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ABSTRACT

A study examined the views of various members of the school and business communities toward what the focus of vocational education programs in Illinois actually is and what it should be. A questionnaire dealing with six factors currently stressed in vocational educational programs and five factors that should possibly be stressed was mailed to the following groups, which the study population comprised: 31 members of the State Advisory Council for Vocational Education in Illinois; 21 directors of regional career guidance; 60 state-level staff in adult, vocational, and technical education; 45 teacher educators; 451 representatives (administrators, teachers, and students) from comprehensive high schools; 242 representatives from area vocational schools; 466 representatives from junior colleges; and 115 business and industry representatives. In all, 1,019 individuals (71.2 percent) completed the questionnaire. The respondents felt that affective job, technical, and occupational survival skills currently receive the most emphasis in vocational education, followed by job search, basic, and entrepreneurial skills. With respect to those factors that should be emphasized, affective job and occupational survival skills were mentioned most frequently, followed by job search, basic, and technical skills. (This report contains 16 tables analyzing the various existing and desired skill areas according to the various population subgroups and a copy of the survey instrument.) (MN)

A Study of State-wide Perceptions of Vocational Educational Outcomes

Identification and Assessment of Vocational Education Outcomes

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Introduction

The use of educational outcomes as the focus of evaluation has commanded increased attention in recent years as the emphasis of evaluation has shifted from processes to products and impact. Public Law 94-482, The Education Amendments of 1976, mandated states to evaluate program effectiveness on the basis of two specific outcome criteria: employment in training-related occupations and employer assessment of the training and preparation for employment received by students. In addition, policy makers, educators, and the general public are asking questions concerning the accountability of vocational education. Answers to questions related to the goals, side-effects, and payoffs of vocational education are being sought. Outcome evaluation, as part of the broader field of educational evaluation, is one means to answer such questions.

Vocational education outcomes may be viewed as a subset of educational outcomes--those that occur specifically as a result of vocational education programs. Darcy (1979) defines vocational education outcomes as short-term consequences and longer-term impacts resulting from vocational programs. This definition represents the viewpoint that outcomes should encompass all consequences of vocational programs. Other vocational educators believe that outcomes should focus on the change in individuals. For example, a publication of the University Council for Vocational Education (Moss and Copa, 1982) defines outcomes as the changes made in the individual as a

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result of the experiences provided through vocational education delivery mechanisms. Evans and Hunter (1979) suggest that these are best conceived as the value added to (or taken from) the individual. The Illinois State Board of Education has also adopted this viewpoint. In the State of Illinois, statements of outcomes are defined as broad expressions of what students must know and be able to do as a result of schooling. While not defining any particular approach to instruction nor specifying any particular manner of organizing instructional programs, outcome statements provide an observable and measurable academic, knowledge, or skill basis for the expectations of schooling.

To evaluate vocational education outcomes, one must first identify and verify appropriate outcomes. From a review of the literaure related to outcome identification, it is apparent that the processes and criteria used to identify outcomes varies with the purpose of each study. In general, the literature related to this area can be divided into two categories. The first category consists of follow-up studies of vocational and non-vocational graduates. The second category consists of studies which focus on the process of identifying and assessing outcomes. Within the follow-up studies, it appears that legislative requirements are one of the primary criteria used for the identification of outcomes to be assessed. Questions related to these outcomes are often included in follow-up questionnaires in national, state, and local studies (i.e., Blackford et al., 1979; Enoch, 1977; Tabler, 1979). A second general criterion used to identify outcomes in follow-up studies appears to be the information needs of a particular audience. For example, information needs of local schools often relate to program improvement. Therefore, outcomes such as employment status, satisfaction with training, and completion/dropout rate might be assessed (i.e., Hernstadt et al., 1979; Katz et al., 1974; Robon, 1977).

The process and criteria are somewhat different in studies which focus on outcome identification. In general it appears that an initial list of outcomes has been identified through the literature. This list has been limited and verified through processes such as surveys (Copa, 1982) or working conferences (Copa, 1982; Darcy, 1979; and McKinney and Fornash, 1983). Input from representatives of business, labor, and education, including both vocational education and other disciplines, have been incorporated through these processes.

Recommendations from previous studies related to outcome identification emphasize the need to gather input from a variety of sources when identifying vocational education outcomes. Therefore, the purpose of this study was to gather input from a variety of sources concerning the emphasis on individual outcomes of vocational education programs. Respondents were asked their perceptions of the emphasis "that is" and "that should be" given to each outcome. Identifying differences between what is and what should be will provide a means for determining in-service needs and possible curricuium needs. The study involved a survey of representatives from the following groups: vocational administrators, teachers, and students in comprehensive high schools, area vocational centers, and community colleges; state-level staff; vocational teacher educators; state advisory council for vocational education; career education and guidance center staff; and business and industry in the state of Illinois. This study was one component in the process of identifying appropriate vocational education outcomes in Illinois.

Method

Sample Selection

The population for this study consisted of state-level staff in adult,

vocational, and technical education; members of the state advisory council for vocational education; staff of the regional career education and guidance centers; teacher educators in vocational education; vocational administrators, teachers, and students in comprehensive high schools, area vocational centers, and community colleges; and representatives of business and industry in the state of Illinois. Due to the varying size of each group, different sampling techniques were used. The following describes the sampling technique used for each group.

State-level staff. There are 60 professional staff members in the Department of Adult, Vocational, and Technical Education, Illinois State Board of Education. The entire population was selected.

