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Grouping of Commonality Courses

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Grouping of Commonality Courses

Abstract

This study is designed to identify contributing variables, for and against, the practice of grouping of commonality courses on a postsecondary level. More specifically, the purpose of this study is:

1. to serve as a study to determine the interest in the grouping of commonality courses.

2. to obtain current opinions from literature concerned with the grouping of commonality courses.

3. to determine attitudes toward the practice of grouping through interview and questionnaires.

4. to determine attitudes toward the practice of grouping from review of related literature.

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GROUPING OF COMMONALITY COURSES

Approved by:

Graduate Committee Chairman

May 5, 1975
Date

Wagner Resource Center
DEPARTMENT OF
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GROUPING OF COMMONALITY COURSES

A Research Paper

Presented to

the Department of Industrial Technology

University of Northern Iowa

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Dan Brobst

May 1975

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Chapter 1

INTRODUCTION

At the present time many post-secondary vocational-technical institutions have been using, to a limited degree, the practice of grouping students from similar programs in the same classroom for common courses.

The question of furthering the practice of grouping common courses on the post-secondary level has caused some controversy. This grouping practice involves scheduling students from varied programs in the same classroom for common courses such as: math, physics, human relations, and communications. The controversy stems around primarily two main issues: one, the belief that the grouping practice enhances the philosophy of the institutions and progressive education and second, a questioning of the practice in upholding the philosophy of the institutions and maintaining relevant education in their individual programs.

Statement of the Problem

This study is designed to identify contributing variables, for and against, the practice of grouping of commonality courses on a post-secondary level. More specifically, the purpose of this study is:

1. to serve as a study to determine the interest in the grouping of commonality courses.
2. to obtain current opinions from literature concerned with the grouping of commonality courses.

3. to determine attitudes toward the practice of grouping through interview and questionnaires.

4. to determine attitudes toward the practice of grouping from review of related literature.

Limitations of the Study

This study is designed around the specific issue of grouping students of common courses in a vocational-technical school. The gathering of related information and data on grouping is not intended to be used to formulate a conclusive solution or recommendation for or against grouping and in no way implies a direct correlation to issues of a similar nature on other educational levels.

The major limitation in this study is time; therefore, the questionnaire and interviews will be restricted to only those individuals directly involved with commonality courses at one post-secondary vocational-technical school. The questionnaire will be used for the faculty due to the larger numbers and the interview for the administration and department chairmen. The review of literature and analysis of current practices will be related to vocational-technical schools as much as possible.

Assumptions

The nature of this study lends itself to many different avenues approaching the same level. While some of the approaches do contribute to the issue, some naturally do not. To further clarify the direction of the study the following assumptions are made:

1. Administrators and instructors can formulate valid attitudes both for and against the concept of grouping of commonality courses.

2. Success of grouping of commonality courses is directly proportional to the rate of learning.

3. Responses to the questionnaire and interviews reflect an honest over-all attitude of the individuals involved.

4. The conclusions reached in the study are applicable only to post-secondary vocational-technical schools and is limited to the period in which the study occurred.

Definition of Terms

Grouping of commonality courses -- combining of courses which are similar to two or more programs.

Student mobility -- student has the flexibility of changing his vocational direction at various levels with a minimal loss of credit.

Innovation -- act of introducing something new or novel.

Core -- part of the experience curriculum which is concerned with those types of experiences thought necessary for all learners in order to develop certain behavior competencies considered necessary for effective living in our democratic society (Faunce and Bossing, 1958, p. 54).

Core program -- total organizational activities of that part of the curriculum devoted to the determination of competencies needed by all, including procedures, materials, and facilities of the institution.

Core curriculum -- is a pattern of the experience curriculum organized into a closely integrated and interrelated whole, in which one division, the core program, is devoted to the development of the common competencies needed by all (Faunce and Bossing, 1958, p. 58).

Chapter 2

REVIEW OF LITERATURE

The analysis of the literature reviewed will involve the following subordinate problems; a description of the general design and composition of the articles, and identification of their common aspects, the isolation of certain distinguishing characteristics and a final comparison of their elements.

A Conference on Identification of Common Courses in Paramedical Education

At a conference conducted by 126 paramedical schools from thirty-six states there were found many variations in the same courses offered by different institutions. This general inconsistency initiated a more in depth study with the overall objective being to design a curriculum based on the changing job requirements of the medical care for educational programs with maximum efficiency. More specific objectives were:

1. to determine common courses.
2. to determine the nature of commonality courses.
3. to set up guidelines for the integration of these courses.

As the study progressed, peripheral problems were identified that were found to be directly related to the designing of a new curriculum. Some of the more important problems were (Fullerton, 1968, p. v):

1. high cost of instruction due to small classes.
2. limited use of classrooms and facilities.
3. lack of enough qualified faculty.

4. discrepancies that occur between training programs and job requirements.

5. wide range of commonalities in subject classification.

The results of the study revealed there were 2,613 course titles from 126 different paramedical schools. Through task analysis and identifying course objectives the number of course titles were reduced to 126 general subject classifications. As the number of courses were reduced to fewer subject classifications, it was found that those with higher incidence of commonality were programs requiring higher levels of skill and knowledge. Common courses were found to be less evident in programs requiring less training. Yet, it was evident that within a specific paramedical educational program for which a student is being trained, there might be careers requiring much of the same content (Fullerton, 1968, p. vii). This might indicate that curriculum developers can, in fact, combine courses, classes, faculty, facilities, and materials for more efficient and economical programs. Equally evident, however, is the need for identifying behavioral objectives if significant results are to be accomplished.

