DOCUMENT RESUME

ED 149 0[illegible] 08 CE 013 941

TITLE	Comprehensive Career Education Project. An Incremental Project. Summary of Results for 1975-76.
INSTITUTION	Maine Univ., Orono. Coll. of Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
BUREAU NO	554A50079
PUB DATE	78
GRANT	G007502355
NOTE	41p.
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Administrator Attitudes; *Career Education; Counselors; Counselor Training; *Curriculum Development; Educational Planning; Elementary School Teachers; Fused Curriculum; *Inservice Teacher Education; Learning Activities; Post Secondary Education; Professional Education; Program Attitudes; Program Development; Program Effectiveness; Program Evaluation; Secondary School Teachers; State Boards of Education; State Programs; Tables (Data); Teacher Attitudes; *Teacher Educator Education; *Teacher Workshops
IDENTIFIERS	Maine (Bangor)

ABSTRACT

Evaluation results are summarized for the first year (1975-76) of a project designed (1) to demonstrate a comprehensive and coordinated career education program in the Bangor, Maine, public school system, which could serve as a model for the northern section of Maine, (2) to demonstrate procedures for integrating and implementing career education at the university/college level, and (3) to demonstrate procedures for developing a state plan for career education. Project data generated the following conclusions: (1) The inservice model presented to the public school level was effective in producing gains in career knowledge, in creating more positive attitudes toward career education, and in implementing activities in the classroom; (2) key components as identified by teacher participants in inservice workshops were demonstrations by experienced teachers of career education activities, participation in actual experiences suggested for students, follow-up support by consultants for teacher career education activities, and small group meetings within grade and subject areas to discuss implementation of career education concepts; (3) career education is an accepted goal by the State Board of Education but not necessarily a priority item for funding support in Maine; (4) postsecondary teacher educators or administrators in general do not perceive career education as a priority item; and (5) the inservice training model for demonstrating career education philosophy, concepts, and practices is a viable procedure. (TA)

COMPREHENSIVE CAREER EDUCATION PROJECT

An Incremental Project

Project No. 554A50079
Grant No. G007502355

Summary of Results For 1975-76

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TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

The purpose of this report is to present in non-technical language the evaluation results for the first year of the Comprehensive Career Education Project, funded under Public Law 93-380, Section 406, in fiscal year 1975-76. An overview of the project is presented with information on the context within which the activities occurred and the participants involved. The three levels of the project and objectives are presented along with a brief description of activities. Evaluation results and overall findings are discussed. A series of recommendations are presented that may be useful to educational systems undertaking similar type programs.

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NATURE OF PROJECT

The project had three major goals for the 1975-76 school year:

1. To demonstrate a comprehensive and coordinated career education program in the Bangor Public School system, Bangor, Maine which could serve as a model for the northern section of Maine.

2. To demonstrate procedures for integrating and implementing career education at the University/College level.

3. To demonstrate procedures for developing a Maine State Plan for Career Education.

Each goal had specific objectives that were used to develop varied project activities and evaluation procedures.

PROJECT CONTEXT

Characteristics of the State of Maine

Maine is a rural state with a population of slightly over one million persons and encompasses more square miles than all the other New England states combined. A majority of the population (70%) is located in the southern coastal portion of the state. The major industries are paper production, fishing, shoe manufacturing, poultry farming, and recreation. Maine is a relatively poor state with lower than average annual wages and high unemployment. The 1970 Census Report indicated that the average per capita personal income for the state of Maine was $3,375 and that over 10% of all families in Maine are below the poverty level.

Characteristics of the City of Bangor

Bangor is Maine's third largest city and has a population of approximately 38,000. The population is 99% white and 1% non-white and includes 26.4% who are under age fifteen.

Bangor is situated on the Penobscot river, 35 miles from the coast and is the approximate midpoint of the north-south axis of the state. It serves as the major distribution point for the northern half of Maine and has a variety of small diversified industries. For example, electronics, shoe production, food distribution, medical services and building suppliers. The average work force is about 100 employees in each business and industrial firm located in the city.

Characteristics of the University of Maine at Orono

The Orono campus of the University is one of several educational centers making up a statewide system of public higher education. The campus is located approximately eight miles from Bangor and boarders the Stillwater river, a branch of the Penobscot River.

The Orono institution includes the Colleges of Arts and Sciences, Life Sciences and Agriculture, Business Administration, Education, Engineering and Science, and Bangor Community College. Each of these colleges, with the exception of Bangor Community College, offers both undergraduate and graduate degrees in a wide variety of education programs. The total enrollment is slightly over 11,000 students.

PROJECT PARTICIPANTS

Level I University Based Activities

A total of thirty-eight university professors participated in three all-day seminars to examine the philosophy, methods and objectives of career education. These professors are involved in teacher education pre-service and represent all regions of the State of Maine. In addition, they represented five of the seven campuses of the University of Maine system.

Also, fourteen undergraduate teacher trainees were selected as career education interns from a total of thirty-six applications. The selection criteria were a G.P.A. of 2.0, junior or senior standing and a personal interview.

A group of four counselor trainees were selected from the counselor education program at the Orono campus of the University of Maine. Each of these trainees was in a masters degree program in counselor education with an emphasis on career education.

Level II Bangor School System

A group of thirty-five participants, thirty-one teachers and four guidance counselors were selected to participate in the career education project. Of the thirty-one teachers involved, fourteen were from grades K-6, eleven from grades 7-9 and six from grades 10-12. All grades, K-12 were represented by at least one teacher participant. The four guidance counselors were volunteers and represented elementary, junior and senior high school.

The total participation in all facets of the career education program was as follows:

Student Participants:	Number
K-6	315
7-9	1114
10-12	626

Educator Participants:	
Teachers	140
Counselors	8
Administrators	6
Members of the Business Community	55
State Dept. of Education	3

The above figures represent the combined total participation of students, teachers, counselors, administrators and others who contributed to various training efforts.

Level III State Department Based Activities

The State Department of Education and Cultural Services was ably represented by Mrs. Marion Bagley, Consultant for Career Education. A statewide advisory committee provided input for developing the preliminary Career Education Plan and reviewed various segments prior to submission to the State Board of Education. The Advisory Committee represented all levels of education and met on a regular monthly basis to advise on the Career Education Plan.

LEVEL I UNIVERSITY BASED ACTIVITIES

The goal to demonstrate procedures for integrating career education at the university level was attempted through a number of enabling objectives.

Objective 1:

The first objective was to train teacher educators within the university system in the philosophy, objectives and content of career education. The expectation was to involve 100 teacher educators in the program; however, only 38 participated. Fifteen institutions in the state were identified as being involved in teacher education and the dean or department chairman asked to nominate faculty members to attend the sessions. Only seven of these responded. A series of three workshops were held in each of three geographic locations (southern, central & northern) within the state. The first workshop was entitled "Career Education: What It is and What It Can Be." The second session was on "How to Implement Career Education." Project staff from the South Portland Public Schools, Cumberland School District and Career Placement Center of the University of Maine at Orono demonstrated career education activities which were part of their programs. The third session was on "Future Trends and Directions in Career Education." Experts on career education in higher education participated in this session as consultants.

