DOCUMENT RESUME

ED 103 444 TM 004 275

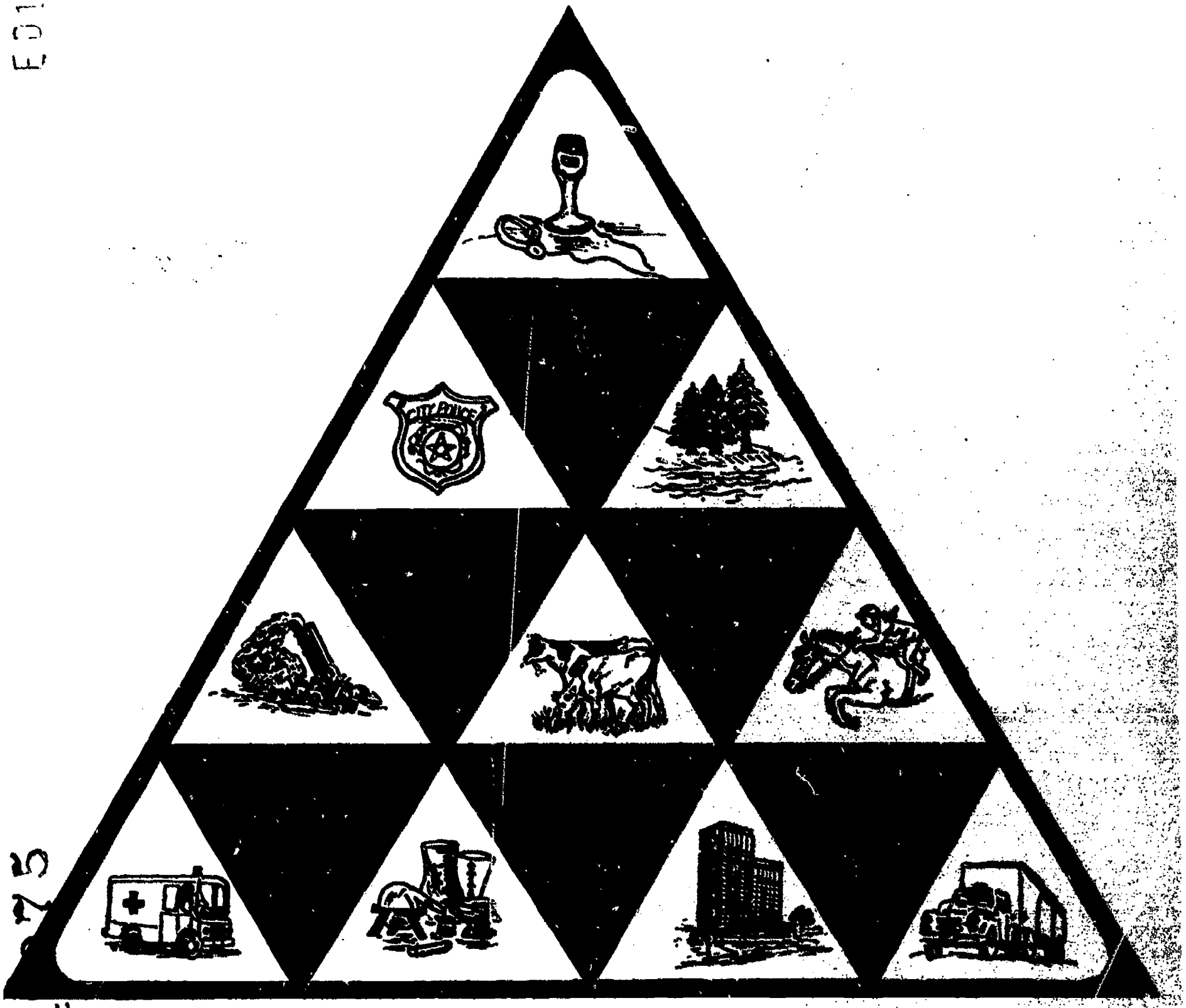
AUTHOR Lewis, James P.; Dittenhafer, Clarence A.
TITLE Evaluation of Selected Career Resource Centers in Pennsylvania. Final Report.
INSTITUTION Pennsylvania Research Coordinating Unit for Vocational Education, Harrisburg.
PUB DATE Dec 73
NOTE 46p.

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS Career Opportunities; *Evaluation; Evaluation Methods; Guidance Objectives; *Guidance Services; High School Students; Information Dissemination; Occupational Guidance; Parent Student Relationship; *Participant Satisfaction; Pilot Projects; Program Evaluation; *Resource Centers; Resource Materials; Secondary Education; Statistical Analysis; Student Attitudes; Teacher Attitudes; *Vocational Counseling; Vocational Maturity

ABSTRACT

The study evaluated five career resource centers (CRC) in Pennsylvania. The centers were located in two area vocational-technical schools and three senior high schools. The results showed the CRC's to be successful in organizing and maintaining all the necessary hardware and software; however, keeping career software materials up to date and helping pupils find desired materials was a problem. The overall attitudes of pupils and teachers toward the CRC's were significantly higher than similar control school personnel attitudes toward a regular guidance program. Exposure to the CRC or a regular guidance program was not sufficient to cause significant changes in pupil's scores on the Pennsylvania Occupational Questionnaire or the Vocational Development Inventory, administered in November 1972 and June 1973. (Author)