It was finally concluded that the irregularity of general education requirements raises some questions, not of the value of general education, but of its relationship to the particular requirements of each paramedical-career. The proliferation of technical course titles and their wide variation in content and depth suggest that most of them could be substantially redesigned without endangering accreditation standards or final student outcome (Fullerton, 1968, p. viii).

Council on Educational Mobility for Health Manpower

One of the major concerns identified by the council was the provision of increased utilization of health manpower in order to improve the quality and extent of health services. One way to achieve this greater efficiency was to implement a core course concept. This would also allow for greater mobility within the allied health professions. The specific objectives of the study were (Coordinating Council for Education in Health Science, 1970, p. 8):

1. to provide the students in the health related fields with a thorough up-to-date background in the sciences, specifically in the areas of anatomy and physiology, microbiology, physics, and chemistry, as applicable to all of these areas.

2. to provide all students enrolled with a level of general education in the field of biology and allied sciences comparable to that offered in science courses required as general education in other curricula.

3. to provide, within the framework of the preceding statements, a course sequence that lays a foundation for, supplements and compliments the content of additional courses in the health related fields.

The definition of core curriculum presumes that within the allied health occupations there is a commonality of information and skills which is relevant to all students. The logic, economy, and related values of the core course and core curriculum have continued more as a pious declaration of intent than as a conviction and fact of operational curricula life. Therefore in order to determine what knowledges and skills are essential in the sciences for each allied health occupation, it was

necessary to break down the traditional academic boundaries of hours, courses, units, and settle on the basic concepts before rebuilding could take place. Human Anatomy can range from one hour a week to a lifetime of study, so how does one determine what concepts are required in each occupation. To meet varying individual differences determined by the instructor and the student, options must also be provided to go beyond the basics as tempered by teaching and the amount of time that prevails; the emphasis must not be on the boundaries as they now are, but on the nature or the material; not on courses, but on learning. Why, for example, should inhalation therapists spend three years in school when a task analysis was not available of entry level performance required.

As Bruner remarks, "the curriculum must consider the learner and the learning process, as well as the nature of knowledge." A similar thought is that transfer of training depends not only on what a person learns but also on how he learns it. The changing concepts of learning indicate in addition to the mastery of broad concepts and principles, there is a definite need for experiences which encourages adaption, generalization and application. (Bruner, 1966, p. x)

What has to be communicated at various levels leads to not just ladder approaches in occupations but a lattice, providing students options for vocational decision making at various points along the continuum, horizontally as well as vertically. Supposedly the students own goals provide the motivation toward full actualization of his own potential, providing opportunities are open ended to challenge him. Carlson stated in Saturday Review, "You don't improve a person's position in the job market by giving him six months of book learning. What makes him mobile is the experience he acquires." The concept of commonality

courses and its success is totally dependent upon the direction and interaction of those involved. As Dressel states:

> No solution will emerge which is more than a patchwork of compromise, a reluctant agreement by diverse and competing interests to experiment with new ideas as long as they involve minimal interference with vested interest. (Dressel, 1968, p. ix)

Other Related Studies

Change in the curriculum of American schools is not a fad nor is it an indication of a foot-loose unstable educational system. Rather, it is an essential feature of the social process essential to realization of the democratic goals to which our country is committed; it is an inevitable application of our prevalent conception of the nature of learning; it is a result of living in a culture which does not stand still and of which change is the most assured character (Caswell, 1950, p. 20).

Learning through experience or doing, which is fundamental to all current theories of learning, is a basic factor of the core curriculum. The principle of learning therefore calls for consciously planned scope and sequence in order to provide the utmost integrating experience from the learning situation. Such interrelationships or correlation cannot be left to chance. The function of learning is to enlarge the learner's general pattern of understanding so that items of experience which follow will find a place in the total pattern and take on meaning.

Core programs, of which grouping of commonality is a part, is one type of curricula organization which provides for this concept of patterned or unified learning. Planned scope and sequence, which considers the importance of integrating materials, provides a broad framework within which the grouping concept can operate. Such a plan for

organization of content does not allow the core the weaknesses inherent in activity programs planned only on lifelike experiences. Problem solving, which is an integration of many particular knowledges, skills, and attitudes, is basic to the principle of learning and allows the learner to cut across subject lines in his work on a unified problem or topic (Hennis Jr., 1962, pp. 306-13).

Technical education is badly in need of support courses in general education that are relevant to the needs of the students. At present, most schools satisfy the 25% general education requirements with off-the-shelf survey courses in economics, communications, history, psychology, management, math, and American Government. This is a great mistake. It takes into account neither the characteristics of the technical student nor his needs.

The temperment of the technical student, as well as his motivation, is different from the liberal arts student. The technical student is more interested in the application rather than the derivation of scientific principles. He is oriented to "things" rather than to "theory". As a rule, he is mission oriented and interested in problem solving techniques. In structuring the courses in general education these characteristics of the student must be taken into account if the student is to benefit from them (Dobrovolny, 1970, p. 1).

