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A Study of Five Factors Affecting Attitudes of Educators Toward Career Education

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Spear,

Rushie Courtney Newman

1975

A STUDY OF FIVE FACTORS AFFECTING ATTITUDES
OF EDUCATORS TOWARD CAREER EDUCATION

A Thesis

Presented to

The Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by

Rushie Courtney Newman Spear

December 1975

A STUDY OF FIVE FACTORS AFFECTING ATTITUDES
OF EDUCATORS TOWARD CAREER EDUCATION

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A STUDY OF FIVE FACTORS AFFECTING ATTITUDES
OF EDUCATORS TOWARD CAREER EDUCATION

R. Courtney N. Spear December 1975 84 pages

Directed by: Betsy Howton, Harry Robe, and Eugene Harryman
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Educational practices appear to have failed in preparing many individuals to build productive, fulfilling lives. This is evident in the increasing number of dropouts and individuals who qualify neither for a job nor college. Career education has been selected as a priority program in attempting to remedy such failures.

Theory implies that to successfully implement new educational programs, educators' attitudes and values need to be favorable toward such programs. At present, however, there is very little data available about attitude and the factors that affect attitude. An analysis of educators' attitudes appears to be a necessary first step in the design and implementation of career education programs.

Previous research on educators' attitudes toward career education suggests several factors which may influence educators' attitudes, but the findings have been inconsistent. The present study was limited to five relevant and measurable factors which were assumed to be associated with attitude. The selected factors were (a) knowledge about career education, (b) the position of the educator (teacher, counselor, administrator), (c) the level of school employment

(elementary, middle, or high school), (d) the number of years of work experience outside education, and (e) the method of program implementation in which the educator was involved.

There were no instruments reported in the literature that measured all of the chosen factors. A questionnaire was developed for this specific study.

A sample was selected from educators currently involved in two career education projects in the western section of the Commonwealth of Kentucky. The questionnaires were completed and returned by 74 percent of the educators in the sample.

This study investigated the following questions:

1. Is there an association between the knowledge of career education and attitude toward career education?
2. Is there an association between the position of the educator and attitude toward career education?
3. Is there an association between the level of the educator and attitude toward career education?
4. Is there an association between the years of work experience outside education and attitude toward career education?
5. Is there an association between the method of implementation and attitude toward career education?
6. Is there an association between the set of five chosen factors and attitude toward career education?

Data were analyzed by means of a multiple classification analysis. The results of the data analysis indicated that knowledge and position had the greatest degree of association with attitude of the five factors studied. The eta correlation between knowledge and attitude was .243. The eta correlation between position and attitude was .235. The method of implementation and level of the educator had eta correlations of .191 and .116 respectively. Years of work outside education did not have a significant association with an educator's attitude toward career education. The combined effect of the set of factors had a correlation of .362, although all predictors together explained only slightly over 13 percent of the total variance in attitude.

Discussion of the results of this study center around possible uses of the information obtained, strengths of the instrument, implications for further research, and a critical look at the theoretical assumptions of this study.

CHAPTER I

Introduction

Educational practices appear to have failed in preparing many individuals to build productive, fulfilling lives. This failure is evident in the increasing number of dropouts and individuals who qualify neither for a job nor college (Marland, 1972a, 1972b). Career education has been selected as a priority program in attempting to remedy such failures.

Theory implies that to successfully implement new educational programs, educators' attitudes and values need to be favorable toward such programs (Baker, 1972; Ricciuti, 1973). Knowledge of educators' attitudes might provide decision-makers with the data necessary to plan inservice programs designed to increase favorable attitudes and contribute to successful implementation (Ricciuti, 1973). At present, however, there are very little data available concerning attitude and the factors that affect attitude. An analysis of educators' attitudes appears to be a necessary first step in design and implementation of career education programs.

Previous research on educators' attitudes toward career education suggests several factors which may influence

educators' attitudes, but the findings have been inconsistent. The purpose of the present study was to analyze the association between five chosen factors and educators' attitudes toward career education. Four of the five factors were assumed to be associated with attitude on the basis of a literature review. These four factors were (a) knowledge about career education, (b) the position of the educator (teacher, counselor, administrator), (c) the number of years of work experience outside education, and (d) the method of program implementation in which the educator was involved. These four factors were among the most frequently mentioned in the literature as affecting educators' attitudes toward career education. The fifth factor, employment at the elementary, middle, or high school level, was considered to be worth investigation because of the limitations of previous research.

There were no instruments available which measured all of the chosen factors. Therefore, a survey questionnaire was designed specifically for this study.

Data were analyzed by means of a multiple classification analysis.

This study investigated the following questions:

1. Is there an association between the knowledge of career education and attitude toward career education?
2. Is there an association between the position of the educator and attitude toward career education?

3. Is there an association between the level of the educator and attitude toward career education?

4. Is there an association between the years of work experience outside education and attitude toward career education?

5. Is there an association between the method of implementation and attitude toward career education?

6. Is there an association between the set of five chosen factors and attitude toward career education?

CHAPTER II

Review of the Literature

In January, 1971, career education was announced as a major priority of the United States Office of Education in a speech given by the Commissioner of Education, Sidney P. Marland, at the annual convention of the National Association of Secondary School Principals in Houston (Marland, 1972b). At the time of Commissioner Marland's announcement there were many facts which made a program such as career education important. Less than 20 percent of the individuals in secondary schools received training in specific skills, while 80 percent did not graduate from college (Goldhammer & Taylor, 1972). The figures for the year 1970-1971, the year of Marland's announcement, showed that 3.7 million individuals left formal education. Of the 3.7 million, 2.5 million were without a marketable skill or career goal (Goldhammer & Taylor, 1972; Ottina, 1973). Such figures are typical for the years preceeding and represent a large sum in educational expenditure and unemployment.

Since the announcement by Commissioner Marland, much emphasis has been given to career education programs, and now "there are clear indications that career education is moving into the mainstream everywhere" (Ohanneson, 1973,

p. 3). Recently, the Commissioner of Education has reemphasized support of career education by pledging continued federal support and declaring 1974 as a year for assessing and clarifying the concept (Ottina, 1974).

The concept of career education is best described as a program to prepare youth for successful employment. Such a program includes not only academic aspects of education but also psychological, sociological, and vocational aspects. More attention is now given to the personal values, cultural values, and abilities of the individual. It is a main goal of career education that academic and vocational training be integrated in such a way that the individual "will be better prepared not only to function but to find fulfillment..." (Ohanneson, 1973, p. 27).

Baker (1972), in discussing the role of the teacher in career education, stated that:

Teachers are vitally important to the concept of career education. They are the ultimate factor in its success or failure because they are the elements through which the bulk of the educational and guidance activity is carried out....

Research indicates that more than half of the students' career decisions are influenced in varying degrees by teachers. Because of this influence, teachers' attitudes toward career education, the world of work, and college training are important

factors in their own acceptance and implementation of the career education concept. (p. 36)

Other authors and leaders in education have supported this view and point to a need for personnel programs aimed at value and attitude changes by teachers toward acceptance of and commitment to career education programs (Burdin, 1973; Halverson, 1973; Keller, 1973). It seems that most authors begin with an assumption similar to the following by Ricciuti (1973):

If teachers do not have positive feelings towards career education, or if their understanding of career education is shallow or unclear, viable programs of career education will not be implemented. (pp. 113-114)

Although much emphasis is being given to the importance of teachers' attitudes toward career education programs, it seems that educators as a whole are cautious in approaching new programs. An analysis of problems encountered by classroom teachers involved in a career education project suggests that many teachers were hesitant to become involved in and committed to change, wary "that it might just be a 'fad'" (Ehresman, Harryman, & DeMars, 1973, p. 68).

No doubt there are other factors that affect an educator's attitude toward, and involvement in, any new program. Therefore, in order to plan for the implementation of new and innovative programs, it may be important to

know not only what attitudes educators have, but also what factors influence educators' attitudes toward these programs.

Attitude Theory and Definition

A basic assumption in the above discussion is that the behavior and effectiveness of educators participating in career education program implementation will be affected by their attitudes about career education. McNemar (1946) reviewed the literature on opinion-attitude methodology and synthesized a definition of attitude. He stated that "an attitude is a readiness or tendency to act or react in a certain manner...the existence of which is inferred from nonverbal overt behavior, or from verbal or symbolic behavior" (p. 189). Others support this view of attitude (Edwards, 1957; Fishbein, 1969; Seiler & Hough, 1970; Summers, 1970). The operational definition of attitude as stated above was accepted for use in this study.

Related Studies and Findings

Research aimed at better identifying and describing educators' and the public's attitudes was done by Baker (1972). He organized 30 career education items into a Likert-type attitude scale and administered it to vocational teachers, academic teachers, and the public of four midwest communities. He used analysis of variance and Duncan's A Posteriori test to analyze the responses to each item, although he did not discuss the specific use of these

statistics. He reported significant differences on 11 items, all of which were between the public and at least one of the groups of teachers. Baker concluded that the differences indicated a bias toward elements of the curriculum such as college preparatory or vocational education. He saw these biases as "detrimental to the success of the career education concept" (p. 30). Baker also interpreted the results as indicating confusion regarding the purposes of career education. He concluded that further study of attitudes is needed and that there is a need to better inform educators and the public about career education. There are several difficulties not defined by Baker that make the conclusions of the study questionable. First, he had a sample size of only 79 for the four communities and three categories of individuals. The sample was not randomly selected. Such a sampling procedure increases the possibility of biased results. Second, Baker did not discuss instrument development to any extent, and it is possible that his attitude scale could not discriminate to the degree that his method of analysis required. These weaknesses in Baker's study are due to his lack of reporting or lack of planning an adequate survey design. There is a need for larger, more carefully selected samples, more attention to instrument development, and more concise reporting in order to clarify results from previous attitudinal surveys.