EVALUATION OF SELECTED CAREER RESOURCE CENTERS IN PENNSYLVANIA



PENNSYLVANIA RESEARCH COORDINATING UNIT FOR VOCATIONAL EDUCATION

FINAL REPORT

Project Number 14-2124

Mr. Garland Gingerich
Director, Vocational Education
York County Area Vocational-Technical School

Mr. James P. Lewis
Dr. Clarence A. Dittenhafer
Principal Investigators

December 1973

Pennsylvania Department of Education
Bureau of Vocational Education
Research Coordinating Unit
Box 911
Harrisburg, Pennsylvania 17126

TABLE OF CONTENTS

LIST OF TABLES

Table | Page

ABSTRACT

Title: Evaluation of Selected Career Resource Centers in Pennsylvania

Investigators: James P. Lewis
Clarence A. Dittenhafer

Agency: Pennsylvania Research Coordinating Unit for Vocational Education

Summary:

The purpose of the study was to evaluate pilot career resource centers in five secondary schools in Pennsylvania. The evaluation sought to assess the CRC in terms of information collection, evaluation and storage, client usage of materials, faculty integration of career units and attitudinal factors.

Generally, the study utilized a pretest-posttest control group design for most of the factors and descriptive analysis for the remaining ones. Input information was obtained from samples of students and teachers. The instruments used were Pennsylvania Occupational Questionnaire, Vocational Development Inventory, two semantic differential measures and a CRC evaluation form. Analysis of covariance and percentage calculations were the primary statistical techniques performed on the data.

The CRCs were successful in organizing and maintaining all the necessary hardware and software; however, improvement should be made in keeping career software up-to-date and helping pupils find materials. The overall attitudes of pupils and teachers toward the CRCs were significantly higher than attitudes of pupils and teachers in the control schools toward a regular guidance program. Exposure to a CRC or a regular guidance program was not sufficient to cause

significant changes in pupils' vocational maturity. The CRCs were successful in helping parents become active and concerned in the career development of their children. The centers also successfully utilized community resources in fostering a better understanding of the relationship of education to work.

The study resulted in the following recommendations: (1) incoming materials should be evaluated systematically for accuracy and appropriateness, (2) CRC orientation sessions should be conducted for all prospective client groups, (3) satellite centers seem an effective extension of the CRC, (4) the CRC should be the focal point of a total career development program and (5) a feedback mechanism should be established for improving the effectiveness of the CRC.

BACKGROUND

In their broad-based career development goals, the career resource centers acknowledge a responsibility for providing pupils with an awareness of career alternatives. Thus, considerable effort was [illegible] toward an examination of the CRCs in terms of their effect on the decision-making ability of pupils.

The Research Coordinating Unit, working cooperatively with staff members in the Division of Pupil Personnel Services, Pennsylvania Department of Education, developed five pilot CRCs in Pennsylvania. For further implementation, evaluation of the centers' materials, staff, dissemination functions, career development of pupils, teacher attitudes and community involvement was essential.

The experimental CRCs were established in September 1971 as an integrated part of a school's total curricula. Centers were located at the following sites:

- North Hills Senior High School

  North Hills Senior High School is a regular academic school located in the greater Pittsburgh area. Socioeconomically, the area is middle to upper middle class.

  The CRC is staffed with a full-time director and paraprofessional. The center has a wide selection of career development materials including audio-visual aids, PENNscripts, career games, career briefs, handbooks, free materials and appropriate hardware.

  The center's director emphasizes job readiness skills, job placement, group counseling and coordinated field experiences. In addition, career consultants from business and industry hold organized group sessions with pupils.

The center makes extensive use of student assistants and is open to all pupils in the high school and to the public on certain days.

- State College Senior High School

State College Senior High School is a regular academic school located in Centre County. The school has a high per cent of upper middle class pupils. The staffing and facilities are similar to North Hills CRC.

- Springfield Senior High School

Springfield Senior High School is an academic high school located in the greater Philadelphia area. Socioeconomically, the area is middle to upper middle class. Approximately 80 per cent of the graduating seniors enter institutions of higher learning upon graduation.

The center is very similar to the ones in North Hills and State College. One unique feature of the center is the interactive learning system computer search installation. Springfield is the only center with the locational capabilities for installing the system.

- Johnstown AVTS

Johnstown is a comprehensive area vocational-technical school located in the greater Johnstown area. Socioeconomically, the area is high lower to low middle class. The area is a part of Pennsylvania's Appalachian Region.

The center has a wide variety of vocational materials in addition to the regular materials and facilities found in the other CRCs. Particular emphasis is placed on job placement assistance. A unique feature of the center is the establishment of satellite centers in nearby secondary schools.

- York AVTS

York is a comprehensive area vocational-technical school serving schools in York County. The school draws students from diverse socioeconomic backgrounds.

The center's operation is similar to Johnstown but operates no satellite centers.

OBJECTIVES

In order to accomplish the numerous functions of a CRC, the following objectives were formulated:

- To collect, evaluate and disseminate accurate and relevant career information.
- To provide assistance to the centers' clientele in locating, evaluating and using career information.
- To help students integrate self-knowledge with relevant career information by providing counseling services.
- To assist the faculty to integrate career information into the instructional program thereby supporting the career development of students.
- To assist parents in becoming active, concerned and understanding participants in the career development of their children.
- To utilize the community resources in fostering a better understanding of the relationship between education and work.

In order to assess the above objectives, the evaluation effort sought to answer the following questions:

1. How effective were the CRCs in collecting and evaluating career information?
2. How effective were the CRCs in assisting pupils to locate and use career information?
3. How effective were the CRCs in helping pupils integrate self-knowledge with relevant career information?
4. How satisfactory were the CRCs in assisting the faculty in integrating career information to ongoing instructional activities?
5. To what extent did the CRCs help parents become active and concerned in the career development of their children?