Chapter 3

PROCEDURE OF THE SURVEY

To gather the information needed to determine interest and attitude toward the concept of grouping of commonality courses, it was necessary to utilize two different techniques, the interview and the questionnaire. Because of the limited amount of time the interview was restricted to the administration and the questionnaire to the faculty. The questionnaire was designed to be a quick response by allowing the person to check a response from 0 - disagree, to 5 - agree for each of the twenty-one statements. The final question was left open to allow for more specific comments and remarks.

Tabulating the Questionnaire

For each of the twenty-one statements, an analysis was made and tabulated, identifying department responses in numbers and percentages for each response from 0 to 5. In conclusion, a total number and percentage was given encompassing the entire school.

Although the basic factual and statistical information inherent in such an inquiry constitutes an essential part of the information sought, it is only a part. In addition, the objective is to discuss opinions and problems as they relate to the present status and trend of education at the vocational-technical level, and to collect and correlate the essential substance of such information for the purpose of evaluating the practice of grouping of commonality courses.

The following tables, pages 12 - 32, reflect the responses of the statements from the questionnaire. See Appendix A. Each table caption and number corresponds directly to the response number and statement in the questionnaire.

If the accumulated percentages do not add up to 100%, this indicates that there was no response by one or more individuals.

TABLE I

THERE ARE SIMILARITIES IN SUBJECT MATTER AMONG VARIOUS

PROGRAMS IN VOCATIONAL-TECHNICAL SCHOOLS

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	-	-	-	-	-	-	-	-	1	20	1	1.8
1	1	6.7	-	-	-	-	-	-	-	-	1	20	2	3.6
2	-	-	1	11.1	-	-	-	-	3	50.0	1	20	5	9.1
3	1	6.7	2	22.2	3	27.3	2	25.0	-	-	2	40	10	18.2
4	3	20.0	4	44.4	2	18.2	1	12.5	2	33.3	-	-	12	21.7
5-Agree	10	66.6	2	22.2	5	45.5	4	50.0	1	16.6	-	-	22	40.0
Total	15	100%	9	100%	10	91.0%	7	87.5%	6	100%	5	100%	52	94.4%

TABLE II

STUDENTS WOULD TEND TO LOSE THEIR PROGRAM IDENTITY

WITH THE GROUPING CONCEPT

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	4	26.7	3	33.3	-	-	3	37.5	-	-	-	-	10	18.2
1	3	20.0	-	-	1	9.1	-	-	4	66.6	-	-	8	14.5
2	3	20.0	-	-	3	27.3	1	12.5	-	-	2	40.0	9	16.3
3	3	20.0	1	11.1	1	9.1	3	37.5	2	33.3	1	20.0	11	20.0
4	1	6.7	3	33.3	4	36.4	1	12.5	-	-	1	20.0	10	18.2
5-Agree	1	6.7	2	22.2	2	18.2	-	-	-	-	1	20.0	6	10.9
Total	15	100%	9	100%	11	100%	8	100%	6	100%	5	100%	54	98.2%

TABLE III

COMMONALITY COURSES COULD BE STRUCTURED

TO RETAIN PROGRAM IDENTITY

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	1	11.1	-	-	1	12.5	-	-	2	40.0	6	10.9
1	2	13.4	-	-	-	-	-	-	-	-	2	40.0	5	9.1
2	-	-	-	-	2	18.2	-	-	-	-	-	-	2	3.6
3	2	13.4	1	11.1	3	27.3	2	25.0	1	17.0	1	20.0	10	18.2
4	5	33.3	5	55.5	2	18.2	3	37.5	5	83.0	-	-	20	36.4
5-Agree	5	33.3	2	22.2	2	18.2	2	25.0	-	-	-	-	11	20.0
Total	15	100%	9	100%	9	90.0%	10	100%	6	100%	5	100%	54	98.2%

TABLE IV

GROUPING OF COMMONALITY COURSES COULD BE IMPLEMENTED IN THE RELATED AREAS MORE READILY THAN THE MORE PROGRAM AREAS

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	1	11.1	1	9.1	-	-	-	-	-	-	2	3.6
1	-	-	-	-	1	9.1	-	-	-	-	-	-	1	1.8
2	-	-	-	-	-	-	-	-	1	16.6	-	-	1	1.8
3	3	20.0	1	11.1	2	18.2	-	-	1	16.6	2	40.0	9	16.3
4	3	20.0	3	33.3	2	18.2	3	37.5	2	33.0	1	20.0	14	25.5
5-Agree	9	60.0	4	44.4	5	45.5	5	62.5	2	33.0	2	40.0	27	49.1
Total	15	100%	9	100%	11	98%	8	100%	8	99.2%	5	100%	54	98.0%

TABLE V

RELATED COURSES SHOULD HAVE MATERIAL THAT

IS RELEVANT TO THE MAIN AREA PROGRAM

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	1	6.7	1	11.1	-	-	-	-	-	-	-	-	2	3.6
3	2	13.4	-	-	-	-	-	-	2	33.0	-	-	4	7.8
4	1	6.7	2	22.2	2	18.2	2	25.0	3	50.0	-	-	10	18.2
5-Agree	11	73.2	6	66.6	9	81.8	6	75.0	1	16.7	5	100%	38	69.0
Total	15	100%	9	100%	11	100%	8	100%	6	100%	5	100%	54	99%