State Advisory Council. There are 31 members of the State Advisory Council for Vocational Education in Illinois. All members were included in the study.

Career education and guidance center staff. Representatives of career education and guidance were considered to be the directors of the regional career guidance centers. There are 21 directors and all were included in the study.

Teacher educators. There are nine universities offering vocational education in the state of Illinois. Within these vocational programs, 90 teacher educators were identified. From this population, 50 percent were randomly selected. Sample size equaled 45.

Comprehensive high schools. Representatives of comprehensive high schools included vocational administrators, teachers and students. A sample was selected to insure representation from each of these groups. A 20 percent random sample was selected of all high school vocational directors. This resulted in a sample size of 120. A 3 percent sample was

randomly selected of all high school teachers who teach at the skill training level. This resulted in a sample size of 181. Students enrolled in training-level programs at a rural high school and an urban high school were selected to participate in the study. The sample consisted of approximately 75 students from each high school. The total sam size for comprehensive high schools equalled 451.

Area vocational centers. Representatives of area vocational centers included vocational administrators, teachers, and students. A sample was selected to insure representation from each of these groups. Since the population of vocational directors in area vocational centers is 31, the entire populations was surveyed. A 3 percent sample was randomly selected of all area vocati al center teachers. This resulted in a sample size of 61. Students from an area vocational center which has one program for city residents and one program for residents of the outlying counties were selected to participate in the study. The sample consisted of approximately 75 students from each program. The total sample size for area vocational centers equaled 242.

Community colleges. Representatives of community colleges included vocational administrators, teachers, and students. A sample was selected to insure representation from each of these groups. The population for vocational directors in community colleges is 38. Therefore, all were included in the study. A 3 percent sample was randomly selected of all community college vocational teachers. This resulted in a sample size of 166. Students from a community college which has programs in all th major vocational areas was selected to participate in the study. The sample consisted of 262 students. The total sample size for community colleges equalled 466.

Business/Industry representatives. In order to obtain input from representatives of business and industry who are knowledgeable about vocational education, the population chosen for this study included the chairpersons of local advisory councils for vocational education. From this population, a 20 percent random sample was selected. Sample size equaled 115.

The total sample for the study consisted of 1431 representatives of the groups described.

Instrument

The survey instrument consisted of a 45 item questionnaire printed in a booklet format. Each item represented one potential outcome of a vocational program, as identified from the literature and input from the state staff. Using a Likert scale, respondents were asked to indicate their opinion of the emphasis "that is" and "that should be" placed on each outcome. An example, outcome statement was "the ability to fill out a job application."

Procedure

The questionnaires were mailed with a cover letter signed by the Assistant Superintendent, Department of Adult, Vocational, and Technical Education, Illinois State Board of Education. Also included with the questionnaire was a self-addressed stamped envelope for its return. Questionnaire data were collected during April and May, 1984.

Fourteen hundred and thirty one questionnaires were sent to representatives of the identified groups. The total number of questionnaires returned was 1019 (71.21%). Table 1 contains a summary of the return rate by group.

TABLE 1

RETURN OF QUESTIONNAIRE

Group	Number sent	Number returned	% Returned
Comprehensive High Schools	451	329	72.95
Area Vocational Centers	242	206	85.12
Community Colleges	466	338	72.53
Universities	45	22	48.89
DAVTE	60	46	76.67
SACVE	31	9	29.03
Career Centers	21	16	76.19
Business/Industry	115	53	46.09
Total	1431	1019	71.21

Data Analysis

The first step in the analysis of data was to determine what underlying constructs were being measured by the outcomes questionnaire. The questionnaire responses were subjected to a principal components factor analysis followed by a rotation with Kaiser normalization. The criteria for maintaining a factor were: 1) at least two items must be included in the factor and, 2) each item must load at .40 or higher on the factor.

Once the factors were derived, factor means were calculated for each major group of respondents. An analysis of variance was then conducted to determine if there were differences in the factor means among groups. The F Ratio obtained from the analysis of variance was tested at the .01 level of significance. When significant F Ratios were obtained, the Scheffe method of multiple comparison was used as a follow-up test. Although unequal sample sizes necessitated the use of the Scheffe procedure, significant differences between individual groups were not always identified because of the conservative nature of this test.

Findings and Discussion

Factor Identification and Description

The principal components factor analysis produced six factors for "current emphasis" and five factors for "should be emphasis." The analysis began with 45 items and of these, 36 items loaded at .40 or higher on one of the six factors identified for "current emphasis" and 32 items loaded at .40 or higher on one of the five factors identified for "should be emphasis."

Perceptions of Current Emphasis. Factor I (82 percent of the total variance) was called Technical Skills, as it includes those skills necessary to perform a job. Persons scoring high on the items defining this factor feel that education for employment programs should assist students in developing an awareness of and proficiency in operating tools and equipment needed for a job, an understanding of terminology, technical information and the steps required to do a job, the ability to meet an identified standard and to perform a job safely, as well as an understanding of the need to upgrade job skills and a knowledge of training required for advancement on the job.

Factor II (7 percent of the total variance) was called Job Search Skills, as the items loading high on this factor relate to obtaining a job. Persons who score high on this factor believe that students should have an identified career goal, a desire to seek out job opportunities, a knowledge of how to prepare a resume, fill out a job application, interview effectively and to present a good image.