6. To what extent did the CRCs utilize community resources in fostering a better understanding of the relationship of education to work?

The above questions were formulated jointly by the evaluation team and the directors of the five centers.

METHODS AND PROCEDURES

General Design

A nonequivalent control group was employed in the evaluation. Diagrammatically, the general design of the study was as follows:

TABLE 1

A DIAGRAMMATICAL REPRESENTATION OF THE GENERAL DESIGN OF THE STUDY

Schools	Pretest	Posttest
Experimental	CRC Schools	CRC Schools
Control	Non-CRC Schools	Non-CRC Schools

Additionally, a descriptive analysis for questions 1, 2, 5 and 6 was conducted.

Instruments

The instrumentation employed to obtain the input data was as follows (See Appendix A for sample items):

- The Pennsylvania Occupational Questionnaire was used as a pre- and postmeasure of pupil knowledge about the world of work. The instrument was designed to measure pupil knowledge of job activities, requirements and working conditions.

- The Vocational Development Inventory was used as a pre- and postmeasure of pupils' attitudes toward the world of work. The instrument was designed to measure the degree of consistency of vocational choice, competencies and attitudes.

- Think About the Career Resource Center, a semantic differential pre- and postmeasure, was administered to teachers and students in the experimental schools. The instrument was designed to measure attitudes of teachers and students toward CRCs.

- Think About the Guidance Program, a semantic differential pre- and postmeasure, was administered to teachers and students in the control schools. The instrument was designed to measure attitudes of teachers and students toward a school's guidance program.

- Career Resource Center Evaluation Form, a questionnaire, was administered to students in the experimental group to determine opinions concerning the efficiency and effectiveness of the CRCs.

- Career Resource Center Equipment and Materials Form, a rating scale, was completed by the CRC directors to determine the educational value of equipment and materials located in the centers.

Sample

Subjects for the study were a sample of 230 9th grade boys and girls from experimental and control schools at or near North Hills and Springfield and 349 10th grade boys and girls from experimental and control schools at or near State College, Johnstown and York. A sample of 284 teachers from experimental and control schools at or near North Hills, State College, Johnstown and York also provided input data.

An attempt was made to select control schools with student populations similar to the experimental schools. Each control school's guidance program followed the rules and regulations as outlined in the Pennsylvania Code (Title 22, Chapter 7).

Diagrammatically, the sampling design was as follows:

TABLE 2

SAMPLING MATRIX SHOWING NUMBER OF STUDENTS
OR TEACHERS IN EACH CELL

Schools	N (Pupil)	N (Teacher)
North Hills SHS	51	60
Shaller SHS*	54	35
State College SHS	58	24
Bellefonte SHS*	58	12
Springfield SHS	63	--
Haverford SHS*	62	--
Johnstown AVTS	60	30
Clearfield AVTS*	60	29
York AVTS	53	43
Dauphin AVTS*	51	51

*Denotes control schools.

Procedures

Each pupil in the experimental and control sample was tested with the VDI and the POQ. In addition, Think About the Career Resource Center was administered to the experimental group and Think About the Guidance Program was administered to the control group. All of the pupils in the experimental group completed the Career Resource Center Evaluation Form.

Each teacher in the experimental sample responded to the Think About the Career Resource Center instrument. The teacher control sample completed the Think About the Guidance Program instrument.

Pretesting was done from November 1, 1972 to November 15, 1972. Posttesting occurred between May 22, 1973 and June 5, 1973.

The Career Resource Center Equipment and Materials Form was completed by the CRC directors in May 1973.

Data Analysis

The computer library program Analysis of Covariance, Craig (1963), was used to analyze the data input from student responses on the POQ, VDI, Think About the Career Resource Center and Think About the Guidance Program. Descriptive statistics were used to analyze data on the Career Resource Center Evaluation Form and Career Resource Center Equipment and Materials Form.

RESULTS

The results section is structured to reflect the outcomes for the six previously stated questions. Thus, the outcomes relating to each question are reported separately. It should be noted that the Johnstown AVTS data was unavailable for the POQ, VDI and the Career Resource Center Evaluation Form at the time of the analysis.

Question 1

How effective were the CRCs in collecting and evaluating career information?

The Career Resource Center Evaluation Form, items 2 and 4, was used to answer question 1. Pupils from the experimental schools at North Hills, State College, Springfield and York completed the forms. Results for each of the above items are reported separately below.

Item 2. Did you find the materials accessible and organized?

An examination of the Table 3 totals shows the per cent in each response category as follows: Yes (87%), No (4%) and Sometimes (9%). Clearly, the majority of the respondents felt the CRCs' materials were accessible and well organized.

TABLE 3

STUDENT RESPONSES TO ITEM 2
ON THE CRC EVALUATION FORM

CRC School	Number of Responses	% for Each Response Category		
		Yes	No	Sometimes
North Hills	46	76	4	20
State College	45	100	0	0
Springfield	18	83	11	6
York	32	84	3	13
TOTAL	141	87	4	9

Item 4. Did you find the materials up-to-date?

Table 4 totals show the per cent in each response category as follows: Yes (66%), No (9%) and Sometimes (25%). The responses indicated most of the materials in the CRCs were up-to-date.

