teacher training through evaluation in light of information regarding current and projected manpower needs and job opportunities.

The use of these funds is constrained to provide minimum percentage allocations to three groups of persons by Title I, Part B, Sec. 122.(c) (1)-(3).

This is paraphrased here:

(1) A minimum of 15% of total funds allowed for Part uses must be expended on persons in (4) (A) above. (Hereafter termed the "Disadvantaged");

(2) A minimum of 15% of Part B allotments must be expended for persons in (2) above. (Hereafter termed "Post-Secondary")'

(3) A minimum of 10% of Part B funds must be spent on persons in (4) (B) above. (Hereafter termed the "Handicapped").

The procedures for the derivation of a state plan and its contents are set out in Sec. 123.(a) (1)-(18) of Title I, Part B.

Subpart (a) (6) is most pertinent to the derivation of criteria and priorities for the allocation of state funds. It is reproduced in its entirety here.

"SEC. 123. (a) Any State desiring to receive the amount for which it is eligible for any fiscal year pursuant to this title shall submit a State Plan at such time, in such detail, and containing such information as the Commissioner deems necessary, which meets the requirements set forth in this title. The Commissioner shall approve a plan submitted by a State if he determines that the plan submitted for that year --

"(6) sets forth in detail the policies and procedures to be followed by the State in the distribution of funds to local educational agencies in the State and for the uses of such funds, specified in paragraphs (1) through (8) of section 122(a), for the programs, services, and activities set forth in the program plans submitted pursuant to paragraphs (4) and (5), which policies and procedures assure that --

"(A) due consideration will be given to the results of periodic evaluations of State and local vocational education programs, services, and activities in the light of information regarding current and projected manpower needs and job opportunities, particularly new and emerging needs and opportunities on the local, State, and national levels,

"(B) due consideration will be given to the relative vocational education needs of all population groups in all geographic areas and communities in the State, particularly persons with academic, socioeconomic, mental, and physical handicaps that prevent them from succeeding in regular vocational education programs,

"(C) due consideration will be given to relative ability of particular local educational agencies within the State, particularly those in economically depressed areas and those with high rates of unemployment, to provide the resources necessary to meet the vocational education needs in the areas or communities served by such agencies,

"(D) due consideration will be given to the cost of the programs, services, and activities provided by local educational agencies which is in excess of the cost which may be normally attributed to the cost of education in such local educational agencies,

"(E) funds made available under this title will not be allocated to local educational agencies in a manner, such as the matching of local expenditures at a percentage ratio uniform throughout the State, which fails to take into consideration the criteria set forth in paragraphs (A), (B), (C), and (D),

"(F) applications from local educational agencies for funds --

"(i) have been developed in consultation with representatives of the educational and training resources available to the area to be served by the applicant,

"(ii) are designed to provide the persons to be served with education programs which will make substantial progress toward preparing such persons for a career,

"(iii) include assurances of adequate planning to meet the vocational education needs of potential students in the area of community served by such agency, and,

"(iv) include a plan, related to the appropriate comprehensive area manpower plan (if any), for meeting the vocational education needs in the area or community served by such agency; and

"(v) indicate how, and to what extent the vocational education programs, services, and activities proposed in the application will meet the needs set forth pursuant to clause (iii); and

"(G) no local educational agency which is making a reasonable tax effort, as defined by regulations, will be denied funds for the establishment of new vocational education programs solely because the local educational agency is unable to pay the non-Federal share of the cost of such new programs;"

The requirements set out in the Vocational Education Amendments of 1968 above for the distribution of funds to local education agencies are manifest in the Illinois State Plan. The most pertinent sections of the Illinois State Plan for FY1971 (1971 Plan) and FY1972 (1972 Plan) will be examined here.

For FY1971 the provisions for meeting the requirements set by the 1968 Amendments enumerated above are contained in Part 1. Section 3.0 and Part 3. Section 1.0 and 2.0 of the 1971 Plan.

Part 1. Section 3.1 cites the general restrictions for the allocation of federal funds to the state vocational education programs. The percentage requirements of Sec. 122. (C) of the Act are paraphrased in Sec. 3.11. (This is not reproduced here because of the similarity to the Act.) Section 3.12 defines those persons specified in Sec. 122. (4) (A) of the Act to be called the "disadvantaged." They are to be identified by the local educational agency in cooperation with the Illinois State Employment Service, the Division of Vocational Rehabilitation, and local

educational agency is given wide latitude in the definition and identification of the "disadvantaged." Local educational agencies are to outline programs especially designed for the disadvantaged. They are to utilize input and involvement from the disadvantaged community in implementing the programs and in recruiting students for the programs for the disadvantaged. Encouragement to set up such programs is provided by the funding formula as discussed later. Handicapped persons are defined and a means of testing and diagnosis setup in Section 3.13. The local agencies are again given wide latitude in establishing and applying the criteria with the cooperation of appropriate agencies and subject to yearly review. No definition, criteria or priority is stated for the Sec. 122.(a) (3) group, the Post-Secondary students. A statement advocating the placing of high priority on manpower needs and job opportunities as a stipulation for the allocation of funds to local educational agencies is made presumably to note the Act's emphasis on manpower priorities stated in Sec. 123.(a) (6) (A) of the Act. Section 3.15 of the State Plan identifies the five groups of persons to be served by paraphrasing Sec. 122.(a) (1)-(4) (B) of the Act:

(a) Persons in high school.

(b) Persons who have completed or left high school and who are available for study in preparation for entering the labor market.

(c) Persons who have already entered the labor market and who need training or retraining to achieve stability or advancement in employment (other than persons receiving training allowances under other legislation).

(d) Disadvantaged persons.

(e) Handicapped persons.

As explained later, persons in groups (a)-(d) are allocated funds via differential funding base rates. Those in (d) and (e) receive an additional factor to be applied to the base funding rate.

Section 3.21 describes the method for the allocation of funds to the local educational agencies. The general content required of the local applications is reproduced below:

3.21-1 Content of Local Applications

All local applications for approval of programs, services and activities shall contain:

(a) A description of a comprehensive total program on which the local agency is requesting funds.
(b) A statement of compliance with State Board minimum requirements of qualifications of staff responsible for carrying out the program.
(c) A justification of need of Federal and State funds and indication of sources and amounts of other funds available for this purpose.
(d) Certification that the application was developed in consultation with area resources.
(e) Assurance that the program, services and activities are designed to prepare persons for employment.
(f) An indication of the percentage of the total student body to be served by the proposed plan and long range plans for meeting occupational training needs of students and meeting manpower needs of the area.
(g) Procedures for evaluating the program, services and activities in terms of these long range plans.
(h) Certification that the program, services and activities meet applicable requirements of the Act, the Regulations and the State Plan.
(i) A one year plan and a five year plan for meeting the manpower needs of the area and the vocational education needs of all potential students of all groups in the area and shall relate to comprehensive area manpower planning.

Section 3.22 establishes approval procedures for local applications for funding as a state vocational education program. These procedures include review by the State Board via the Approval and Evaluation Unit and the State Director.

The criteria for determining the relative priority of local applications are given in Section 3.26. These "criteria" are shown in full here.