TABLE VI

ONE INSTRUCTOR COULD TEACH STUDENTS FROM VARIED PROGRAMS

AND STILL INCLUDE RELEVANT MATERIAL EFFECTIVELY

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	2	13.4	1	11.1	1	9.1	-	-	-	-	1	20.0	5	9.1
1	-	-	-	-	1	9.1	-	-	1	16.6	1	20.0	3	5.4
2	1	6.7	1	11.1	3	27.3	-	-	1	16.6	1	20.0	7	12.6
3	4	26.7	3	33.3	3	27.3	2	25.0	1	16.6	2	40.0	15	27.3
4	3	20.0	2	22.2	2	18.2	4	50.0	2	33.3	-	-	13	23.6
5-Agree	5	33.3	2	22.2	1	9.1	2	25.0	1	16.6	-	-	11	20.0
Total	15	100%	9	100%	11	100%	6	100%	6	100%	5	100%	54	98%

TABLE VII

INSTRUCTOR LOAD COULD BE REDUCED BY

IMPLEMENTING THE GROUPING CONCEPT

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	1	11.1	1	9.1	-	-	-	-	1	20.0	3	5.4
1	2	13.4	-	-	1	9.1	-	-	-	-	-	-	3	5.4
2	-	-	1	11.1	2	18.2	1	12.5	-	-	-	-	4	7.3
3	4	26.7	2	22.2	3	27.3	3	37.5	2	33.3	1	20.0	15	27.3
4	2	13.4	3	33.3	1	9.1	2	25.0	3	50.0	2	40.0	13	23.6
5-Agree	7	46.7	3	33.3	3	27.3	2	25.0	1	16.6	1	20.0	17	31.0
Total	15	100%	10	100%	11	100%	8	100%	6	100%	5	100%	55	100%

TABLE VIII

GROUPING OF COMMONALITY COURSES WOULD ALLOW

MORE PREPARATION TIME FOR THE INSTRUCTOR

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	-	-	1	9.1	-	-	-	-	2	40.0	4	7.3
1	1	6.7	-	-	1	9.1	1	12.5	-	-	-	-	3	5.4
2	-	-	1	11.1	2	18.2	1	12.5	-	-	-	-	4	7.3
3	2	13.4	1	11.1	1	9.1	1	12.5	1	16.6	-	-	6	10.9
4	3	20.0	2	22.2	3	27.3	3	37.5	4	66.6	1	20.0	16	29.1
5-Agree	9	60.0	5	55.5	3	27.3	2	25.0	1	16.6	1	20.0	21	38.2
Total	15	100%	9	100%	11	100%	8	100%	6	100%	4	80%	60	98%

TABLE IX

THERE IS AN ADVANTAGE TO THE STUDENT HAVING CLASSES

WITH OTHER STUDENTS OUTSIDE HIS PROGRAM

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	-	-	2	18.2	-	-	-	-	2	20.0	4	7.3
1	-	-	-	-	-	-	1	12.5	-	-	-	-	1	1.8
2	-	-	2	22.2	1	9.1	-	-	-	-	-	-	3	5.4
3	-	-	-	-	5	45.5	1	12.5	-	-	1	20.0	8	14.5
4	4	26.7	4	44.4	1	9.1	2	25.0	2	33.3	1	20.0	14	25.5
5-Agree	10	66.6	3	33.3	2	18.2	4	50.0	4	67.6	2	40.0	24	43.6
Total	15	100%	9	100%	11	100%	8	100%	6	100%	6	100%	54	98%

TABLE X

GROUPING OF COMMONALITY COURSES WOULD

ALLOW FOR BETTER USE OF FACILITIES

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	-	-	-	-	-	-	-	-	1	20.0	1	1.8
1	1	6.7	-	-	-	-	1	12.5	-	-	-	-	2	3.6
2	1	6.7	1	11.1	3	27.3	-	-	-	-	-	-	5	9.1
3	-	-	4	44.4	2	18.2	-	-	-	-	1	20.0	13	23.6
4	5	33.3	2	22.2	5	45.4	3	37.5	2	33.3	1	20.0	14	25.5
5-Agree	8	53.4	2	22.2	1	9.1	4	50.0	4	67.6	2	40.0	19	34.6
Total	15	100%	8	100%	11	100%	8	100%	6	100%	5	100%	54	98%

TABLE XI

GROUPING OF COMMONALITY COURSES WOULD REQUIRE

LENGTHENING YOUR EXISTING PROGRAM

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	8	53.4	1	11.1	3	27.3	2	25.0	4	66.6	1	20.0	19	34.6
1	2	13.4	2	22.2	1	9.1	1	12.5	1	16.6	-	-	7	12.6
2	1	6.7	1	11.1	-	-	1	12.5	1	16.6	-	-	4	7.3
3	1	6.7	5	55.5	2	18.2	4	50.0	-	-	2	40.0	14	25.5
4	-	-	-	-	2	18.2	-	-	-	-	-	-	2	3.6
5-Agree	2	13.4	-	-	1	9.1	-	-	-	-	1	20.0	4	7.3
Total	14	93%	9	100%	9	100%	8	100%	6	100%	4	80%	50	90%