TABLE 4

STUDENT RESPONSES TO ITEM 4
ON THE CRC EVALUATION FORM

CRC School	Number of Responses	% for Each Response Category		
		Yes	No	Sometimes
North Hills	46	46	13	41
State College	57	77	3	20
Springfield	20	65	15	20
York	32	78	6	16
TOTAL	155	66	9	25

Question 2

How effective were the CRCs in assisting pupils to locate and use career information?

Items 3, 5 and 6 on the Career Resource Center Evaluation Form and a pupil semantic differential instrument were used to answer question 2. A sample of pupils from experimental schools at North Hills, State College, Springfield and York completed the forms.

Item 3. Did you find the equipment in good working condition?

Table 5 totals show the per cent in each response category as follows: Yes (86%), No (3%) and Sometimes (11%). The evidence clearly indicated the equipment was in good working condition.

TABLE 5

STUDENT RESPONSES TO ITEM 3
ON THE CRC EVALUATION FORM

CRC School	Number of Responses	% for Each Response Category		
		Yes	No	Sometimes
North Hills	46	83	4	13
State College	56	96	0	4
Springfield	19	89	0	11
York	32	69	9	22
TOTAL	153	86	3	11

Item 5. Did you find the information you needed?

Table 6 totals show the per cent in each response category as follows: Yes (64%), No (13%) and Sometimes (23%). The response levels were similar to those reported for item 4 in the previous question. Generally, the CRCs were helpful in assisting clients to secure desired information.

TABLE 6

STUDENT RESPONSES TO ITEM 5
ON THE CRC EVALUATION FORM

CRC School	Number of Responses	% for Each Response Category		
		Yes	No	Sometimes
North Hills	46	48	22	30
State College	56	77	5	18
Springfield	21	52	29	19
York	32	72	3	25
TOTAL	155	64	13	23

Item 6. Most useful items in helping students make career decisions.

The rankings in Table 7 were based on the responses of pupils. While all of the items were considered helpful by the pupils, the rank ordering gave an indication relative to the usage of the items. The Summary of CRC Directors' Evaluation of Equipment and Materials includes ratings on the above items (See Appendix B).

TABLE 7

RANK ORDERING OF THE MOST USEFUL ITEMS
IN HELPING PUPILS MAKE CAREER DECISIONS

Order of Usage	Description
1	Career Pamphlets
2	Career Books
3	Filmstrip Program
4	Interview Cassettes

TABLE 7--Continued

Order of Usage	Description
5	PENNscripts
6	Career Kits
7	Career Games
8	Projective Tests
9	State & Federal Civil Service Job Announcements
10	View Decks

Table 8 summarized the analysis of covariance for all experimental and control school pupils on the two semantic differential instruments. The pretest scores were used as the covariate and a statistically significant difference was obtained.

TABLE 8

TOTAL PUPIL ANALYSIS OF COVARIANCE SUMMARY
ON THINK ABOUT THE CAREER RESOURCE CENTER
AND THINK ABOUT THE GUIDANCE PROGRAM

Source	Mean Square	d.f.	F-ratio
Pupil	14506.39	1	29.66*
error	489.90	579	
total		580	

*Significant at the > .001 level.

An inspection of Table 9 indicated the pretest to posttest mean difference for the experimental group was .83. The mean difference for the control group declined by 4.28.

TABLE 9

TOTAL PUPIL PRE- AND POSTTEST MEANS, ADJUSTED POSTTEST MEANS AND MEAN DIFFERENCES ON THINK ABOUT THE CRC AND THINK ABOUT THE GUIDANCE PROGRAM

Source	N	Pretest Mean	Posttest Mean	Adjusted Posttest Mean	Mean Difference
Experimental	285	106.77	107.60	106.59	.83
Control	295	99.73	95.45	96.43	-4.28

Question 3

How effective were the CRCs in helping pupils integrate self-knowledge with relevant career information?

Table 10 summarized the analysis of covariance for all experimental and control school pupils on the POQ. The pretest scores were used as the covariate. No statistically significant difference was obtained.

TABLE 10

TOTAL PUPIL ANALYSIS OF COVARIANCE ON THE POQ

Source	Mean Square	d.f.	F-ratio
Pupil	46.9157	1	2.48
error	18.9004	578	
total		579	

An inspection of Table 11 revealed the mean difference between pre- and posttest was only .14 for the CRC school pupils and -.13 for the control school pupils. As with the two semantic

differential instruments, the experimental group showed slightly increased POQ scores, while the control group was declining even though the former group had higher pretest scores.

TABLE 11

TOTAL PUPIL PRE- AND POSTTEST MEANS, ADJUSTED POSTTEST MEANS AND MEAN DIFFERENCES ON THE POQ

Source	N	Pretest Mean	Posttest Mean	Adjusted Posttest Mean	Mean Difference
Experimental	285	20.15	20.39	20.30	.14
Control	294	19.77	19.64	19.73	-.13

Table 12 summarized the analysis of covariance for all experimental and control school pupils on the VDI. The pretest scores were used as the covariate and no statistically significant difference was obtained.

TABLE 12

TOTAL PUPIL ANALYSIS OF COVARIANCE ON THE VDI

Source	Mean Square	d.f.	F-ratio
Pupil	157.3416	1	1.64
error	95.5139	578	
total		579	

Table 13 showed the mean difference between pre- and posttest was .61 for the CRC school pupils and -.48 for the control school pupils. The results closely paralleled those for the POQ.