3.26 Criteria for Determining Relative Priority of Local Applications

3.26-1 Manpower Needs and Job Opportunities

(a) Manpower needs and job opportunities, both current and projected, shall be based upon the most recent data available from the Department of Labor (local, state and national), surveys conducted locally, upon the recommendations of state and local advisory committees, and/or any privately contracted survey the State Board may deem necessary.
(b) To the extent of practicality, the data collected in (a) above will be used to determine long range program plans.
(c) The results of periodic evaluations (refer to 1.5 State Plan) shall assist the State Board in determining the effectiveness and needs of programs at the local level.
(d) Data collected regarding manpower needs both local and statewide shall be disseminated by the State to all local educational agencies for use in Local planning.

3.26-2 Vocational Education Needs

(a) The State Board shall determine by reviewing the local vocational education plan, submitted by each local educational agency, the relative degree to which those agencies are meeting the needs of all persons who desire vocational training. An evaluation (refer to 3.21 and 3.22 State Plan) by the State Board shall determine to what extent this criteria is being met in each educational agency.

(b) The long range plan shall serve as an instrument to determine the occupational education program needed for satisfactory assurance of substantial progress toward meeting the vocational education needs of potential students.
(c) The periodic evaluation shall be conducted by the Program Approval and Evaluation Unit and shall be articulated with the appropriate units of the Division of Vocational and Technical Education.
(d) Each vocational education program in the State shall be evaluated annually and from this evaluation, program adjustments shall be made.

3.26-3 Relative Ability to Pay

The State Board shall determine the allocation of funds based on the assessed value per student in local educational agencies at the elementary and secondary levels as set forth by the Office of Superintendent of Public Instruction. Such allocations shall be determined at the post-secondary level as set forth by the Illinois Junior College Board. (Currently on a per resident basis).

Priorities shall be given to local education agencies serving depressed areas by application of Factors in 3.27 of this part.

The plus weights of the appropriate factors in 3.27 as determined by consideration of 3.26-1, 3.26-2, 3.26-3, 3.26-4, and 3.26-5 will place funding emphasis on depressed and/or high unemployment areas. (See 1.1 Part III this Plan).

3.26-4 Relative Costs of Programs, Services and Activities

Allocation of funds to local educational agencies shall reflect costs of programs, services and activities provided which are in excess of the cost normally attributed to the cost of education. Consideration shall be given to excess costs accruing to local educational agencies due to excessive construction costs, excessive cost of equipment, excessive instructional costs and/or costs for supporting special services as detailed in the local application.

Funds will be allocated as described in 3.27 (g) of this part. Such excess costs shall be documented in the local application. Information will be updated annually.

3.26-5 Other Criteria of the State

(a) Implementation of initial programs shall be given priority by the State Board in relation to funding of ongoing programs.
(b) Equipment, construction and other costs not included in the basic per capita formula, will be determined on an individual agency basis.

Rather than establish specific criteria, it is suggested that primary consideration be given to manpower needs, vocational educational needs, relative ability to pay, relative costs of programs, services and activities, new programs and nonformula costs in the formulation of a local application. Sources of data for manpower needs and relative ability to pay considerations are suggested. It is noted that priority shall be given to depressed areas by application of factors to the base allocations for local programs.

The application of the criteria in determining the relative priority of local applications (Section 3.27) is reproduced below:

3.27 Application of Criteria in Determining the Relative Priority of Local Applications

The weights of all of the following factors will be determined and adjusted annually (refer to 1.1, Part III, State Plan) on the basis of total projected enrollments by groups to be served, (refer to 3.15 State Plan) and the projected amounts of Federal, State, and local funds available. Portions of the total funds will be earmarked to cover "set asides" for disadvantaged, handicapped, and post-secondary programs and to cover the plus weights of priority factors. Distribution of these "set asides" will be on a per capita basis or by contract when more appropriate.

Data derived from consideration of all points under 3.26 of the State Plan will be considered annually in establishing factor weights.

Allocation of funds to local educational agencies shall be made by applying the following factors:

(a) Basic per capita on average vocational, education membership: Elementary, secondary, post-secondary, adult.
The following factors shall be added as applicable:

(b) Factor 1--Funding ratio--ability of local educational agency to pay.

(c) Factor 2--Programs for disadvantaged persons.

(d) Factor 3--Organizational structures serving special groups.

(e) Factor 4--Implementation of initial programs.

(f) Factor 5--Programs designed to meet manpower needs of new and emerging occupations and priority areas.

(g) Factor 6--Programs for handicapped persons.

Thus, a base per capita funding that is education-level specific is established and priority factors are applied as percentage of base add-ons.

Part III, Section 1.11 further defines the allocative process and is reproduced below:

1.11 Allocation of Part B Funds by Formula

Funds will be allocated to local educational agencies based on the number of credits or contact hours to be earned by students who are enrolled in approved vocational-technical programs. This base amount will be determined for each level of education (secondary, post-secondary, and adult) by the State Board of Vocational Education and may be adjusted yearly. Secondary and Post-Secondary credit programs will be reimbursed per unit of credit. Adult non-credit vocational-technical education programs shall be reimbursed on student contact hours. Elementary occupational information programs shall be reimbursed per student enrolled at a level set by the State Board.

In addition to the above basic amounts which will be distributed to all eligible school districts, additional monies will be allocated as mandated by the Act to give priorities to programs which qualify as Manpower needs, relative ability to pay, and differential costs of Vocational Education. These additional funds will be computed using one or more of the following weighted plus factors as additions to the basic claim.

1.11-1 Basic Claim

The basic claim will be computed by multiplying the number of student units of credit or contact hours as applicable for students enrolled in approved courses by the base amount set by the State Board.

1.11-2 Additional Factors

Factor I--Relative Ability to Pay

Each local educational agency which offers on approved vocation-technical program qualifies for Factor I in relation to their relative wealth. Relative wealth will be determined in public schools by comparing assessed valuation (tax base) per pupil or full time equivalent (FTE) for junior college districts. A sliding scale from 0 to 100% of the base amount will be added to more nearly equalize educational opportunities and becomes the adjusted basic amount. (All districts qualify for the basic funds, but the least wealthy in any given category may qualify for double the basic reimbursement.)

Factor II--Provisions for Educating Disadvantaged Students

If special provisions are made in the local district plan to provide vocational education for disadvantaged persons (as defined Part I--Section 3.12) additional reimbursement may be claimed as follows: A sliding scale of 10% to 50% of the base amount figure may be added for the number of student units in which disadvantaged students are enrolled.

Factor III--Special Organizations

Special organizations are defined as approved area vocational centers or cooperative joint agreements between school districts. A sliding

scale from 10% to 50% of the base amount will be used to add additional funds as reimbursement for student units earned in programs which are designed to serve students from two or more school districts.

Factor IV--Initial Programs

Initial programs are defined as programs offered for the first time in an educational institution. A sliding scale from 10% to 50% of the base amount may be added for the first year to such programs to encourage schools to expand their vocational offerings. These additional funds are provided to help defray the costs of implementing new programs.

Factor V--Manpower Priorities

The Manpower priorities factor may be added to the base amount when an educational institution offers programs for students which are designated by the State Board in cooperation with the Illinois State Employment Service as being priority areas of manpower shortage in which a low proportion of the training need is being met. Ten to fifty percent of the amount figure may be added if such programs are approved.