Factor III (4 percent of the total variance) was called Affective Job Skills. The item content relates to attitudes, interpersonal relationships,

and an understanding of oneself and others. Persons scoring high on this factor feel that education for employment programs should help students develop a positive attitude toward co-workers and work, get along with people, be on time and understand employers' expectations, as well as to develop an understanding of their own interests and abilities.

Factor IV (3 percent of the total variance) was called Occupational Survival Skills because it includes generalizable skills for maintaining a job. Persons who score high on this factor believe students should be able to follow directions, be dependable on the job, have a respect for authority, effectively manage time and materials, work without close supervision, have an understanding of the steps required to do a job, and present a good image to an employer.

Factor V (3 percent of the total variance) was called Entrepreneurial Skills because the items reflect those skills identified as needed for a person who is self-employed. A person who socres high on this factor feels that an education for employment program should help a student develop an understanding of risk taking and its consequences, an ability to make decisions and be creative, a feeling of self-confidence, a desire to seek out job opportunities and an understanding of the rights and duties of a worker.

Factor VI (2 percent of the total variance) was called Basic Skills. Persons scoring high on the items defining this factor feel that education for employment programs should help students develop a proficiency in applying reading and writing skills and the ability to effectively communicate.

Table 2 contains the factor analysis results for outcomes currently emphasized. Item numbers, stems and associated factor loadings for each

of the six derived factors are included. Tentative names have been suggested for each of the factors.

TABLE 2

OUTCOME ASSIGNMENTS TO FACTORS FOR CURRENT EMPHASIS

Item	Loading
Factor I - Technical Skills	
20. An awareness of the special tools and equipment needed for a job	.748
42. A proficiency in operating tools and equipment needed for a job	.692
28. An understanding of terminology related to a job	.688
24. An understanding of technical information related to a job	.635
35. An understanding of the steps required to do a job	.584
18. An ability to meet an identified standard when performing a job	.556
16. An ability to perform a job safely	.485
17. An understanding of the need to upgrade job skills	.473
44. A knowledge of training required for advancement in the job	.405
Factor II - Job Search Skills	
11. An ability to fill out a job application	.700
31. An ability to interview for a job	.700
39. A knowledge of how to approach an employer for potential employment	.688
8. A knowledge of how to look for a job	.673
23. An ability to prepare a resume	.644
38. An ability to present a good image to an employer	.542
40. A desire to seek out job opportunities	.536
25. An identified career goal	.419
Factor III - Affective Job Skills	
7. A positive attitude toward co-workers	.635
3. An ability to get along with a variety of people	.553
13. A positive attitude toward work	.550
6. An ability to be on time	.537
2. An understanding of employers' expectations	.437
5. An understanding of personal abilities and interests	.414
Factor IV - Occupational Survival Skills	
36. An ability to follow directions	.601
43. An ability to be dependable on the job	.572

41.	A respect for authority	.545
34.	An ability to efficiently manage time and materials	.501
30.	An ability to work without close supervision	.468
35.	An understanding of the steps required to do a job	.425
38.	An ability to present a good image to an employer	.418

Factor V - Entrepreneurial Skills

32.	An understanding of risk taking and its consequences	.575
26.	A proficiency in decision making skills	.510
22.	An ability to be creative and make suggestions to improve the job	.487
37.	A feeling of self-confidence	.417
40.	A desire to seek out job opportunities	.409
45.	An understanding of rights and duties as a worker	.403

Factor VI - Basic Skills

15.	A proficiency in applying reading skills	.625
27.	A proficiency in applying writing skills	.615
21.	An ability to effectively communicate verbally and in writing	.555

Perceptions of Should Be Emphasis. Factor I (78 percent of the total variance) was called Job Search Skills, as the items defining this factor relate to skills needed for obtaining a job. Persons scoring high on this factor feel that education for employment programs should help students identify a career goal, become aware of job opportunities and training required for advancement, develop a desire to seek out job opportunities, become knowledgable of how to look for a job and how to approach an employer for employment, and to develop the ability to prepare a resume, to fill out a job application and to interview effectively. All items defining the Job Search Skills factor for current emphasis were included in this factor. Three additional items were included. These were: an understanding of rights and duties as a worker, a knowledge of training required for advancement, and an awareness of current and projected job opportunities.

Factor II (7 percent of the total variance) was called Technical Skills, as it includes those skills necessary to perform a job. A person scoring

high on this factor feels that a student should have an understanding of terminology, technical information, tools and equipment and steps required to do a job, the ability to operate tools and equipment and to meet an identified standard, an understanding of the need to upgrade job skills and of training required for advancement, an understanding of risk taking and the ability to perform a job safely and to be creative. All items except risk taking and creativity were included in the Technical Skills factor for current emphasis.

Factor III (5 percent of the total variance) was called Affective Job Skills, as items relate primarily to attitudes and interpersonal skills. A person scoring high on these items feels that education for employment programs should help students develop a positive attitude toward co-workers and learning and the ability to get along with people and to perform a job safely. A positive attitude toward co-workers and the ability to get along with people were the only two items included in Affective Job Skills for both current and should be emphasis.

Factor IV (4 percent of the total variance) was called Basic Skills, as items loading high on this factor relate to the application of basic skills. A person scoring high on these items feels that students should develop a proficiency in applying reading, writing, and math skills, the ability to effectively communicate, and a proficiency in a core of skills designed to prepare students for advanced study. A proficiency in the core skills and math skills were not inluded in the Basic Skills factor for current emphasis.