A formalized research design was not used to assess the changes in knowledge or attitudes on the part of the faculty members participating. They were asked, however, to evaluate the program. They found K.B. Hoyt's, "An introduction to Career Education" particularly useful in assisting them to understand the definition and rationale for career education.

As far as topics selected, the university group was more interested in the role of career education in higher education than in having an overview of the types of programs included in the elementary and secondary schools. The group rated as excellent, the session on "Implementing Career Education." Overall, they felt the need for more sessions with ample discussion time and increased emphasis on how to infuse career education into the higher education setting.

Objective 2:

The second objective was to train fifteen teacher trainees in career education. Fourteen juniors and seniors were selected on the basis of their grade point average, class standing and personal data sheet response. The interns registered for Ed C 154 Career Education: The Secondary School (3 credits) and Ed X 198 Problems in Education (3 credits) during the spring session. The field experience involved work in the classrooms of the Bangor School System with teachers who were involved in the in-service training portion of the project. They also participated in the different career education workshops held for the Bangor teachers. The teaching staff gave the students ratings of satisfactory or higher on their involvement and attempts to infuse career education. The students also took a knowledge and attitude pretest and posttest. The fact that students had relatively high knowledge of the career education concept at the beginning of the project year could account for the lack of significant gain in their scores from pre to posttest.

Objective 3:

A third objective was to define the role of the University/College in career education.

An analysis of seminar notes identified the major questions raised and in the in-service sessions held for college and university faculty members. The greatest concern expressed related to the declining job market for education majors and how to reconcile this reality with the future of teacher education. The greatest concern expressed related to the declining job market for education majors and how to reconcile this reality with the future of teacher education. The faculty raised seven basic issues which need further analysis and response:

1. How does career education relate to career preparation and planning on the campus?
2. Will institutions of higher learning be forced to introduce or develop programs of career education?
3. Does career education apply to differing types of institutions i.e. liberal arts colleges, state universities, etc.?
4. Does career education apply to older adults and how is this to be infused in the post secondary institution?
5. What priorities can be established from career education to guide university program development? For example, should we focus on self-awareness, decision making, or career awareness?
6. How does career education help students with unrealistic aspirations in relation to their abilities and interests?
7. Will there be additional federal funds to assist universities in establishing in-service training of staff and faculty?

The following key activities were suggested for post secondary based career education training:

1. Provide in-service training for the staff.
2. Develop self-instructional materials for faculty members who cannot attend all training sessions.
3. Coordinate campus based career education from a central location for continuity and direction. Seminars, courses, special events, proposal development and policy making must be the responsibility of at least one high level official.

4. Work closely with local secondary schools for field testing new materials and training of teachers.

Objective 4:

The fourth objective was to review career education literature, research models and state exemplary projects with teacher educators.

The review was completed by students enrolled in Ed C 153, Career Education: The Elementary School and Ed C 154 Career Education: The Secondary School. Materials and media were reviewed and abstracts provided to the teacher educators in a loose leaf notebook. Career Education materials were collected for use by the Bangor teachers and by the college interns. The materials were evaluated by the participants but no annotated bibliography is currently available. In general, few career education materials were found in the following areas: Appreciations and Attitudes, Employability Skills and Beginning Competencies. Educational Awareness materials were available but most materials had a heavy guidance orientation and appeared to have limited use by the classroom teacher. Economic Awareness materials were limited to publications by the Joint Council on Economic Education as a major source, but were rated excellent.

Objective 5:

The fifth objective was to arrange visits for the participants to observe career education methods being used in selected Maine schools.

Selected school districts were visited by the project staff and as a result of these visits the following changes were made in the delivery of career education to teachers and teacher educators:

1. The materials in the Career Resource Center were cataloged and a list prepared for teachers.

2. The demonstrations arranged for the teachers were related to specific career education elements, e.g. Self-Awareness, Career Awareness, Decision Making, etc.

3. An improved procedure for record keeping was instituted after reviewing the South Portland REVAMP system.

4. More demonstrations on"How To Do It" were arranged for the Bangor teachers as a result of the visit to Project REVAMP.

5. "Shadow" experiences were arranged for the Bangor teachers to increase their knowledge of employment opportunities in local public agencies.

6. Several panels were presented to the teachers per their request to meet and discuss with local business personnel the problems that youth encounter in the transition from school to work.

Objective 6:

The sixth objective was to educate four counselor trainees in career education. The four counselor trainees took six courses during the year, Career Education: The Elementary School, Introduction to Counseling, Career Development Theory, Career Education: The Secondary School, Education-Occupational Information and a Practicum in Career Counseling. The counselor trainees and teacher education interns also participated in the workshops held for the Bangor teachers and devoted time to critiquing curriculum materials and research models.

LEVEL II SCHOOL BASED ACTIVITIES

The goal to demonstrate a comprehensive, integrated and coordinated career education program in one local pilot school system was attempted through a series of enabling objectives.

Objective 1:

The first objective was to demonstrate a comprehensive career education model for teachers in grades K through 12. The following steps were taken to initiate this:

1. The Bangor Public school system was selected because career education was identified as a basic in-service need by staff and teachers.

2. Orientation sessions were held for all Bangor teachers concerning the nature of the project and volunteers solicited. A total of thirty-five were selected from the forty-eight who submitted applications.

3. Eleven full day workshops and one field trip to the South Portland Career Education Program were conducted. All project teachers participated in a one day job shadowing experience and three field trips to local businesses and industries. Each of eight workshops focused on one of the career education elements. The elements were Education Awareness, Economic Awareness, Community Involvement, Decision Making, Self-Awareness, Career Awareness, Appreciation and Attitudes and Beginning Competencies and Skills.

4. The format for the workshops was as follows:

   a. One hour of theoretical material on each element.
   b. One hour of discussion and activity related to the presentation.
   c. A two hour laboratory session conducted by experienced teachers from another district who demonstrated career education activities by grade and subject area.

   Afternoon workshop sessions varied according to participants needs and interests but included teacher preparation time, field trips and panel discussions.

5. In class assistance was rendered to the participants upon request by members of the project staff in the form of providing resources, presenting self-awareness experiences, leading discussions, showing filmstrips and demonstrating simulation techniques.

6. A half-day workshop was given to the total Bangor school staff (380) on the highlights of the Bangor Comprehensive Career Education Program. The workshop consisted of a slide presentation on activities which occurred in the experimental career education classrooms, the distribution of the Career Education Handbook developed by the project staff, the illustration of teachers in selected career education activities and discussion of future plans for career education in the school system.

7. The community was involved in this project. Members from the community were selected to serve on the Project Advisory Committee and business and industrial groups cooperated in hosting field trips for the teachers. Panels and discussion sessions were conducted to supplement the above.