Factor VI--Programs for Handicapped

An additional 10% to 50% of the basic amount may be added to the reimbursement claim if a school offers programs and services for handicapped persons (as defined in Part I--Section 3.13). This amount will be computed on the number of student units earned by such persons.

1.11-3 Summary of Funding by Formula

Base amount by category and Factor I shall be designated by the State Board.
Factors 2 through 6, where applicable, shall be computed as a percent of the base amount and none will be cumulative.
Total funding to a local educational agency will be the sum of the above funding factors and the basic claim.

2.12 Persons to be Served

2.12-1 Secondary

Expanded programs for persons in secondary education will emphasize (a) a sequential comprehensive, well articulated program beginning with occupational information followed by occupational orientation capped by occupational experiences; (b) curricula planned to meet current and projected manpower needs; (c) comprehensive programs accessable to a greater number of students suited to the abilities, interest, and needs of such students. Primary objectives of such programs will be to provide entry level knowledges and skills in less than baccalaureate degreed vocational pursuits and/or preparation for advanced occupational experiences at the post-secondary level.

2.12-2 Post-Secondary

Expanded programs for persons who have left the secondary schools or who have completed high school will emphasize (a) a comprehensive well articulated curricula that permits intensive short term vocational competencies, certificated and licensure competencies, as well as Associate Degree technical competencies; (b) curricula planned to meet current and projected manpower needs; (c) accessability to a greater number of young adults programs suited to and designed for their abilities, interests, and needs. Primary objectives of such programs will be to provide job entry level skills and knowledges in less than Associate Degree vocations; competencies for licensed vocations; and advanced competencies typically Associate Degree Technological vocations.

2.12-3 Adult

Projected allocation of $500,000 Federal and $1,127,119 State has been estimated for programs which are designed for persons who have completed or discontinued their formal education and who desire to enter the labor market and those who have already entered the labor market but need to upgrade their skills or learn new ones to insure job stability or advancement in the labor market. (Refer to Table 1 of this Part)

Funding may be through either secondary or post-secondary local educational agencies as needs are determined. Priority on funding of adult programs will stress junior college responsibility as mandated by the Illinois Junior College Act.

2.12-4 Disadvantaged Persons

Vocational programs for disadvantaged persons shall be comprehensive in scope and provide services in addition to the regular vocational education program in order to enable the disadvantaged person to meaningfully enter the world of work. Funds have been provided for the vocational education of disadvantaged persons who by virtue of their disadvantage require specially designed educational programs and related services in order to succeed (section 3.12, Part I of the State Plan.) Cooperation and coordination between organizations and agencies representing disadvantaged persons is encouraged in implementing special services and programs.

Specific criteria for the identification of "disadvantaged persons," within the intent of the Vocational Education Amendments of 1968, will be determined by the local educational agency in cooperation with persons and/or agencies involved in such fields as guidance, psychology, and counseling (Section 3.12, Part I of the State Plan.) Specific criteria and additional services must be developed and identified in the local annual plan and/or in special contractual agreements.

Projected allocation of funds for programs designed for persons designated as disadvantaged pursuant to 3.12 or Part I of the State Plan shall meet the percentage requirements as set forth in 3.11 of Part I of the State Plan.

An expenditure of $2,490,000 of Part B funds and $1,660,000 of Section 102(b) funds is estimated for programs for the disadvantaged in fiscal 1971. Priority areas for funding shall be depressed areas, areas of high dropouts, and areas of high youth unemployment. (Refer to Table I of this part.)

2.12-5 Handicapped Persons

Programs for the handicapped shall provide youth and adults entry level vocational skills or a sound basis to enter programs from which they may make direct entrance into employment. Funds have been provided for the vocational education of persons who by virtue of their handicapping condition cannot succeed in the regular vocational education program without special educational assistance (Refer to 3.13-1, Part I of the State Plan) or who require a modified vocational education program.

Projected allocation of funds for programs designed for persons designated as handicapped pursuant to 3.13 of Part I of the State Plan shall meet the percentage requirements as set forth in 3.11 of Part I of the State Plan.
An expenditure of $1,660,000 of Part B funds is estimated for programs for the handicapped in fiscal year 1971. (Refer to Table I of this Part.)

2.13 Areas to be Served

The geographical distribution of allocated funds for 1971 (6.0, Table 8, Part II) will be made according to priorities for categories of persons specified in 2.1 of the long-range plan as follows:

2.13-1 Economically Depressed and High Unemployment Areas

Part II, long-range program plan provisions, include the following geographical areas by map:

Map 2.1 (a)--counties in which the general assistance is 10 persons per 1,000 population or higher.

Map 2.1 (b)--counties in which the aid to dependent children is 100 children per 1,000 population or higher.

Map 2.1 (c)--counties in which general unemployment is 6% or higher.

Map 2.1 (d)--designated Model Cities in Illinois--Chicago, East St. Louis, Rock Island and Carbondale.

Two methods of funding will be utilized in serving occupational program needs in economically depressed and high unemployment areas.

(a) Using the criteria for allocation of funds given in 3.27 of Part I, Administrative Plan, and 1.0, this part, all regular programs in the State will have applied factors for such designated areas, i.e. ability to pay factor, disadvantaged factor, and handicapped factor.

(b) Funding for depressed areas by special contract with the local educational agencies will give top priority to these areas. These include special contracts using Disadvantaged and Handicapped funds from Part B, Disadvantaged funds from 102(b)--Part B, Consumer and Homemaking funds from Part F, Cooperative Education funds from Part G, Work Study funds from Part H, and Exemplary funds from Part D.

2.13-2 Areas of High Youth Unemployment and School Dropout

Part II, Long Range Program Plan Provisions, includes the following geographical areas by map:

Map 2.1 (e)--substantially high youth unemployment by county.

Map 2.1 (g)--excessive school dropout by county. Additional pockets of high drop-out may occur in unique situations.

Funding for these target areas is described in the preceeding Section, 2.13-1.

2.13-3 Areas of High Population Density

Map 2.1 (f), Part II, depicts the nine Standard Metropolitan Statistical Areas (SMSA) in Illinois.

Funding for these designated areas will receive priority when target situations described in 2.13-1 and 2.13-2 of this part are present.

2.14 Occupational Offerings

> The instructional program offerings planned in Tables 2 and 3 of this part were directly affected by population, present and future training planned, and job opportunities projected in Table 1 of the long-range plan. The local educational agencies will plan programs where a current or future labor market exists.

The FY1972 State Plan adopts the language of the FY1971 Plan Provisions of Part I. Section 3.0 unchanged.

Part I. Section 1. makes minor changes in the language of the FY1971 State Plan with the notice that the State Board was revising the formula. The relative ability to pay factor adopts a 0 to 75% sliding scale. The other factors take on a 0-50% sliding scale rather than the 10-50% of FY1971 State Plan guidelines. The provisions of Part III. Provision 2. were essentially unchanged from the FY1971 to FY1972 State Plan. There is an expanded enumeration for the use of funds for the disadvantaged.