TABLE 13

TOTAL PUPIL PRE- AND POSTTEST MEANS, ADJUSTED POSTTEST MEANS AND MEAN DIFFERENCES ON THE VDI

Source	N	Pretest Mean	Posttest Mean	Adjusted Posttest Mean	Mean Difference
Experimental	385	83.58	84.19	84.11	.61
Control	294	83.54	83.06	83.06	-.48

Question 4

How satisfactory were the CRCs in assisting the faculty in integrating career information to ongoing instructional activities?

Table 14 summarized the analysis of covariance for all experimental and control school teachers. The pretest scores were used as the covariate and a statistically significant difference was obtained.

TABLE 14

TOTAI TEACHER ANALYSIS OF COVARIANCE SUMMARY ON THINK ABOUT THE CAREER RESOURCE CENTER AND THINK ABOUT THE GUIDANCE PROGRAM

Source	Mean Square	d.f.	F-ratio
Teacher	3845.2884	1	4.41*
error	87.33019	282	
total		283	

*Significant at the > .001 level.

An inspection of Table 15 indicated the pre- to posttest differences for the experimental schools' teachers was 5.56. The

control schools' teacher difference was only .66. Clearly, the evidence favors the experimental schools.

TABLE 15

TOTAL TEACHER PRE- AND POSTTEST MEANS, ADJUSTED POSTTEST MEANS AND MEAN DIFFERENCES ON THINK ABOUT THE CRC AND THINK ABOUT THE GUIDANCE PROGRAM

Source	N	Pretest Mean	Posttest Mean	Adjusted Posttest Mean	Mean Difference
Experimental	138	114.60	119.56	117.01	5.56
Control	127	105.50	106.16	109.34	.66

Question 5

To what extent did the CRCs help parents become active and concerned in the career development of their children?

Summary of CRC Directors' Successful Activities for Question 5

- CRC open house for parents and students was held at different times during the school year.
- CRC objectives and operating procedures were given at PTA meetings.
- Pamphlets describing the purpose of the CRC were distributed to parents.
- Career nights for interested parents and citizens were held.
- Telephone conversations with parents in regard to pupil's career decisions were highly successful.

Question 6

To what extent did the CRCs utilize community resources in fostering a better understanding of the relationship of education to work?

Summary of CRC Directors' Successful Activities for Question 6

- Community career consultant programs were held focusing on the relationship between education, training and the needs of business and industry.
- Community advisory council assisted in developing local objectives for CRC programs.
- Members of community organizations took pupils for a day to observe and experience work activities.
- CRC student placement services were established for part- and full-time work experience in cooperation with local business/industrial firms.
- Field trips were taken to business and industrial sites.
- Speakers from business and industry were invited to talk with interested student groups.
- CRC materials were shared with industrial personnel offices and interested groups.
- Career nights at the CRCs were held for interested citizens.
- Pamphlets describing the objectives and procedures of the CRCs were distributed to community organizations and individual citizens.
- Frequent news releases of CRC activities and programs appeared in local newspapers and TV news programs.
- Telephone conversations were held with citizens regarding career information.

DISCUSSION

The first question dealt with the information collection and evaluation capabilities of the CRCs. The criteria relative to the question were materials' accessibility, organization and appropriateness.

Taken collectively, the results for the above criteria indicated strong support for the CRCs' overall information collection and evaluation system. The weakest link in the system appeared to be keeping information current and appropriate. The finding was consistent with subjective reports from the CRC directors who were critical of many of the commercial materials. The situation was quite crucial relative to films, filmstrips and other visuals. The problem was difficult to overcome especially where people were shown in the visual because of changing hair styles, clothing and other personal items. Personal characteristics tended to automatically date the visual for the audience, particularly with young people.

Constant monitoring of the materials in the CRC seemed essential to maintain up-to-date information for client use. Various techniques might be employed in the monitoring process to keep the information current. If certain materials in the CRC collection are somewhat outdated, a notation should accompany the materials to brief perspective viewers as to the message being conveyed by the visual. Further, it may become necessary at certain times to simply dispose of materials no longer appropriate for the clientele. A final possibility lies in the selection of new or replacement materials. The person reviewing perspective sources of information should give

prime consideration to suppliers with built-in updating capabilities. An example of the latter is the PENNscripts program in Pennsylvania. The occupational information contained on the PENNscripts aperture card is continually revised on a cyclical basis by labor market area. Similar updating techniques are a part of some commercially supplied materials.

The second question was concerned with the effectiveness of the CRCs in helping pupils locate and use career information. The criteria relative to the question were the working condition of the equipment, retrieval of the information, the items useful in helping students make career decisions and attitudinal comparisons.

As with question 1, the collective responses to the criteria for question 2 showed strong support for the CRCs. There seems to be little doubt that the CRCs were able to provide clients with the information being sought. The high rankings of items such as filmstrips, interview cassettes and PENNscripts suggested students value visual media in securing career information inputs. The above visuals required various pieces of equipment. The high percentage of pupils reporting the equipment in good working condition spoke well for the CRC directors' management of the center. The responses to the equipment's condition did not reflect a qualitative evaluation. Certainly a prospective center director should know the equipment most essential to a center. A priority buying list should be established where funds are limited. The Summary of CRC Directors' Evaluation of Equipment and Materials (Appendix B) provides valuable input to the equipment selection decision.