8. Project activities were publicized through the media. On fourteen occasions television newscasts reported project activities and two newspaper articles were distributed for statewide consumption.

9. Ten of the local project teachers were selected and trained as career education demonstrators and presented reports at regional and national conferences. The demonstration teachers were selected on the basis of their willingness to present ideas to their colleagues as well as the quality of career education activities in their classrooms.

Evaluation

The Comprehensive Career Education Model was evaluated in a variety of ways. First, the knowledge and career attitudes of the teachers was assessed through a pretest posttest design. There was a significant gain in the knowledge of the teachers. The mean of the pretest was 30.33 and the posttest 41.39. A t of 9.70 was computed and found to be significant at the .01 level. When the Experimental Group was compared to the non-participating teachers after the posttesting, the Control Group had a mean score of 31.00 compared to the Experimental Groups mean score of 41.39. A paried t of 4.76 was computed and was found to be significant at the .01 level. There were also positive shifts in attitudes as measured by the Career Attitude Scale between the pretest and posttest results.

Second, teachers were asked to do formative and summative evaluation of the workshops and project in general. As a result of the Career Education Project the workshop participants indicated the development of competencies in the following areas:

1. An understanding of the career education elements.
2. The use of techniques for intereviewing, conducting field trips, job shadowing, values clarification and using community resources.
3. An awareness and understanding of the curriculum infusion concept.

As a result of the project, the participants expressed a positive feeling toward career education and indicated that:

1. They desired to see career education continue as an on-going project in Bangor.
2. They wanted to see career education infused into the curriculum of the Bangor Schools.
3. They were going to continue to infuse career education activities into their particular courses next year.
4. They indicated that increased use of community resource people, parents, field trips and job shadowing would occur.
5. They expressed a desire to have a central career education resource center or individual school resource centers established.
6. They desired to see career education elements infused into the guidance program as well as the curriculum.
7. They expressed a desire to pursue additional training in career education workshops.

The participants suggested the following with regard to an in-service program for next year:

1. That a new group of teachers receive the same intensive training in career education.
2. That renewal, follow-up and advanced training sessions be made available for those completing the workshops this year.
3. That the participants completing the 1975-76 program become the workshop staff for the in-service program in 1976-77.

4. That additional use be made of local business people in the schools on panel presentations and for job shadowing and group field trips.

5. That "hands-on" activities and small group procedures be stressed in the workshop.

Objectives 2, 3, 4:

The second objective was to demonstrate career education curriculum practices for infusing traditional subject matter.

The third objective was to demonstrate the implementation of career exploratory and preparation techniques for students in grades 7-12.

As mentioned in the previous section of this report, each workshop focused on one of the eight elements of career education. In small group sessions the South Portland teachers provided the Bangor participants with sample materials and infusion strategies. Teachers were required to keep a log of career activities which they had completed in their classrooms. It should be noted that there was no requirement to teach a specific number of instructional units and each teacher had freedom to implement and develop activities unique to their subject.

In interpreting the data, there appears to be a relationship between the introduction of the career education element in the workshop and subsequent infusion in classroom activities related to that element. For example, the self-awareness and career awareness elements were presented early and the decision making element toward the end of the program. Inspection of the data reveals that 87 Career Awareness activities were conducted for 873 students in grades K to 6 and that teachers in grades 7-12 conducted 95 Career Awareness activities.

impacting 1,446 students; 37 Employability Skills activities impacting 270 students and 21 Beginning Competencies activities involving 252 students. It should also be noted that career education resource materials were loaned to these teachers on 216 occasions. Job shadowing experiences were provided for approximately 200 students and fifty-four student field trips were conducted.

Objective 5:

Objective five was to demonstrate career guidance techniques that support and facilitate career education in grades K-12.

Four of the workshops for participants were conducted by members of the Counselor Education Division of the College of Education at the University of Maine at Orono. The South Portland Guidance staff met with the Bangor Guidance staff during the site visitation to Project REVAMP and suggested strategies for revamping the guidance program. Guidance materials were demonstrated, e.g., Work Values Inventory, Self Directed Search, and Life Career game.

The sixth objective was to demonstrate through research techniques the career education growth of selected 3rd, 5th, 7th, 9th, and 10th graders over a three year period. Baseline data was collected from all project classrooms as well as from a matched group of control classrooms. A pretest posttest non-equivalent control group design was used.

After reviewing the Handbook for the Evaluation of Career Education Programs (USOE, 1974) and A Practical Guide to Measuring Project Impact on Student Achievement the following instruments were selected:

NAME	PUBLISHER	GRADE LEVEL
Career Education Knowledge Inventory	Center for Vocational-Technical Education, Ohio State University	Adult
Attitude Inventory	Unknown	Adult
Self-Concept and Achievement Motivation Inventory (SCAMIN)	N.J. Milchus, et. al. Person-O-Metrics, Inc. 20504 Williamsburg Rd. Dearborn Hts., Michigan 48121	K-3
Survey of School Attitudes	T. Hogan, Harcourt, Brace and Jovanovich, Inc., New York	1-6
Career Knowledge	Barbara Fulton, Evaluative Research Associates, 5431 Trailbend Road St. Louis, MO 63033	1-3
Self Esteem Iventory	S. Coopersmith W.H. Freeman & Co. San Francisco, Ca., 1967	2-12
Career Maturity Inventory Attitude Scale	J. M. Crites, McGraw-Hill/ California Test Bureau	4-12
Occupational Knowledge Test (Form A)	R.W. Heath Comprehensive Evaluation Project U.S.O.E. Contract No. EC-9-099017-4424 (010)	4-6
Knowledge of Occupational Areas Test (Form B)	Center for Occupational Education, North Carolina State University of Raleigh, 1973	4-6
Career Development Inventory	D. Super, et. al. Teachers College, Columbia University, New York, N.Y.	7-12
Career Awareness Survey	R. Drummond and C.W. Ryan, College of Education University of Maine Orono, Maine	4-12

EVALUATION RESULTS

The Comprehensive Career Education Project was a multi-level attempt to demonstrate concepts, philosophy and practices to public school teachers. Student impact and teacher infusion data were analyzed for significance. Does career education make a difference? Do teachers who adapt career education concepts and practices make a difference in the lives of their students? The evidence available from this project is mixed, but we feel comfortable in offering several positive observations.

A. Exposure to Self Awareness: Students in career education oriented classes made increased gains in total self concept as measured by the SCAMIN and Self Esteem Inventory (Coopersmith) (not all gains were statistically significant). See Figures 1 and 2 for data comparisons. The Self-Awareness career education element received extremely strong support from all project teachers. Students exposed to infused career education classes demonstrated greater self-awareness as measured by the two self concept inventories. In 65% of the classes the experimental subjects made greater self concept gains than the control subjects. A total of 2,665 students in grades K-12 were impacted by the project teachers.