In research conducted by the Institute for Educational Development (IED) concerning attitudes toward career education, 40 items were developed into a Likert-type attitude scale (Brickell & Aslanian, 1971). This scale was administered to 500 persons in each of the following categories--pupils in grades four through six, pupils in grades seven through 12, staff, and parents. Six career education pilot programs were involved. The data were discussed and analyzed only in terms of percent answering strongly agree, agree, undecided, disagree, and strongly disagree. A later analysis of the data was promised that would include cross-tabs and pre- and post-study analysis. The results reported by IED showed that the attitudes were extremely positive toward career education in the six pilot programs. This study had a large sample from widespread geographical locations. However, the attitude survey did not appear to discriminate between various attitudes (favorable and unfavorable). This lack of discrimination indicates a possible need for more stringent instrument development. The data analysis and reporting left many questions unanswered. With such a large sample it would have been more informative to have a multivariate analysis of the results. In addition, this study did not yield the additional data that was promised by IED.

Another study, supported by Title III funds (Smith, 1974), examined the attitudes toward career education of 81 city teachers and 81 county teachers in Greeneville and

Greene County, Tennessee. The investigator, Smith, stated that the attitudes of teachers must be determined before initiating strategies to accomplish the objectives of teacher understanding, commitment, and involvement. The attitude scale had 20 items with responses on a Likert-type four-point scale. The results were reported for each item by group frequencies, percentages, means, modes, and medians. The conclusions drawn from the results were definite statements as to the relationship of the two sets of teachers. The following are examples of her conclusions and recommendations. First, 50 percent of each group answered agree to an item that seemed to favor schools being responsible for student placement. Smith's conclusions were that one half of each group was in favor of placement and recommended that planning for placement programs needed to begin soon. Next, fewer county teachers than city teachers responded favorably to an item that seemed to favor "drop-outs" returning to school at a later date. Smith concluded that county teachers are less positive than city teachers about people who quit school and return later. She then recommended that specific efforts should be made to provide opportunities for students who have left school to return. This study offered a description of teachers' attitudes toward career education, but there are many questions about such use of the results. Apparently the attitude measure did not discriminate well. Instrument development was not

discussed, and, from inspection of the items, the test may have been more appropriate as a measure of knowledge about career education than attitude toward career education. Also, the test may have measured the agreeableness of teachers as there were few items where as few as 40 or 50 percent disagreed with statements and many where 100 percent agreed. Therefore, it is unclear what the instrument measured. Smith also offered conclusions and recommendations that apparently went far beyond the data available. Even though this study may have information to offer the administrators who are close to the study, the questions about the instrument, data analysis, and conclusions prevent it from offering clear, accurate information that might have been provided had the study been conducted with more care.

Ricciuti (1973) also pointed to a lack of information available concerning teachers' attitude and knowledge. He studied both in relation to each other and career education. His position, quoted earlier, was that such information is vitally important for planning successful career education program implementation. The focus of Ricciuti's study was to measure and compare the knowledge of, and attitude toward career education held by vocational and academic secondary classroom teachers in academic, vocational, and comprehensive high school sites. (p. 113)

His sampling procedure involved a random selection of schools from a stratification of schools within a 50 mile radius of Boston. There were five schools in each of the categories he described above. The final selection of teachers was randomly sampled from the schools so chosen until he obtained the following sample: 240 secondary high school teachers with 60 teachers in each category of (a) vocational teachers in vocational high schools, (b) academic teachers in academic high schools, (c) vocational teachers in comprehensive high schools, and (d) academic teachers in comprehensive high schools. The attitude measure was a semantic differential scale rating career education. Nine bipolar adjectives, defined by the original Osgood studies as evaluative adjectives, were listed with a seven point scale. The polarity of the scales was systematically alternated. There were also three "dummy" concepts on the instrument rated in the same way. These extra variables were vocational education, college preparatory, and general curriculum. Ricciuti filled in his own concepts on a form developed for ease in computer scoring. Ricciuti's knowledge measurement was a 30-item multiple-choice test. He reports a thorough process of establishing validity and reliability through jury, pilot, and statistical tests. The instrument was personally administered by the researcher to the teachers in groups at each school. Ricciuti established the level of significance of $p < .01$ for decision to

reject the null hypotheses. There were five hypotheses that Ricciuti tested with appropriate statistical procedures, which included the Pearson Product-Moment Correlation, a one-way analysis of variance, and the Fisher t-test. Ricciuti did not reject any of his null hypotheses as a result of the findings. He found no significant differences in attitude toward or knowledge about career education either among or between the four classifications of teachers listed above. In addition, Ricciuti conducted a "step-wise multiple linear regression of attitude on knowledge for each of the four teacher groups" (pp. 110-111). The only significant regression indicated that a positive attitude toward career education for academic teachers in comprehensive high schools was a strong predictor of knowledge about career education. Most of Ricciuti's comments on the results encouraged further research on the different aspects of his study. Also, from an educational standpoint, he emphasized the indications (although nonsignificant) that knowledge of career education was greater among academic than vocational teachers while attitude was more positive among vocational teachers.

Ricciuti developed and conducted a thorough study which may have been strengthened by more rigorous development of the attitude measure. First, the adjectives found by Osgood to be evaluative for the concepts in his study may not even relate to the concept of career education. Ricciuti did not

report any preliminary analysis of the adjectives he used to rate career education. An overview of the semantic differential form determined that he used such adjectives as beautiful-ugly and low-high, which may not relate to career education. Second, alternating the polarity of the scales is a practice that may cause confusion and add to measurement error (Nunnally, 1967). Also, Ricciuti's study was unfortunately limited to high school teachers in the Boston area. An expansion of his study might clarify any differences in level or subject matter that might exist.

In a study of the attitudes of Texas elementary educators toward selected aspects of career awareness, Moore (1973) used a 30-item Likert-type Career Awareness Attitude Scale (CAAS). Although there were six categories for response to each item, the data analysis collapsed the responses into the two categories of agree and disagree. Validation of the attitude scale was assumed because of the use of a jury and a pilot study during the instrument development. However, after the pilot study, Moore threw out items which did not have 75 percent response on the section of the scale he considered appropriate for positive attitudes. No information regarding reliability was provided. For data collection, the CAAS was combined into a Career Awareness Information Form that included a set of instructions with definitions of terms and a personal data form. The process of sample selection involved selecting

elementary schools using random numbers, then contacting the principals of the schools chosen. Of the 325 principals contacted, 177 responded and 147 agreed to participate. The principals had also been asked to list teachers and counselors for participation in the survey. Data collection involved mailing out the total packet to the principals and including the teacher and counselor instruments. The final return represented 146 elementary schools with 143 principals, 134 teachers, and 70 counselors. Only nine of the schools represented had an active career awareness program. Each hypothesis was tested using an item analysis. As long as one item among related items yielded a significant difference at $p < .05$ level of significance, the null hypothesis was rejected. Moore interpreted his results as showing that the attitudes of elementary staffs were generally favorable toward selected aspects of career awareness. He also stated that teachers' attitudes were unfavorable toward all aspects of staff development with principals and counselors being somewhat unfavorable in their attitudes toward the same aspects. Moore summarized that there were nonsignificant relationships between respondents' attitudes and age, length of educational service, academic preparation, or fields of specialization. In general, the position of the respondents as teacher, counselor, or principal yielded a significant difference in attitude toward the selected aspects of career awareness studied by Moore. There was

no difference in attitude among the staffs of schools of various sizes or among schools with or without career awareness programs. Moore's recommendations centered around continued expansion and implementation of career awareness programs with cautions urged in considering finances, staff development, and continued research on attitudes.

There are several questions about the adequacy of Moore's results. First, there is a possibility that the attitude measurement is biased for favorable responses due to his method of eliminating items after the pilot study and to his instruction page which defines concepts. An overview of the instrument indicates that the items may measure understanding of the concepts rather than attitude toward the concepts. Therefore it is unlikely the measurement is as strong as Moore assumes. There is doubt that the individual items discriminate so well that a significant difference on one item is strong enough to reject a related null hypothesis. Second, Moore's method of sampling allowed for the possibility of a biased sample. One indication of this is that his first request for participation was accepted by only 45.2 percent of the principals contacted. It is possible that only principals with the most favorable attitudes participated in the study. The teachers and counselors who were selected may have been those whom the principals liked, agreed with, or thought would "look good" in the study. Although the overall plan of the study is

adequate, the weaknesses of Moore's instrument and sampling procedure bring into question the adequacy of his study. In addition, it was limited only to elementary educators. Further research involving individuals of other educational levels and conducted with careful attention directed to instrumentation and sampling would add support and clarify Moore's (1973) results.