2.12-4 Disadvantaged Persons

> Vocational programs for disadvantaged persons shall be comprehensive in scope and provide services in addition to the regular vocational education program in order to enable the disadvantaged person to meaningfully enter the world of work. Funds have been provided for the vocational education of disadvantaged persons who by virtue of their individual situation require specially designed educational programs and related services in order to succeed (Section 3.12, Part I of the State Plan.) Cooperation and coordination between organizations and agencies representing disadvantaged persons is encouraged in implementing special services and programs.
>
> Specific criteria for the identification of "disadvantaged persons," within the intent of the Vocational Education Amendments of 1968, will be determined by the local educational agency in cooperation with persons and/or agencies involved in such fields as guidance, psychology, and counseling (Section 3.12, Part I of the State Plan). Specific criteria and additional services must be developed and identified in the local annual plan and/or in special contractual agreements.

Funds provided under Part A, Section 102(b) and Part B, as projected in Table 1, will be allocated by special contract and regular reimbursement for the following types of programs, activities, and services which are applicable to disadvantaged persons and which are recognized as priorities for funding. Priority will be given geographic areas of high youth unemployment and excessive school dropout rates. Applications for contractual agreements should be submitted in appropriate format to the Special Programs Unit. Regular program funding will be included in local district one-year plans. The following types of programs and/or educational services for disadvantaged persons are:

1. Individual services to sustain the disadvantaged student in regular vocational programs.

2. Special vocational education programs at the secondary, post-secondary and adult levels.

3. Programs in State supported institutions for fulltime inmates, work-release inmates, recently paroled inmates and other disadvantaged persons.

4. Programs for migrant workers and their dependents.

5. Programs for probationary youth and delinquents in juvenile centers.

6. Special guidance and placement services for dropouts in continuation schools.

7. Coordination with other state agencies conducting programs for the disadvantaged.

8. Special services for elderly persons in areas of counseling, training, retraining and job placement.

9. Provisions for teacher-aides in programs for disadvantaged.

10. Conduct in service workshops for teachers and the development of curriculum materials in programs for the disadvantaged.

11. Special programs for members of racial and linguistic minorities.

12. Services in work adjustment, vocational evaluation, and guidance for disadvantaged youth and adults.

APPENDIX B

Letters and Memoranda Establishing Criteria and Priorities for the Distribution of Funds to Districts for Vocational and Technical Education FY1971.

State of Illinois

Office of the Superintendent of Public Instruction

BOARD OF VOCATIONAL EDUCATION AND REHABILITATION
405 Centennial Building
Springfield 62706

Dr. Michael J. Bakalis
Superintendent

Vocational and Technical Education Division
Sherwood Dees, Director

March 24, 1971

Executive Secretary, Illinois Junior College Board
Presidents of Junior Colleges
Superintendents of Educational Service Regions
Superintendents of School Districts

Dear Educators:

Enclosed are a number of information sheets relative to the funding policies for the Division of Vocational and Technical Education for fiscal year 1971.

These policies were adopted by the State Board of Vocational Education and Rehabilitation at their meeting on March 16, 1971.

Any questions regarding these policies or the effects they will have on funding at the local level should be directed to the Director of the Division of Vocational and Technical Education.

Your continued support of this segment of the total educational program is appreciated.

Sincerely yours,

Michael J. Bakalis
Superintendent of Public Instruction
Executive Officer
Division of Vocational and Technical Education

Enclosures

Division of Vocational and Technical Education
General Program Funding
Policy for FY 1971

Adopted by Board Action March 16, 1971

As an interim step toward a complete revision of funding policies and procedures for FY 1972, the following basic principles on which funding for the current year (FY 1971) is to be made was adopted by the State Board:

a. Board designated Manpower priorities occupations -- Health Occupations -- funded at the base amount of:
   Secondary - - - - $50.00 per credit
   Post-Secondary- - 7.50 per semester hour
   Adult - - - - - - .25 per contact hour

b. Programs for Handicapped students funded at a base up to that in (a) above as required to meet federal requirements.

c. Programs in Area Secondary Centers funded at a base of $40 per credit.

d. Programs at the Post-Secondary level funded at $6.00 per semester hour; $4.00 per quarter hour.

e. All other programs funded at a base of:

   1. Elementary Information program $ .30 per student per year
   2. Secondary
      Orientation and preparation up to 7.50 per credit
      Occupational Training * 30.00 per credit
   3. Adult Occupational Training .15 per contact hour

f. The following factors will be applied to base as applicable at amounts indicated below:
   1. Relative ability to pay -- additional 80% of base for lowest relative ability group and scaled down to no additional added to base for those districts with high relative ability.
   2. Programs of Disadvantaged students -- additional 30% of base.
   3. Programs of Special Administrative organization -- additional 30% of base.
   4. Manpower priorities programs -- Health Occupations -- additional 30% of base.
   5. Programs of Handicapped -- additional 40% of base.

These policies were established on the basis of projections from first semester (quarter) and summer session claims. If total claims vary greatly from these projections, adjustments will be made accordingly.*

Division of Vocational and Technical Education
Effect of Funding Policies
on Local Educational Agencies
FY 1971

General Program Funding -- on Credits (as compared to last year)

ELEMENTARY PROGRAM	-- Approximately 350% increase in total funds for this purpose over last year. Average student funded at approximately 50% of level of last year.
SECONDARY PROGRAM -	
Orientation Program	-- Approximately one-half in total funds for this purpose as compared to last year. Average credit funded at approximately 40% of last year.
Occupational Training	-- Approximately 9% increase in total funds for this purpose as compared to last year. Average credit funded at approximately 4% above last year.
Area Center	-- Approximately 8% increase in total funds for this purpose over last year. Average credit funded at approximately 75% of last year.
POST-SECONDARY PROGRAM	-- Approximately 15% decrease in total funds for this purpose as compared to last year. Average credit hour funded at approximately 70% of last year.
ADULT PROGRAM	-- Approximately 13% increase in total funds for this purpose over last year. Average contact hour funded at approximately 7% above last year. (The large program in Health Occupations at the adult level accounts for this increase in average level of funding)

Area Center Phase I Moratorium Status

The moratorium on Phase I proposals for secondary area vocational centers remains in effect until such time as it is removed by State Board action.

Funds allocated from FY 1971 appropriations for Phase I proposals approved prior to the moratorium period have been obligated in total and no funds are available for the remainder of the current fiscal year.

Allocation of funds for the remaining Phase I proposals approved prior to the moratorium is dependent upon Board action and availability of funds in FY 1972.

Status of the Phase I moratorium and FY 72 funds will be announced when determined.

March 22, 1971

Division of Vocational and Technical Education
Funding Policy Explanation
FY 1971
(See General Program Funding Policy for FY 1971)

The following explanation of FY 1971 funding policy is given to clarify points on which most frequent questions arise.

Each step has precedence over succeeding steps if one step appears to be in conflict with another.

a. Manpower priorities funding levels for health occupations are for occupational training only.

b. 10% of Part B federal funds are required to be spent for programs for the handicapped. The secondary $50.00 base; the post-secondary $7.50 base; and the adult $.25 base will be used as the upper limit for funding handicapped students to attain this required amount.

f.

1. Relative ability to pay -- Equalized at 80% for lowest ability

Old FY 1970 Factor	New FY 1971 Factor
1.0	.8
.9	.7
.8	.6
.7	.5
.6	.4
.5	.3
.4	.2
.3	.1
.2	.05
.1	.0
.0	.0

1, 2, 3, 4, and 5 percentages are applied as plus factors to applicable base for any specific program as indicated in a, b, c, d, and e of the policy.

