

1993

## Secondary and postsecondary vocational education curriculum articulation as perceived by community college and high school administrators

John W. Sorenson  
*University of Northern Iowa*

*Let us know how access to this document benefits you*

Copyright ©1993 John W. Sorenson

Follow this and additional works at: <https://scholarworks.uni.edu/etd>



Part of the [Vocational Education Commons](#)

---

### Recommended Citation

Sorenson, John W., "Secondary and postsecondary vocational education curriculum articulation as perceived by community college and high school administrators" (1993). *Dissertations and Theses @ UNI*. 816.

<https://scholarworks.uni.edu/etd/816>

This Open Access Dissertation is brought to you for free and open access by the Student Work at UNI ScholarWorks. It has been accepted for inclusion in Dissertations and Theses @ UNI by an authorized administrator of UNI ScholarWorks. For more information, please contact [scholarworks@uni.edu](mailto:scholarworks@uni.edu).

## **INFORMATION TO USERS**

**This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.**

**The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.**

**In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.**

**Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.**

**Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.**

# **U·M·I**

University Microfilms International  
A Bell & Howell Information Company  
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA  
313/761-4700 800/521-0600



**Order Number 9420291**

**Secondary and postsecondary vocational education curriculum  
articulation as perceived by community college and high school  
administrators**

**Sorenson, John Walton, Ed.D.**

**University of Northern Iowa, 1993**

**Copyright ©1993 by Sorenson, John Walton. All rights reserved.**

**U·M·I**  
300 N. Zeeb Rd.  
Ann Arbor, MI 48106




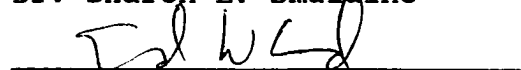
SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION  
CURRICULUM ARTICULATION:  
AS PERCEIVED BY  
COMMUNITY COLLEGE AND HIGH SCHOOL ADMINISTRATORS


A Dissertation  
Submitted  
In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Education

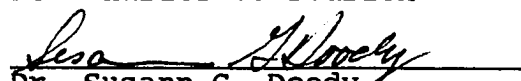
Approved:

  
Dr. Roger A. Kueter

  
Dr. Sharon E. Smaldino

  
Dr. Edward W. Amend

  
Dr. Charles V. Dedrick

  
Dr. Susann G. Doody

John W. Sorenson  
University of Northern Iowa  
December 1993

Copyright by  
JOHN W. SORENSON  
December 1993  
All Rights Reserved

## ACKNOWLEDGMENTS

The members of my dissertation committee are to be thanked for their assistance: Dr. Roger Kueter, Dr. Sharon Smaldino, Dr. Edward Amend, Dr. Charles Dedrick, and Dr. Susann Doody. Their words of encouragement, their challenging questions, and their attention to detail are deeply appreciated. Special thanks are extended to Dr. Smaldino for her leadership role, and to Dr. Doody for her countless hours of assistance in the data analysis.

Heartfelt appreciation is given to the professors that I encountered and who challenged me in my doctoral study. The professional and clerical staff in the Donald O. Rod Library, the Schindler Education Center, and the Academic Computer Center deserve thanks for their assistance as well.

I would also like to thank my father-in-law, Fred Brandt, for his continued interest in my education. Special thanks goes to my parents, Walton and Margaret Sorenson, who instilled in me at a very early age the value of an education.

My greatest thanks goes to my wife, Carol, who has been my number one source of encouragement and strength; and, to our son and daughter, Michael and Rachel, for their support and for their understanding that their father could not attend all their college and school events.



## TABLE OF CONTENTS

	Page
LIST OF TABLES . . . . .	vii
LIST OF FIGURES . . . . .	viii
CHAPTER I, INTRODUCTION	
Introduction . . . . .	1
Statement of the Problem . . . . .	5
Importance of the Study . . . . .	8
Assumptions . . . . .	12
Delimitations . . . . .	13
Limitations . . . . .	14
Definition of Terms . . . . .	14
Administrators . . . . .	14
Articulation . . . . .	15
Remaining Definitions . . . . .	17
CHAPTER II, REVIEW OF LITERATURE	
Introduction . . . . .	19
The Historical Development of the Two-Year Junior/Community College . . . . .	22
The Evolution of the Junior College, 1850-1920	22
The Expansion of Occupational Programs, 1920-1945 . . . . .	31
The Community College Concept, 1945-1965 . . . .	35
The Period of Consolidation, 1965-Present . . . .	39
The Stated Functions of the Two-Year Junior/Community College . . . . .	41
Original Functions . . . . .	41