In California a series of studies investigated attitudes of different levels of school personnel toward career education. The studies surveyed the following sets of educators: (a) high school teachers, (b) junior high school teachers, (c) elementary school teachers, (d) elementary and secondary administrators, and (e) secondary school counselors. Each was conducted and published separately and only two were available to this researcher for review. One study investigated the career education opinions of junior high school teachers (Santoro, 1973) and the other investigated the career education opinions of high school teachers (Ohanneson, 1973). Comparison of the reports indicates that they are identical (except for population) until the results and discussion are presented. Therefore, the procedures for both will be summarized before the results and conclusions are reviewed.

Starting from a philosophy similar to that of Ricciuti (1973) about the importance of teachers' attitudes, Ohanneson and Santoro also assumed the necessity for knowing

more about what characteristics, if any, would affect support of career education programs. The instrument and hypotheses development was guided by role-theory literature. Previous role studies have attempted to determine the relationship between teachers' attitudes and environment and/or background. The variables investigated by Santoro and Ohanneson were ones that role studies had found to be related to teachers' attitudes.

They describe a process of stratified random sampling which reflected teacher subject matter and urban or semi-urban locality. In each study 900 cases were drawn at random from the stratification until the percent selected from a given classification reflected the percent in the total population. The opinionnaire consisted of 25 Likert-type items in each of three sections. In each section educators were asked to respond to the items and answer (a) to what extent should, (b) to what extent can, and (c) to what extent does the teacher or school engage in career education. Items were developed to measure attitude toward the five components of career education. Validity was established through use of an expert jury and three pilot tests. An estimate of reliability was obtained by a factor analysis of the items. Through the factor analysis, researchers found that items interrelated in such a way that three indexes appeared within the instrument. The three indexes clustered items as follows: (a) items related to

teacher/classroom activities composed Index I, (b) items related to school/community composed Index II, and (c) items which were impersonal in nature composed Index III. Item analysis by indexes yielded a range of reliability of .62-.75 for Index I, .64-.75 for Index II, and .55-.67 for Index III. A test of internal consistency yielded an average of .68 for Index I, .70 for Index II, and .50 for Index III. As a result of this test of reliability, Index III was not used in further analyses. The five components of career education were shown to be part of Indexes I and II. In the final analyses of data only 17 of the 25 items in each of the three sections were used to test the hypotheses. Data collection was achieved by a thorough process of mailout and follow-up procedures. The study was endorsed by the California State Department of Education and the state teachers' association. Data analysis consisted of testing mean differences between all variables investigated by the studies. Appropriate statistical procedures were used. A significance level of $p < .05$ was established as criterion for rejection of hypotheses.

The study involving junior high school teachers (Santoro, 1973) had a return of about 79 percent. Results indicated that subject matter, information about career education, and implementation of career education program affected teacher attitudes. Santoro found that information and

implementation were significant determinants of support for career education. Years of teaching experience, years of nonteaching experience, sex, and location in rural or urban area did not have a significant relationship to junior high school teachers' attitudes. These results agreed with Moore's (1973) findings that staff development methods affect teachers' opinions but did not include some of the other demographic variables included by Moore (1973). Santoro's recommendations centered around suggestions to administrative, state planners as to the need to use teachers with strong support, the need to continue information programs, and the need for involving teachers in the planning processes. A major contribution of this study by Santoro was the information concerning characteristics that may affect teachers' attitudes.

The study involving high school teachers (Ohanneson, 1973) had a total return of over 82 percent. He also found that neither location (in urban or rural area), sex, nor years of teaching experience affected teachers' attitudes. However, unlike the study of junior high school teachers (Santoro, 1973), nonteaching work experience emerged as a factor which increased support of career education. Factors found to be determinants of favorable attitudes toward career education were subject matter, information about and implementation of career education. Ohanneson's recommendations centered around much of the same content as

Santoro's (above), and the real contribution provided is the same as that noted for Santoro's study. Although differences in results could be due to the level of the educator, this study shows further need to consistently investigate demographic variables and their effects on attitude. Such further studies would help to clarify the relative importance that various factors may have.

The two studies discussed above are very strong in terms of their survey design, execution, and data analysis. The limitations that were mentioned by the investigators related to their less-than-precise urban-rural stratifications and the shortcomings of their resources for the sample selection. Both of these limitations were either rectified in the data analysis or by the cautions that were mentioned in the discussion of the results. The investigators also pointed out that the opinionnaire was long. Since only 17 of the 25 items in each section were used, elimination of the unnecessary wording and items would have added to internal consistency. An additional criticism of these studies is that they determined the educator's knowledge by asking only three questions related to the educator's attendance at inservices and his or her use of career education techniques in the classroom. A section of the opinionnaire designed to measure knowledge would have been a better indication of the amount of knowledge about career education. Nevertheless, the

shortcomings of these two studies are minor, especially when compared to most, and they could be corrected through minor opinionnaire modification.

Summary

Many of the studies discussed above are very general in nature. Unfortunately, many of the previous studies have had design or execution errors that leave the results in question. Sample selection was often obtained through a method other than random selection. Statements or items on the instruments referring to career education often appear to have been arbitrarily chosen. Nevertheless, these studies conceptually establish that many educators, researchers, and program planners acknowledge the importance of teachers' attitudes and the need to know more about attitudes and factors that may affect teachers' attitudes toward career education.

Research indicates that various factors affect individuals' attitudes, and there appears to be a need to consistently and thoroughly investigate factors that may have an association with attitude.

Knowledge or information about career education and its relation to attitude was investigated by several studies. Ricciuti (1973) found that knowledge had no statistically significant relationship to attitude while others (Ohanneson, 1973; Santoro, 1973) found that knowledge was

related to attitude. There is a need to clarify the association between knowledge and attitude so educators may be more effectively involved in inservice programs.

Insufficient information exists about the relationship between position of the educator and attitude. Moore (1973) found a relationship between position and attitude at the elementary school level, but other studies did not discriminate between position (Baker, 1972) or surveyed only teachers (Ohanneson, 1973; Ricciuti, 1973; Santoro, 1973; Smith, 1974). The career education program requires support and cooperation among educators of various positions. It is necessary to have information about educators' attitudes as it relates to their position so that inservice programs may be planned to involve each position effectively.

A serious limitation of previous research is that studies have separately investigated educators' attitudes at the elementary (Moore, 1973), middle (Santoro, 1973), and high school (Ricciuti, 1973; Ohanneson, 1973) levels using different techniques. Since the career education program is different at each school level, the educator's attitude toward the program may be affected in different ways at different levels. Therefore, there is a need for further study to determine the association between level of the educator and attitude toward career education as measured by a common instrument.

Ohanneson (1973) found a relationship between non-teaching work experience and the educator's attitude, although Santoro's study (1973) found that this factor did not appear to have a relationship to attitude. Such a factor could be important in involving educators as leaders in implementation of career education programs. It seems that those who are outside of education might better appreciate the need to integrate the classroom and the community.

Finally, Moore (1973), Ohanneson (1973), and Santoro (1973) found that method of implementation does have an effect on educators' attitudes. However, further investigation is necessary in order to clarify what association exists between different methods of implementation and attitude.

Although some existing surveys appear to yield valid measurements, it is necessary to develop an instrument that will measure attitude and knowledge and obtain demographic variables. Those that were available related specifically to either knowledge or attitude and were too long and cumbersome to be incorporated into a single survey measurement of both.

CHAPTER III

Methods

In 1973-74, federal funds supported two survey research projects which were related to different pilot career education projects in the Commonwealth of Kentucky. The investigator served as an assistant for the research projects and was generously granted access to all data; however, only selected data were used in this study.

Population

The two career education pilot projects were different in size. Project One was confined within a single school system while Project Two was region-wide and included many school systems. The sample sizes were proportional to the size of the two projects. Table 1 summarizes the number of individuals from each project.

Project One included one high school, one middle school, and seven elementary schools. The research survey included teachers, counselors, and administrators in the project. The total number sampled, as shown in Table 1, was 247.

The schools in Project Two were stratified as to the level of the school (elementary, middle, or high school) for sampling. Twenty schools were chosen and the quota for each stratification was as follows: (a) 5 high schools,

Table 1
 Individuals Sampled in Each Project by
 Position as Teacher, Counselor, and Administrator

Position	Project 1	Project 2	Total
Teacher	230	435	665
Counselor	8	31	39
Administrator	9	21	30
Total	247	487	724

(b) 5 middle schools, and (c) 10 elementary schools. All teachers and administrators in these schools were surveyed. Due to the small number of counselors in these schools, all counselors in the project were surveyed. As shown in Table 1, the total number sampled in Project Two was 487.

The two projects were implemented differently. Project One was slowly implemented system-wide by training cadre teachers to work with the other teachers as the project progressed. The career education program in Project Two was implemented in a less organized manner. Individual school systems decided how to use allotted money. Some systems chose a model school approach; others bought career education materials; and others tried major system-wide inservice programs.

Instrument Development

There are very few instruments mentioned in the literature that relate to measurement of attitude and knowledge about career education. Those that are available relate specifically to knowledge or attitude and are too long and cumbersome to be incorporated into a single survey measurement of both. This research aimed at answering questions not answered in previous studies--questions which were beyond the scope of most instruments in the literature (Newton, 1974).

As a result, it was necessary to develop an instrument for the research studies that would obtain demographic information as well as measures of attitude and knowledge. The survey contained several sections that were developed individually and then combined. The following is a description of the development and application of the sections used in this study.