In studying the list in Appendix B, one must speculate as to the reasons for the relatively low rankings of such items as career kits and games. These items are very visual but pupils may feel an artificiality in using kits and games as informational input to real life decisions. A further explanation may lie in the amount of time required to use kits and games. If a student's time is limited in the CRC, he may not wish to get involved with a career game he is unable to complete. A student may be much more satisfied with information he can pick up and take with him for reading at his leisure. The latter may explain the high rankings for career pamphlets and books. The rankings are especially important considering the relatively high cost of many kits and games.

Attitudinally, CRC schools showed significant increases in the pre- to posttest scores over the control group with a regular guidance program. Thus, CRC schools were able to slightly improve attitudinal scores, while control school attitudes were showing the normally expected decline. One can speculatively state the CRCs were an effective adjunct to a school's guidance efforts. If students have access to readily available career information, perhaps professional guidance counselors can function in a true counseling role.

Question 3 related to the effectiveness of the CRC to enhance the students' ability to integrate self-knowledge and career information. The criteria used were pre- and posttest scores on the POQ and VDI. As reported in the results section, no statistically significant difference was found.

One should not hastily conclude from the above that CRCs are ineffective in helping students integrate self-knowledge and career information. It must be noted that students' mean scores in the CRC schools did move upward from pre- to posttest on both the instruments. On the other hand, students' mean scores in schools with conventional guidance programs decreased from pre- to posttest. Thus, the CRC school students appeared to know more about job activities, requirements and working conditions. Further, the same students are more consistent about vocational choice, competencies and attitudes as measured by the VDI. Practically speaking, the evidence suggested CRCs did make an effective contribution to the knowledge-information integration process.

Question 4 sought to determine if the CRCs were effective in helping faculty integrate career information into ongoing instructional activities. Obviously, any systematic effort to affect change in the use of career information cannot be accomplished by students using one CRC in a school district. Substantial attempts must be made to incorporate the appropriate career information into the ongoing instructional program.

The results of the evaluation clearly showed the CRC to be an effective agent in the information integration process. The overall teacher attitudinal change was statistically significant. However, the true importance of the significance lies in the higher mean difference for the teachers in the CRC schools. The higher difference occurred even thouph these teachers had higher pretest means than the control group. Since the control group responed to the Think About

the Guidance Program, one must speculate as to the relative ineffectiveness of a conventional guidance program in fostering the information integration process.

Naturally, not all CRCs are going to be able to successfully integrate career information into ongoing programs. The degree of success seems to rest with the creative ability of the center's director and/or staff. In most cases, the CRC personnel will need to sell the information integration idea to teachers rather than expect teachers to visit the center to initiate the process. Thus, the selection of the center's staff is critical if the above integration is to be accomplished.

The evaluation has answered the question relative to the effectiveness of the CRC in the integration process. However, the successful implementation strategies were not studied in the evaluation. Hopefully, a novice director will be able to identify the successful elements of implementation utilized by the staff in the CRCs evaluated in the project. He can use his creative talents to build on the existing elements and find additional ways to accomplish the integration.

Question 5 attempted to evaluate the CRCs' efforts in helping parents become interested in the career development of their children. The evaluation established the CRCs' positive effectiveness in fostering career development of students. However, it is difficult to assess the effects of parental exposure to a CRC as being contributory to the car r development of their children.

In using the CRC directors' listing of successful activities relative to the above question, the evaluation somewhat circumvents

the issue. Speculatively, the assumption is that parental exposure to a new concept will assist them in making the necessary information transfer to their children. If the parents become involved in the CRCs' activities and the transfer is made, one can assume career development is enhanced.

The final question assessed in the evaluation related to the CRCs' utilization of community resources. Specifically, the assessment sought to ascertain whether the utilization fostered a better understanding of the relationship of education to work. The assumption was made that a listing of successful activities involving the community indirectly fostered the above understanding. As with the previous question, a direct answer was somewhat circumvented because of the time and difficulty involved in securing more definitive information.

The activities listed in the results seemed to indicate the CRCs attempted to establish a two-way communications between them and the community. The listed activities basically divide themselves into two categories; i.e., people-oriented, business-industrial oriented. The subjective judgments of the CRC directors indicated the people-oriented activities were effective in getting adult involvement in the center. One problem in opening a center to adults was the inability of the staff to communicate on a one-to-one basis with clients because of constraints on time and physical facilities. Telephone conversations during nonpeak hours proved an effective media for resolving the communications problem with adults.

CONCLUSIONS

The conclusions derived from the evaluation were as follows:

- The CRCs successfully established a viable system for collecting and evaluating career information. Keeping information current, especially visuals, was a problem.

- The CRCs were able to serve most pupils' needs for career information. The most helpful items involved the use of some visual media; e.g., filmstrips, interview cassettes. The centers adequately furnished the necessary quipment for students to utilize the visual material.

- Attitudes of the experimental group toward the CRCs were significantly more positive than the control group's attitudes toward a regular guidance program.

- Exposure to the CRC or a regular guidance program during the seven months of the experimental period was not sufficient to cause significant changes in pupils' occupational awareness and/or vocational maturity.

- Faculty attitudes toward the CRCs were significantly better than faculty attitudes toward a regular guidance program.

- The CRCs appeared successful in helping parents become involved in the career development of their children.

- The CRCs successfully utilized community resources in fostering a better understanding of the relationships of education to work.

RECOMMENDATIONS

Based upon the experience gained in conducting the evaluation, the following recommendations are offered:

1. A system should be developed that will enable the CRC staff to update the career materials in terms of job descriptions and labor market needs.

The system should have the following components:

- One CRC staff member or a team should be assigned to make decisions on incoming materials as to accuracy and appropriateness.