TABLE XII

TASK ANALYSIS AND BEHAVIORAL OBJECTIVES WOULD HAVE TO BE STATED BEFORE THE DEVELOPMENT OF COMMONALITY COURSES

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	1	11.1	-	-	-	-	-	-	-	-	1	11.1
1	1	6.7	-	-	-	-	-	-	-	-	-	-	1	1.8
2	1	6.7	-	-	1	9.1	-	-	-	-	-	-	2	3.6
3	2	13.4	1	11.1	1	9.1	-	-	2	33.3	-	-	6	10.9
4	2	13.4	3	33.3	2	18.2	-	-	2	33.3	1	20.0	10	18.2
5-Agree	9	60.0	4	44.4	6	54.6	8	100.0	2	33.3	4	80.0	33	60.0
Total	15	100%	9	100%	19	100%	8	100%	6	100%	5	100%	53	100%

TABLE XIII

LARGER CLASS SIZES COULD BE HANDLED BY

GROUPING OF COMMONALITY COURSES

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	2	13.4	-	-	1	9.1	-	-	-	-	1	20.0	4	7.3
1	1	6.7	-	-	3	27.3	-	-	1	16.6	-	-	5	9.1
2	1	6.7	1	11.1	2	18.2	-	-	1	16.6	-	-	5	9.1
3	2	13.4	2	22.2	2	18.2	-	-	1	16.6	1	20.0	8	14.5
4	3	20.0	3	33.3	1	9.1	2	25.0	3	50.0	2	40.0	14	25.5
5-Agree	6	40.0	3	33.3	1	9.1	6	75.0	-	-	1	20.0	17	31.0
Total	15	100%	9	100%	10	81%	8	100%	6	100%	5	100%	53	96%

TABLE XIV

CLASS SIZES WOULD HAVE TO BE LIMITED

IN SIZE DEPENDING UPON THE COURSE

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	-	-	-	-	-	-	-	-	-	-	1	1.8
1	1	6.7	1	11.1	-	-	-	-	-	-	-	-	2	3.6
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	4	26.7	-	-	-	-	2	25.0	1	16.6	-	-	7	12.6
4	2	13.4	4	44.4	4	36.4	2	25.0	3	50.0	-	-	15	27.3
5-Agree	7	46.7	4	44.4	5	54.6	4	50.0	2	33.3	5	100.0	27	49.1
Total	15	100%	9	100%	9	91%	8	100%	6	100%	5	100%	52	94%

MAGNEN RESOURCE CENTER

TABLE XV

GROUPING OF COMMONALITY COURSES WOULD PRESENT

A SCHEDULING PROBLEM FOR STUDENTS

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	-	-	-	-	2	25.0	-	-	-	-	3	5.4
1	2	13.4	1	11.1	-	-	-	-	-	-	-	-	3	5.4
2	-	-	2	22.2	1	9.1	-	-	-	-	-	-	3	5.4
3	6	40.0	-	-	2	18.2	2	25.0	2	33.3	1	20.0	13	23.6
4	1	6.7	2	22.2	5	45.5	3	37.5	3	50.0	-	-	14	25.5
5-Agree	5	33.3	4	44.4	3	27.3	1	16.6	4	80.0	1	12.5	18	32.7
Total	15	100%	9	100%	11	100%	8	100%	6	100%	5	100%		98%

TABLE XVI

THE GROUPING CONCEPT IS ONE WAY TO

UTILIZE MANPOWER EFFICIENTLY

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	1	11.1	1	9.1	-	-	-	-	1	20.0	3	5.4
1	-	-	-	-	-	-	-	-	-	-	1	20.0	1	1.8
2	1	6.7	1	11.1	3	27.3	-	-	-	-	-	-	5	9.1
3	4	26.7	2	22.2	3	27.3	1	12.5	1	16.6	-	-	11	20.0
4	2	13.4	3	33.3	3	27.3	3	37.5	3	50.0	2	40.0	16	29.1
5-Agree	8	53.4	2	22.2	1	9.1	4	50.0	2	33.3	1	20.0	18	32.7
Total	15	100%	9	100%	11	100%	8	100%	6	100%	5	100%	54	98%

TABLE XVII

THE GROUPING CONCEPT WOULD RAISE THE

STANDARDS OF YOUR PROGRAMS

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	5	33.3	1	11.1	4	36.4	1	12.5	1	16.6	3	60.0	15	27.3
1	-	-	-	-	2	18.2	2	25.0	-	-	1	20.0	5	9.1
2	-	-	5	55.5	4	36.4	2	25.0	-	-	1	20.0	12	21.7
3	5	33.3	2	22.2	1	9.1	-	-	1	16.6	-	-	9	16.3
4	3	20.0	1	11.1	-	-	1	12.5	4	66.6	-	-	9	16.3
5-Agree	2	13.4	-	-	-	-	1	12.5	-	-	-	-	3	5.4
Total	15	100%	9	100%	11	100%	7	87%	6	100%	5	100%	53	96%

