DOCUMENT RESUME

ED 110 674 CE 004 464

TITLE	A Critique of Research Entitled "The Effectiveness of Public and Proprietary Occupational Training" by Wellford W. Wilms.
INSTITUTION	American Vocational Association, Washington, D.C.
PUB DATE	31 Oct 74
NOTE	15p.; For the original Wilms study, see ED 100 459
EDRS PRICE	MF-$0.76 HC-$1.58 Plus Postage
DESCRIPTORS	*Analytical Criticism; *Content Analysis; Educational Benefits; *Educational Research; Evaluation; Literature Reviews; Post Secondary Education; Program Effectiveness; *Proprietary Schools; Public Schools; *Research Methodology
IDENTIFIERS	Wilms (Wellford W)

ABSTRACT

The findings, conclusions, and recommendations of the Wilms study leave much to be desired. The reported results and interpretation of those results are generally not supported, nor was the design adequate either to confirm or refute the author's central hypothesis. In its present state, the report of the study cannot serve as a valid professional reporting source. The report departs from the generally accepted format of scientific reports and mixes facts and interpretations rather freely. In order to assess the study, therefore, the reviewers were forced to reconstruct it according to the logical sequence found in most technical reports, i.e., problem, objectives, method, results, conclusions, and recommendations. The review conforms to that sequence. The reviewers believe that few verifiable results have emerged, or could have emerged, from the study because of numerous design flaws and a severe lack of the design and procedural information which would be needed to evaluate the study's adequacy. Editorializing of the author's biases and assumptions occur throughout the report, unsupported by study data. When the data do not support the author's expectations, there seems to be a tendency to dispell undesired conclusions with an alternative explanation or assumption not based on study data. (Author/PR)

A

Critique of Research

Entitled

"The Effectiveness of Public and Proprietary

Occupational Training"

By

Wellford Wilms

Center for Research and Development in

Higher Education

University of California, Berkeley

October 31, 1974

Submitted by:

American Vocational Association
1510 H St., N. W.
Washington, D. C. 20005

A BRIEF RE"IEW OF WELLFORD W. WILMS' STUDY,

"THE EFFECTIVENESS OF PUBLIC AND PROPRIETARY OCCUPATIONAL TRAINING"

The findings, conclusions, and recommendations of this study leave much to be desired. The reported results and the interpretation of those results are generally not supported, nor was the design adequate either to confirm or refute the author's central hypothesis. In its present state, the report of the study cannot serve as a source of valid professional reporting.

It is unfortunate that periodicals such as The Washington Post and the Education Daily have not only publicized the report uncritically, but have headlined implications which go even beyond the questionable findings stated in the report.

The report departs from the generally accepted format of scientific reports and mixes facts and interpretations rather freely. In order to assess the study, therefore, the reviewers were forced to reconstruct it according to the logical sequence found in most technical reports, i.e., problem, objectives, method, results, conclusions, and recommendations. The review which follows conforms to that sequence.

PROBLEM

Wilms apparently believes that the effectiveness of proprietary and public postsecondary occupational training is largely unknown. He does not say what he means by "effectiveness." One would suppose that this term implies the extent to which the students acquire the skills that the programs are designed to teach, but it is not clear that this is what the author has in mind. Even more confusing, the author uses the terms occupational training, vocational education, and career education interchangeably, giving

no indication that he is aware of any distinctions among them.

OBJECTIVES

The author gives the objectives of the study in a single paragraph. The stated objective of the study was to assess the relative success in the job market of graduates of public versus proprietary occupational training schools. As was the case with effectiveness, the author does not say what he means by success. No operational criteria of success are stated, thus making it impossible to either confirm or reject the author's hypothesis that

> After controlling for differences in students' backgrounds and abilities, graduates of proprietary schools will experience greater occupational success in the labor market than graduates of comparable public programs.

Further reading of the report indicates that the author did use a variety of measures of success, but often used them inconsistently. In the end, success seemed to be Wilms' subjective impression based upon a variety of measures selected a postcriori for different situations. The measures used were (a) income earned, (b) whether the graduate was working in a job considered to be within the occupation for which he was trained, (c) various personal characteristics and attitudes, and (d) other miscellaneous measures.

METHODS

Sampling of Schools

Fifty "occupational training" schools were randomly selected from four major U. S. cities, resulting in twenty-one public and twenty-nine proprietary schools. The sample seems to be a heterogenous mix of various kinds of schools. Aside from the breakdown into public and proprietary schools, no information is provided about the distribution of schools on such important variables as location, accreditation, size, type of student, quality of

teachers, or programs offered. Without this information, it is impossible to know what universe of schools the sample represents and to what kinds of schools the results apply. Further, the heterogencity of the sample could mask results which might be quite different for different kinds of schools.

