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ABSTRACT

The data used in the report were compiled from several indices used to evaluate the career education efforts in Pima and Cochise Counties in Arizona. The findings unequivocally show a trend whereby career education exposure enhances occupational knowledge, career awareness, economic awareness, decision-making skills, and realistic career planning and preparation. The data also show that students exposed to career education are more positively oriented toward integrating their educational experience with their future plans. An analysis of eight career education activities (occupational exploration kits, in-class work experiences, career education games, career education fairs, community resource speakers, occupational ability/interest tests, occupational films, and occupational tours within the community) demonstrates that their effectiveness varies with students' age. Finally, the data indicate that student goals in the area of educational and occupational achievement are most influenced by parental expectations.

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SUMMARY EVALUATION REPORT OF CAREER EDUCATION IN SOUTHERN ARIZONA

ARIZONA STATE DEPARTMENT OF EDUCATION

PHOENIX, ARIZONA

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EDUCATION & WELFARE
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SUMMARY EVALUATION REPORT OF CAREER EDUCATION
IN SOUTHERN ARIZONA

An extensive evaluation of two career education projects in Southern Arizona was undertaken during the 1973-74 school year. The programs were located in Pima and Cochise Counties. The combined programs deliver career education services to a catchment area of over 100,000 students in grades K-12. The career education effort in both counties is in its fourth year of operation.

The means of delivering career education services to the classroom are similar in the two counties. Career education specialists are responsible for providing support services to classroom teachers, school counselors, and school administrators. The career education specialist works with teachers, counselors, and school administrators to organize career development activities in which a major goal is to integrate occupational and vocational counseling into the regular curriculum. This model represents a clear departure from educational programs which separate academic activities from job-related activities.

Data collected from over 6000 students in grades 4-12 from the two counties have been combined in this report to present an overview of student accomplishments related to the career education projects in both Pima and Cochise Counties.

Several areas of interest are highlighted; however, the major focus of this report is on student accomplishments in the areas of career planning and

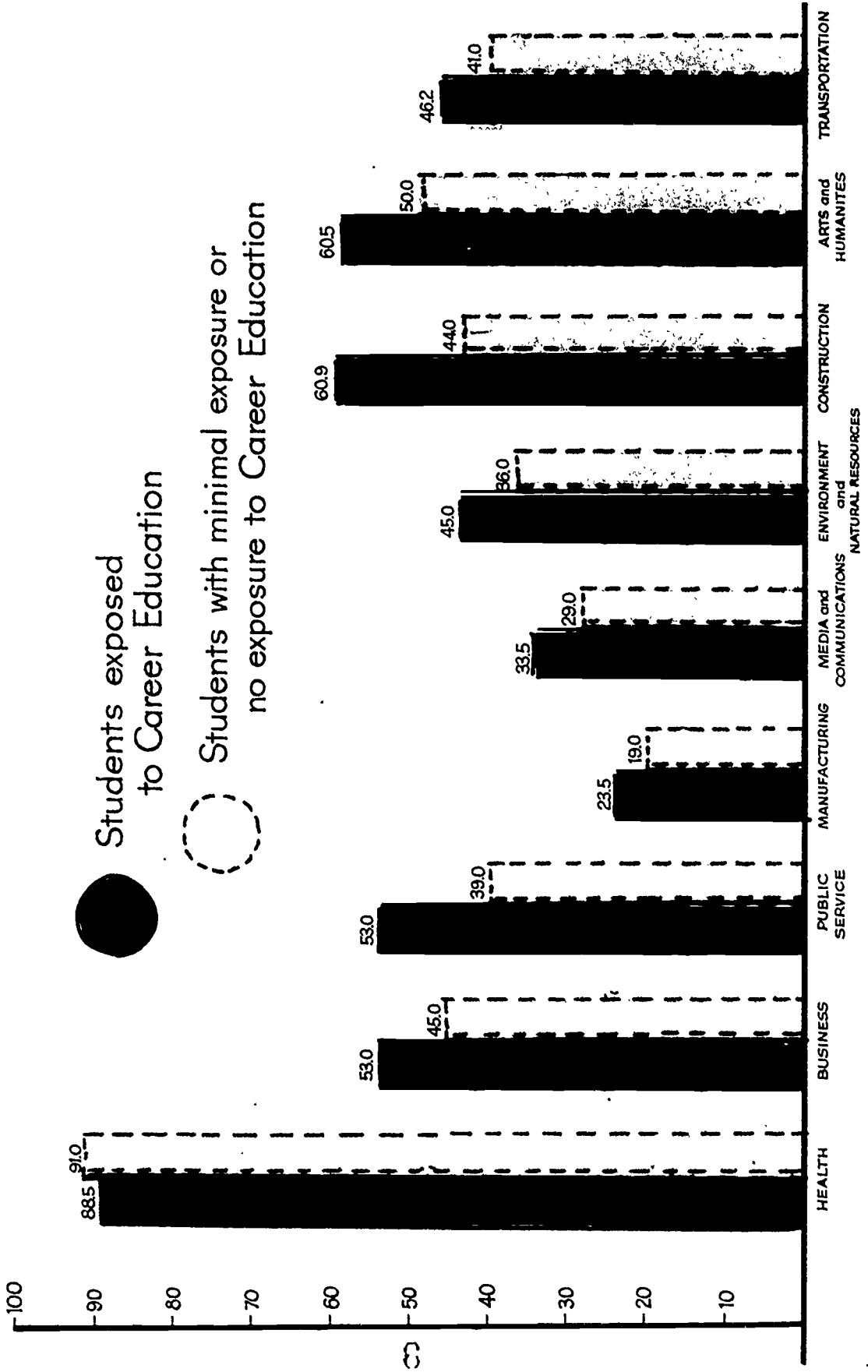
preparation, career awareness, economic awareness, and decision making skills. Each of these areas is related to a long range outcome of the State of Arizona's Career Education Program. The outcomes and the structural framework for the Arizona program are developed more fully in the Arizona Career Education State Matrix.