B. Exposure to Career Awareness: On tests designed to measure career attitude, career knowledge, career awareness and career planning the students in career education infused classes scored higher than students in the control classes (demonstrated higher gain scores). See Figures 3 through 6.

Students exposed to career awareness activities in grades 2 through 12 were able to:

1. Recognize, list and identify factors essential to successful career planning and job selection. Factors such as educational information, abilities, occupational planning, and using informational resources to assist in career planning. The test scores reflect gains for the experimental group.

2. Student objectives were to develop increased knowledge of occupational choices, positive attitudes toward career planning and knowledge of their values toward work. The attitude subtest of the Career Maturity Inventory, the Career Development Inventory and the Occupational Knowledge Test were administered in a pre-posttest design to career education oriented classes. A total of 2,319 students were impacted by the project teachers on the career awareness element.

C. Attitude Toward School Subjects: It was not possible to assess student learner outcomes in relation to basic skill development in academic subjects during the 1975-76 project year. We were able to assess student attitudes toward Mathematics, Science, Social Studies, and Language Arts via a pre-posttest design. The Survey of School Attitudes measures attitude toward reading, mathematics, social studies, and science in the elementary school curriculum. We infer that if students do not enjoy working with numbers, reading books, or experimenting with science problems there will probably be little achievement in basic competency. Items on SSA were selected to sample instructional objectives and daily activities characterizing each curricular area. The Reading/Language Arts scale includes items concerning reading, writing, listening, working with words, and speaking. The Mathematics scale covers geometry and measurement, numeration concepts, computation, and problem solving. Life

sciences, earth science, physical science, and scientific methods are included in the science scale. Social Studies items sample government and politics, history, geography, anthropology, sociology, and social studies skills. The survey items were chosen to be representative both of school activities and of school-learned skills and concepts used in everyday life.

Our results indicate that gain scores in the career education classes were higher than the control classes but not significantly so. It may be a result of our teacher training effort in the in-service component or attributable to the teacher experience variable. Teachers in the experimental classes were more experienced and had been in the Bangor Public School system for longer periods of service than had teachers in control classes. Figure 7 illustrates the gains made by students in career education oriented classes.

FIGURE 1

A Comparison of Self-Concept for Kindergarten and Grade One on the SCAMIN

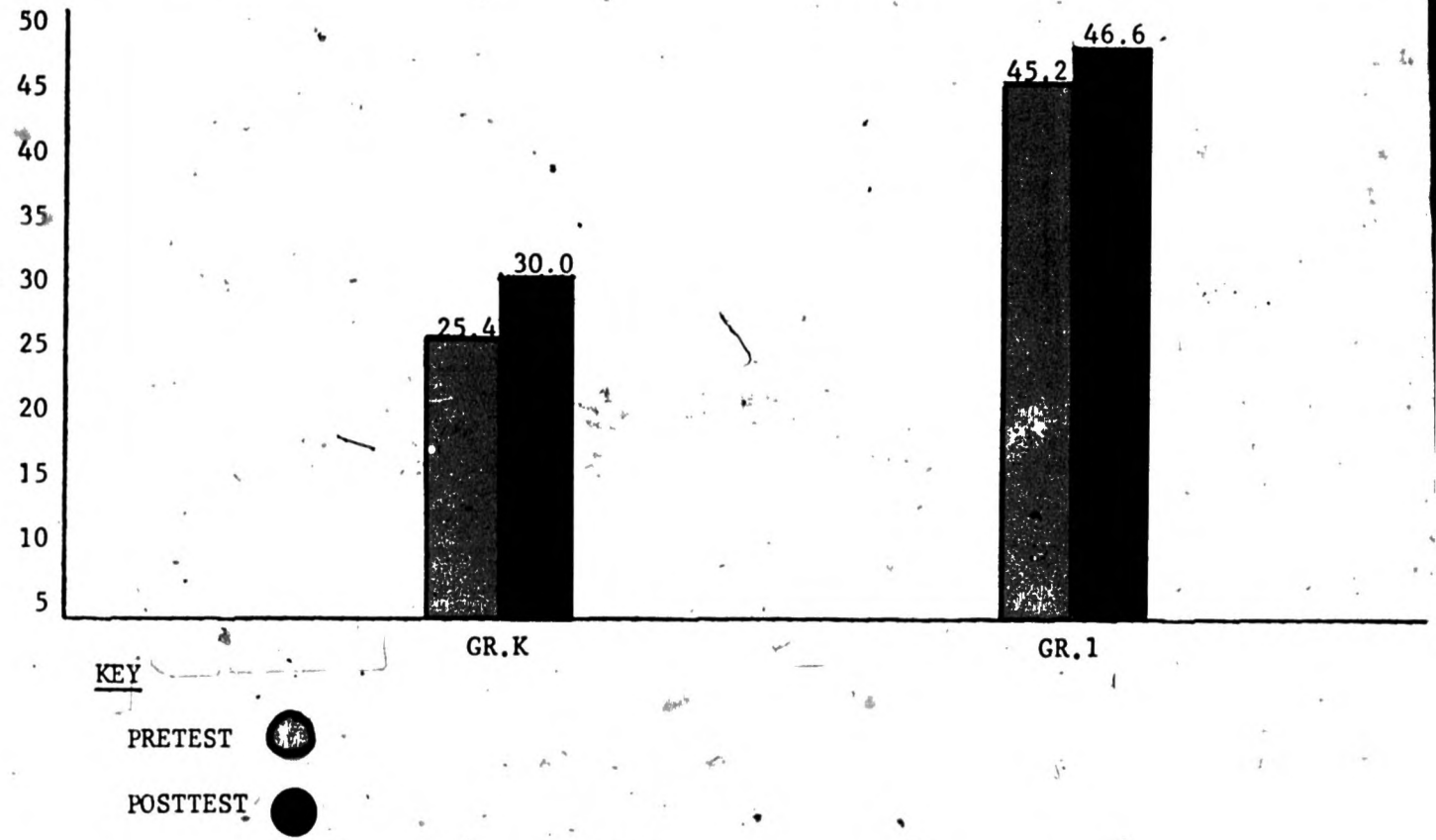


FIGURE 2

A Comparison of Self-Esteem Scores For Grades Two Through Eleven on the Coopersmith Self-Esteem Inventory