Sampling of Subjects

Three samples of subjects were selected: beginning students, graduating students (students about to graduate), and graduates (persons who had already graduated and were in the labor force). The author does not state how the subjects were selected. It appears as if all the persons in each of six programs at the fifty schools were used as subjects, but this is not certain. The distribution of subjects across location, type of school, and occupation is very uneven (Tables 2-4).

This uneven distribution has resulted in confounding type of school, geographic location, and occupation. In addition, about fifty percent of the graduate sample appear to be the same persons used in the graduating sample, resulting in a further confounding. This confounding makes it impossible to know whether the results were attributable to real differences between proprietary and public schools, or to artifacts of geographic location and occupational differences.

Sampling of Occupations

The author selected six occupations of somewhat different prestige levels for the study.

Design and Procedures

The author does not state what the design was or what procedures were used, except that questionnaires were administered and interviews were conducted. Examination of the results, however, implies that the procedure involved mainly a comparison of the public and proprietary schools on the various items in the questionnaires and interviews. In an inconsistent

fashion, some of the items were used as criteria of success, while others were used as individual background variables to be "controlled" in the data analysis.

Instruments

With two exceptions, the questionnaires are not described, nor is there any indication of how many questionnaires there were. With the exception of a few items, the interview content and procedures are not described.

It appears that one of the key criteria of success was whether the subject's job matched his training; hence, one of the interview questions asked the subject what his or her job was. It is not clear, however, how it was determined whether the graduate's job was considered to be within the occupation for which he or she was trained.

Data Analysis

Wilms used analysis of variance, t-tests, and chi-square to determine the differences between public and proprietary schools on a large number of the variables. He reports significance levels, but not degrees of association; that is, non-zero differences between public and proprietary schools, but no indication of the strength of the differences. Consequently, it cannot be determined whether reported findings are sizeable or trivial, only that they are "not zero." Insufficient information is provided about the details of the analyses to be able to evaluate their adequacy. In some cases, it appears that the data were improperly scaled for the statistical analysis used.

As pointed out previously, type of school is confounded with geographic location and occupation, making the meaning of findings very unclear. Table 4, for example, indicates that for the Data Proces ing Programmer occupation seventy-five percent of the proprietary school graduates were in Boston and Miami, while eighty percent of the public school graduates were in Chicago.

Thus, any alleged differences between public and proprietary schools might actually have been differences between Chicago and the east coast cities, and not have had anything to do with the schools. Since the criterion of "success" is heavily weighted with income and employment, factors known to vary geographically, this confounding is crucial to any findings involving alleged differences in success. For the subsets of data used in many of the analyses, no information is provided about the distribution of important variables, such as geographic location, occupation, and others across the groups being compared. The possibility of additional confounding cannot be ruled out.

RESULTS

Beginning and Graduating Students

The reported results for these two samples are merely descriptive differences between public and proprietary schools on a large number of variables. They are not directly relevant to the objectives of the study. Because of the confounding problem mentioned earlier, it cannot be concluded that the alleged results are actually attributable to real differences between the two types of schools. They may be artifacts of geographic location or occupation.

Graduates

As admitted by the author, no difference in occupational success were found between public and proprietary schools, except in the case of secretaries. Not even this is a safe conclusion because of the known geographic confounding and because of the undefined criteria of success.

Summary

The reviewers believe that few verifiable results have emerged, or could have emerged, from this study because of numerous design flaws and a severe lack of the design and procedural information which would be needed to evaluate the adequacy of the study.

CONCLUSIONS

In the Abstract of the report of the study are highlighted such findings as (a) proprietary instructional costs were 35 percent less than public costs; (b) only 20 percent of the graduates of "professional or technical-level training" ever got jobs for which they were trained; (c) graduates from "lower-level clerical or service worker programs," with the exception of secretaries, barely earned the federal minimum wage; (d) neither kind of school compensated for less-advantaged students' backgrounds; and (e) graduates of proprietary schools paid 20 times more than public school graduates for their training courses.

Support for these highlighted findings, however, is clouded by the previously indicated dearth of key information about the institutions involved, the nature of graduates supplying survey data, and the methodologies used to collect such data as well as design and analyze flaws. Selective reporting and presentation of survey results encourage misleading inferences and conclusions. And, editorializing of the author's biases and assumptions occur throughout the report, unsupported by the data from this study. Thus, it seems necessary to challenge the accuracy, completeness, and representativeness of the reported conclusions.

The "Conclusions and Implications" chapter of the report is organized around six questions, from which the emphasized findings are drawn. These six questions are used below to consider the merit of the author's conclusions relative to each.