Sections I and II. The content of the items in these sections is descriptive in nature and was formulated by the research staff from the plans for data collection stated in the proposal for the research. Data obtained from these sections for use in this study were (a) the individual's position as teacher, counselor, or administrator, (b) the method of implementation used by the project in which the individual was employed, and (c) the number of years the individual had worked outside education.

Section III. This section is a 20-item, true-false inventory of an individual's knowledge about career education (see Appendix A). Item development involved extracting factual statements from career education literature. These statements were then rewritten so that there were equal numbers of true and false items. Finally, items were retained which were judged to be clear, concise, and non-repetitive. An individual's score was the number of items answered correctly (see Appendix D) and was used in data analysis as indicating the individual's knowledge about career education.

Section IV. Section IV is a 20-item, Likert-type attitude inventory (see Appendix A). Item development initially followed the guidelines of Edwards (1957). Then the items were submitted to a Q-sort analysis using the Thurstone method of item selection. McNemar (1946) suggested that this process of item selection with Likert-type scoring increased the validity of measures of attitude. More recent studies (Seiler & Hough, 1970) support this view. The score was obtained by using the sum of values for the categories marked by the individual and was used in data analysis as a measure of the individuals' attitude toward career education.

Final revisions. After a field test of the total instrument, sections I and II were revised in relation to the individual's position as teacher (Appendix A), counselor

(Appendix B), or administrator (Appendix C). These revisions were then submitted to critical review by several expert panels consisting of individuals involved in career education programs at state, university, and local levels. After these reviews, the final drafts were written and printed.

Reliability. Section III, Knowledge, and Section IV, Attitude, were submitted to two reliability studies. The first was a test/retest analysis of the sections administered in a pilot study. Second, both sections were submitted to an item analysis appropriate for the data in each. This analysis used data from the returned teacher questionnaires (486). As shown in Table 2, the Knowledge section had a test/retest consistency of .83 and a KR20 coefficient of .73, both significant at $p < .05$. The attitude section (see Table 2) had a test/retest coefficient of .60 and a Chronbach Alpha

Table 2
Results of Reliability Studies on
Knowledge and Attitude Sections*

Section	Test/Retest	Internal Consistency
III Knowledge	.832	.727 ^a
IV Attitude	.600	.937 ^b

^aThis item analysis was by the KR20 method.

^bThis item analysis was by Chronbach α method.

* $p < .05$.

coefficient of .94, both significant at $p < .05$. Reliability of a survey measurement refers to the accuracy of the responses in the sense of their stability, replicability, or precision (Ohanneson, 1973). The reliabilities for the knowledge and attitude sections were considered adequate for the purposes of this study.

Validity. The usefulness of any measuring device rests on whether or not the instrument measures what it purports to measure, i.e., the instrument's validity.

There are three principle types of validation procedures commonly accepted and followed in educational and psychological test development: (a) content validity, (b) criterion-related (or predictive) validity, and (c) construct validity. There is a corresponding major purpose for each type of validity: (a) representation of a specified universe of content, (b) establishment of a functional relationship with a particular variable, and (c) measurement of a theoretical trait or construct (Anastasi, 1970; Nunnally, 1967).

Although the process of development was essentially the same for both the knowledge and attitude sections, the sections had different purposes and therefore different meanings when considering validity.

Content validity appeared to be the logical type of validity for the knowledge section. The process followed in development and selection of items, critiques by experts, and

field testing tended to support the assumption of content validity. No additional studies were conducted to determine the possible existence of criterion-related or construct validity.

The attitude section was intended as a measure of a theoretical trait or construct: attitude toward career education. The questions about validity for attitude measurement are best answered by determining criterion-related or construct validity. The procedures for establishing such validities are costly processes in time and energy and would involve additional, extensive studies. Therefore, validity of the attitude section was assumed on the basis of the procedures used in the development of the questionnaire.

Procedure

All surveys were disseminated in a package that included the instrument, a cover letter that briefly explained the project and elicited participation (see Appendix A), and a package of complimentary coffee enclosed as incentive for participation.

The teacher surveys were distributed by placing in teachers' mailboxes or leaving for distribution at a teachers' meeting. All counselors and administrators were contacted individually. After a week, a research staff member visited each school to collect the instruments that

had been returned. For counselors in Project Two who were not in the schools sampled, self-addressed, stamped envelopes were provided.

This study had a 74 percent total return (see Table 3).

Table 3
Percent of Return from Each Project
by Position of Respondents

Position	Project One % Returned	Project Two % Returned	Total % Returned
Teacher	84	67	73
Counselor	50	71	67
Administrator	89	90	90
Total	83	68	74

Data Analysis

The nature of the questions asked required the use of multivariate analysis. From such an analysis it is possible to examine (a) the association between each individual factor and the dependent variable, (b) the association between an individual factor and the dependent variable when considering the effect of the other factors, and (c) the association between all predictors and the dependent variable (Andrews, Morgan, & Sonquist, 1969). Using the information from multivariate analysis it is possible to discuss

the degree of the association or predictive power between the factors and dependent variable in each of the situations mentioned above.

The data from this study included nominal scales, non-linear relationships, and some factors that were correlated. Such data will not "fit" the assumptions of most multivariate analyses. However, one model designed to handle such data is the Multiple Classification Analysis (MCA), and it was used for this study. The MCA model analyzes data as follows: (a) nominal data are treated much the same as when using "dummy variables" in multilinear regression, (b) non-parametric statistics are used, and (c) the complication of correlated predictors is circumvented by use of an additive model.

The MCA model requires discrete categories for all variables except the dependent variable. The scores on the knowledge section, therefore, were categorized into low, medium, and high. The categories were determined by restricted variance and dividing the range of possible scores (see Table 4 in Appendix E). Also, responses about years of employment outside education were collapsed into two categories: (a) some experience or (b) none (see Table 4 in Appendix E). Method, level, and position, the remaining factors, were discrete category variables.

CHAPTER IV

Results

This chapter is directed to the statistical analysis of the data obtained from this study. The data presented in this chapter are the result of responses to a questionnaire developed for this study and answered by individuals involved in two career education projects.

The data analysis provided by the Multiple Classification Analysis (MCA) allows for examination of the association between each factor or independent variable and the dependent variable. This information is summarized in Table 4.

Table 4
Summary of Statistics
for Each Predictor of Attitude

Factor	Eta	Eta ²	Beta	Beta ²
Knowledge	.2433*	.0592	.2065	.0426
Position	.2350*	.0552	.2281	.0520
Method of Implementation	.1906*	.0363	.1821	.0332
Level	.1160*	.0134	.0639	.0041
Years Work Outside Ed.	.0354	.0013	.0301	.0009

*Significant at $p < .001$.

Eta "indicates the ability of the predictor...to explain variation in the dependent variable" (Andrews et al., 1969, p. 22) and is very similar to a correlation ratio. Eta-square indicates the proportion of variance explained by each factor. The eta statistics are based upon the raw data before considering the degrees of freedom (sample size and number of other predictors) and the effect of the other factors.

The beta statistics are based upon the data after being adjusted for the degrees of freedom and consider the effect of the other factors. Beta indicates the relative strength of a factor in a joint explanation of the dependent variable (attitude). Beta-square indicates the proportion of variance explained by a factor in the presence of others. Since the beta statistics are based upon adjusted data, their estimated values can be greatly affected by the degrees of freedom and any appreciable multicollinearity among factors. The data did not violate any important aspects of the beta assumptions (see tables in Appendix E).

Knowledge appears to have the strongest single association with attitude with an eta of .2433 (see Table 4). This is significant at $p < .001$. The null hypothesis "there is no significant association between knowledge of career education and attitude toward career education" is rejected. However, the relative importance of this association is not great since the proportion of variance explained is less than

six percent (as demonstrated by eta-square in Table 4). By inspection of the mean difference between categories (see Table 2 in Appendix E), it is also possible to discuss the order of the association between knowledge and attitude. It appears that educators with low levels of knowledge also tend to be less favorable toward career education while those with medium or high levels of knowledge have more favorable attitudes.

Position is almost as strongly associated with attitude as knowledge. In fact, the beta values indicate that position has more weight in predicting attitude from the combination of variables than knowledge (see Table 4). The eta describing the relationship between position of the educator and attitude toward career education is .2350 and is significant at $p < .001$. The null hypothesis stating that position and attitude do not have a significant association is rejected. Nevertheless, the relative importance of this association is not great since the proportion of variance explained is less than six percent as demonstrated by eta-square (see Table 4). The order of the association (see Table 2 in Appendix E) appears to be that administrators have the most favorable attitudes toward career education while counselors have less favorable attitudes and teachers have the least favorable attitudes.

Method of implementation appears to be the next strongest association with an eta of .1906 (see Table 4).

This is significant at $p < .001$. The null hypothesis "there is no significant association between the method of implementation and attitude toward career education" is rejected although the eta-square indicates that the proportion of variance explained is less than four percent. Also, the beta for method of implementation (see Table 4) is .1821. This indicates slight predictive value when in combination with the other factors.