March 22, 1971

Division of Vocational and Technical Education
General Principles for Funding Policies
FY 1972

After two year's operation under the 1968 Amendments to the Vocational Education Acts, certain facts have become apparent:

1. The reality that Federal funds which have become available are far below that anticipated at the time of implementation of the program in the State.

2. The tremendous growth in total program is far in excess of the most liberal projections.

3. The availability of more recent data indicates varying levels of differential costs for various occupational programs.

4. An analysis of where dollars are spent and for what purposes does not always indicate maximum productivity, and

5. The directions of the program and the principles of funding, even though successful, need modification and refinement.

In keeping with this need for reassessment and modification, funding policies adopted by the Board for FY 1971 were designed to serve as an interim step toward a more complete change in FY 1972.

Due to these changes contemplated by the Board, a statement of general direction should be helpful to local agencies in planning programs for future operation.

The Board has generally agreed upon pursuing the following principles for future funding:

1. Priority assignment of each approved occupational course upon which a funding level would be applied. Such a funding level would have a base proportionate to the priority assigned, be realistic in terms of funds available, and would be applied irrespective of the level of the institution.

2. Reassessment of add-on factors and their values in keeping with priority of the objective of each.

3. Strive for a degree of comprehensiveness of local program through funding benefits.

Local agencies will be informed when definite policy has been established.

March 22, 1971

APPENDIX C

Letters and Memoranda Establishing Criteria and Priorities for the Distribution of Funds to Districts for Vocational and Technical Education FY1972.

Report on Funding -- Philosophy and Procedures
FY 1972 and FY 1973

The State Program of Vocational and Technical Education in Illinois is one of the State Board of Vocational Education and Rehabilitation contracting with public and private local agencies -- The Delivery System -- to provide programs, services, and activities designed to provide Career Education in the broad spectrum of preparation for occupational competency.

This includes instructional programs to assist individuals in becoming acquainted with, prepared for, and trained in skills for entering the world of work or upgrading competencies for advancement or re-entry. It also includes ancillary services and activities designed to complement the primary purpose of the vocational and technical education program.

The Division of Vocational and Technical Education, under the State Board, administers funds appropriated at State and Federal levels for these purposes. Financial support, through reimbursement to local agencies, is based upon priorities of manpower need and of differential costs, as well as ancillary priorities established to best assist in the total State program.

In addition to administering funds, the Division staff provides consultative services to local agencies to assist them in better providing a quality program designed to serve the needs of individuals and provide needed manpower for the communities, the State, and the Nation.

The present policies of the State Board provide for financial assistance to local educational agencies from kindergarten through adulthood for approved programs of occupational information, occupational orientation and preparation for entering occupational training, and occupational training -- CAREER EDUCATION. The following page summarizes the levels of approved programs and maximum level of funding for each.

APPROVABLE PROGRAMS, SERVICES, AND ACTIVITIES

FOR USE OF VOC/TECH FUNDS

ram by Type		Level of Students	Basis for Reimbursement	Types of Services, Activities and/or Programs	Maximum Funding Base
APPROVED OCCUPATIONAL INFORMATION PROGRAM		Elementary Grades - Typically K-8	Funded on number of students enrolled	Providing comprehensive, occupational information in a systematic, coordinated and sequential program.	Up to 50 cents per student per year plus applicable factor
APPROVED OCCUPATIONAL ORIENTATION PROGRAMS Preparing students for approved occupational training in five occupational areas: Ind. Orient. Applied Bio & Ag. Bus. Mkt., & Mgmt. Health Personal & Public Services		Typically 9th and 10th grade 14 and 15 years of age	Number of students enrolled on eleventh day of classes multiplied by carnegie units of credit assigned to class Funded at a lower rate than occupational training programs.	Background orientation and preparation for approved occupational training programs, including the ancillary services necessary for a quality program.	Up to $10 per high school credit plus applicable factors
APPROVED OCCUPATIONAL TRAINING PROGRAMS (Classroom, laboratory, and/or on-the-job experiences.)	Secondary	Typically 11th and 12th grade. 16, 17, 18 years of age and up.	Number of students enrolled on eleventh day of classes multiplied by carnegie units of of credit assigned to class. Funded at designated secondary rate.	Programs designed to train students for entry level employment and/or additional training which includes the ancillary services necessary for quality programs.	Up to $50* per high school credit plus applicable factors
	Post-Secondary	Typically 13th and 14th grade. 18, 19, 20 years of age and up.	No. of students enrolled multipled by the credit hours. Enrollment taken at mid-semester or mid-quarter. Funded at the designated post-secondary rate.	Programs designed to train students for entry level employment or employment at the technical level, which includes ancillary services necessary for quality programs.	Up to $7.50* per semester hour credit ($5.00* per quarter hour) plus applicable factor
	Adult (courses which do not receive H.S. or college credit)	Typically those out of school who need training or retraining	No. of students enrolled multiplied by the contact hours. Enrollment taken at third meeting of class. Funded at the designated adult rate.	Training or retraining of persons for gainful employment who are out of school. Necessary ancillary services shall be provided.	Up to 25 cents* per student contact hour plus applicable factor
APPROVED SPECIAL CONTRACTS		For whomever and wherever the need exists.	Enrollees of Program and costs involved. Funded at contracted amount.	Programs designed to fit the needs of individuals involved--research, development, exemplary, all specifically funded programs under the act, professional and curriculum development, and manpower development and training programs, and any other needed services, activities, and/or programs.	Reimbursement according to terms of contract

*Applicable Level of Priority Determines Funding Base

Appropriations for Vocational and Technical Education at both State and Federal levels are on a fixed dollar amount and are not based on work load or a legislated base of reimbursement. Therefore, all Board policy for reimbursement is on an "up to" basis. This dictates that the claims are paid on a prorated percent (up to 100%).

Due to growth of program each year, as the Career Education concept penetrates the decision-making level in the local schools, and the somewhat leveling off of State and Federal appropriations, the amount reimbursed per student is decreasing. This has been somewhat offset by increased state aid to the public school and junior college districts.

Through the three phase Evaluation System, only programs which meet the requirements of the Program Approval and Evaluation Unit as "approved programs for reimbursement," are reimbursed. Many programs which in themselves are good and serve a definite purpose at the local level are not included in the approved list as indicated above and are not reimbursed by this Division. The approval of an Occupational Training Program is dependent upon its direct relation to preparing a person for entry level employment.

Many adult programs such as interior decorating, furniture upholstering (or similar crafts), woodworking (for leisure), etc., etc., etc. are not approved for reimbursement from vocational and technical funds. In like manner, many of the related courses at the secondary and post-secondary levels are not approved for reimbursement even though the courses are very good and complement the skill training part of the program. Examples of these courses are: Business English, Technical Communications, Technical Match, Technical Science, Applied Physics, Human Relations, etc., etc., etc.

Occupational information, orientation, and preparation programs are approved only if the program is sequential and leads to occupational training which will be available to the student when he has reached this level of development.