Career-Awareness, Economic-Awareness, Decision-Making

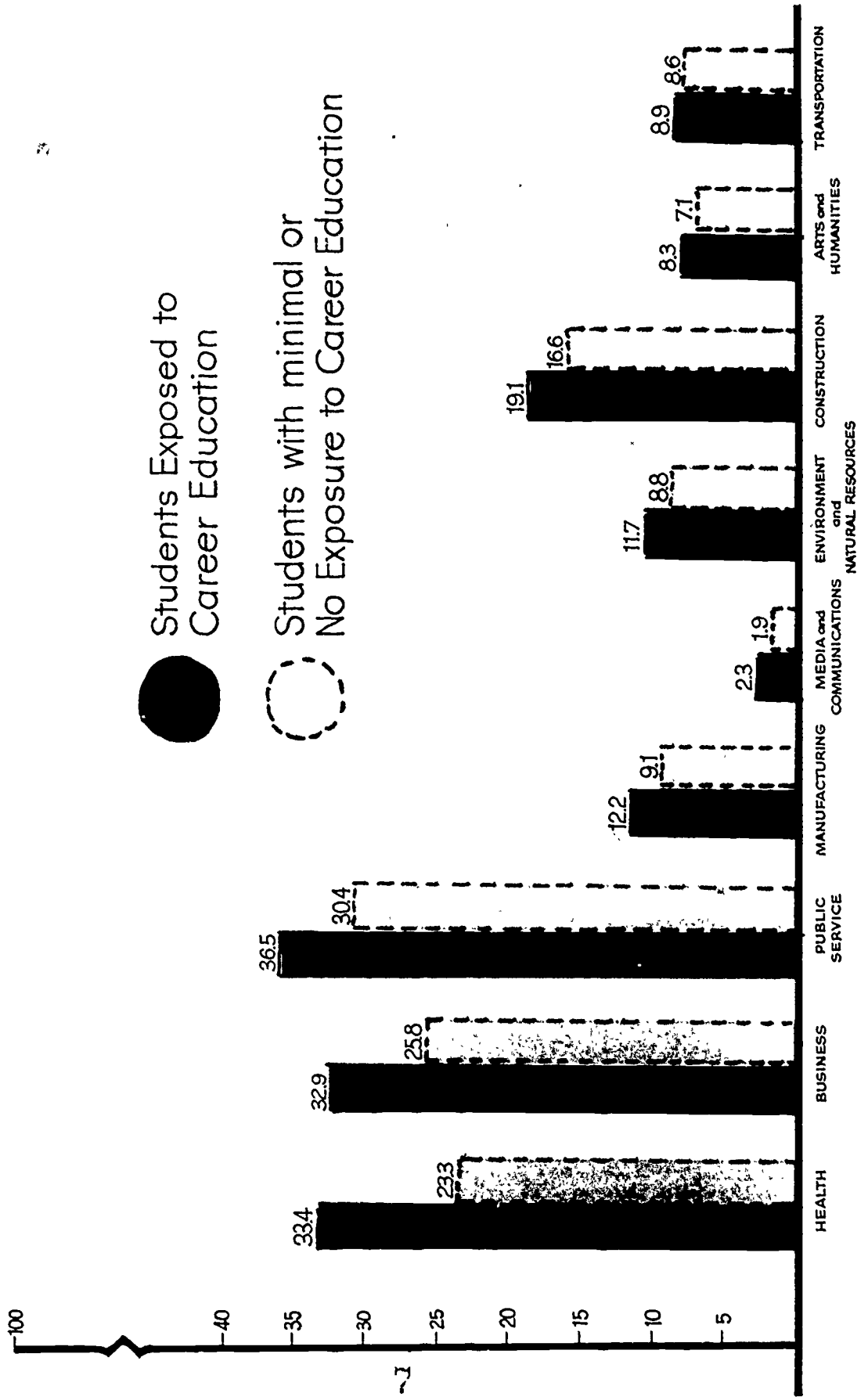
Students exposed to career education demonstrated a greater awareness of the world of work. On every index designed to measure career-awareness, economic-awareness, and decision-making, the students with career education exposure scored higher. One of the most consistent findings in the data is that students with career education exposure are more knowledgeable about a variety of occupational clusters, representing the entire range of jobs. This finding reflects favorably on the Arizona Career Education Effort, and highlights one major goal of career education which is to expand the students' conceptualization of the economic marketplace.

The students were examined for occupational knowledge in the fields of health, business, public service, manufacturing, communications, environment, construction, arts and humanities, and transportation. Students with career education exposure are more knowledgeable about the types of jobs that fall within all of the categories measured. As the accompanying illustrations show, students exposed to career education consistently demonstrate higher levels of knowledge within the occupational career clusters. In some instances as in the Health cluster among secondary students and the Public Service and

Proportion of Students Demonstrating Knowledge within Nine Career Clusters (Elementary and Intermediate Students)



Proportion of Students Demonstrating Knowledge within Nine Career Clusters (Secondary Students)