The level of the educator produced an eta of .1160, significant at $p < .001$. Although this leads to rejection of the null hypothesis, level explains only around one percent of the variation in attitude (as indicated by eta-square in Table 4). In addition, the beta for level is only .0639 and indicates only slight predictive value of this factor when in combination with the other factors. Differences between the means were too small to suggest a meaningful interpretation of the order of their associations with attitude (see Table 2 in Appendix E).

The eta describing the association between years of work experience outside education and attitude toward career education is .0354. This is not significant and indicates that there is no appreciable association between years of work outside education and attitude. Also, years of work outside education has a beta of .0301 which indicates that it adds very little to prediction of attitude. The null hypothesis relating to this factor is not rejected.

The data analysis provided by the MCA model also allows for examination of the association between the set of predictors and the dependent variable (attitude). This information is summarized in Table 5.

The multiple R (see Table 5) is a multiple correlation coefficient (adjusted for degrees of freedom), and is similar to a Pearsonian coefficient (Andrews, et al., 1969). The multiple R-square (see Table 5) "indicates the proportion of variance in the dependent variable explained by all predictors (after adjusting for degrees of freedom)" (Andrews et al., 1969, p. 22).

Table 5

Summary of Major Statistics
from Multiple Classification Analysis of Attitude*

Statistic	Result
Multiple <u>R</u>	.3624
Multiple <u>R</u> -square	.1314

*p < .001.

The multiple R describing the association between the set of predictors investigated by this study and attitude toward career education is .3624 and is significant at p < .001. The null hypothesis concerning this association stated that there is no significant association between the

set of factors and attitude toward career education. On the basis of the results presented in Table 5 and mentioned above, this null hypothesis is rejected. However, as indicated by the multiple R-square of .1314, all predictors explained only slightly over 13 percent of the total variance in attitude.

CHAPTER V

Discussion

The purpose of this study was to analyze the associations between five chosen factors and educators' attitudes toward career education. The five factors were (a) knowledge about career education, (b) position of the educator as teacher, counselor, or administrator, (c) method of career education program implementation as indicated by which project the educator was employed, (d) number of years employment outside education, and (e) level of the educator in elementary, middle, or high school.

Instruments were developed for this study and administered to local principals, school counselors, and classroom teachers. The responses were then submitted to multiple classification analysis which provided information about each factor's association with attitude and the association between the set of factors and attitude.

Findings

The results indicate that there is a statistically significant association between knowledge and attitude. It appears to be that educators with low levels of knowledge also tend to be less favorable toward career education while those with medium or high knowledge have more favorable

attitudes. The eta for the association between knowledge and attitude was .2433.

There was a statistically significant association between position and attitude toward career education. The eta correlation between position and attitude was .2350. Administrators have the most favorable attitudes with counselors having less favorable and teachers having the least favorable attitudes. The associations with attitude by level in elementary, middle, or high school and method of implementation were also statistically significant. The eta correlations were .116 and .190 respectively. However, it was not possible to determine the order of the associations.

The results indicated no statistically significant association between years of work outside education and attitude toward career education.

A statistically significant association between the set of factors and attitude was found. The correlation between the set of factors and attitude is .36, and according to the multiple classification analysis, the association explained slightly over 13 percent of the total variance in attitude.

Limitations

A major limitation of this study was that the survey was made on samples selected from districts where administrative decisions had already been made to implement career

education. Such a situation may affect a priori the difference in attitude according to position. Also, since the individuals in the study were involved in the implementation of career education, associations between the factors studied and attitude might be different from associations prior to implementation.

The sample included only educators from the western section of the Commonwealth of Kentucky and may be subject to geographical/cultural biases.

Some degree of construct validity was established by the present study. However, it is necessary to be critical of the instrument. Since reliability over time and predictive validity have not been established, the use of the instrument should be limited.

There was very little variance in scores and years of outside work (see Table 4 in Appendix E). As a result, the correlations may be restricted or less than they would have been had greater variance existed.

Some 76 percent of those sampled returned the questionnaires. Had there been returns from the other 24 percent, stronger associations might have resulted.

Implications

Although statistically significant, the amount of variance explained by level and method was so small as to bring into question their importance. Therefore, only the strongest, knowledge and position, will be discussed below:

1. Based upon the results of this study it appears that an increase in knowledge about career education will most likely facilitate favorable attitudes toward career education. Such an association needs further study. However, since attainment of information usually enhances increased knowledge, implementation programs should attempt to give educators as much information about career education programs as possible.

2. The results of the study indicate that teachers have the least favorable attitudes toward career education. This is understandable when difficulties in the classroom are considered. The implementation of career education often requires a complete change in the teacher's method of presenting materials. For example, there are many concerns about managing field trips or visits by outsiders to a classroom. These difficulties, concerns, and attitudes of the classroom teacher are realistic. Thus, there appears to be a need to involve the teacher to a greater degree during the inservice and implementation processes. Also, the manner in which the decision was made to implement career education was not studied. Perhaps teachers had the least amount of input into the decision and were therefore less enthused about the program.

Even though the validity of the attitude section was not as well established as would be preferred, the combination of sections allowed maximum collection of information

in a convenient and simple manner. For this reason, this is a good survey measurement to use, particularly the knowledge and attitude sections. Revisions of the total instrument (of any section alone or in combination with newly developed sections) would have a wide possibility of uses. Below are suggestions for a few of many possible uses:

1. The knowledge section may be used as a pre- and post-test to evaluate the effectiveness of informational programs.
2. A major goal of implementing career education is to enable students to have an increased awareness, appreciation, and ability in relation to the world of work. Revisions of the instrument could be used in evaluating the success of career education. An example of such use would be to administer the knowledge and attitude sections as achievement and attitude measures for students.
3. The knowledge and attitude sections could be the basis for a predictive validity study investigating whether or not teachers with high scores on those sections bring about the greatest amount of change in students' knowledge and/or attitude related to career education programs.
4. Revisions could also be used in additional studies for further identification and investigation of other factors affecting attitude.

Finally, the five factors were expected to account for more than 13 percent of the variance in attitude. The

following are possible explanations of the failure to account for more variance in attitude:

1. It is possible that the score used in data analysis as an indication of an educator's attitude may not reflect a valid construct. Additional studies are needed to establish construct validity of that section.

2. It has been assumed that favorable attitudes are necessary for successful implementation of new programs. However, it is possible that given a sufficiently favorable attitude, there might be other factors that would be better predictors of successful involvement. Other than the assumptions about attitude that exist throughout the literature, there is no actual research concerning the question "what is the strongest predictor of successful involvement in career education programs?" That question needs to be researched. The focus on attitude may be inappropriate. For example, knowledge may be worth further study in such a role as it may be an important determinant for any involvement in a new program.

3. The factors that were chosen for this study may not be well enough defined to yield powerful associations with attitude, or they might be inappropriate for such associations with attitude. An example of a factor that was apparently incorrectly identified is years of outside work experience. Very few educators have worked outside education for any length of time and there was not much variation

within this factor. However, it is possible that inclusion of outside interests such as hobbies or part-time employment may help to identify educators whose outside involvements facilitate their support of career education programs.

Recommendations

The following recommendations are offered based upon the results of this study:

1. Additional research should be aimed at clarifying what characteristics of teachers and other educators affect successful implementation of career education programs.

2. If attitude is shown to be a strong predictor of successful involvement, more research is needed to clarify what factors affect attitude.

3. Future research and evaluation of career education programs should make use of the instrument used in this study for further clarification of the relationship between knowledge and attitude and successful career education programs. Modifications may be necessary for such use, but this instrument is believed to have basic strengths that might be valuable in future research.

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APPENDIX A
Career Education Teacher Survey
and
Cover Letter

Dear Teacher:

Western Kentucky University is conducting a research project concerning career education. The information obtained through the research will, hopefully, be used in both refining existing and planning future programs throughout Kentucky.

A major part of this research involves teachers, counselors, and administrators in some of the schools which have been exposed to career education; therefore, your help is greatly needed. Recognizing how very busy you are, surveys are being used to gather information.

Please take a few minutes to fill out the attached survey. Since you do not sign your name there is no way for us nor anyone else to know which survey you completed.

When you have finished, kindly put the survey back in the envelope in which it came, seal and return it to the collection point in your school office. We will pick the surveys up in a few days.

We greatly appreciate your cooperation and participation.

Sincerely,

Mark Newton
Project Director

P. S. HAVE A CUP OF COFFEE ON US!

MN:bs

CAREER EDUCATION TEACHER SURVEY

SECTION I

DIRECTIONS: Please provide the requested information by checking or filling in the appropriate blank.

1. Male _____ Female _____
2. Age _____
3. Your race: a) _____ Caucasian
b) _____ Black
c) _____ Oriental
d) _____ Other
4. Years teaching experience: _____
5. Years full-time employment outside the field of education: _____
6. At which level do you teach: a) _____ Elem.
b) _____ Mid. or Jr. High
c) _____ High School
7. Average class size: a) _____ less than 10 c) _____ 21 - 30
b) _____ 10 - 20 d) _____ 31 +
8. Area(s) you teach: a) _____ Social Studies
b) _____ Language Arts
c) _____ Mathematics
d) _____ Science
e) _____ Vocational Educ. (T&I, B&O, Home Ec., DE, Health, Occ, Voc. Ag.)
f) _____ Special Education
g) _____ Other (please specify _____)

SECTION II

DIRECTIONS: Based upon your involvement in career education, please provide the requested information by checking or filling in the appropriate blank.