Factor V (3 percent of the total variance) was called Occupational Survival Skills, because it includes generalizable skills needed for maintaining a job. Persons scoring high on this factor believe that education for employment programs should help students develop an ability to follow

directions, to be dependable on the job, and to effeciently manage time and materials, as well as an understanding of steps required to do a job. Fewer items defined this factor than in the Survival Skills factor for current emphasis. This factor did not include the items concerning respect for authority, working without close supervision, and presenting a good image.

Table 3 contains the factor analyses results for outcomes which respondents felt should be emphasized. Item numbers, stems, and associated factor loadings for each of the five derived factors are included. Tenative names have been suggested for each of the factors.

TABLE 3

OUTCOME ASSIGNMENTS TO FACTORS FOR SHOULD BE EMPHASIS

Item		Loading
	Factor I - Job Search Skills	
39.	A knowledge of how to approach an employer for potential employment	.670
31.	An ability to interview effectively for a job	.646
8.	A knowledge of how to look for a job	.625
23.	An ability to prepare a resume	.598
40.	A desire to seek out job opportunities	.587
11.	An ability to fill out a job application	.559
38.	An ability to present a good image to an employer	.544
25.	An identified career goal	.467
45.	An understanding of rights and duties as a worker	.467
44.	A knowledge of training required for advancement in the job	.447
10.	An awareness of current and projected job opportunities	.440
	Factor II - Technical Skills	
28.	An understanding of terminology related to a job	.645
20.	An awareness of the special tools and equipment related to a job	.637
24.	An understanding of technical information related to a job	.598
35.	An understanding of the steps required to do a job	.581
42.	A proficiency in operating tools and equipment needed for a job	.567

18.	An ability to meet an identified standard when performing a job	.408

Factor III - Affective Job Skills

7.	A positive attitude toward co-workers	.618
3.	An ability to get along with a variety of people	.526
16.	An ability to perform a job safely	.429
19.	A positive attitude toward learning	.414

Factor IV - Basic Skills

27.	A proficiency in applying writing skills	.680
15.	A proficiency in applying reading skills	.656
21.	An ability to effectively communicate verbally and in writing	.643
4.	A proficiency in applying math skills	.477
14.	A proficiency in a core of basic skills designed to prepare students for advanced study	.402

Factor V - Occupational Survival Skills

36.	An ability to follow directions	.533
43.	An ability to be dependable on the job	.488
34.	An ability to effeciently manage time and materials	.487
35.	An understanding of the steps required to do a job	.405

Analysis of Perceived Emphasis of Factors

The next step in the analysis of data was to determine the respondents' perception of the emphasis that is currently placed, and that should be placed on each identified factor. Responses for the items defining each factor were tabulated in order to calculate mean scores for each factor.

Table 4 contains the factor means of all respondents for current emphasis. Respondents indicated their perception of the emphasis that is currently placed on each outcome on a scale of 1 (no emphasis) to 5 (much emphasis). Respondents felt that Affective Job Skills ($\bar{x}$ = 3.502), Technical Skills ($\bar{x}$ = 3.497) and Occupational Survival Skills ($\bar{x}$ = 3.466) received the most emphasis, followed by Job Search Skills ($\bar{x}$ = 3.266), Basic Skills ($\bar{x}$ = 3.114) and Entrepreneurial Skills ($\bar{x}$ = 3.026). In general, responses indicated that a moderate emphasis is currently placed on all factors.

TABLE 4

FACTOR MEANS FOR CURRENT EMPHASIS

Factor	$\bar{x}$	Rank Order
Affective Job Skills	3.502	1
Technical Skills	3.497	2
Occupational Survival Skills	3.466	3
Job Search Skills	3.266	4
Basic Skills	3.114	5
Entrepreneurial Skills	3.026	6

Table 5 contains the factor means of all respondents for "should be" emphasis. Respondents indicated their perception of the emphasis that should be placed on each outcome on a scale of 1 (no emphasis) to 5 (much emphasis). Affective Job Skills ($\bar{x}$ = 4.400) and Occupational Survival Skills ($\bar{x}$ = 3.397) were indentified as those factors which should receive the most emphasis, followed by Job Search Skills ($\bar{x}$ = 4.260), Basic Skills ($\bar{x}$ = 4.250), and Technical Skills ($\bar{x}$ = 4.199). Overall, respondents indicated that a fairly high emphasis should be given to all factors.

TABLE 5

FACTOR MEANS FOR SHOULD BE EMPHASIS

Factor	$\bar{x}$	Rank
Affective Job Skills	4.400	1
Occupational Survival Skills	4.397	2
Job Search Skills	4.260	3
Basic Skills	4.250	4
Technical Skills	4.199	5

A comparison of the rank order of factors between current and should be emphasis indicates a similar order of all factors except Technical Skills. In addition, Entrepreneurial Skills was not identified as a factor for should

be emphasis and therefore was not ranked. Technical Skills were ranked second under current emphasis, indicating that more emphasis is placed on the development of technical skills than survival skills, job search skills, basic skills, and entrepreneurial skills. Technical skills were ranked fifth for should be emphasis, which indicated that respondents felt technical skills should receive less emphasis than other factors. Yet, the higher mean scores of all factors for should be emphasis suggests that respondents feel that all factors, except entrepreneurial skills, should receive more emphasis than is currently given.