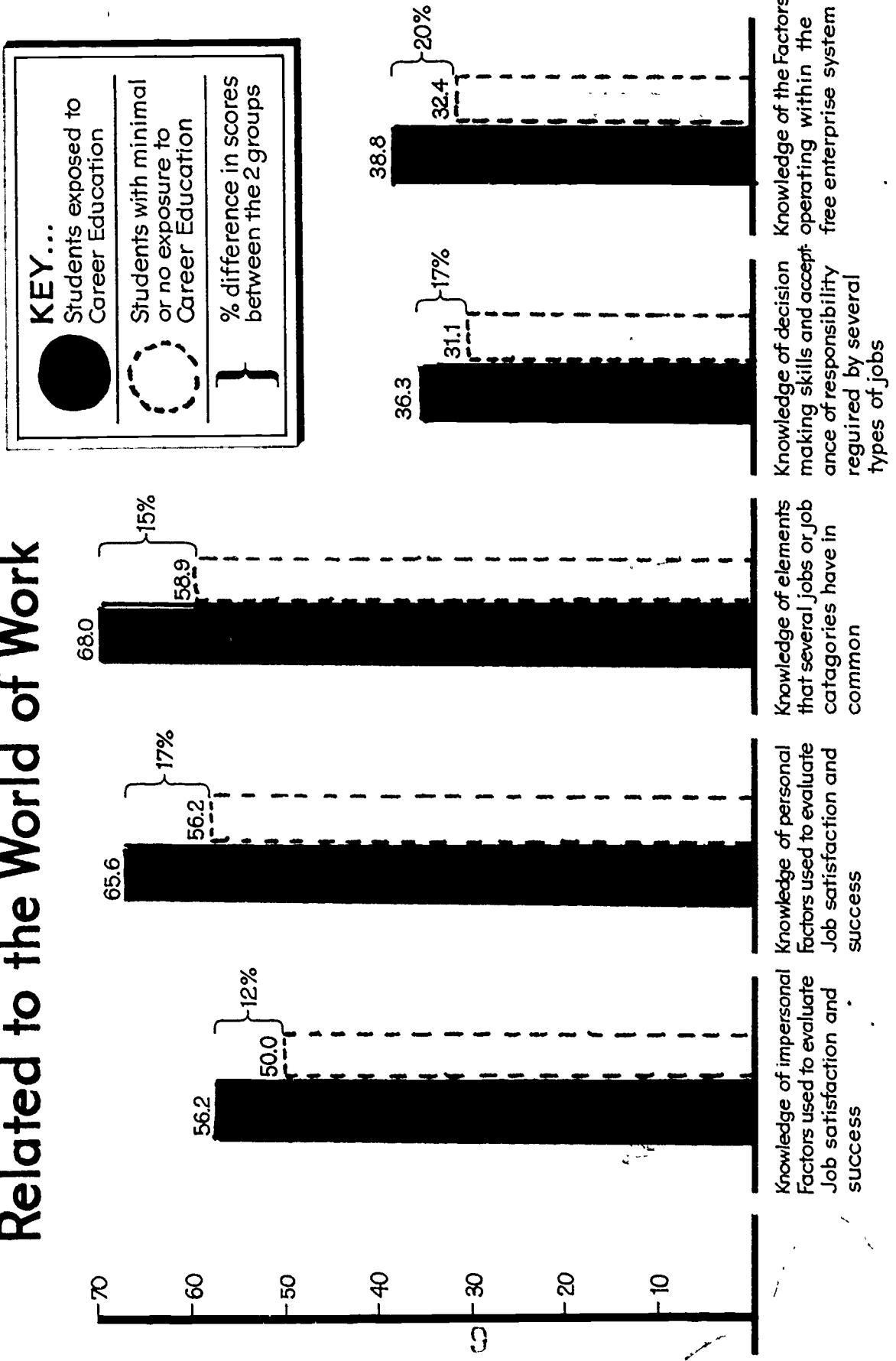


Construction clusters for elementary/intermediate students, the career education students scored thirty to forty percent higher than non-career education students. However, even in cases where the percentage differences are smaller, the trend for career education students to score higher is maintained. In only one case (specifically the Health cluster among elementary/intermediate students) is this trend reversed.

The next figure reproduces data directly related to career-awareness, economic-awareness and decision-making. The students with more exposure to career education were better able to:

- (1.) Recognize and list the impersonal factors to consider in evaluating jobs, such as which jobs require the most education, which jobs require abilities with numbers, and which jobs are most prevalent.
- (2.) Recognize in themselves and others various personal characteristics related to job performance and satisfaction, such as which job is best suited for people who want to work with their hands, the importance of motivation and ability in getting a job, and the specific skill requirements for a variety of jobs.
- (3.) Demonstrate the ability to relate specific occupations to some larger grouping such as specifying the common elements in a variety of jobs, and recognizing the job ladder within a specific field such as data processing or sales.
- (4.) Recognize and demonstrate the decision-making skills associated with various occupational roles. Also they are better able to

Differences in Knowledge of Factors Related to the World of Work



recognize the degree of responsibility which is inherent in different jobs.

- (5.) Comprehend the manner in which the free enterprise system operates by identifying the way in which the factors comprising the economic market place are functionally related, such as, the relationship between material resources, labor supply, and the demand for goods.

Career Planning and Preparation

Students exposed to career education: (1) have knowledge of a wider range of occupations both between and within occupational categories, (2) have more ability to evaluate the skills needed in preparation for certain occupational choices, and (3) have more self-confidence that their goals are both realistic and achievable.