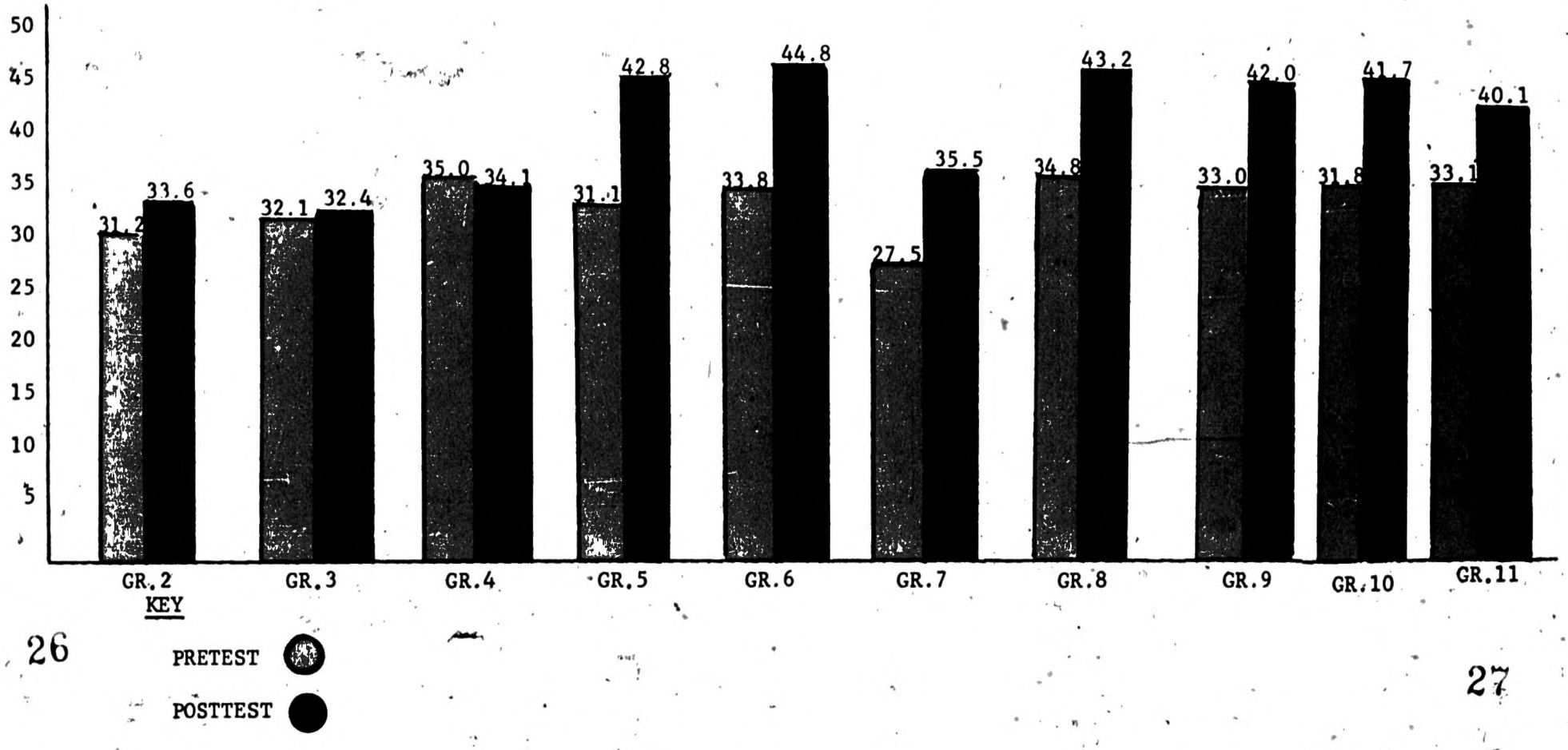


FIGURE 3

A Comparison of Career Attitude Scores for Grades Four Through Eleven on the Career Maturity Inventory

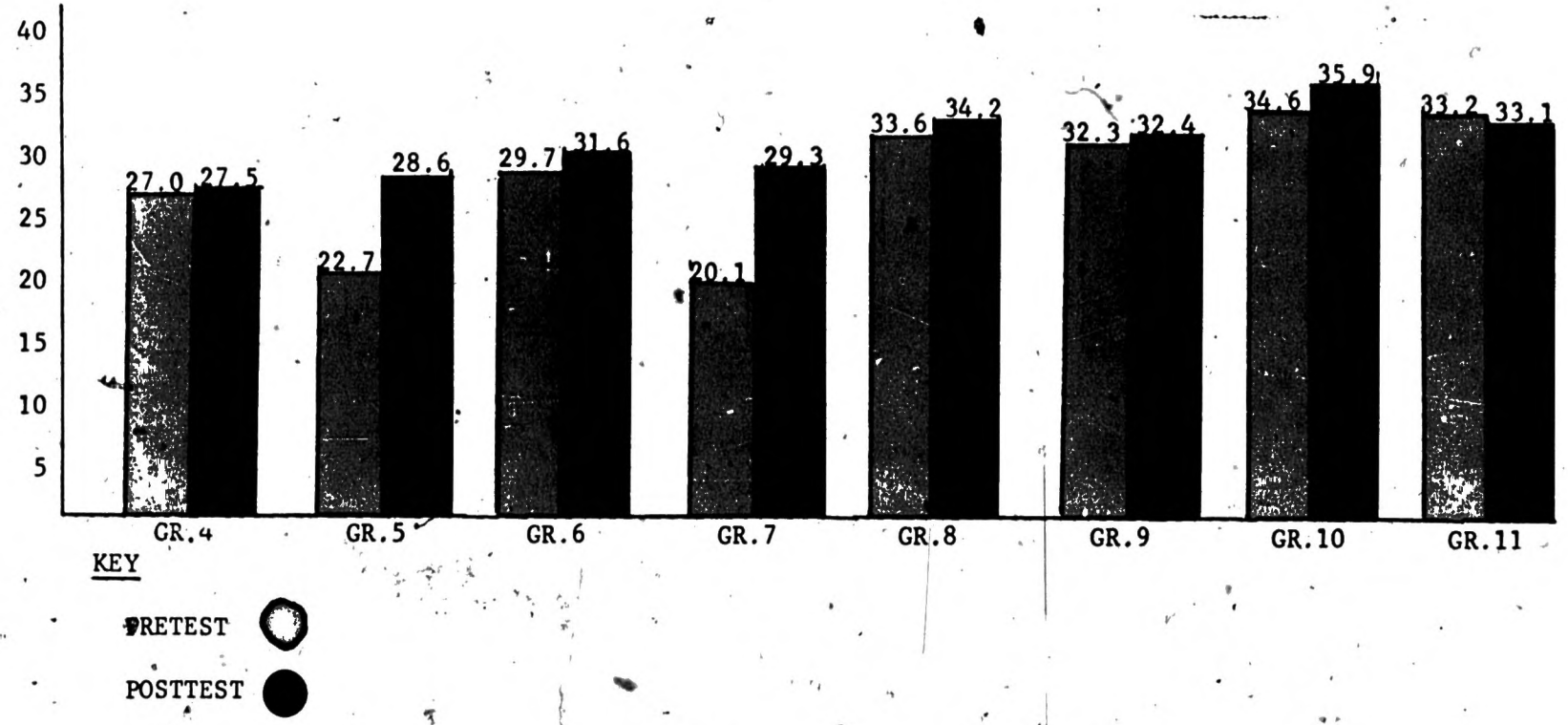


FIGURE 4

A Comparison of Career Knowledge Scores for Grades One Through Three on the Career Knowledge Test