Analysis of Differences Among Groups for Current Emphasis

To determine if there were differences in responses among the major groups of respondents, an analysis of variance was conducted. In addition, the Scheffe multiple range test was used to identify the location of significance among groups. Respondents were categorized into eight groups, according to the agency with which they are associated. These were: Comprehensive High Schools (Comp HS), Area Vocational Centers (AVC), Community Colleges (Com Col), Universities (Univ), Department of Adult, Vocational and Technical Education, Illinois State Board of Eduation, (DAVTE), Business and Industry (Bus-Ind), State Advisory Council for Vocational Education (SACVE), and Career Education Centers (Career Centers).

Table 6 summarizes the means, standard deviations and F ratio current emphasis on the Technical Skills factor. Significant differences of mean scores were observed among the respondent groups. Representatives from area vocational centers indicated a significantly higher emphasis on technical skills than representatives from all other groups. Mean scores of community college representatives were also significantly different from all

other groups, indicating a greater emphasis on technical skills than all other groups except area vocational centers.

TABLE 6

MEANS, STANDARD DEVIATIONS AND F RATIO

FOR CURRENT EMPHASIS OF TECHNICAL SKILLS

Group	Mean ($\bar{x}$)	S.D	F
COMP HS	3.28	.68	
*AVC	4.11	.77	
**COM COL	3.68	.78	F = 38.89 ($p<.01$)
UNIV	3.01	.55	
DAVTE	2.96	.57	
BUS-IND	3.10	.69	
SACVE	2.54	.38	
CAREER CENTERS	2.64	.61	
Total	3.50		

* significantly greater than all others
** significantly greater than all others except AVC

The means, standard deviations and F Ratio for the current emphasis of the factor identified as Job Search Skills are presented in Table 6. An F Ratio of 18.69 indicated a significant difference of means scores among groups. The Scheffe test revealed that respondents from area vocational centers rated greater emphasis on job search skills than did respondents from other groups.

TABLE 7

MEANS, STANDARD DEVIATIONS, AND F RATIOS

FOR CURRENT EMPHASIS OF JOB SEARCH SKILLS

Group	Mean ($\bar{x}$)	S.D	F
COMP HS	3.28	.88	
*AVC	3.79	.92	
COM COL	3.22	.91	F = 18.69 (p<.01)
UNIV	3.07	.97	
DAVTE	2.70	.77	
BUS-IND	2.80	.77	
SACVE	2.32	.58	
CAREER CENTERS	2.36	.92	
Total	3.27		

* significantly greater than all others

The third factor related to current emphasis was identified as Affective Job Skills. The group means, standard deviations and F Ratio are summarized in Table 8. A significant difference in mean scores was observed among groups of respondents. Again, the mean score for area vocational centers was significantly higher than all other group means. This would indicate that respondents from area vocational centers perceive that a greater emphasis is currently placed on affective job skills than do respondents from other groups.

TABLE 8

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR CURRENT EMPHASIS OF AFFECTIVE JOB SKILLS

Group	Mean ($\bar{x}$)	S.D.	F
COMP HS	3.57	.81	
* AVC	4.05	.79	
COM COL	3.41	.84	F = 15.12 ($p<.01$)
UNIV	2.96	.77	
DAVTE	2.79	.74	
BUS-IND	3.21	.73	
SACVE	2.62	.33	
CAREER CENTERS	2.76		
Total	3.50		

* significantly greater than all others

Significant differences in group mean scores were also observed for the current emphasis on occupational survival skills. The data related to this factor are summarized in Table 9. Responses of area vocational center representatives were significantly higher than other group responses, indicating a greater current emphasis. In addition, the mean score of career education respondents were significantly lower than that of area vocational centers, community college and comprehensive high schools. This suggests that respondents from career education centers believe there is less emphais on occupational survival skills in education for employment programs than did respondents from three agencies.

TABLE 9

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR CURRENT EMPHASIS OF OCCUPATIONAL SURVIVAL SKILLS

Group	Mean ($\bar{x}$)	S.D.	F
** COMP HS	3.43	.85	
*** AVC	4.12	.84	
** COM COL	3.54	.84	F = 35.357 ($p<.01$)
UNIV	2.85	.80	
DAVTE	2.69	.70	
BUS-IND	2.92	.80	
SACVE	2.47	.39	
* CAREER ED	2.27	.92	
Total	3.47		

* significantly lower than **
*** significantly greater than all others

Table 10 presents the means, standard deviations and F Ratio of responses to current emphasis of the factor identified as Entrepreneurial Skills. A significant difference in mean scores among groups was identified. The mean score of area vocational center respondents was significantly higher than all other group means, while the career education mean score was significantly lower than both area vocational centers' and community colleges' respondents scores. Once again representatives of area vocational centers perceived a greater current emphasis and representatives of career education perceived less emphasis than did other respondents.

TABLE 10

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR CURRENT EMPHASIS ON ENTREPRENEURIAL SKILLS

	Group	Mean ($\bar{x}$)	S.D.	F
	COM HS	2.93	.85	
*	AVC	3.65	.98	
**	COM COL	3.12	.90	F = 26.267 ($p<.01$)
	UNIV	2.53	.84	
	DAVTE	2.35	.72	
	BUS-IND	2.59	.88	
	SACVE	2.10	.19	
***	CAREER CENTERS	1.93	.77	
	Total	3.02		

* significantly greater than all others
** significantly greater than ***

The means, standard deviations, and F Ratio of responses to current emphasis of the factor identified as Basic Skills are presented in Table 11. An F Ratio of 10.408 indicated a significant difference in mean scores among groups. The Scheffe procedure did not identify which mean scores were significantly different. This may be due to a large variance among responses or could indicate that the differences were not great and therefore were not detected because of the conservative nature of the Scheffe procedure. Although not identified as significantly different, the highest mean score was again that of respondents of the area vocational centers.