1. Which type of workshop or inservice format has been most effective in increasing your knowledge and understanding of career education? (choose one)
 - a) _____ single-session small group
 - b) _____ single-session large group
 - c) _____ multi-session small group
 - d) _____ multi-session large group
 - e) _____ combination of c & d
 - f) _____ other (please specify _____)

2. Which type of workshop or inservice format has been least effective in increasing your knowledge and understanding of career education? (choose one)
- a) ___ single-session small group
 - b) ___ single-session large group
 - c) ___ multi-session small group
 - d) ___ multi-session large group
 - e) ___ combination of c & d
 - f) ___ other (please specify) _____
3. Which type of resource person(s) has been most successful in increasing your knowledge and understanding of career education? (choose one)
- a) ___ other teachers in your school
 - b) ___ university faculty (from Ky.)
 - c) ___ teachers from other schools
 - d) ___ personnel from Ky. State Dept. of Education
 - e) ___ out-of-state career education specialists
 - f) ___ other (please specify) _____
4. Which type of resource person(s) has been least successful in increasing your knowledge and understanding of career education? (choose one)
- a) ___ other teachers in your school
 - b) ___ university faculty (from Ky.)
 - c) ___ teachers from other schools
 - d) ___ personnel from Ky. State Dept. of Education
 - e) ___ out-of-state career education specialists
 - f) ___ other (please specify) _____
5. Which of the following activities has most increased your knowledge and understanding of career education? (choose one)
- a) ___ workshops and/or inservice meetings
 - b) ___ university courses
 - c) ___ professional meetings
 - d) ___ slide/film presentation
 - e) ___ reading professional literature
 - f) ___ visits to ongoing projects
 - g) ___ other (please specify) _____
6. Which activity has been the least effective in increasing your knowledge and understanding of career education? (choose one)
- a) ___ workshops and/or inservice meetings
 - b) ___ university courses

- c) ___ professional meetings
 d) ___ slide/film presentation
 e) ___ reading professional literature
 f) ___ visits to ongoing projects
 g) ___ other (please specify) _____
7. During the past school year, did you involve parents in some career education activity? Yes _____ No _____ If yes, how were they utilized?
- a) ___ resource persons in classroom
 b) ___ provide tours in work setting
 c) ___ provide field-trip transportation
 d) ___ other (please specify) _____
8. What has been the most effective method of initiating parental involvement and participation in your classroom? (choose one)
- a) ___ letters or correspondence sent home
 b) ___ personal contact (face to face)
 c) ___ telephone contact
 d) ___ arrangements made through guidance office
 e) ___ PTA
 f) ___ other (please specify) _____
9. During the past school year, how many people (other than parents of your students) visited your classroom to discuss their jobs or hobbies? _____
10. During the past school year, how many trips did your class(es) take to observe the world of work? _____
11. What has been the most effective method of initiating employer involvement and participation in your classroom? (choose one)
- a) ___ letters sent to business or work setting
 b) ___ arrangements through guidance office
 c) ___ personal contact (face to face)
 d) ___ telephone contact
 e) ___ other (please specify) _____
12. Do you feel employers in your community are aware of career education? Yes _____ No _____ If yes, what do you perceive their attitude toward career education to be?
- a) ___ favorable b) ___ neutral c) ___ unfavorable

SECTION III

DIRECTIONS: Based upon information you have received about career education, please determine whether each of the following statements is true or false. Circle your response.

1. Occupational clustering is a system designed to organize thousands of occupations and render them educationally manageable and useful. T F
2. The implementation and continuance of career education in a local school requires substantial amounts of supplemental funding. T F
3. Career education is designed for students from the earliest elementary level through grade 12 and beyond. T F
4. The most effective method of implementing career education in a local school is to establish a separate course designed to survey careers. T F
5. Because career education is economically based, its major purpose is to channel students into careers where manpower needs exist. T F
6. An objective of career education is to facilitate the development of realistic and rational decision making skills on the part of the learner. T F
7. Career education provides academic preparation for college entrance. T F
8. An objective of career education is to place more personnel into technical fields and less into the professions. T F
9. A career oriented curriculum includes the arts and humanities. T F
10. Career education, at the elementary level, is designed to eliminate the fantasy stage of early childhood. T F
11. Career education and vocational education are synonymous. T F
12. Career education provides opportunities for students to explore various occupations while simultaneously gaining competencies in the basic skills. T F

13. Career education gives its main thrust to the non-college bound student. T F
14. Career education recognizes that learning is necessarily an intellectual and academic exercise. T F
15. During the exploration phase of a career education program, the student finalizes his career choice. T F
16. Career education is developmental and begins with an awareness of self and work. T F
17. One aim of career education is a reduction in the dropout rate. T F
18. Career education requires the development of a new curriculum. T F
19. A job and/or educational placement system is not a function of a career education program. T F
20. Career education requires the active participation of parents, employers, and other community members in the total school program. T F

SECTION IV

DIRECTIONS: Read each statement and decide how you feel about it. Indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), or if you are Undecided (U). Use the Undecided (U) category only if you have no opinion. Please circle your response to each item.

1. When parents are utilized as classroom resources, they add significantly to the learning experiences of students. SA A U D SD
2. Career education is needed in Kentucky. SA A U D SD
3. If education were career development oriented, it would be responsive to the needs of more students. SA A U D SD
4. Career education increases students' career options. SA A U D SD

- | | |
|--|-------------|
| 5. Career education has positive value for every student. | SA A U D SD |
| 6. Career education does not have a significant effect on the career planning of students. | SA A U D SD |
| 7. Career education gives the educator increased opportunities for creativeness in the school setting. | SA A U D SD |
| 8. Students are interested in the information they receive from outside resource persons who come into the classroom. | SA A U D SD |
| 9. A middle or upper-middle class suburb does not need career education. | SA A U D SD |
| 10. Students should have as much exposure to careers as possible. | SA A U D SD |
| 11. If more vocational schools were built, career education would not be needed in the typical secondary school curriculum. | SA A U D SD |
| 12. Students should not make career plans during high school. | SA A U D SD |
| 13. Career education has been a waste of the educator's time. | SA A U D SD |
| 14. Students increase their feelings of self-worth through career education. | SA A U D SD |
| 15. Career education is a threat to minority groups, i.e., another means of holding them back. | SA A U D SD |
| 16. Facilitating the career development of students is the counselor's job, not the teacher's job. | SA A U D SD |
| 17. Employers are willing to participate in career education. | SA A U D SD |
| 18. Students enrolled in vocational courses (either in the high school or the vocational school) learn enough about the world of work. | SA A U D SD |

19. Parents who know about career education
are supportive of it. SA A U D SD
20. It is not the responsibility of the
school to become involved with the place-
ment of exiting students in jobs. SA A U D SD

APPENDIX B

Career Education Counselor Survey

and

Cover Letter

Dear Counselor:

Western Kentucky University is conducting a research project concerning career education. The information obtained through the research will, hopefully, be used in both refining existing and planning future programs throughout Kentucky.

A major part of this research involves counselors, teachers, and administrators in some of the schools which have been exposed to career education; therefore, your help is greatly needed. Recognizing how very busy you are, surveys are being used to gather information.

Please take a few minutes to fill out the attached survey. Since you do not sign your name there is no way for us nor anyone else to know which survey you completed.

When you have finished, kindly put the survey back in the envelope in which it came, seal and return it to the collection point in your school office. We will pick the surveys up in a few days.

We greatly appreciate your cooperation and participation.

Sincerely,

Mark Newton
Project Director

P. S. HAVE A CUP OF COFFEE ON US!

MN:ls

CAREER EDUCATION COUNSELOR SURVEY

SECTION I

DIRECTIONS: Please provide the requested information by checking or filling in the appropriate blank.

1. Male _____ Female _____
2. Age _____
3. Your race: a) _____ Caucasian
b) _____ Black
c) _____ Oriental
d) _____ Other
4. Years teaching experience: _____
5. Years full-time employment outside the field of education: _____
6. Years counseling experience: _____
7. Which level do you serve? a) _____ Elem.
b) _____ Mid. or Jr. High
c) _____ High School
8. What is your counselor-pupil ratio? _____
9. How many schools do you serve? _____
10. Area(s) you taught: a) _____ Social Studies
b) _____ Language Arts
c) _____ Mathematics
d) _____ Science
e) _____ Vocational Educ. (T&I, B&O, DE, Home Ec., Health Occ., Voc. Ag.)
f) _____ Special Education
g) _____ Other (please specify) _____
11. Have you taken courses specific to career or vocational guidance during your professional preparation as a counselor? Yes _____ No _____ If yes, how many? _____

SECTION II

DIRECTIONS: Based upon your involvement in career education, please provide the requested information by checking or filling in the appropriate blank.