TABLE XVIII

GROUPING OF COMMONALITY COURSES ALLOW FOR GREATER MOBILITY

FOR STUDENTS TO TRANSFER CREDITS FOR RELATED COURSES

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	2	22.2	-	-	-	-	-	-	1	20.0	4	7.3
1	1	6.7	-	-	2	18.2	1	12.5	-	-	-	-	4	7.3
2	3	20.0	1	11.1	5	45.4	-	-	-	-	-	-	9	16.3
3	1	6.7	2	22.2	-	-	1	12.5	1	16.6	2	40.0	13	23.6
4	2	13.4	1	11.1	3	21.3	3	37.5	2	33.3	1	20.0	12	21.7
5-Agree	7	46.7	3	33.3	1	9.1	3	37.5	3	50.0	1	20.0	18	32.7
Total	15	100%	9	100%	11	100%	9	100%	6	100%	5	100%	60	100%

TABLE XIX

COMMONALITY COURSES WOULD PROVIDE STUDENTS WITH A GREATER UNDERSTANDING AND APPRECIATION FOR OTHER FIELDS OF OCCUPATIONS

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	-	-	1	11.1	-	-	-	-	-	-	3	60.0	4	7.8
1	2	13.4	1	11.1	-	-	1	12.5	-	-	1	20.0	5	9.1
2	1	6.7	1	11.1	2	18.2	-	-	-	-	1	20.0	4	7.8
3	2	13.4	2	22.2	6	54.6	-	-	1	16.6	-	-	12	21.7
4	7	46.7	4	44.4	2	18.2	4	50.0	3	50.0	-	-	22	40.0
5-Agree	2	13.4	-	-	1	9.1	3	37.5	2	33.3	-	-	8	14.5
Total	14	93%	9	100%	9	100%	8	100%	6	100%	5	100%	55	100%

TABLE XX

THERE IS A NEED FOR GROUPING OF COMMONALITY COURSES

AT VOCATIONAL-TECHNICAL SCHOOLS

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	2	22.2	3	27.3	-	-	-	-	4	80.0	10	18.2
1	-	-	1	11.1	1	9.1	1	12.5	-	-	-	-	3	5.4
2	-	-	-	-	3	27.3	1	12.5	-	-	1	20.0	5	9.1
3	2	13.4	4	44.4	2	18.2	1	12.5	1	16.6	-	-	10	18.2
4	3	20.0	2	22.2	2	18.2	2	25.0	1	16.6	-	-	10	18.2
5-Agree	9	60.0	-	-	-	-	2	25.0	3	50.0	-	-	14	25.5
Total	15	100%	9	100%	11	100%	7	97%	5	83%	5	100%	52	95%

TABLE XXI

TO WHAT DEGREE WOULD YOU BE WILLING TO ASSIST IN A PILOT PROJECT

OF GROUPING COMMONALITY COURSES IN YOUR PROGRAM

Responses	Industrial Technology		Power Mechanics		Applied Arts		Health		Natural Resources		Electronics		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
0-Disagree	1	6.7	1	11.1	3	27.3	-	-	1	16.6	1	20.0	7	12.6
1	1	6.7	1	11.1	1	9.1	1	12.5	-	-	-	-	4	7.3
2	-	-	-	-	1	9.1	1	12.5	-	-	-	-	2	3.6
3	1	6.7	3	33.3	2	18.2	1	12.5	2	33.3	1	20.0	10	18.2
4	2	13.4	3	33.3	3	27.3	3	37.5	1	16.6	1	20.0	13	23.6
5-Agree	9	60.0	1	11.1	1	9.1	1	12.5	1	16.6	2	40.0	15	27.3
Total	14	100%	9	100%	11	100%	7	97%	5	83%	5	100%	51	93%

Chapter 4

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Summary

The accumulation of data from the faculty questionnaire in the preceding chapter indicates by numbers and percentages general attitudes toward a given statement concerning grouping of commonality courses. As in any questionnaire the true validity is limited by: the phrasing of the statements, the number of responses, and the manner of tabulation. The results of the questionnaire responses in numbers and percentages therefore indicate an over-all general attitude toward grouping rather than a definite "yes" it should be used, or "no" it should not be used.

The last item on the questionnaire is, "What is your feeling toward the grouping concept? What advantages and/or disadvantages does the grouping concept have for the students and the instructor?" The response to this question in many ways summarized attitudes by allowing the individual to be more specific as to the advantages and disadvantages of the grouping concept. Since these responses are indicative of a more definite attitude, they are included. See Appendix B. Due to the confidence in administering the questionnaire, no remarks will be identified as to the individual, program, or school.

Utilization of the interview method for the administrative personnel allowed a built-in flexibility and correction factor for many of the items. Although some interview sessions became broad in

scope, certain identifiable statements were recorded that indicated definite opinions. See Appendix C.

Conclusion

The primary concern of this paper was to identify the extent of interest and attitude toward the grouping of commonality courses in vocational education. It was generally agreed that there are commonalities in various programs but in most cases only in the related areas. The primary concern as substantiated by the questionnaire data is the need to include relevant material in all classes and to examine the task analysis and behavioral objectives. It was agreed upon that even though class sizes could basically be larger this would depend upon the course and might create a scheduling problem. The overall attitude was one of caution and reservation as can be seen in the popular question, "What will the student gain or lose?".

Recommendation

The ability of an institution to survive in a changing environment depends a great deal on the adaptability of that institute. Flexibility is important to any educational program. However, flexibility may result in unorganized and aimless change unless based on serious constructive criticism (Olsen, 1958, p. xx).