- All career materials that are found to be outdated should be eliminated.

- All audio-visual materials should be periodically reviewed for appropriateness of information content. If a film is outdated but has important concepts, a note should be attached explaining the purpose of the film and pointing out the unimportance of certain personal aspects; i.e., dress, hair style.

2. The CRC staff should conduct orientations on how to use the center. Every pupil, teacher and administrator should attend an orientation. A scheduling system should be established to prevent more than about 10 pupils from using the center at any one time. It's better to have small groups of pupils use the center rather than an entire class.

3. Smaller satellite centers should be established in middle and elementary schools. These centers could be located in hallways, libraries, classrooms, etc. Another type of satellite center is a mobile van. A major advantage of a van is the savings realized by not needing to purchase duplicate materials and equipment and wider circulation of available materials. Shopping centers, public libraries, industrial plants, as well as other schools, could be possible locations.

4. The CRC should be part of a total career education program in an individual school, school district or intermediate unit. The CRCs themselves may not be a viable vehicle to foster changes in vocational maturity. However, when combined with a total career education program, the CRCs are a very important component.

5. Feedback information pertaining to the objectives and procedures of the CRC should be obtained from the users. Constant feedback will enable the CRC staff to make adjustments and improvements in the operations of the center.

6. The following references should be considered when planning a CRC:

   - Guidelines for Establishing CRCs. (Dittenhafer and Lewis, 1973)
   - School-Based Job Placement Service Model. (Harrold, Gingerich, Turner and Franchak, 1972)
   - Summary of CRC Directors' Evaluation of Selected Equipment and Materials. (Appendix B)

BIBLIOGRAPHY

Crites, J. O. "The Maturity of Vocational Attitudes in Adolescence." Unpublished Manuscript, University of Iowa, 1969.

Dittenhafer, Clarence A. and Lewis, James P. "Guidelines for Establishing Career Resource Centers." Harrisburg, Pennsylvania: Department of Education, 1973.

Gordos, Edward. "Model Career Resource Center." Unpublished Final Report, July 1973, York Area Vocational-Technical School, York, Pennsylvania. Project No. 20-2005, Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

Harrold, Kenneth; Gingerich, Garland; Turner, Robert; and Franchak, Stephen. School-Based Job Placement Service Model. Brownstown, Area Vocational-Technical School, Brownstown, Pennsylvania. Project No. 19-1044, Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

Johnson, Edward. "Model Career Resource Center." Unpublished Final Report, July 1973, Greater Johnstown Area Vocational-Technical School, Johnstown, Pennsylvania. Project No. 20-2004, Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

Lutz, Barry. "Model Career Resource Center." Unpublished Final Report, July 1973, State College Area School District, State College, Pennsylvania. Project No. 20-2003, Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

McNamara, James F., and Franchak, Stephen J. Planning Vocational Education Programs in Pennsylvania. Harrisburg, Pennsylvania: Department of Education, 1970.

Mountan, Norma. "Model Career Resource Center." Unpublished Final Report, July 1973, North Hills School District, Pittsburgh, Pennsylvania. Project No. 20-2002, Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

Pennsylvania Department of Education. Pennsylvania Occupational Questionnaire. Harrisburg, Pennsylvania: Department of Education, 1971.

Pennsylvania Department of Labor and Industry. Area Manpower Review. Harrisburg, Pennsylvania: Department of Labor and Industry, 1973.

Pennsylvania Department of Labor and Industry. Pennsylvania Annual Manpower Planning Report Fiscal Year 1974. Harrisburg, Pennsylvania: Department of Labor and Industry, 1973.

Tuckman, Bruce. "Attitudes Towards Career Education." Unpublished Instrument, Rutgers University, 1972.

U.S. Department of Labor. Occupational Manpower and Training Programs for the 1970's. Washington, D.C.: Government Printing Office, 1971.

Wallick, Kenneth. "Model Career Resource Center." Unpublished Final Report, July 1973, Springfield School District, Springfield, Pennsylvania. Project No. 20-2001, Department of Education, Bureau of Vocational Education, Research Coordinating Unit.

APPENDIX A

PENNSYLVANIA OCCUPATIONAL QUESTIONNAIRE (POQ)

DIRECTIONS: Following is a series of statements and questions about occupations and work. On your answer sheet blacken the circle for the choice which best completes the statement or answers the question.

1. Who do you think would have to do the most lifting of heavy objects?

   - o bank guard
   - o farmer
   - o barber
   - o cashier

2. Which job requires the least time in school?

   - o engineer
   - o accountant
   - o physician
   - o plumber

3. Which of these jobs has the highest <u>starting</u> salary?

   - o nurse
   - o waiter
   - o engineer
   - o 2nd grade teacher

VOCATIONAL DEVELOPMENT INVENTORY (VDI)

DIRECTIONS: There are a number of statements about occupational choice and work listed in this booklet. Occupational choice means the kind of job or work that you think you will probably be doing when you finish all of your schocling.

If you agree or mostly agree with the statement, use your pencil to blacken the circle in the column headed *T* on the separate answer sheet. If you disagree or mostly disagree with the statement, blacken the circle in the column headed *F* on the answer sheet.

T	*F*	
o	o	1. Once you choose a job, you cannot choose another one.
o	o	2. In order to choose a job, you need to know what kind of person you are.
o	o	3. I plan to follow the line of work my parents suggest.

THINK ABOUT THE CAREER RESOURCE CENTER

DIRECTIONS: With the following, first read the phrase, "Think About the Career Resource Center," then glance down at each pair of words. Mark your response on Side 2 of the answer sheet. Move to the next set and do the same. Please answer every item.