Student goals were measured by obtaining indicators of their occupational and educational aspirations, their self-confidence that their goals are realistic and achievable, and their motivation for school performance. Several interesting findings emerged from the data. Students with greater exposure to career education in the two counties were interested in occupations that fell in similar categories to students without career education exposure. Thus, occupational choices, on the surface, seemed to be relatively uninfluenced by career education. Yet a closer look at the data showed that students exposed to career education named a wider range of jobs within each occupational category, which indicates the students have knowledge of a larger number of careers. More importantly, the students with career education exposure were also more realistic about the educational preparations required for certain occupations.

That is, students exposed to career education were better able to match the educational requirements associated with achieving their occupational goals than students without career education exposure.

Among students where the career education process was most implemented, generally students from the intermediate grades, exposure to career education was accompanied by increased self-confidence that educational and occupational aspirations would be achieved. The career education students are more certain of their choices, and fall much less frequently in the undecided category.

Overall, a larger proportion of the students with career education exposure expect their performance in school to be above average. This trend holds for students in all grades. One interpretation of these data is that the career education projects in Pima and Cochise Counties are helping to instill positive appreciations and attitudes toward school and learning.

Effect of Career Education Activities

Career-awareness, economic-awareness and decision-making are positively influenced by exposure to a variety of career education activities. Student participation in eight career education activities was obtained as a part of the information gathered in the student questionnaires. The activities in question consisted of: occupational exploration kits, in-class work experiences, career education games, career education fairs, community resource speakers, occupational ability/interest tests, occupational films, and occupational tours within the community.

The activities were not equally effective at each grade level. Generally intermediate grade students were influenced positively by activities in which

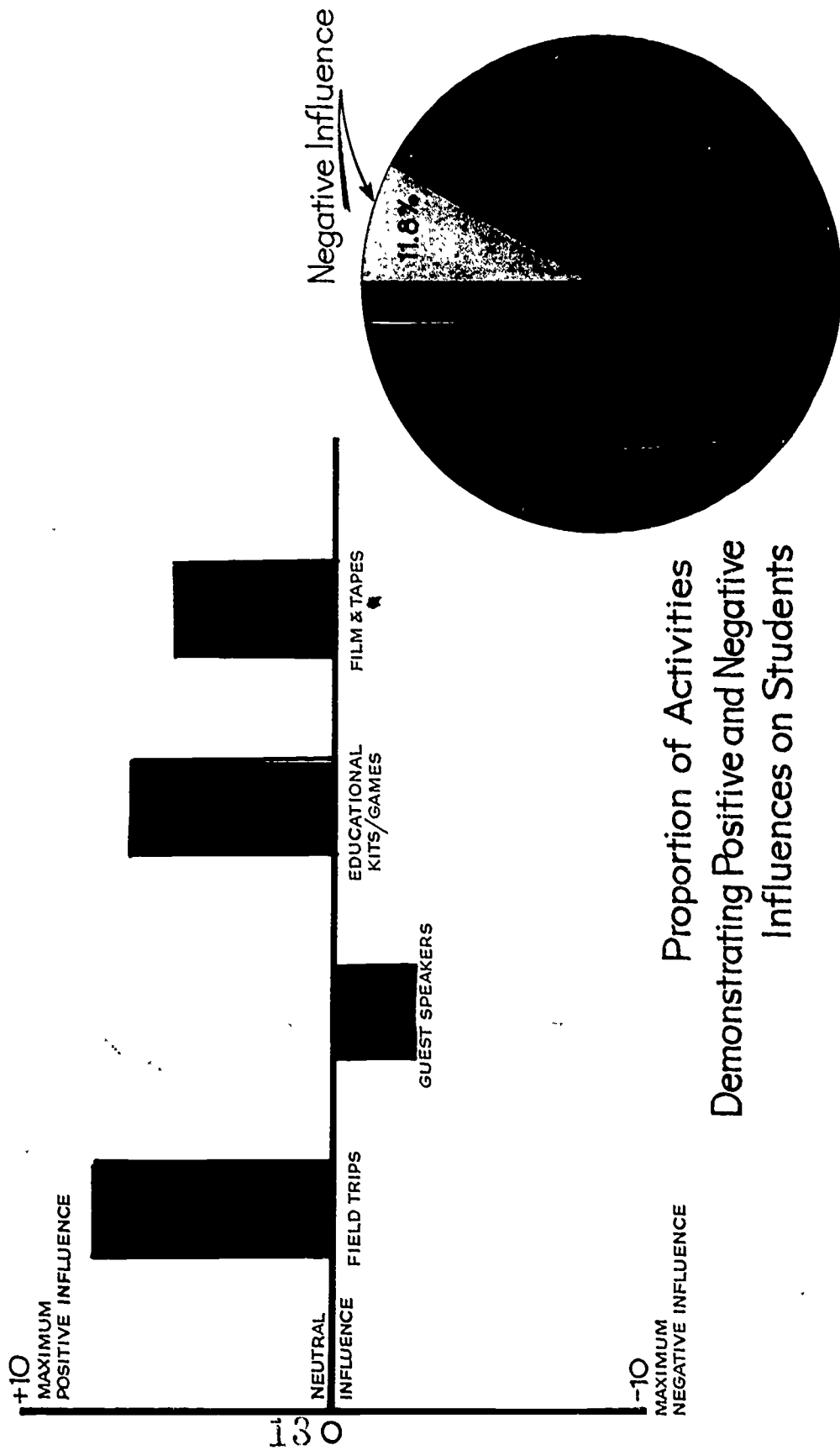
they are given maximum opportunity for physical participation, such as career education games and occupational tours. At this level, the overall effect of resource speakers is negative. Conversely, the career education activity with the most positive influence among secondary grade students is exposure to community resource speakers. The accompanying two graphs show that the career education activities to which the students were exposed were at least eighty-eight percent effective on the students' career awareness, economic awareness, and decision-making skills.