Quality in vocational-technical education connot be legislated, or commanded, and a logical approach toward improvement is necessary in order to prevent or reduce the wide variety of ineffective methods in courses of study.

Improving courses is one thing, but the accomplishment of the program in relation to the need is quite another. For the sake of

relevancy and accountability, it would be wise for vocational-technical educators to examine their efforts with a critical eye from time to time so they can see if what they are accomplishing meets the overall objectives or goals established by the institution.

Further study and research is necessary to supply more conclusive data that isolates the answer to the question, "What will the student gain or lose?".

APPENDIX A

Questionnaire in Regards to Grouping

of Commonality Courses

From: Dan Brobst
Vocational Instructor

Cedar Falls, Iowa 50613

To: Name _____

Position _____

Address _____

Purpose: To determine attitudes and sentiment toward grouping of commonality courses.

Commonality Courses defined: Courses which are common to two or more programs, such as, communications, math, physics, and human relations.

Instructions: Circle the number which best represents your attitude toward the given statements. Zero indicates total disagreement - five indicates total agreement.

	Disagree	Agree
1. There are similarities in subject matter among various programs in vocational-technical schools.	0/ 1/ 2/ 3/ 4/ 5	
2. Students would tend to lose their "program identity" with the grouping concept.	0/ 1/ 2/ 3/ 4/ 5	
3. Commonality courses could be structured to retain "program identity."	0/ 1/ 2/ 3/ 4/ 5	
4. Grouping of commonality courses could be implemented in the related areas more easily than the main program areas.	0/ 1/ 2/ 3/ 4/ 5	

Questionnaire continued

		Disagree					Agree
5.	Related courses should have material that is relevant to the main program.	0/	1/	2/	3/	4/	5
6.	One instructor could teach students from varied programs and still include relevant material effectively.	0/	1/	2/	3/	4/	5
7.	Instructor load could be reduced by implementing the grouping concept.	0/	1/	2/	3/	4/	5
8.	Grouping of commonality courses would allow more preparation time for the instructor.	0/	1/	2/	3/	4/	5
9.	There is an advantage to the student having classes with other students outside his program.	0/	1/	2/	3/	4/	5
10.	Grouping of commonality courses would allow for better use of facilities.	0/	1/	2/	3/	4/	5
11.	Grouping of commonality courses would require lengthening your program.	0/	1/	2/	3/	4/	5
12.	Task analysis and behavioral objectives would have to be stated before the development of commonality courses	0/	1/	2/	3/	4/	5
13.	Larger class sizes could be handled by the grouping concept.	0/	1/	2/	3/	4/	5
14.	Class sizes would have to be limited in size depending upon the course.	0/	1/	2/	3/	4/	5
15.	Grouping of commonality courses would present a scheduling problem for students.	0/	1/	2/	3/	4/	5
16.	The grouping concept is one way to utilize manpower efficiently.	0/	1/	2/	3/	4/	5

Questionnaire continued

	Disagree	Agree
17. The grouping concept would raise the standards (graduating) of your program.	0/ 1/ 2/ 3/ 4/ 5	
18. Grouping of commonality courses allows for greater mobility for students to transfer credits of related courses.	0/ 1/ 2/ 3/ 4/ 5	
19. Commonality courses would provide students with a greater understanding and appreciation for other programs.	0/ 1/ 2/ 3/ 4/ 5	
20. There is need for grouping of commonality courses in vocational-technical schools.	0/ 1/ 2/ 3/ 4/ 5	
21. To what degree would you be willing to implement the grouping concept?	0/ 1/ 2/ 3/ 4/ 5	

22. What is your feeling toward the grouping concept? What advantages and/or disadvantages does the grouping concept have for the student? the instructor?

THANK YOU FOR YOUR COOPERATION.

APPENDIX B

Responses from Questionnaire

The grouping concept is perfect for the efficiency expert but full of pitfalls for the learning expert. I am attracted toward it with considerable trepidation, being an efficient learning expert. The only advantage/disadvantage to the student lies in the answer to the question: 'will he learn more or less of the subject matter pertinent to his chosen field or study?'... and that all depends. The only worthwhile consideration for the instructor over the long run is the same: 'will our graduates be better or poorer?'. If we can use the grouping concept to produce graduates with either improved abilities or the same as at present, we should use it.

The grouping concept may work for the related courses. It could eliminate needless duplication of instructional preparation and give greater emphasis to the subject as far as the instructor is concerned, leading to over-all improvement in the course. This in turn would make the course more palatable and worthwhile to the student. However, the instructor should be closely in touch with the main area instructor and the advisory committee so directly related problems could be included.

There would be a definite need to make each commonality course relevant to each program involved in order to be meaningful to the student.

Grouping of common courses permits the students to become acquainted with students from other programs, reducing cliques and offering more points of view in discussions. However, there would be more competition for the top grades, less individual attention, less relevant material, and the student may be less likely to speak up in a larger class. Although grouping may reduce the teaching load to a more realistic figure and eliminate duplicating preparations, it would require more time for correcting papers, and larger classrooms.

The grouping concept of commonality courses such as, communications, math, and human relations is fine. However, related subjects should be within the scope of the specified program. If related courses were grouped there would have to be a stopping point between the basics and how the course would apply to the specific program. With the grouping concept the student would possibly lose some class participation, due to the increase in class size, and get less personal attention from the instructor. The instructor may have more time outside the classroom for individual help.