TABLE 11

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR CURRENT EMPHASIS ON BASIC SKILLS

Group	Mean ($\bar{x}$)	S.D.	F
COMP HS	3.19	.88	
AVC	3.33	1.06	
COM COL	3.21	.85	F = 10.408 ($p<.01$)
UNIV	2.51	.75	
DAVTE	2.51	.82	
BUS-IND	2.92	.93	
SACVE	2.29	.40	
CAREER CENTERS	2.48	.90	
Total	3.11		

In identifying differences among group responses, it is apparent that respondents from area vocational centers consistently rated the current emphasis of all factors higher than did respondents from other agencies. In addition, community college respondents rated three of the factors (technical skills, occupational survival skills, and entrepreneurial skills) higher than several other groups. Traditionally, one of the major missions for these two agencies has been to prepare students for employment. Therefore it would be consistent with this mission that more emphasis is currently placed on these outcomes than in other agencies. In contrast, respondents from career education and guidance centers felt there is significantly less emphasis on occupational survival skills and basic skills, than did other respondents. It is possible that the application of basic skills and the development of survival skills are more specific to individual classrooms or teachers and not always evident as part of the overall curriculum. Since representatives of career education are generally not

directly involved with classroom instruction, they may perceive less emphasis.

Analysis of Differences Among Groups for Should Be Emphasis

Table 12 contains the means, standard deviations and F Ratio of responses to should be emphasis of the factor identified as Job Search Skills. A significant difference in mean scores among groups was identified. The mean score of respondents from area vocational centers was significantly higher than the mean score of comprehensive high schools, community colleges, universities and business and industry. This would indicate that area vocational center representatives believe that more emphasis should be given to job search skills than do persons from the other identified groups.

TABLE 12

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR SHOULD BE EMPHASIS ON JOB SEARCH SKILLS

	GROUP	MEAN ($\bar{x}$)	S.D.	F
**	COMP HS	4.25	.60	
*	AVC	4.53	.48	
**	COM COL	4.14	.68	F = 9.025 ($p<.01$)
**	UNIV	3.91	.86	
	DAVTE	4.27	.62	
**	BUS-IND	4.02	.65	
	SACVE	4.51	.10	
	CAREER CENTERS	4.40	.52	
	Total	4.26		

* significantly greater than **

Significant differences in mean scores among groups was also observed for the should be emphasis factor identified as Technical Skills. The

means, standard deviations and F Ratio for this factor are summarized in Table 13. Again, area vocational center respondents had the highest mean score, which was significantly higher than the mean score of representatives of business and industry and universities.

TABLE 13

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR SHOULD BE EMPHASIS ON TECHNICAL SKILLS

	GROUP	MEAN ($\bar{x}$)	S.D.	F
	COMP HS	4.07	.57	
*	AVC	4.50	.48	
	COM COL	4.25	.60	F = 13.691 ($p<.01$)
**	UNIV	3.87	.61	
	DAVTE	4.16	.57	
**	BUS-IND	3.92	.61	
	SACVE	4.30	.27	
	CAREER CENTERS	3.94	.51	
	Total	4.20		

* significantly greater than **

Table 14 contains the means, standard deviations, and F Ratio for the should be emphasis factor identified as Affective Job Skills. An F Ratio of 4.60 indicated a significant difference in mean scores among groups. The Scheffe procedure did not identify which mean scores were significantly different. This may be due to a large variance among responses or could indicate the differences were not great and therefore not detected because of the conservative nature of the Scheffe procedure. Although not identified as significantly different, the highest mean score was for career education respondents and the lowest mean score was for university respondents.

TABLE 14

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR SHOULD BE EMPHASIS ON AFFECTIVE JOB SKILLS

GROUP	MEAN ($\bar{x}$)	S.D.	F
COMP HS	4.38	.60	
AVC	4.58	.49	
COM COL	4.32	.66	F = 4.600 ($p<.01$)
UNIV	4.07	.81	
DAVTE	4.36	.56	
BUS-IND	4.37	.43	
SACVE	4.54	.53	
CAREER CENTERS	4.67	.40	
Total	4.40		

The means, standard deviations, and F-Ratio for the should be emphasis factor idenified as Basic Skills are summarized in Table 15. A significant difference in mean scores among groups was indicated by an F Ratio of 5.43. Once again, due to the conservative nature of the Scheffe procedure, there was no indication of which scores were significantly different in the follow-up test. Representatives of SACVE did indicate a need for greater emphasis on Basic Skills than other groups and university representatives indicated less emphasis than other groups, although these differences were not significant.

TABLE 15

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR SHOULD BE EMPHASIS ON BASIC SKILLS

GROUP	MEAN (x)	S.D.	F
COMP HS	4.21	.61	
AVC	4.25	.64	
COM COL	4.16	.62	F = 5.43 (p <.01)
UNIV	4.07	.75	
DAVTE	4.56	.47	
BUS-IND	4.34	.42	
SACVE	4.80	.23	
CAREER CENTERS	4.53	.36	
Total	4.25		

Table 16 contains the means, standard deviations and F Ratio for the should be emphasis factor identified as Occupational Survival Skills. A significant difference in mean scores among groups was observed. The mean score of area vocational c[illegible] respondents was significantly different from the mean scores of respondents from universities, DAVTE, and business and industry. Representatives from area vocational centers thought there should be a greater emphasis on occupational survival skills than did the respondents from the other three groups.