The programs are classified by level when the local plan is reviewed and approved. Numbers 1 through 4 plus an NA classification are used to indicate classification for Funding Purposes:

1. Occupational training - highest level of funding on a priority basis

2. Related courses - not funded

3. Orientation and preparation for occupational training - lower level of funding

4. Elementary Program of Occupational Information - very low level of funding

NA Not approved as a reimbursed vocational course

The occupational training courses (No. 1's) are further classified by priority. The two components of the priority listing for a given occupational training course are differential cost and manpower priority. These have been assigned by the Division staff and Illinois State Employment Service.

These classifications are indicated by the letters:

A - Highest priority -- funding up to base amount
B - Above average priority -- average funding
C - Average priority -- low funding
D - Low priority -- no funding

In addition to varying base amounts depending upon program classification and priority classification, several factors are added to base amounts in order to promote programs, services, and/or activities for target populations or target areas. These are:

Factor 1 - An additional 0% to 80% of base amount dependent upon the relative ability of the local agency in comparison to other like agencies.

Factor 2 - An additional 30% of base amount for services and activities for the disadvantaged person.

Factor 3 - An additional 30% of base amount for programs serving two or more districts.

Factor 4 - An additional 30% of base amount for programs offered by an agency for the first time (year).

Factor 5 - An additional 40% of base amount for services and activities for the handicapped person.

The sum total of applicable base amount plus the product produced by all applicable factors on that base amount is the reimbursement any given unit (credit, semester or quarter hour, or contact hour) will generate.

In summary, funding of an occupational program is made only through approval of that program as part of the local agencies annual plan. Funding may be provided for kindergarten through adult programs when designed in a sequential systematic manner to lead the student through career development culminating in occupational competency. Only programs or segments of programs designed to accomplish this end are fundable under the Illinois State Plan for the Administration of Vocational and Technical Education.

Support by special contractual agreement with public and private agencies is primarily limited to MDTA programs (under the Manpower Development and Training Act), Professional and Curriculum Development, Research and Development activities (Part C and D Federal funds) and the administration of line-item Federal funds for specific purposes under the Vocational Education Acts:

Consumer-Homemaking - Part F funds
Work-Study - Part H funds
Cooperative Education - Part G funds
Programs for Disadvantaged - Part 102(b) funds

In addition to the formula reimbursement for program operation, reimbursement is made on instructional equipment for approved vocational and technical education programs in post-secondary institutions and secondary area vocational centers for a limited budgeted amount based upon the extent of past financial support for each of these agencies.

Through the Illinois School Building Commission, State appropriated funds are allocated for construction to Secondary Area Vocational Centers which have been so designated by the State Board.

State of Illinois

Office of the Superintendent of Public Instruction

BOARD OF VOCATIONAL EDUCATION AND REHABILITATION

Springfield 62706
1035 Outer Park Drive

Michael J. Bakalis
Superintendent

Vocational and Technical Education Division
Sherwood Dees, Director

December 6, 1971

Memorandum

To: Executive Secretary, Junior College Board
Superintendents, Educational Service Regions
Junior Colleges and Community College Presidents
Chief Administrators, Public School Districts

From: Sherwood Dees, Director
Division of Vocational and Technical Education

Subject: Priority Listing of Programs and/or Courses for Funding Purposes for FY 1972

The attached list of programs and/or courses are those being used by the Division for funding the regular programs for FY1972.

As you know, this is the first year for this principle of funding. Refinement will be made as better data are available and differential costs which were established by this Division and Manpower priorities which were established by the Illinois State Employment Service.

In each case this listing encompasses state-wide averages and does not necessarily coincide with proven costs or manpower needs of a particular junior college or public school district.

Your cooperation and patience will be of great assistance to us in administering the principle of priority funding. We feel that the principle is sound; the administration of it is most difficult.

DIVISION OF VOCATIONAL AND TECHNICAL EDUCATION

Listing of Priorities
For Program Funding for FY 1972
Occupational Training Programs Only

OFFICE OF EDUCATION CODE NUMBER	OCCUPATION OR COURSE NAME	DIFFERENTIAL COST PRIORITY	MANPOWER PRIORITY	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
01.0100	Agricultural Production	C	D	C
01.0101	Animal Science	C	D	C
01.0102	Plant Science	C	D	C
01.0103	Farm Mechanics	B	C	B
01.0104	Farm Business Management	C	C	C
01.0200	Agricultural Supply & Service	B	C	B
01.0201	Agricultural Chemicals	B	C	B
01.0202	Feeds (Processing & Dist.)	C	C	C
01.0203	Seeds (Processing & Dist.)	C	C	C
01.0204	Fertilizers (Plant Food)	B	C	B
01.0300	Agriculture Mechanics	A	C	B
01.0301	Agricultural Power & Machinery	A	D	B
01.0302	Agricultural Struct. & Conveniences	C	D	D
01.0303	Soil Management	C	C	C
01.0304	Water Management	C	C	C
01.0305	Agricultural Mechanics Skills	B	C	B
01.0306	Agricultural Construction & Maint.	C	D	C
01.0307	Agricultural Electrification	B	C	B
01.0400	Agricultural Products	B	D	C
01.0401	Dairy Products	B	D	C
01.0402	Nonfood Products	B	D	C
01.0500	Ornamental Horticulture	A	C	B
01.0501	Arboriculture	B	C	B
01.0502	Floriculture	B	C	B
01.0503	Greenhouse Operations & Management	A	C	B
01.0504	Landscaping	A	C	B
01.0505	Nursery Operation & Management	A	C	B
01.0506	Turf Management	A	C	B
01.0600	Agricultural Resources	A	C	B
01.0601	Forests Conservationist	C	B	B
01.0602	Recreation Director (Pk. Ranger-Mgr)	B	B	B
01.0603	Soil Conservationist	C	B	B
01.0604	Wildlife	C	B	B
01.0605	Water Conservationist	A	B	B
01.0607	Fish (Including Farms & Hatcheries)	B	C	B
01.0608	Range (Ag. Resources)	A	C	B
01.0700	Forestry	A	D	C
01.0702	Forest Protection	B	C	C
01.0703	Logging	C	D	D
01.0704	Wood Utilization	B	D	C
01.0706	Special Products (Forestry)	B	D	C
04.0100	Advertising Services	C	C	C
04.0200	Apparel & Accessories (Sales)	C	C	C
04.0300	Automotive Sales	C	C	C
04.0400	Finance and Credit	C	B	C
04.0500	Floristry (Sales)	C	C	C
04.0600	Food Distribution (Sales)	C	C	C