There seems to be an interaction effect between the effectiveness of career education activities and age. For example, resource speakers, generally considered an adult type of activity, were most effective among the older students in the sample and least effective among the youngest students. On the other hand, occupational tours and occupational films, which both had positive effects among the youngest students had a negative effect on the oldest students.

On the basis of these outcomes, steps have been taken, in the current project year, to produce a better fit between the activities to which students are exposed and the intellectual development and emotional maturity of the students. The important thing, however, is not that the activities were not one hundred percent effective. We should keep in mind that the career education activities used by the Pima and Cochise Projects had a combined effectiveness rate of at least eighty-eight percent. That is, the activities were very influential in increasing the students' career-awareness, economic-awareness, and decision-making skills.

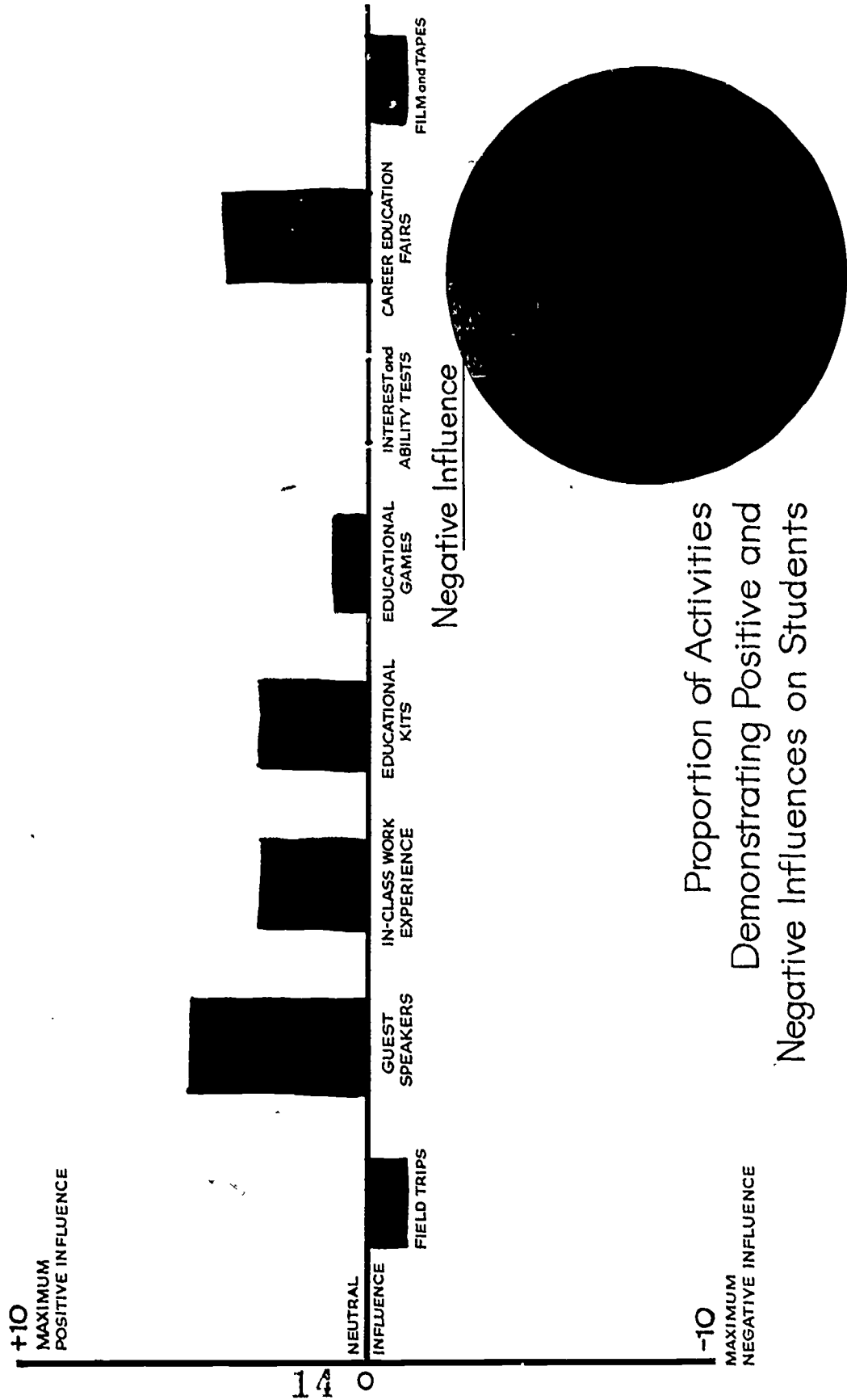
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Relative Effectiveness of Career Education Activities for Delivering Knowledge of The World of Work (Elementary and Intermediate Levels)



Proportion of Activities
Demonstrating Positive and Negative
Influences on Students

Relative Effectiveness of Career Education Activities for Delivering Knowledge of The World of Work (High School Level)



Parental Involvement