1. Which type of workshop or inservice format has been most effective in increasing your knowledge and understanding of career education? (choose one)

- a) ___ single-session small group
 b) ___ single-session large group
 c) ___ multi-session small group
 d) ___ multi-session large group
 e) ___ combination of c & d
 f) ___ other (please specify) _____
2. Which type of workshop format has been least effective in increasing your knowledge and understanding of career education? (choose one)
- a) ___ single-session small group
 b) ___ single-session large group
 c) ___ multi-session small group
 d) ___ multi-session large group
 e) ___ combination of c & d
 f) ___ other (please specify) _____
3. Which type of resource person(s) has been most successful in increasing your knowledge and understanding of career education? (choose one)
- a) ___ other teachers or counselors in your school
 b) ___ university faculty (from Ky.)
 c) ___ teachers or counselors from other schools
 d) ___ personnel from Ky. State Dept. of Education
 e) ___ out-of-state career education specialists
 f) ___ other (please specify) _____
4. Which type of resource person(s) has been least successful in increasing your knowledge and understanding of career education? (choose one)
- a) ___ other teachers or counselors in your school
 b) ___ university faculty (from Ky.)
 c) ___ teachers or counselors from other schools
 d) ___ personnel from Ky. State Dept. of Education
 e) ___ out-of-state career education specialists
 f) ___ other (please specify) _____
5. Which of the following activities has most increased your knowledge and understanding of career education? (choose one)
- a) ___ workshops and/or inservice meetings
 b) ___ university courses
 c) ___ professional meetings
 d) ___ slide/film presentations
 e) ___ reading professional literature
 f) ___ visits to ongoing projects
 g) ___ other (please specify) _____

6. Which activity has been the least effective in increasing your knowledge and understanding of career education? (choose one)
- a) ___ workshops and/or inservice meetings
 - b) ___ university courses
 - c) ___ professional meetings
 - d) ___ slide/film presentations
 - e) ___ reading professional literature
 - f) ___ visits to ongoing projects
 - g) ___ other (please specify) _____
7. During the past school year, did you initiate or coordinate parental involvement in some career education activity? a) ___ Yes b) ___ No If yes, how were they utilized?
- a) ___ resource persons in classroom(s)
 - b) ___ provide tours in work setting(s)
 - c) ___ provide field-trip transportation
 - d) ___ other (please specify) _____
8. What has been the most effective method of initiating parental involvement and participation in your school(s)? (choose one)
- a) ___ letters or correspondence sent home
 - b) ___ personal contact (face to face)
 - c) ___ telephone contact
 - d) ___ other (please specify) _____
9. During the past school year, how many trips did you arrange or coordinate for classes to observe the world of work? _____
10. What has been the most effective method of initiating employer involvement and participation in career education? (choose one)
- a) ___ letters sent to business or work setting
 - b) ___ personal contact (face to face)
 - c) ___ telephone contact
 - d) ___ other (please specify) _____
11. Do you feel employers in your community are aware of career education? a) ___ Yes b) ___ No If yes, what do you perceive their attitude toward career education to be?
- a) ___ favorable
 - b) ___ neutral
 - c) ___ unfavorable

12. Have students demonstrated increased interest in career guidance since the initiation of your career education program? a) Yes b) No If yes, how has this increased interest been demonstrated?
- a) request for career related resource materials
 b) request for personal career guidance
 c) request for interest and/or aptitude tests
 d) other (please specify) _____
13. Have your duties increased since becoming involved in career education? a) Yes b) No If yes, how?
- a) coordinating field trips
 b) coordinating the visitation of resource persons to the school
 c) compiling and maintaining resource files
 d) increased testing
 e) placement duties
 f) other (please specify) _____
14. Do you have paraprofessional assistance? a) Yes
 b) No If yes, what kind? _____
15. What has been the most effective method of providing students with appropriate feedback concerning career related inventories, surveys, tests, etc., which have been administered to them? (choose one)
- a) group guidance sessions
 b) individual guidance sessions
 c) no sessions, but return of profiles
 d) other (please specify) _____

SECTION III

DIRECTIONS: Based upon information you have received about career education, please determine whether each of the following statements is true or false. Circle your response.

1. Occupational clustering is a system designed to organize thousands of occupations and render them educationally manageable and useful. T F
2. The implementation and continuance of career education in a local school requires substantial amounts of supplemental funding. T F

3. Career education is designed for students from the earliest elementary level through grade 12 and beyond. T F
4. The most effective method of implementing career education in a local school is to establish a separate course designed to survey careers. T F
5. Because career education is economically based, its major purpose is to channel students into careers where manpower needs exist. T F
6. An objective of career education is to facilitate the development of realistic and rational decision making skills on the part of the learner. T F
7. Career education provides academic preparation for college entrance. T F
8. An objective of career education is to place more personnel into technical fields and less into the professions. T F
9. A career oriented curriculum includes the arts and humanities. T F
10. Career education, at the elementary level is designed to eliminate the fantasy stage of early childhood. T F
11. Career education and vocational education are synonymous. T F
12. Career education provides opportunities for students to explore various occupations while simultaneously gaining competencies in the basic skills. T F
13. Career education gives its main thrust to the non-college bound student. T F
14. Career education recognizes that learning is necessarily an intellectual and academic exercise. T F
15. During the exploration phase of a career education program, the student finalizes his career choice. T F
16. Career education is developmental and begins with an awareness of self and work. T F

17. One aim of career education is a reduction in the dropout rate. T F
18. Career education requires the development of a new curriculum. T F
19. A job and/or educational placement system is not a function of a career education program. T F
20. Career education requires the active participation of parents, employers, and other community members in the total school program. T F

SECTION IV

DIRECTIONS: Read each statement and decide how you feel about it. Indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), or if you are Undecided (U). Use the Undecided (U) category only if you have no opinion. Please circle your response to each item.

1. When parents are utilized as classroom resources, they add significantly to the learning experiences of students. SA A U D SD
2. Career education is needed in Kentucky. SA A U D SD
3. If education were career development oriented, it would be responsive to the needs of more students. SA A U D SD
4. Career education increases students' career options. SA A U D SD
5. Career education has positive value for every student. SA A U D SD
6. Career education does not have a significant effect on the career planning of students. SA A U D SD
7. Career education gives the educator increased opportunities for creativeness in the school setting. SA A U D SD

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|--|----|---|---|---|----|
| 8. Students are interested in the information they receive from outside resource persons who come into the classroom. | SA | A | U | D | SD |
| 9. A middle or upper-middle class suburb does not need career education. | SA | A | U | D | SD |
| 10. Students should have as much exposure to careers as possible. | SA | A | U | D | SD |
| 11. If more vocational schools were built, career education would not be needed in the typical secondary school curriculum. | SA | A | U | D | SD |
| 12. Students should not make career plans during high school. | SA | A | U | D | SD |
| 13. Career education has been a waste of the educator's time. | SA | A | U | D | SD |
| 14. Students increase their feelings of self-worth through career education. | SA | A | U | D | SD |
| 15. Career education is a threat to minority groups, i.e., another means of holding them back. | SA | A | U | D | SD |
| 16. Facilitating the career development of students is the counselor's job, not the teacher's job. | SA | A | U | D | SD |
| 17. Employers are willing to participate in career education. | SA | A | U | D | SD |
| 18. Students enrolled in vocational courses (either in the high school or the vocational school) learn enough about the world of work. | SA | A | U | D | SD |
| 19. Parents who know about career education are supportive of it. | SA | A | U | D | SD |
| 20. It is not the responsibility of the school to become involved with the placement of exiting students in jobs. | SA | A | U | D | SD |

APPENDIX C

Career Education Administrator Survey

and

Cover Letter

Dear Principal,

Western Kentucky University is conducting a research project concerning career education. The information obtained through this research will, hopefully, be used in refining existing and planning future school programs throughout Kentucky.

A major part of this research involves collecting data from administrators, teachers and counselors in some of the schools which have been exposed to career education. Recognizing how very busy you are, surveys are being used to gather information.

Please take a few minutes to fill out the attached survey. As you fill it out, have a cup of coffee on us. We are asking that you do not sign your name.

When you have finished, kindly put the survey back in the envelope in which it came, seal and place it in the pick-up box being used by your teachers. We will pick the surveys up in a few days.

We greatly appreciate your cooperation and participation.

Sincerely,

Mark Newton
Project Director

MN:bs

CAREER EDUCATION ADMINISTRATOR SURVEY

SECTION I

DIRECTIONS: Please provide the requested information by checking or filling in the appropriate blank.

1. Male _____ Female _____ 3. Your race: a) _____ Caucasian
 b) _____ Black
 2. Age _____ c) _____ Oriental
 d) _____ Other
4. Years teaching experience: _____
5. Years experience as an educational administrator: _____
6. At which level are you an administrator: a) _____ Elem.
 b) _____ Mid. or
 _____ Jr. High
 c) _____ High
 _____ School
7. Years full-time employment outside the field of education: _____
8. Area(s) you taught: a) _____ Social Studies
 b) _____ Language Arts
 c) _____ Mathematics
 d) _____ Science
 e) _____ Vocational Educ. (T&I, B&O, DE,
 _____ Health Occ., Home Ec., Voc. Ag.)
 f) _____ Special Education
 g) _____ Other (please specify) _____

SECTION II

DIRECTIONS: Based upon your involvement in career education, please provide the requested information by checking or filling in the appropriate blank.