OFFICE OF EDUCATION CODE NUMBER	OCCUPATION OR COURSE NAME	DIFFERENTIAL COST PRIORITY	MANPOWER PRIORITY	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
04.0700	Food Services (Sales)	C	C	C
04.0800	General Merchandise (Sales)	C	C	C
04.0900	Hardware, Bldg. Materials (Sales)	C	C	C
04.1000	Home Furnishings (Sales)	C	B	C
04.1100	Hotel and Lodging Services	C	B	B
04.1200	Industrial Marketing (Sales)	C	B	C
04.1300	Insurance (Sales)	C	C	C
04.1400	International Trades (Sales)	C	C	C
04.1500	Personal Services Sales	C	C	C
04.1600	Petroleum (Sales)	C	C	C
04.1700	Real Estate (Sales)	C	C	C
04.1800	Recreation & Tourism Services	C	C	C
04.1900	Transportation (Sales)	C	C	C
04.2000	Retail Trade	C	C	C
04.3100	Wholesale Trade	C	C	C
04.9900	Distributive Education Mktg. - Gen.	C	C	C
04.9901	Small Business Management	C	C	C
07.0100	Dental	A	A	A
07.0101	Dental Assistant	A	A	A
07.0102	Dental Assistant (Assoc. Degree)	A	A	A
07.0103	Dental Laboratory Technician	A	B	A
07.0200	Medical Laboratory	A	A	A
07.0201	Cytology	C	A	B
07.0202	Histologist	C	A	B
07.0203	Medical Laboratory Assistant	A	A	A
07.0204	Hematology	C	A	B
07.0300	Nursing	A	A	A
07.0301	Nursing (Associate Degree)	A	A	A
07.0302	Practical (Voc'l) Nurse	A	A	A
07.0303	Nursing Aid	C	A	B
07.0304	Psychiatric Aide	B	B	B
07.0305	Surgical Technician (Oper. Rm. Tech.)	A	A	A
07.0306	Obstetrical Technician	C	B	C
07.0307	Home Health Aide	C	B	C
07.0308	School Health Aide	C	B	C
07.0400	Rehabilitation	B	A	A
07.0401	Occupational Therapist	A	A	A
07.0402	Physical Therapist	A	A	A
07.0403	Prosthetics	B	A	B
07.0404	Orthotics	B	B	B
07.0500	Radiologic (Health Occupations)	A	A	A
07.0501	Radiologic Technology (X-ray)	A	A	A
07.0502	Radiation Therapy	A	A	A
07.0503	Nuclear Medical Technology	A	A	A
07.0600	Ophthalmic	B	B	B
07.0601	Ophthalmic Dispensing	B	B	B
07.0602	Orthoptics	B	B	B
07.0603	Optometrist Assistant	B	B	B
07.0700	Environmental Health	B	A	A
07.0701	Environmental Health Assistant	B	A	A
07.0702	Radiological Health Technician	A	A	A

OFFICE OF EDUCATION CODE NUMBER	OCCUPATION OR COURSE NAME	DIFFERENTIAL COST PRIORITY	MANPOWER PRIORITY	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
07.0703	Sanitarian Assistant	B	B	B
07.0800	Mental Health Technology	C	A	B
07.0801	Mental Health Technician	C	A	B
07.0802	Mental Retardation Aide	C	A	B
07.0900	Health Occupations Assistant	B	A	B
07.0901	Electroencephalograph Technician	A	A	A
07.0902	Electrocardiograph Technician	A	A	A
07.0903	Inhalation Therapy	A	A	A
07.0904	Medical Assistant	C	A	B
07.0905	Central Supply Technician	C	C	C
07.0906	Community Health Aid	C	A	B
07.0907	Medical Emergency Technician	B	A	A
07.0908	Food Service Health Supervisory	C	B	C
07.0909	Mortuary Science	C	C	C
07.9900	Health Occupations Education	B	B	B
09.0200	Home Economist Assistant	C	C	C
09.0201	Care and Guidance of Children	B	C	B
09.0202	Clothing, Management, Prod. & Ser.	C	D	C
09.0203	Food Management, Production & Ser.	A	C	B
09.0204	Home Furnishing, Equip. Services	C	D	D
09.0205	Institution & Home Management Serv.	B	C	C
14.0100	Accounting & Computer - General	C	B	C
14.0102	Bookkeeping	C	C	C
14.0103	Cashiers	C	C	C
14.0104	Machine Operators	B	B	B
14.0105	Tellers	C	B	C
14.0200	Business Data Processing	A	A	A
14.0201	Computer & Console Operators	A	A	A
14.0202	Keypunch, Coding & Oper. Equipment	C	C	C
14.0203	Computer Programmers	A	B	B
14.0204	Systems Analysts	A	A	A
14.0300	Filing, Office Mach. & Gen. Office	C	C	C
14.0301	Duplicating Machine Operators	C	C	C
14.0302	File Clerk	C	D	C
14.0303	General Office Clerks	C	B	C
14.0400	Information, Commun. Assistant	C	C	C
14.0401	Communication Systems Clerks	C	C	C
14.0402	Correspondence Clerks	C	C	C
14.0403	Mail & Postal Clerks	C	C	C
14.0404	Mail-Preparing & Mail-Hand. Oper.	C	C	C
14.0405	Messengers & Office Boys & Girls	C	D	D
14.0406	Receptionist & Inform. Clerks	C	D	C
14.0500	Material Support Occupations	C	C	C
14.0501	Planning & Production Clerks	C	C	C
14.0502	Quality Control Clerks	C	C	C
14.0503	Shipping & Receiving Clerks	C	C	C
14.0504	Stock & Inventory Clerks	C	C	C
14.0505	Traffic, Rate, & Transport. Clerks	C	C	C
14.0600	Personnel Administrator	C	C	C
14.0601	Educ. Ass't & Training Specialists	C	D	C
14.0602	Interviewers & Test Technicians	C	C	C

OFFICE OF EDUCATION CODE NUMBER	OCCUPATION OR COURSE NAME	DIFFERENTIAL COST PRIORITY	MANPOWER PRIORITY	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
14.0603	Personnel Assistant	C	C	C
14.0700	Steno, Secretarial & Rel. Occup	B	A	B
14.0701	Executive Secretary	B	A	A
14.0702	Secretaries	B	A	B
14.0703	Stenographers	B	A	B
14.0800	Supv. & Admin. Manage. Occup.	C	C	C
14.0801	Administrative Assistants	C	C	C
14.0802	Budget Management Analysts	C	C	C
14.0803	Clerical Office Supervisors	C	C	C
14.0804	Data-Method & System-Proced. Analyst	C	C	C
14.0805	Office Managers & Chief Clerks	C	C	C
14.0900	Typing and Related Occupations	C	A	B
14.0901	Clerk-Typist	C	A	B
14.0902	Typists	C	A	B
16.0100	Engineering-Related Technician	C	A	B
16.0101	Aeronautical Technology	C	A	B
16.0103	Architectural Technician	B	A	B
16.0104	Automotive Technician	B	A	B
16.0105	Chemical Technology	B	A	A
16.0106	Civil Technology	B	A	B
16.0107	Electrical Technician	B	A	B
16.0108	Electronic Technician	B	B	B
16.0109	Electromechanical Technician	B	B	B
16.0112	Instrumental Technology	B	A	B
16.0113	Mechanical Technology	B	B	B
16.0114	Metallurgical Technology	B	B	B
16.0115	Nuclear Technology	B	A	A
16.0116	Petroleum Technician	B	B	B
16.0117	Scientific Data Processing	B	A	B
16.0400	Office Related Technology	C	C	C
16.0601	Commercial Pilot Training	C	C	C
16.0602	Fire & Fire Safety Technology	B	A	B
16.0603	Forestry Technician	B	A	B
16.0605	Police Science Technician	B	A	A
16.9901	Air Pollution Technology	B	A	A
16.9902	Water & Waste Water Technology	B	A	B
17.0100	Air Conditioning	A	A	B
17.0101	Cooling	B	A	A
17.0102	Heating	C	A	B
17.0108	Ventilating (Filtering & Humid.)	C	A	B
17.0200	Appliance Repair	C	B	B
17.0201	Electrical Appliances Repair	B	B	B
17.0202	Gas Appliances Repair	C	B	B
17.0300	Automotive Services	A	A	A
17.0301	Body and Fender Repairs	A	B	B
17.0302	Mechancis (Auto)	A	A	A
17.0400	Aviation Occupations	B	C	B
17.0401	Aircraft Maintenance	A	B	A
17.0402	Aircraft Operations	A	C	B
17.0403	Ground Operations	A	C	B
17.0500	Blueprint Reading	C	B	B