TABLE 16

MEANS, STANDARD DEVIATIONS, AND F RATIO

FOR SHOULD BE EMPHASIS ON OCCUPATIONAL SURVIVAL SKILLS

	GROUP	MEAN (x)	S.D.	F
	COMP HS	4.36	.61	
*	AVC	4.64	.51	
	COM COL	4.38	.65	F = 6.357 ($p<.01$)
**	UNIV	4.15	.76	
**	DAVTE	4.23	.66	
**	BUS-IND	4.21	.58	
	SACVE	4.33	.27	
	CAREER CENTERS	4.48		
	Total	4.40		

* significantly greater than **

In identifying differences among group responses concerning the emphais that should be given to each outcome, area vocational center respondents again indicated a greater emphasis on several factors than did other respondents. These included job search skills, technical skills, and occupational survival skills, which are three of the more traditional outcomes of job preparation programs. A need for an emphasis in these areas would be consistent with the literature related to a primary mission of the area vocational centers. Yet, in all three cases, university and business/industry representatives had significantly lower mean scores than the area vocational centers. It appears that the two agencies who deal with students after graduation perceive less need for an emphasis on job skill preparation, while area vocational centers maintain the need for a strong emphasis in this area.

Summary of Findings

A factor analysis of questionnaire responses was conducted to group individual items into major categories of outcomes. Six factors were derived for current emphasis: Technical Skills, Job Search Skills, Affective Job Skills, Occupational Survival Skills, Entrepreneurial Skills, and Basic Skills. Five factors were derived for should be emphasis: Technical Skills, Job Search Skills, Affective Job Skills, Occupational Survival Skills, and Basic Skills. Factors for current and should be emphasis were given the same names since a majority of item numbers contained in each factor were the same. Therefore, the results of the factor analysis indicated that except for Entrepeneurial Skills, the major categories of outcomes that are currently emphasized in education for employment programs are the same categories of outcomes which repondents felt should be emphasized.

Although the categories of outcomes are the same, the findings indicate a difference in the degree of emphasis on each outcome. A ranking of categories according to the degree of emphasis, indicated a change only in the rank order of Technical Skills. While Technical Skills currently receive more emphasis than all other outcomes except Affective Skills, repondents felt it should receive less emphasis than all other outcomes. Overall, repondents felt that more emphasis should be given to all categories of outcomes than is currently given.

Some differences in responses among groups were also apparent. In general, representatives from area vocational centers indicated a greater emphasis on most factors than did other respondents. Responses from area vocational centers were higher on all factors for current emphasis and higher on three factors (job search skills, technical skills and occupational survival skills) for should be emphasis. In contrast, business/industry

and university representatives rated these factors lower, indicating they perceived a need for less emphasis in these areas than did area vocational center respondents.

Appendix A

Questionnaire

Illinois
State Board of
Education

EDUCATION IS EVERYONE'S FUTURE

100 North First Street
Springfield, Illinois 62777
217/782-4321

Walter W Naumer Jr Chairman
Illinois State Board of Education

Donald G Gill
State Superintendent of Education

Dear Colleague:

On September 1, 1983, the Illinois State Board of Education approved recommendations of an intensive study of the state's education for employment program. This study addresses the importance of program quality with respect to preparing youth and adults for work or continued learning.

The University of Illinois is assisting us in the process of identifying appropriate student outcomes of education for employment programs. We are in the initial stages of this developmental process. This questionnaire, based upon the input of several groups of professionals, is designed to help us determine the perceived importance of potential student outcomes. Your concern for and knowledge of education for employment, will greatly enhance the success of this effort.

Please complete this questionnaire by reading the brief directions, responding to the items as requested and returning it to the Office of Vocational Education Research at the University of Illinois in the enclosed, stamped, self-addressed envelope. This instrument should take less than ten minutes of your valuable time. Your opinions are important to us.

Thank you for your prompt reply and assistance with this project.

Sincerely,

James R. Galloway
Assistant Superintendent
Department of Adult, Vocational
and Technical Education

Enclosure

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188 West Randolph
Chicago, Illinois 60601
312/814-2220

Southern Illinois Regional Office
First Bank and Trust Building
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Mt Vernon, Illinois 62864
618/242-1878

DIRECTIONS

The following list represents potential outcomes of an Education for Employment program. These describe skills, knowledge, and attitudes that the completer of a training level program should possess. Only those outcomes that are thought to be common to all or most programs are listed. Therefore, specific technical skill competencies are not included.

We are interested in your opinion of the emphasis "that is" and "that should be" given to each outcome in the program(s) with which you are most familiar. Your responses will be used to group the outcomes into categories. Therefore, the number of items related to each category does not indicate importance. In a later effort we will assess the overall importance of each category and the educational levels at which these outcomes might be appropriate.

Please read each statement and indicate on a scale of 1 to 5 YOUR OPINION of the emphasis that:

1) is currently placed on each outcome and
2) that should be placed on each outcome.