Do Graduates of Public or Proprietary Schools Do Better?

The author concludes that his central hypothesis was not confirmed. "With few exceptions, graduates of public schools had about the same success in the labor market as graduates of proprietary schools." In elaborating upon selected portions of this issue, the author notes the status level of jobs gained by graduates and the earnings of various subgroups of the sample.

It is from these portions that the Abstract draws the findings to be emphasized.

The adequacy of the sampling of program graduates and of institutions is a key element in establishing the merit of the study's findings. Using four of the Great Cities as the source of training programs to be studied, the report notes that only part of the schools were accredited, and others were not. But nowhere does the report inform the reader how many schools of what types were surveyed for each specific occupational area, nor how many students of particular backgrounds were included from each school and program. Thus, when results are later summarized, it is impossible to determine whether comparisons are based on graduates of non-accredited institutions, primarily from one school in a city, or any other unusual characteristic of the particular subsample.

At the "professional and technical level" of training, upon which the 20 percent effective placement figure is based, 67 percent of the graduates of proprietary schools came from only one city, Chicago. The number of schools represented by these graduates is not reported. In Boston, a major employment center for electronic technicians, no graduates were surveyed from either type of school. In no instance can the reader determine whether any accredited proprietary schools were included for a given occupational area. Many forms of postsecondary occupational training schools are not sampled at all, including public technical institutes, manpower training programs (MDTA/CETA), certificate and associate programs of state universities, military technical training schools, and community colleges serving rural and smaller communities. About half of the graduates were very recently graduated; the remainder had graduated about two years previously. No distinction is made in their responses, all being pooled as graduates. Such restriction of representation must be carefully specified whenever results and conclusions of the study are communicated.

Graduates of accounting programs (requiring two years or less attendence) were apparently recorded as "clerks" or as having other lower-level jobs if they worked as bookkeepers or payroll clerks. There is no acknowledgement that employers may move new workers through a variety of "lower-level" positions, to acquaint them fully with company operations before full "accountant" positions are assigned. What Wilms seems to be doing is equating completion of an accounting program as full preparation for the occupation of accountant.

Also, there is little apparent awareness that skills imparted by a particular training program may be highly relevant for performance in many types of jobs. For example, accounting skills might reasonably be sought by many young people planning to employ such skills in personal affairs, sales occupations, or even eventually in a variety of small business enterprises. Thus, it might be well to question the merit of the finding that more than 80 percent did not get the jobs for which they were trained, but became clerks or took low-paying, unrelated jobs.

When the data do not support the author's expectations, there seems to be a tendency to dispell undesired conclusions with an alternative explanation or assumption not based on the study data. This happens, for example, when too many of the accounting graduates reported that their first job after schooling was related to their training.

Do Public or Proprietary Graduates Experience More Personal Growth?

It was concluded that "there were no differences in personal growth between public and proprietary graduates for any occupational group." No consistent differences of any kind were found to influence personal growth in a variety of subgroups. But, in view of the limitations in the samples of graduates and schools cited previously in this review, no comparative conclusions of any kind could have been substantiated or refuted by the data and design.

Are Public or Proprietary Graduates More Satisfied?

Mixed conclusions resulted across the six occupational areas studied. In two occupations the author found lower job satisfaction on the part of graduates of proprietary schools. However, 80 percent of the proprietary graduates for one of the occupations came from only one city. In the other occupation, 63 percent came from but a single city, and only two cities were represented in the total sample.

Are Public or Proprietary Programs Compensatory?

By "compensatory," the author apparently means that the training results in women and minorities getting the same salary as male whites in their subsequent employment. The author concludes that they do not. In absolute terms they earn less in five of the six occupations studied. Aside from the limitations of the sampling, this conclusion fails to recognize whether such "discriminatory" employment may have been reduced by the training programs. Nor does the design of the study permit any evidence of such progress to be detected, there being no comparative control groups to provide a basis for showing that the training opportunity indeed may be effective in this area.

Are Certain Kinds of Schools Better than Others?

No differences were found between public schools with respect to institutional or staff characteristics influencing how well their graduates fared on the job market. However, some features of proprietary schools were concluded as having a differential impact on the hiring and compensation of graduates. The more effective schools apparently were larger and their teachers were paid more than the less effective schools. Whether this finding was also fully correlated with the accreditation status of the schools is not reported, but might be suspected.

In Public or Proprietary Training Cheaper for the Student?

The study concludes that "if the public student were not subsidized by taxes and paid the same charge to the school as the proprietary student, the total costs to the student in our six occupations would be almost equal." But the author proceeds to state other cost features which suggest that instructional costs are less for proprietary schools and that proprietary school students personally pay a far greater amount for their training.