Developing Functions . . . . .	44
Recent Functions . . . . .	46
The Critics of the Two-Year Junior/Community College . . . . .	49
The Criticisms . . . . .	49
Responding to the Criticisms . . . . .	56
Need for Articulation . . . . .	59
Administrative Structure . . . . .	65
The Vocational-Technical Administrative Structure in Iowa Community Colleges . . . . .	65
The Administrative Structure in Iowa High Schools . . . . .	67
A Synthesis Relevant to the Purpose of This Research . . . . .	68
Summary . . . . .	70
 CHAPTER III, METHOD	
Introduction . . . . .	72
Design of the Study . . . . .	75
Design of the Instrument . . . . .	76
Population of the Study . . . . .	79
Collection of Data . . . . .	83
Data Analysis Procedures . . . . .	85
Summary . . . . .	85
 CHAPTER IV, PRESENTATION AND ANALYSIS OF DATA	
Response to the Inventory . . . . .	87
Data Analysis . . . . .	89
Information Dimension . . . . .	91
Research Questions 1 Through 10 . . . . .	91

Research Question 11 and Hypothesis Test . . . . .	92
Research Question 12 and Hypothesis Test . . . . .	94
Communication Dimension . . . . .	98
Research Questions 1 Through 10 . . . . .	98
Research Question 11 and Hypothesis Test . . . . .	98
Research Question 12 and Hypothesis Test . . . . .	101
Interaction Dimension . . . . .	103
Research Questions 1 Through 10 . . . . .	103
Research Question 11 and Hypothesis Test . . . . .	105
Research Question 12 and Hypothesis Test . . . . .	105
Analysis of Narrative Responses . . . . .	108
<b>CHAPTER V, OVERVIEW, CONCLUSIONS, AND RECOMMENDATIONS</b>	
Introduction . . . . .	130
Study Overview . . . . .	131
Vocational Education Curriculum Articulation . . . . .	131
Conclusions . . . . .	134
Discussion . . . . .	139
Recommendations for Future Studies . . . . .	146
REFERENCES . . . . .	148
APPENDIXES . . . . .	156
A. Permission Letter . . . . .	157
B. High School-Community College Vocational Education Articulation Perception Inventory . . . . .	159
C. Letter to Top Level Administrators . . . . .	169
D. Human Subjects Review Permission . . . . .	171

E.	Cover Letter for Perception Inventory . . . .	173
F.	Scoring Sheet . . . . .	175
G.	Follow-up Letter Utilized to Contact Non-Respondents . . . . .	177
H.	Second Letter Utilized to Contact Non-respondents . . . . .	179
I.	First-Level Categories of Administrators' Responses . . . . .	181
J.	Second-Level Categories of Administrators' Responses . . . . .	187

## LIST OF TABLES

Table	Page
1. Response Rate by Administrative Categories . . . .	89
2. Administrators' Mean Scores of the Actual and Ideal Articulation of the Information Dimension	92
3. Summary Table of Analysis of Variance For The Dependent Variable, Information Dimension . . .	93
4. Administrators' Mean Scores of the Actual and Ideal Articulation of the Communication Dimension . . . . .	99
5. Summary Table of Analysis of Variance For The Dependent Variable, Communication Dimension . .	100
6. Administrators' Mean Scores of the Actual and Ideal Articulation of the Interaction Dimension	104
7. Summary Table of Analysis of Variance For The Dependent Variable, Interaction Dimension . . .	106

## LIST OF FIGURES

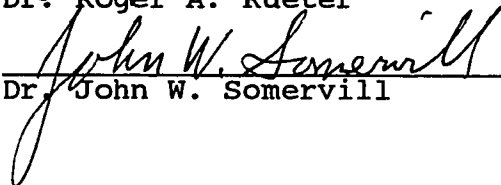
Figure	Page
1. Interaction--Administrative Categories and, Actual and Ideal Articulation in the Information Dimension . . . . .	95
2. Interaction--Administrative Categories and, Actual and Ideal Articulation in the Communication Dimension . . . . .	102
3. Interaction--Administrative Categories and, Actual and Ideal Articulation in the Interaction Dimension . . . . .	107

SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION  
CURRICULUM ARTICULATION:  
AS PERCEIVED BY  
COMMUNITY COLLEGE AND HIGH SCHOOL ADMINISTRATORS

An Abstract of a Dissertation  
Submitted  
In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Education

Approved:

  
\_\_\_\_\_  
Dr. Roger A. Kueter

  
\_\_\_\_\_  
Dr. John W. Somervill

John W. Sorenson  
University of Northern Iowa  
December 1993

## ABSTRACT

The transition of the vocational student from the secondary school to the community college may result in unnecessary duplication of educational resources and curriculum, and can cause the student to waste time, effort, and lose motivation (Whitlock, 1978). Curriculum articulation is a significant approach to solving these problems (Hull & Parnell, 1991). The purpose of the study was two-fold: (a) to investigate the perceptions of community college and high school administrators regarding ideal and actual vocational articulation practices, and (b) to investigate the differences of perceptions to determine if differences were a function of administrative position.