Questionnaire responses continued

We should remember the quality of our students and the fact that most of them work as they attend school. The quality of the instruction in relation to the students major area must always be first.

There is a need to investigate to what degree, if any, grouping should or could be done. I feel that grouping should be investigated, especially in such areas as communications and human relations. As for math, one of the reasons for most failures is the difficulty in showing "real" applications. There is too little time now to educate and train the students. We need both math and physics to be applied with "real" applications pertinent to the area of training.

I think grouping of common courses could be very beneficial in certain areas, however, the course would need to be structured well and the instructor very diversified. Better instruction could be provided by an expert in the field instead of several instructors attempting to teach the same subject matter.

If we want to keep the students interest we must make the course directly related to the program. The instructor has the advantage of fewer preparations but he still has the grading load which often is not taken into consideration. The social value of mixed classes has questionable value.

If grouping is taught in the general sense and the student is unable to relate the subject of their field of study, a deficiency will exist. If the instructor is not knowledgeable of the students specialty of study and the application of commonality study, a major loss to the student will exist. And, if there are many students from varied fields and the instructor is not knowledgeable in these varied fields, the loss to the student is compounded.

Grouping of commonality courses would allow an instructor to specialize in his main areas of interest.

It appears to me that the grouping concept would require super human instructors with extremely versatile backgrounds. Sure, the grouping concept could lighten some of the instructors teaching loads but should this be a major concern or should it be the student. I would like to pose this: the colleges and universities have been using the grouping concept for years - has it been successfully enough for consideration here?

APPENDIX C

Responses from Interviews

Although grouping may enhance the school economy, what will the student have gained?

We need to be flexible in utilizing this concept. The cluster areas may be grouped successfully in the related areas, but it would be difficult to retain continuity if used in the main area programs.

There is a need to identify the intent of the course to limit class size. Although some classes would accomodate larger numbers we need to be realistic toward the number of students an instructor can handle. No matter how many programs you have in one classroom, the student still needs to be identified as an individual if it is to be successful. We need to look at the change in the student to evaluate any change in methods.

Utilization of time, instructors, and equipment would be more efficient and all students would get the same instruction. However, it may be more difficult to schedule.

The main problem is still the selection of the right teacher for a given responsibility. Some teachers could function in a grouped class but many could not. In this type of class he would need to be people oriented instead of occupation oriented, yet he would need to be broad in his teaching to keep class material relevant to the student.

BIBLIOGRAPHY

Barlow, Melvin L.. History of Industrial Education in the United States. Peoria: Chas. A. Bennett Co., Inc., 1968.

Bruner, Jerome. Toward a Theory of Instruction. Belnap Press, 1966.

Caswell, H. L. and associates. Curriculum Improvement in Public School Systems. Columbia University, 1950.

Dobrovolny, Jerry S.. "Applied Mathematics." Technical Education and Bimonthly Supplement to Industrial Arts and Vocational Education. September 1970.

Dressel, Paul. College and University Curriculum. McCutchum Publishing Corp., 1968.

Faunce, Roland C. and Bossing, Nelson L.. Developing the Core Curriculum, Second Edition. Prentice-Hall, Inc., 1958.

Fullerton, Dr. Bill J.. The Identification of Common Courses in Paramedical Education. U. S. Department of Health, Education, and Welfare, 1967.

Hennis, R. S., Jr.. "Basic Psychological Generalizations Underlying the Core Concept." High School Journal, April 1962.

Olsen, Maurice Duane. "An Analysis of Articles Dealing with the Core Type Program in High School." Unpublished master's thesis, State College of Iowa, 1958.

"Program for Education Mobility for Health Manpower." Coordinating Council for Education in the Health Science for San Diego and Imperial Counties, California, 1970.

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1973-75	University of Northern Iowa Graduate School Cedar Falls, Iowa Candidate for Master's in Technology Program of study: Emphasis in Vocational-Technical Educational Supervision and Management
1965-73	University of Northern Iowa Cedar Falls, Iowa Received Bachelor of Arts Degree in Industrial Arts
1963-65	Iowa Central Community College Eagle Grove, Iowa Received Associate of Arts Degree

Work History:

1975-Present	University of Northern Iowa Cedar Falls, Iowa Instructor: Fundamentals of Management
1967-Present	Hawkeye Institute of Technology Box 8015, Waterloo, Iowa Instructor: Math, physics, related welding, heat treatment and materials
1966	Schultz Manufacturing Company Waterloo, Iowa Foreman: Welding department

1965-66	Engineered Equipment Waterloo, Iowa Worked as welder, layout and set-up man on concrete hydraulic pumps and portable concrete batch plants
1963-65	Consumer Cooperative Association Eagle Grove, Iowa Duties involved general maintenance and construction plus general feed and fertilizer processing
1960-63	Younglove Construction Company Sioux City, Iowa Worked as cement finisher, carpenter, welder and deck foreman on grain elevators and feed mills

Personal:

Active in Community United Way Campaign
United Way Chairman for Hawkeye Institute, 1971-74

Active in IVA-AVA
Member of District One IVA Executive Board 1972-73

Active member of Faculty Association
Hawkeye Institute of Technology
Welfare Committee Chairman
Faculty Association President