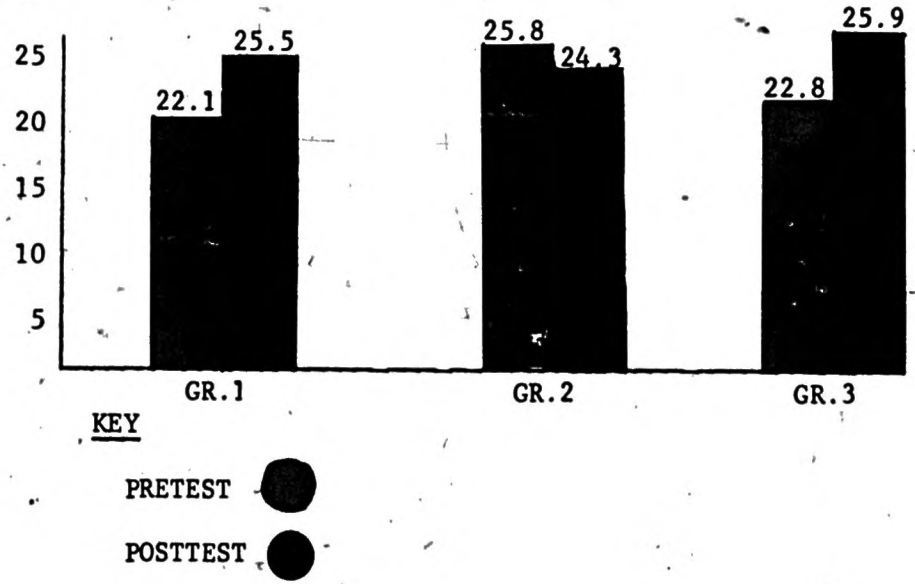


FIGURE 5

A Comparison of Occupational Knowledge Scores for Grades Four Through Six on the Occupational Knowledge Test

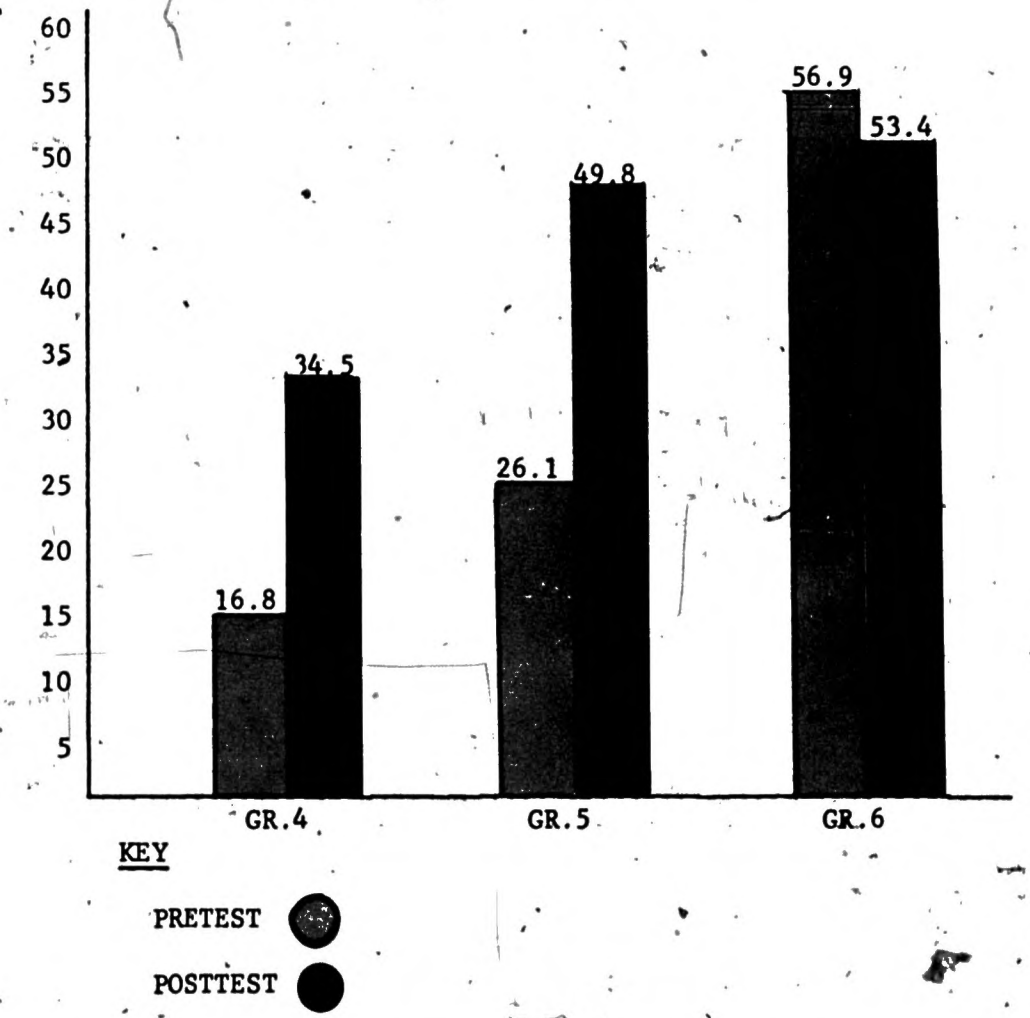


FIGURE 6

A Comparison of Career Information Scores
for Grades Seven Through Eleven
on the Career Development
Inventory