Another significant finding from the data is that student goals in the area of educational and occupational achievement are most influenced by parental expectations. This finding has been incorporated by both projects to increase the effectiveness of the career education effort. Work was begun during 1973-74 in Pima County to more effectively include parents in the career education process. The Pima County model is also being used in Cochise County in the 1974-75 project year. The goal of parent involvement is to help students bridge the gap between participation in academic activities and the relationship of the educational process to real world requirements. This is accomplished by giving parents opportunities to get involved in career education in many ways, such as helping to arrange and take students on occupational site tours, allowing students to spend a "day-on-the-job" with parents, lending materials, tools and uniforms to be used in the classroom demonstrations, and by demonstrating a skill to the students. In this way, the influence of parents is used more systematically in the delivery of career education activities in the classroom.

Conclusions

The data in this report were compiled from several different indices used to evaluate the career education efforts in Pima and Cochise Counties. The findings unequivocally show a trend whereby career education exposure enhances occupational knowledge, career awareness, economic awareness, decision making skills and realistic career planning and preparation. The data also

shows that students exposed to this process are more positively oriented toward integrating their educational experiences with their future plans.

The most significant aspect of this trend is not necessarily the differences in scores between students exposed and not exposed to career education. Rather it is the fact that on all of the indicators used to evaluate various dimensions of the career education effort the findings consistently show that career education is meeting its objectives and goals.