OFFICE OF EDUCATION CODE NUMBER	OCCUPATION OR COURSE NAME	DIFFERENTIAL COST PRIORITY	MANPOWER PRIORITY	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
17.0600	Business Machine Maintenance	B	A	A
17.0700	Commercial Art Occupations	C	C	C
17.0701	Interior Decorating	C	C	C
17.0702	Window Display	B	C	B
17.0703	Designer	C	C	C
17.0800	Commercial Fishery Occupations	B	C	C
17.0801	Seamanship	C	D	D
17.0802	Ship & Boat Oper. & Maintenance	B	B	B
17.0900	Commercial Photography Occupations	C	C	C
17.0901	Photo. Lab. & Darkroom Occupations	C	C	C
17.1000	Construction & Bldg. Trades	C	B	B
17.1001	Carpentry	C	C	C
17.1002	Electricity (Construction)	C	B	B
17.1003	Heavy Equipment Operation & Maint.	B	B	B
17.1004	Masonry	C	C	C
17.1005	Painting & Decorating	C	C	C
17.1006	Plastering	C	D	C
17.1007	Plumbing & Pipefitting	B	B	B
17.1008	Dry Wall Installation	C	B	B
17.1009	Glazing	C	C	C
17.1010	Roofing	B	C	B
17.1100	Custodial Services	C	C	C
17.1200	Diesel Mechanic	B	B	B
17.1300	Drafting	C	A	B
17.1400	Electrical Occupations	B	B	B
17.1401	Industrial Electrician	B	B	B
17.1402	Lineman	C	C	C
17.1403	Motor Repairman	B	B	B
17.1500	Electronics Occupations	A	C	B
17.1501	Communications	C	C	C
17.1502	Industrial Electronics	A	C	B
17.1503	Radio/Television Repair	B	B	B
17.1600	Fabric Maintenance - General	C	C	C
17.1601	Dry Cleaning	C	C	C
17.1602	Laundering	C	C	C
17.1700	Foremanship, Supv. & Management	C	C	C
17.1900	Graphic Arts Occupations	A	C	B
17.1901	Composition, Makeup & Typesetting	C	D	C
17.1902	Printing Press Operator	A	C	C
17.1903	Lithography, Photography & Platemk.	B	B	B
17.1904	Photoengraving	A	C	B
17.1905	Silk Screen Making & Printing	B	C	C
17.1906	Bookbinding	B	C	C
17.2000	Industrial Atomic Energy	A	A	A
17.2001	Installation, Oper. & Maint. Reactors	B	A	B
17.2002	Radiography	A	A	A
17.2003	Industrial Use of Radioisotopes	A	A	A
17.2100	Instrument Maintenance & Repair	A	B	A
17.2101	Instruments Repair (other than watch)	A	B	A
17.2102	Watchmaking & Repair	C	C	C
17.2200	Maritime Occupations	C	D	D

OFFICE OF EDUCATION CODE NUMBER	OCCUPATION OR COURSE NAME	DIFFERENTIAL COST PRIORITY	MANPOWER PRIORITY	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
17.2300	Metalworking	B	D	B
17.2301	Foundry	B	C	B
17.2302	Machine Shop	B	A	A
17.2303	Machine Tool Operators (Semi-skill)	B	B	B
17.2304	Metal Trades, Combined	B	C	B
17.2305	Sheet Metal	B	A	B
17.2306	Welding & Cutting	B	B	B
17.2307	Tool & Die Making	A	A	A
17.2308	Die Sinking	A	A	A
17.2309	Metal Patternmaking	B	B	B
17.2400	Metallurgy	B	B	B
17.2601	Barbering	C	C	C
17.2602	Cosmetology	B	B	B
17.2700	Plastics Occupations	B	B	B
17.2801	Fireman Training	B	B	B
17.2802	Law Enforcement Training	B	B	B
17.2900	Quantity Food Occupations	B	B	B
17.2901	Baker	B	D	C
17.2902	Cook/Chef	B	B	B
17.2903	Meat Cutter	B	C	B
17.2904	Waiter/Waitress	C	B	B
17.3000	Refrigeration	B	A	A
17.3100	Small Engine Repair Inter. Comb.	B	B	B
17.3200	Stationary Energy Sources	A	A	A
17.3201	Electric Power & Generating Plants	B	B	B
17.3202	Pumping Plants	C	C	C
17.3301	Dressmaking	C	D	D
17.3302	Tailoring	C	C	C
17.3400	Leatherworking	C	C	C
17.3401	Shoe Manufacturing	C	C	C
17.3402	Shoe Repair	C	C	C
17.3500	Upholstering	C	C	C
17.3600	Woodworking	C	B	C
17.3601	Millwork & Cabinet Making	B	C	C
01.9902	Ag. Cooperative Education			A
04.9902	Marketing Cooperative (D.O.)			A
07.9902	Health Occupations Co-op			A
09.9902	Home Economics Cooperative (H.E.R.O.)			A
14.9902	Office Occupations Co-op (O.O.)			A
16.0111	Quality Control Technology			B
16.0199	Numerical Control Technology			A
16.0199	Optics Technology			B
16.0199	Plastics Technology			B
16.0199	Radio & Television Engineering			B
17.9902	Industrial Cooperative (D.O., I.C.E.)			A
18.9902	Interrelated Cooperative Education			A
18.9906	Interrelated Cooperative Education			A
18.9906	Special Education Cooperative Education			A
18.9909	Special Education In-School Voc. Ed. Programs			B

OCCUPATION OR COURSE NAME	AVERAGE PRIORITY ON WHICH FUNDING IS TO BE MADE
Tech. Math I	D
Tech. Math II	D
Tech. Physics I	D
Tech. Physics II	D
General Physics I	D
General Physics II	D
Hist. & App. of Motion Pictures	D
Beginning Reporting	D
Introduction to Advertising	D
Federal Government	D
State and Local Government	D
Human Relations	D
Principle of Economics	D
Hist. of Current Problems	D
Human Relations	D
Rhetoric & Composition I	D
Rhetoric & Composition II	D
Elementary Tech. Math	D
Basic Tech. Math	D
Tech. Science	D
Introduction to Anc & Med. Art	D
Advanced Technical Math	D
Intro. to Psychology II	D
Developmental Psychology	D
Social Science I	D
Applied Physics I	D
Math I	D
Math II	D
Introduction to Psychology	D
Paramedical Relationships	D
Introduction to Sociology	D
American National Government	D
State and Local Governments	D
Physical Science	D
Inter. Algebra	D
Plane Trigonometry	D
Business Law I	D
Business & Technical Math	D
College Algebra	D
Introduction to Physical Science	D