		Very	Quite	Somewhat	Neither or both	Somewhat	Quite	Very	
1.	Unworthy	1	2	3	4	5	6	7	Worthy
2.	Unrewarding	1	2	3	4	5	6	7	Rewarding
3.	Unsatisfactory	1	2	3	4	5	6	7	Satisfactory

THINK ABOUT THE GUIDANCE PROGRAM

DIRECTIONS: With the following, first read the phrase, "Think About the Guidance Program," then glance down at each pair of words. Mark your response on Side 2 of the answer sheet. Move to the next set and do the same. Please answer every item.

		Very	Quite	Somewhat	Neither or both	Somewhat	Quite	Very	
1.	Unessential	1	2	3	4	5	6	7	Essential
2.	Harmful	1	2	3	4	5	6	7	Helpful
3.	Meaningless	1	2	3	4	5	6	7	Meaningful

CAREER RESOURCE CENTER EVALUATION FORM

1. Have you used the Career Resource Center?

   Yes _____ No _____

   If Yes, how many times? _____

2. Did you find the materials accessible and organized?

   Yes _____ No _____ Sometimes _____

3. Did you find the equipment in good working condition?

   Yes _____ No _____ Sometimes _____

4. Did you find the materials up-to-date?

   Yes _____ No _____ Sometimes _____

5. Did you find the information you needed?

   Yes _____ No _____ Sometimes _____

   If No, was there an attempt made to obtain the information?

   Yes _____ No _____ Sometimes _____

6. Check the ones that seem to be the most useful to you in making career decisions. (Each center make a list.)

APPENDIX B

SUMMARY OF CRC DIRECTORS' EVALUATION OF EQUIPMENT AND MATERIALS

The equipment and materials available in a given CRC varies somewhat according to location and clientele. However, many items are common to all centers.

In compiling the following summary, CRC directors were asked to subjectively rate a list of equipment and materials basic to all centers. The directors assigned numerical values (1 = poor to 4 = excellent) to categories such as usage and educational value. Cost of the items was also requested. The numerical ratings from all the directors were summarized by the authors. The charts on the following pages are an evaluative compilation of the summary data as supplied by the directors.

SUMMARY OF CRC DIRECTORS' EVALUATION OF EQUIPMENT AND MATERIALS

Item	Usage	Cost	Comments
Hardware			
Reader-Printers	Average	$375 to $1,000	Frequently needs repair and expensive to operate. Higher priced models have fewer repair problems.
Tape Recorders	Average	$100 & Up	Low maintenance, easy to operate and inexpensive.
Film Strip Projectors	Average	$80 & Up	Most popular piece of equipment in the CRC.
Microfilm Readers	Average	$85 & Up	Easy to operate, few maintenance problems.
Cassette Player-Recorders	Average	$315	Excellent for junior high.
Computerized Guidance System (ILS)	High	$1,900 for 70 hrs. + telephone	Excellent motivational device. Performs quick search of occupational and/or college data. Access to telephone tie-lines limits use to only a few school districts. Cost/benefit ratio is high.
Cassette Sound-Film Strip Projectors	High	$275 & Up	Few mechanical problems. Used by individual pupils but classroom use could serve many additional pupils.
Sound Film Strip Viewer/ Players	High	$85 & Up	Few maintenance problems, easy to operate.

Item	Usage	Cost	Comments
Audio-Visual Aids			
Film Strips	High	$12 & Up	Very durable, most popular item in the CRC. Excellent educational value.
PENNscripts	Average	Free	Printed copies made on inexpensive equipment are sometimes difficult to read. Has a good educational potential.
Occupational View Deck	Average	$145 & Up	Good for student to relate interest to occupations.
College View Deck	High	$320	Recommended for use only with CRC staff assistance.
Sound Film Strip	High	$39 & Up	Usually of excellent quality.
Career Games			
Career Games	Low	$28 & Up	Excellent for high achievers. Supervision and explanation needed with low ability pupils.
Psychology Today Games	High	$40	Used in mini-courses and small groups. Excellent for all students.

Item	Usage	Cost	Comments
Career Briefs			
Career Brief Kits	Average	$125	Excellent for exposure to jobs in broad fields at all educational levels.
Job-Experience Brief Kits	Average	$390	Excellent for hands-on experience in 20 occupations. Very expensive.
Occupational Guidance Units	High	$800	Broad occupational coverage easily updated.
Handbooks			
College Catalogs	High	Free	A must for every center.
Occupational Outlook Handbooks	High	$5 & Up	Excellent descriptions and up-to-date coverage.
Dictionary of Occupational Titles (D.O.T.)	Average	$8	Excellent reference.
Encyclopedia of Careers	High	$25	Excellent reference.
Vocational Guidance Manuals	Average	$110	Manuals become outdated too quickly to justify investment.
Vocational Guidance Manuals (Paperback)	Average	$1.95 ea.	Small compact booklet on one subject area. Easy to use and carry home. Has good potential.

Item	Usage	Cost	Comments
Career Opportunities	High	$60	Can be used with groups. Provides supplementary information.
College Handbooks	High	$20 & Up	Necessary for college-bound pupils.

Other Materials

Armed Services Information	Average	Free	Up-to-date information on careers and training available in the Armed Services.
State & Federal Civil Service Announcements	High	Free	Excellent job descriptions and skill requirements.
Occupational Files	High	Free	Should be updated and evaluated.