The High School-Community College Vocational Education Articulation Perception Inventory was utilized to gather data. A total of 402 Iowa community college and high school administrators were selected to participate in the study. The response rate was 73.1%.

The data were analyzed in three ways. A 2 x 5 (articulation x administrative category) Analysis of Variance (ANOVA) with repeated measures on articulation was conducted on each articulation dimension (information/communication/interaction). Significance was tested at the .05 level. Post hoc tests were used to determine the means between which significant differences existed. Data were



summarized using descriptive statistics. Narrative responses were analyzed by using the constant comparative method of qualitative analysis.

Significant differences were detected in the following areas: (a) between actual and ideal articulation in all dimensions, (b) among administrators on actual articulation in the information dimension, and (c) among administrators on articulation in the communication dimension. A majority of administrators, in all categories, viewed vocational articulation as being Extremely Important or Very Important. While the majority of presidents and top level administrators viewed the process as working Very Well or Well, a large percentage of middle level administrators, superintendents, and principals believed that the articulation process was working Fair, Not Well, or Very Slowly.

The findings of the study suggest that administrators support what is taking place in articulation efforts, but believe additional efforts need to transpire. Administrators in specific administrative categories should be exposed to inservice activities enabling them to acquire additional skills to be more effective articulation leaders.

CHAPTER I  
INTRODUCTION

Among the many complex issues in education today is the transition of students from one institution to another. It is rare that students complete their formal education within a single institution. Vocational students move from exploratory programs at junior high schools to high schools and/or area centers, then to technical colleges, junior colleges, and/or senior colleges or universities (Selman & Wilmoth, 1989). These moves often result in unnecessary duplication of educational resources and curriculum, and can cause students to waste time, effort and lose motivation (Whitlock, 1978).

A significant approach to solving problems associated with the transition from one education level to the next is through curriculum articulation. Curriculum articulation is broadly defined as "a process for linking two or more educational systems to help students make a smooth transition from one level to another without experiencing delays, duplication of courses, or loss of credit" (Hull & Parnell, 1991, p. 42). Lindly (1987) viewed curriculum as continuous and sequential, and promoted curriculum articulation wherein each experience builds upon the proceeding one.

Curriculum articulation has been occurring between the secondary and postsecondary institutions with different levels of counsel and emphasis. In 1929, the National Education Association dedicated its Seventh Yearbook entirely to a discussion of articulation at all levels. The President's Commission on Higher Education in 1947 "underscored the need to provide easier transition between high school and college" (Opachinch & Links, 1974, p. 1). The Association for Supervision and Curriculum Development devoted its 1958 Yearbook to articulation (Menacker, 1975).

During the 1980s there was renewed interest in articulation between secondary and postsecondary institutions. Roueche and Barton (1985) stated that community colleges "must believe in and develop partnerships in learning excellence with our high school colleagues" (p. 49). Hodgkinson (1986) felt that since institutions of higher learning can be no better than the secondary institutions that have potential to serve them, all institutions should begin developing collaborative relationships with the public schools. Parnell (1990) stated that the day is clearly over when colleges and universities exist in isolation and, as a result, college leaders are endeavoring to improve their connections with the secondary schools.

The Iowa Department of Education, concerned with providing diverse populations with unrestricted access to quality vocational-technical education, developed a pilot program in Merged Area XV. Merged Area XV is one of 15 merged areas in the state of Iowa (Hompland, 1968). A community college, an area education agency, and elementary-secondary school districts are located in each merged area. In 1987, Indian Hills Community College and the Ottumwa Community School District, with the assistance of the Southern Prairie Education Agency, "joined forces to develop a model vocational education program for secondary students throughout Merged Area XV--using Ottumwa as a regional site" ("Schools join," 1987, p. 3). Indian Hills Community College President, Lyle Hellyer, stated "we hope to work with the AEA and local districts to provide quality vocational technical opportunities for high school students that might otherwise be deprived" ("Schools join," p. 3).

After the initial success of the pilot program in Merged Area XV, other community colleges have participated in formal articulation agreements. Kirkwood Community College in Cedar Rapids, North Iowa Area Community College in Mason City, and Hawkeye Community College in Waterloo have formal articulation agreements with several of the high schools in their merged areas.

The process leading up to a formal articulation agreement between secondary and postsecondary institutions is known as the vocational education curriculum articulation process. The articulation agreement is a written document which explains the decisions agreed upon and the process used by the institutions to grant advanced placement or credit (Herriage, 1989).