With respect to student costs, the attention is directed to what was "paid," not what it "cost" the student. Yet the study went to great length to identify such costs. The analysis revealed that "cost" for proprietary graduates was only 1.3 times the cost for public graduates, not 20 times as great as the direct student payments of tuition and fees. Neither of these figures considers that direct payments to proprietary schools may often be compensated by the Veterans Administration, Vocational Rehabilitation, Social Security, and a variety of other grants-in-aid to students in financial need.

Cost analysis is highly restricted. Teacher salaries and teaching load are the sole bases used for assessing instructional cost per student. Costs are ignored for such items as physical plant, maintenance, staff fringe benefits, extracurricular facilities and activities, advertising, counseling, placement services, curriculum updating, investment risk capital, teaching equipment and aids, and personnel and business management operations.

RECOMMENDATIONS

When presenting testimony that is likely to spark controversy on important public issues, the professional researcher had better be able to describe completely the nature and adequacy of his data collection and analysis. The study does not do this. Neither the sampling design nor the reported results supports conclusions that substantiate the "findings" headlined by the report.

Yet from this research experience, Wilms adds his recommendations for making postsecondary occupational training schools "more effective institutions for a democratic society."

Proceeding from questionable and selected findings, he presents seven recommendations for governmental action. The key element of these recommendations appears to be the provision of information on how well each school is able to place graduates in jobs for which they have been trained.

Pursuit of these recommendations should be handled with serious concern and due caution. If a school's placement record were to become the key factor in evaluating its success (hence, its survival), then it would be reasonable to expect that employment opportunities should come under its control to some extent. If not, a school's most likely recourse would be to conduct training programs only for the high-volume manpower needs of the state. This would seem to dictate a neglect of newly emerging occupations, experimental programs, and the individual interests of students.

A second theme of the recommendations is establishment of equality of pay for equal work, such that schools may be "legally culpable when they actively engage in job placement and referral activities that are discriminatory." Other than forcing schools to be more selective in admissions, another potential result of implementing such a recommendation could be to force schools to eliminate placement and referral services for students. Neither consequence seems helpful to the target groups of students who may already be considered as disadvantaged.

TABLE 2

DISTRIBUTION OF BEGINNING STUDENTS IN PUBLIC AND PROPRIETARY SCHOOLS BY OCCUPATIONAL PROGRAM AND GEOGRAPHIC REGION

	San Fran. Bay Area		Miami		Chicago		Boston		TOTAL
Occupation	Public	Prop.	Public	Prop.	Public	Pro .	Public	Prop.	
Accounting	38	24	--	--	22	34	61	12	191
Electronic data processing programmer	--	--	15	21	58	45	33	7	179
Dental assisting	61	73	--	--	--	--	49	20	203
Electronic technician	--	--	42	23	16	67	--	--	148
Secretarial	8	47	18	56	17	50	61	22	279
Cosmetology	46	44	21	36	--	--	--	--	147
TOTAL	153	188	96	136	113	196	204	61	1147

TABLE 3

DISTRIBUTION OF GRADUATING STUDENTS IN PUBLIC AND PROPRIETARY SCHOOLS BY OCCUPATIONAL PROGRAM AND GEOGRAPHIC AREA

	San Fran. Bay Area		Chicago		Boston		Miami		TOTAL
Occupations	Public	Prop.	Public	Prop.	Public	Prop.	Public	Prop.	
Accounting	40	33	27	49	62	14	--	--	225
Electronic data processing programmer	--	--	74	51	33	21	39	31	249
Dental assisting	61	74	--	--	64	37	--	--	236
Electronic technician	--	--	17	75	--	--	45	25	162
Secretarial	10	52	17	50	65	40	18	56	308
Cosmetology	54	46	--	--	--	--	26	64	190
TOTALS	165	205	135	225	224	112	128	176	1370

TABLE 4

DISTRIBUTION OF GRADUATES OF PUBLIC AND PROPRIETARY SCHOOLS BY OCCUPATIONAL PROGRAM AND GEOGRAPHIC AREA

	San Fran. Bay Area		Chicago		Boston		Miami		Totals
Occupation	Public	Prop.	Public	Prop.	Public	Prop.	Public	Prop.	
Accounting	25	28	39	29	76	94	--	--	291
Electronic data processing programmer	--	--	35	98	60	9	45	15	262
Dental assisting	98	174	--	--	105	104	--	--	481
Electronic technician	--	--	22	279	--	--	104	57	462
Secretarial	13	16	3	189	51	79	10	25	386
Cosmetology	103	153	--	--	--	--	18	114	388
TOTALS	239	371	99	595	292	286	177	211	2270