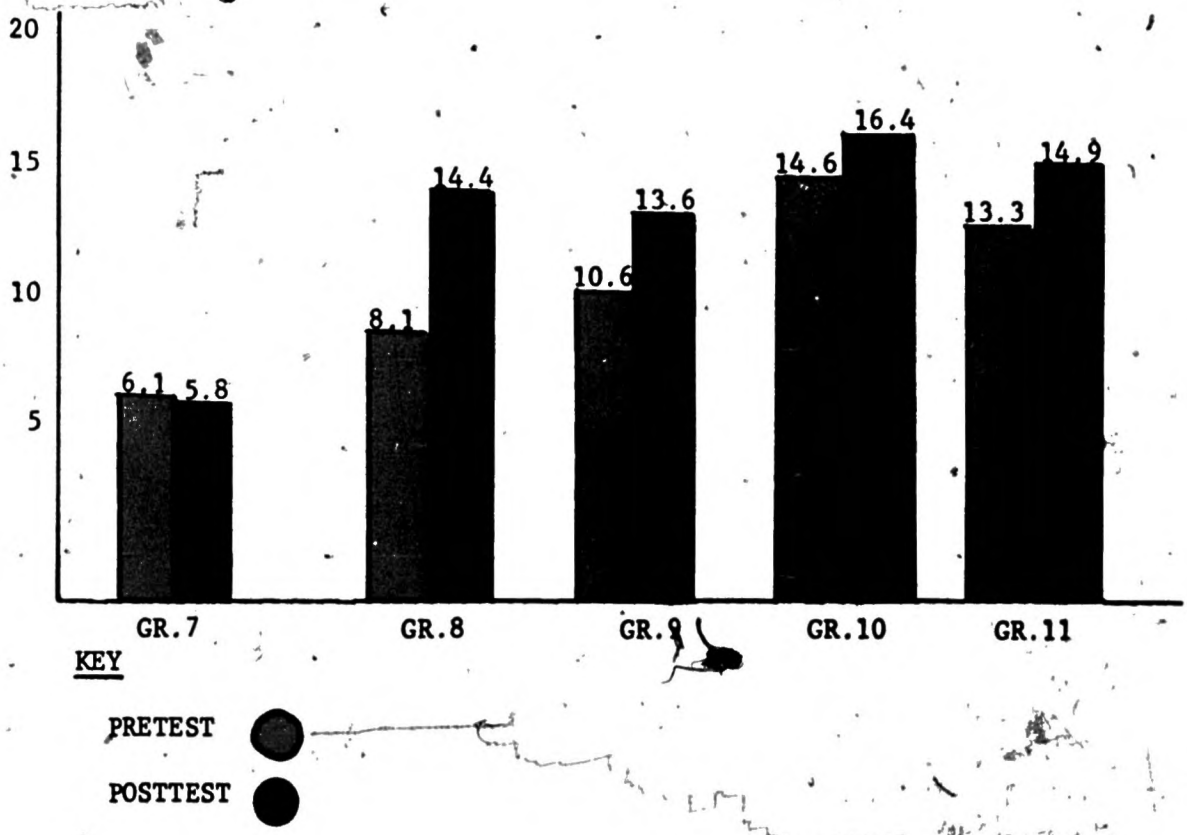
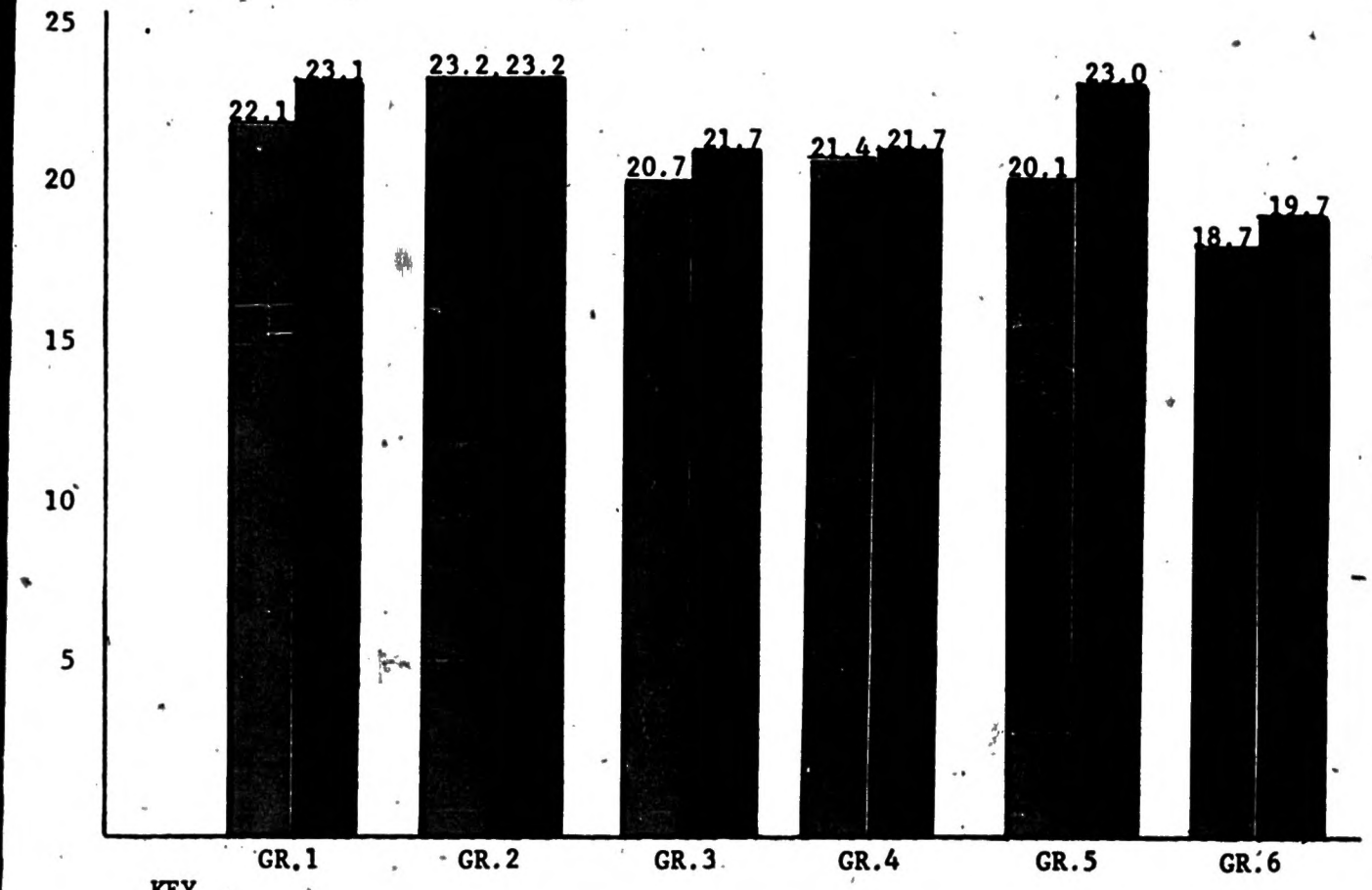


FIGURE 7

A Comparison of School Attitude Scores for Grades One Through Six on the School Attitude Survey



In part the general lack of differences between the experimental and control classes may be attributed to the training program. Teachers were receiving information on how to initiate career education concepts over a seven month period and had a limited time to implement career education activities in their classes. Another problem was their lack of familiarity with career education materials.

The implementation level varied among the teachers, and no set objectives or number of activities were required of the participants. They had the freedom to accept and reject activities and infuse what they wanted. Some were more enthusiastic and energetic than others. In addition, junior and senior high school teachers had rather limited contact with their students, some as little as one 45 minute period per day. Many of the control group students may have participated in career education activities with other sources such as non-project teachers, guidance staff, television, or out of school activities.

In addition, the test instruments had acceptable validity and reliability but they may not have measured the instructional objectives established by the teachers for their particular discipline. The realities of the in-service program, the size of the staff, the scatter of participants across many grades and schools made meaningful, statistical comparisons difficult.

LEVEL III STATE LEVEL

The major objective for this level was to demonstrate procedures for initiating a Maine State Plan for Career Education and had four enabling objectives.

Objective 1:

The first objective was to demonstrate the planning process for the State Career Education Advisory Committee.