OUTCOMES	WHAT IS CURRENT EMPHASIS?					WHAT SHOULD BE THE EMPHASIS?					
	No Emphasis		Moderate Emphasis		Much Emphasis	No Emphasis		Moderate Emphasis		Much Emphasis	
As a result of participating in an education for employment training program, students should have:											
1. an awareness of the need for lifelong learning.	1	2	3	4	5	1	2	3	4	5	[illegible]
2. an understanding of employers' expectations.	1	2	3	4	5	1	2	3	4	5	[illegible]
3. an ability to get along with a variety of people.	1	2	3	4	5	1	2	3	4	5	[illegible]
4. a proficiency in applying math skills.	1	2	3	4	5	1	2	3	4	5	[illegible]
5. an understanding of personal abilities and interests.	1	2	3	4	5	1	2	3	4	5	[illegible]
6. an ability to be on time.	1	2	3	4	5	1	2	3	4	5	[illegible]
7. a positive attitude toward co-workers.	1	2	3	4	5	1	2	3	4	5	[illegible]
8. a knowledge of how to look for a job.	1	2	3	4	5	1	2	3	4	5	[illegible]
9. an understanding of labor unions and how they affect the worker or job.	1	2	3	4	5	1	2	3	4	5	[illegible]
10. an awareness of current and projected job opportunities.	1	2	3	4	5	1	2	3	4	5	[illegible]
11. an ability to fill out a job application.	1	2	3	4	5	1	2	3	4	5	[illegible]
12. a proficiency in using a computer.	1	2	3	4	5	1	2	3	4	5	[illegible]
13. a positive attitude toward work.	1	2	3	4	5	1	2	3	4	5	[illegible]

OUTCOMES	WHAT IS CURRENT EMPHASIS?			WHAT SHOULD BE THE EMPHASIS?			
	No Emphasis	Moderate Emphasis	Much Emphasis	No Emphasis	Moderate Emphasis	Much Emphasis	
As a result of participating in an education for employment training program, students should have:							
14. a proficiency in a core of basic skills designed to prepare students for advanced study.	1 2 3 4 5			1 2 3 4 5			31-32
15. a proficiency in applying reading skills.	1 2 3 4 5			1 2 3 4 5			33-34
16. an ability to perform a job safely.	1 2 3 4 5			1 2 3 4 5			35-36
17. an understanding of the need to upgrade job skills.	1 2 3 4 5			1 2 3 4 5			37-38
18. an ability to meet an identified standard when performing a job.	1 2 3 4 5			1 2 3 4 5			39-40
19. a positive attitude toward learning.	1 2 3 4 5			1 2 3 4 5			41-42
20. an awareness of the special tools and equipment needed for a job.	1 2 3 4 5			1 2 3 4 5			43-44
21. an ability to effectively communicate verbally and in writing.	1 2 3 4 5			1 2 3 4 5			45-46
22. an ability to be creative and make suggestions to improve the job.	1 2 3 4 5			1 2 3 4 5			47-48
23. an ability to prepare a resume.	1 2 3 4 5			1 2 3 4 5			49-50
24. an understanding of technical information related to a job.	1 2 3 4 5			1 2 3 4 5			51-52
25. an identified career goal.	1 2 3 4 5			1 2 3 4 5			53-54
26. a proficiency in decision-making skills.	1 2 3 4 5			1 2 3 4 5			55-56
27. a proficiency in applying writing skills.	1 2 3 4 5			1 2 3 4 5			57-58
28. an understanding of terminology related to a job.	1 2 3 4 5			1 2 3 4 5			59-60
29. the desire to work hard.	1 2 3 4 5			1 2 3 4 5			61-62
30. an ability to work without close supervision.	1 2 3 4 5			1 2 3 4 5			63-64
31. an ability to interview effectively for a job.	1 2 3 4 5			1 2 3 4 5			65-66
32. an understanding of risk taking and its consequences.	1 2 3 4 5			1 2 3 4 5			67-68

OUTCOMES	WHAT IS CURRENT EMPHASIS?					WHAT SHOULD BE THE EMPHASIS?					
	No Emphasis		Moderate Emphasis		Much Emphasis	No Emphasis		Moderate Emphasis		Much Emphasis	
As a result of participating in an education for employment training program, students should have:											
33. an ability to work as a team member.	1	2	3	4	5	1	2	3	4	5	69-70, 1-4dup
34. an ability to efficiently manage time and materials.	1	2	3	4	5	1	2	3	4	5	5-6
35. an understanding of the steps required to do a job.	1	2	3	4	5	1	2	3	4	5	7-8
36. an ability to follow directions.	1	2	3	4	5	1	2	3	4	5	9-10
37. a feeling of self-confidence.	1	2	3	4	5	1	2	3	4	5	11-12
38. an ability to present a good image to an employer.	1	2	3	4	5	1	2	3	4	5	13-14
39. a knowledge of how to approach an employer for potential employment.	1	2	3	4	5	1	2	3	4	5	15-16
40. a desire to seek out job opportunities.	1	2	3	4	5	1	2	3	4	5	17-18
41. a respect for authority.	1	2	3	4	5	1	2	3	4	5	19-20
42. a proficiency in operating tools and equipment needed for a job.	1	2	3	4	5	1	2	3	4	5	21-22
43. an ability to be dependable on the job.	1	2	3	4	5	1	2	3	4	5	23-24
44. a knowledge of training required for advancement in the job.	1	2	3	4	5	1	2	3	4	5	25-26
45. an understanding of rights and duties as a worker.	1	2	3	4	5	1	2	3	4	5	27-28

Other important outcomes or comments:

Appendix B

References

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