1. Which type of workshop or inservice format has been most effective in increasing your knowledge and understanding of career education? (choose one)
- a) _____ single-session small group
 b) _____ single-session large group
 c) _____ multi-session small group
 d) _____ multi-session large group

- e) combination of c & d
f) other (please specify) _____
2. Which type of workshop or inservice format has been least effective in increasing your knowledge and understanding of career education? (choose one)
- a) single-session small group
b) single-session large group
c) multi-session small group
d) multi-session large group
e) combination of c & d
f) other (please specify) _____
3. Which type of resource person(s) has been most successful in increasing your knowledge and understanding of career education? (choose one)
- a) teachers or counselors in your school
b) university faculty (from Ky.)
c) teachers, counselors, or administrators from other schools
d) personnel from Ky. State Dept. of Education
e) out-of-state career education specialists
f) other (please specify) _____
4. Which type of resource person(s) has been least successful in increasing your knowledge and understanding of career education? (choose one)
- a) teachers or counselors in your school
b) university faculty (from Ky.)
c) teachers, counselors, or administrators from other schools
d) personnel from Ky. State Dept. of Education
e) out-of-state career education specialists
f) other (please specify) _____
5. Which of the following activities has most increased your knowledge and understanding of career education? (choose one)
- a) workshops and/or inservice meetings
b) university courses
c) professional meetings
d) slide/film presentation
e) reading professional literature
f) visits to ongoing projects
g) other (please specify) _____

6. Which activity has been the least effective in increasing your knowledge and understanding of career education?
(choose one)
- a) workshops and/or inservice meetings
 - b) university courses
 - c) professional meetings
 - d) slide/film presentation
 - e) reading professional literature
 - f) visits to ongoing projects
 - g) other (please specify) _____
7. What has been the most effective method of initiating parental involvement and participation in your school?
(choose one)
- a) letters or correspondence sent home
 - b) personal contact (face to face)
 - c) telephone contact
 - d) arrangements made through guidance office
 - e) other (please specify) _____
8. Have in-house funds been available for assisting with the implementation of career education in your school?
a) Yes b) No If yes, how have the majority of these funds been used?
- a) purchase resource materials
 - b) pay consultants for in-service workshop activities
 - c) pay for field trip transportation
 - d) modify physical facilities
 - e) purchase career guidance materials or tests
 - f) overtime/incentive pay to staff for curriculum development
 - g) purchase equipment for hands-on experiences
 - h) other (please specify) _____
9. What has been the most effective method of initiating employer involvement and participation in your school?
(choose one)
- a) letters sent to business or work setting
 - b) arrangements through guidance office
 - c) personal contact (face to face)
 - d) telephone contact
 - e) other (please specify) _____

10. Do you feel employers in your community are aware of career education? a) Yes b) No If yes, what do you perceive their attitude toward career education to be?
- a) favorable b) neutral c) unfavorable
11. Have you initiated any public relations activities concerning career education in your school? a) Yes b) No If yes, what kind?
- a) newspaper exposure
 b) TV/radio exposure
 c) pamphlet or brochure for dissemination
 d) slide/tape presentation
 e) provide speakers for civic club meetings
 f) other (please specify) _____
12. If you have initiated public relations activities, which has elicited the most positive feedback? (choose one) If no activity has been initiated, leave blank.
- a) newspaper exposure
 b) TV/radio exposure
 c) pamphlet or brochure for dissemination
 d) slide/tape presentation
 e) provide speakers for civic club meetings
 f) other (please specify) _____

SECTION III

DIRECTIONS: Based upon information you have received about career education, please determine whether each of the following statements is true or false. Circle your response.

1. Occupational clustering is a system designed to organize thousands of occupations and render them educationally manageable and useful. T F
2. The implementation and continuance of career education in a local school requires substantial amounts of supplemental funding. T F
3. Career education is designed for students from the earliest elementary level through grade 12 and beyond. T F

4. The most effective method of implementing career education in a local school is to establish a separate course designed to survey careers. T F
5. Because career education is economically based, its major purpose is to channel students into careers where manpower needs exist. T F
6. An objective of career education is to facilitate the development of realistic and rational decision making skills on the part of the learner. T F
7. Career education provides academic preparation for college entrance. T F
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10. Career education, at the elementary level is designed to eliminate the fantasy stage of early childhood. T F
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14. Career education recognizes that learning is necessarily an intellectual and academic exercise. T F
15. During the exploration phase of a career education program, the student finalizes his career choice. T F
16. Career education is developmental and begins with an awareness of self and work. T F
17. One aim of career education is a reduction in the dropout rate. T F

18. Career education requires the development of a new curriculum. T F
19. A job and/or educational placement system is not a function of a career education program. T F
20. Career education requires the active participation of parents, employers, and other community members in the total school program. T F

SECTION IV

DIRECTIONS: Read each statement and decide how you feel about it. Indicate whether you Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), or if you are Undecided (U). Use the Undecided (U) category only if you have no opinion. Please circle your response to each item.

1. When parents are utilized as classroom resources, they add significantly to the learning experiences of students. SA A U D SD
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3. If education were career development oriented, it would be responsive to the needs of more students. SA A U D SD
4. Career education increases students' career options. SA A U D SD
5. Career education has positive value for every student. SA A U D SD
6. Career education does not have a significant effect on the career planning of students. SA A U D SD
7. Career education gives the educator increased opportunities for creativeness in the school setting. SA A U D SD
8. Students are interested in the information they receive from outside resource persons who come into the classroom. SA A U D SD

- | | | | | | |
|--|----|---|---|---|----|
| 9. A middle or upper-middle class suburb does not need career education. | SA | A | U | D | SD |
| 10. Students should have as much exposure to careers as possible. | SA | A | U | D | SD |
| 11. If more vocational schools were built, career education would not be needed in the typical secondary school curriculum. | SA | A | U | D | SD |
| 12. Students should not make career plans during high school. | SA | A | U | D | SD |
| 13. Career education has been a waste of the educator's time. | SA | A | U | D | SD |
| 14. Students increase their feelings of self-worth through career education. | SA | A | U | D | SD |
| 15. Career education is a threat to minority groups, i.e., another means of holding them back. | SA | A | U | D | SD |
| 16. Facilitating the career development of students is the counselor's job, not the teacher's job. | SA | A | U | D | SD |
| 17. Employers are willing to participate in career education. | SA | A | U | D | SD |
| 18. Students enrolled in vocational courses (either in the high school or the vocational school) learn enough about the world of work. | SA | A | U | D | SD |
| 19. Parents who know about career education are supportive of it. | SA | A | U | D | SD |
| 20. It is not the responsibility of the school to become involved with the placement of exiting students in jobs. | SA | A | U | D | SD |

APPENDIX D

Scoring Key for Knowledge Subsection

KEY FOR CAREER EDUCATION
KNOWLEDGE SUBSECTION

<u>Item Number</u>	<u>Correct Response</u>
1	T
2	F
3	T
4	F
5	F
6	T
7	T
8	F
9	T
10	F
11	F
12	T
13	F
14	F
15	F
16	T
17	T
18	F
19	F
20	T

APPENDIX E

Tables of Additional Information

Table 1
 Frequency of Responses Within Categories
 Between Factors

Factor Variables	Project One	Project Two	Yrs. Emp. Out None Some	Level Tgt. NA* Elem. MS HS	Knowledge Lo Med Hi
Position Teacher	288	194	287 195	5 163 164 150	3 229 250
Counselor	22	4	15 11	0 2 12 12	0 8 18
Administrator	19	8	13 14	0 14 7 6	0 7 20
Project One Two			123 192 83 137	2 103 3 76 49 134 52 116	1 79 126 2 165 162
Yrs. Emp. Out None Some				4 124 1 55 102 81 85 83	2 145 1 99 168 120
Level Tgt. NA Elem. MS HS					0 2 3 1 74 104 1 87 95 1 81 86

*NA stands for no answer.

Table 2
Number and Response Percent
Within Each Category

Factor	Number Responses	Percent Response*	Attitude Mean Score (unadjusted)
Position			
Teacher	482	90.1%	79.00
Counselor	26	4.9%	83.96
Administrator	27	5.0%	88.70
Project			
One	206	38.5%	82.12
Two	329	61.5%	78.24
Number Yrs. Emp. Out			
None	315	58.9%	79.44
Some	220	41.1%	80.15
Level Tgt.			
NA	5	.9%	75.20
Elem.	179	33.5%	81.25
MS	183	34.2%	78.85
HS	168	31.4%	79.21
Knowledge			
Lo	3	.6%	56.00
Med.	244	45.6%	78.09
Hi	288	53.8%	81.36

*The Percent Response category shows the percent of returned questionnaires within each category.

Table 3
 Intercorrelation Matrix of All Factors
 in Study*

Variable	Attitude	Knowledge	Position	Level	Years Work Outside Ed.	Method of Implementation
Attitude	1.0000	.3969	.2199	-.0297	.0723	.1668
Knowledge		1.0000	.1173	.0009	.0049	.1527
Position			1.0000	-.0115	.1121	-.0849
Level				1.0000	.1323	-.2190
Years Work Outside Ed.					1.0000	-.1262
Method of Implementation						1.0000

*All correlation coefficients significant at $p < .05$.

Table 4
 Additional Information About Knowledge,
 Attitude, and Years of Work Experience
 Outside Education

Category	Knowledge	Attitude	Number Yrs. Emp. Out
Possible Score	20	100	any response
Range of Responses	5-20	17-100	0-26
Mean of Responses	15.35	79.39	2.13
Standard Devi- ation of Responses	3.09	10.16	4.15
Category Range for MCA Program	lo = 1-7 med = 8-14 hi = 15-20	not applicable	none = 0 - NA some = 1 - 26

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