The state plan has gone through five revisions. The state board of education adopted the following resolution at the December 11, 1975 meeting.

> The Maine State Board of Education affirms its support of the concept of Career Education and directs the department to continue its efforts in the development and implementation of the State Plan which proposes to serve all individuals in career awareness, orientation, exploration and preparation for work as part of his or her way of living.

The plan was submitted on the basis of an extensive review and analysis of career education needs in Maine. An advisory board has been active in the formulation of the plan and included members of the Department of Educational & Cultural Services, classroom teachers, project personnel from career education projects in the state and school administrators. It will be expanded to include representatives from business and industry.

Objective 2:

The second objective was to develop an evaluation plan. The needed information was gained through the sixth test series administered by the Maine Assessment of Educational Progress office and National Evaluation Systems. The population included 1,000 students in two age groups, 13 and 17 year olds. School districts were also surveyed regarding their needs in career education.

Objective 3:

The third objective was to demonstrate a consultant model for State Department staff responses to school-based career education requests within each county in Maine. The Maine Trainer's Manual for Career Education (1974) was used as a model for conducting in-service training in public schools. Forty-five requests were received and 380 professional educators serviced. The guide covers the following nine topics:

1. Career Education: Historical Antecedents
2. Career Development in the School
3. Working with Self-Concept
4. Career Education in the Elementary School
5. Career Education in the Secondary School
6. Strategies and Practices for Implementing Career Education
7. Community Involvement in Career Education
8. Career Education and Economic Education
9. Evaluation Strategies in Career Education

The topics listed above were supplemented by appropriate study materials and group exercises. The consultant served as a resource person at 16 meetings and also spoke to seven public service groups on the career education concept.

Objective 4:

The fourth objective was to demonstrate a dissemination plan for informing Maine youth of career training opportunities in the state.

To provide Maine youth with career information about training opportunities, the Bureau of Vocational Education has entered into a formal agreement

with the Division of Manpower Research. The goal is to develop a Career Resource Center that will provide up-to-date career information to youth and adults. A demonstration center is under development in Portland, Maine.

Career Education materials were also distributed to 25 school districts within the state. These were:

Career Education and Maine Curriculum Guide by E.G. Johnson & C.W. Ryan

Career Education and Maine: General Information by E.G. Johnson & C.W. Ryan

Maine Trainer's Manual for Career Education by C.W. Ryan, et. al.

In summary, the project data generated the following conclusions and recommendations. All comments should be interpreted as plausible results from a project that was multi-faceted. In a short eight month time span we were training teachers in a large public school, working with an assorted group of teacher educators and assisting the State Department of Education in formulating a Career Education Plan. In short, we were faced with a tremendous variety of assignments and a small staff of professionals to carry them out. It was hard work, but an exciting challenge to all of us.

CONCLUSIONS

The following conclusions were derived from analysis of the data and reasoned inference.

1. The in-service model presented to the public school level was effective in producing gains in career knowledge, more positive attitudes toward career education and implementing activities in the classrooms.

2. The key components as identified by the teacher participants in the in-service workshops were:

   a. demonstrations by experienced teachers of career education activities.

   b. participation in actual experiences that were suggested for the students, e.g. awareness activities, job shadowing, field trips, etc.

   c. follow-up support by consultants for teacher career education activities.

   d. small group meetings within grade and subject areas to discuss implementation of career education concepts.

3. Career education is an accepted goal by the State Board of Education but not necessarily a priority item for funding support in Maine.

4. Post-secondary teacher educators or administrators in general do not perceive career education as a priority item. A large percentage of those who did get involved wanted more training on implementing career education into their subject areas or disciplines.

5. Using this in-service training model for demonstrating career education philosophy, concepts and practices is a viable procedure,

RECOMMENDATIONS

Recommendations for those interested in adapting or adopting various phases of this project are as follows:

1. If in close geographical proximity, visit the Bangor School System, talk with the coordinator and teachers involved and view activities in action such as workshops, classroom demonstrations, or career resource center presentations.

2. Visit an in-service workshop for university educators and review the materials developed for this group.

3. If you have specific questions about phases of the program, write or call the persons listed in the Introductory section of this report.

4. Review the complete technical report on file with the Office of Career Education, U.S.O E.

Bangor Public School Phase

The administrative staff and Career Education Coordinator are encouraged to continue career education and:

1. Use the expertise of teachers who have been trained in career education components within or without the district as peer instructors.

2. Establish a career education resource center.

3. Involve teachers in "hands-on" experiences that include community contact through job shadowing experiences and local educational and/or business field trips.

4. Arrange visitations to on-going career education projects in other school districts than your own.

5. Share and pool career education ideas through newsletters, curriculum guides and renewal sessions.

6. Use the measuring instruments for assessing student career knowledge, attitudes, career maturity and self concept in this project with caution. Evaluation and measurement procedures ought to reflect the actual objectives of the project rather than global or general measures of selected career education components and student outcomes.

7. Revise the evaluation design in relation to the implementation level of the teachers and the number and variety of the activities experienced by the pupils.

8. Review the assessment instrumentation even though highly recommended by outside consultants, USOE, evaluation teams, etc., for local appropriateness. The reading level should be determined and the tests piloted on a sub-sample of the students sample.

9. Secure teacher support for the evaluation phase. A system of feedback needs to be developed so the results of the evaluation are provided teachers and administrators to be used in curriculum planning. Sufficient time needs to be allotted to this phase so testing can be uniform and conditions standardized.

10. Solicit pupil evaluation of the career education activities on a regular basis.

11. Establish an evaluation committee which includes teachers, students, administrators and key persons from the community or business world.

University Phase

The training of university teacher educators and students poses unique problems that are particular to this educational environment. Our recommendations are:

1. A career education practicum or apprenticeship should be a part of the preparation of counselors, but included after formal course experiences in career development theory, occupational information, career education, elementary and secondary levels and counseling theory have been completed.

2. Course work should be supplemented by field work in career education for students on both the graduate and undergraduate levels.

3. Self-instructional materials need to be developed for faculty members who miss sessions or want to study independently. Continuity of instruction is difficult when interruptions, etc. are numerous.

4. A person should be appointed on each campus as a coordinator of career education activities to aid and assist in seminar planning, course development, proposal development, etc.

5. Evaluation via traditional pre-posttest models is difficult with professional staff of varying philosophical hues, particularly those with an anti-test bias. Other unobtrusive methods must be used.

SUMMARY

It is difficult to assess with accuracy and precision all project efforts in this first year, 1975-76. In our opinion, career education projects would enhance their success ratio for all activities by limiting the scope of initial efforts. Quite frankly, we assumed a task that required more staff and time than was budgeted in the original proposal. Any successes must be credited to the hard working nature of attitude that prevails among professional educators in Maine. We thank all for their efforts in helping initiate this career education effort in northern Maine.

11/1/76

Dr. Charles W. Ryan