Responsibility for leadership in the articulation of vocational education is perceived to rest with postsecondary administrators (Selman & Wilmoth, 1989). These postsecondary administrators should provide leadership in maintaining the present articulation agreements and planning new ones. The primary responsibility for maintaining and extending the articulation process rests with top level administrators, as they have been assigned the overall administrative responsibilities for the vocational-technical divisions in the community colleges. Middle level administrators, however, will ultimately be delegated those articulation related tasks as they are closest to the specific vocational-technical courses and programs that have potential for curriculum articulation with the secondary institutions. The postsecondary administrators should work closely with the secondary administrators, specifically the superintendents and the high school principals, to foster

interconnected and collaborative relationships through vocational-technical curriculum articulation.

Few studies have been conducted which examine the vocational-technical curriculum articulation perceptions of administrators at the community college and the high school levels. At a time when it is not realistic or economically feasible to locate a full array of vocational-technical programs in all 425 elementary-secondary districts in Iowa, it is critical that the community colleges collaborate with secondary systems to provide vocational-technical opportunities around the state through articulation (State Board of Education, 1992). Therefore, it is important to understand the curriculum articulation perceptions of those who will ultimately be given the task of initiating and expanding articulation efforts. Those who will ultimately facilitate the process of vocational-technical curriculum articulation between the secondary schools and postsecondary community colleges include the community college presidents, top level administrators, middle level administrators, high school superintendents, and principals.

#### Statement of the Problem

The purpose of this study was two-fold: (a) to investigate the perceptions of presidents, top level administrators, middle level administrators, superintendents and principals regarding ideal and actual vocational-

technical curriculum articulation practices between the community colleges and the high schools, and (b) to investigate the differences of perceptions of the community college and high school administrators regarding ideal and actual vocational-technical curriculum articulation practices. The study utilized the High School-Community College Vocational Education Articulation Perception Inventory (HS-CCVEPI) (Kauer, 1979). The instrument assesses perceptions in three major dimensions of: (a) information, (b) communication, and (c) interaction (Kauer, 1979). Specifically, the study was designed to answer the following research questions:

1. To what extent do middle level administrators in Iowa community colleges perceive that articulation in its three dimensions (information/communication/interaction) should exist (ideal) in vocational education programs in respective institutions?

2. To what extent do middle level administrators in Iowa community colleges perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

3. To what extent do top level administrators in Iowa community colleges perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

4. To what extent do top level administrators in Iowa community colleges perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

5. To what extent do presidents in Iowa community colleges perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

6. To what extent do presidents in Iowa community colleges perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

7. To what extent do superintendents in Iowa school districts perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

8. To what extent do superintendents in Iowa school districts perceive that articulation in its three dimensions actually exists in vocational educational programs in respective institutions?

9. To what extent do high school principals in Iowa high schools perceive that articulation in its three dimensions should exist (ideal) in vocational educational programs in respective institutions?



10. To what extent do high school principals in Iowa high schools perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

11. To what extent do the perceptions of administrators differ regarding actual and ideal articulation in its three dimensions (information/communication/interaction)?

12. To what extent are the differences between perceptions regarding ideal and actual articulation practices of vocational education programs a function of administrative positions?

#### Importance of the Study

During the 73rd session of the Iowa General Assembly, Senate File 449 was passed unanimously by both the House and Senate. "The essence of S.F. 449 is a recognition that Iowans must have access to quality vocational programs in order to meet our citizens' training and retraining needs as well as to prepare workers for the 21st century" (Herriage, 1989, p.1). Senate File 449 required that, by July 1992, Iowa high schools have competency-based vocational courses and that these courses must be articulated with a community college. All vocational-technical offerings at the community colleges are to be competency-based and articulated with local school district vocational

educational programs. "With the implementation of these standards, curriculum articulation efforts between secondary schools and community colleges are expanding to avoid unnecessary duplication of program content and provide a continuum of learning between the two levels for students" (State Board of Education, 1992, p. 7).

In June 1991, the Vocational-Technical Education Task Force was established in Iowa as a result of the State Board of Education's need to view vocational-technical education in a comprehensive manner. Among the Task Force's charge was to include the roles and relationships between secondary and postsecondary institutions, and to recommend strategies to enhance the delivery of vocational-technical programs and services to both secondary and postsecondary students.

In their report, A New Vision for Vocational-Technical Education In Iowa, recommendations of the Vocational-Technical Task Force were presented to the State Board of Education in February 1992. Recognizing the increasing demand for efficiency and effectiveness in vocational-technical education, the Task Force envisioned a new paradigm for education in the 1990s and beyond. Part of the paradigm included a fully integrated and articulated system of vocational-technical education which would provide access to quality vocational-technical programs designed to prepare individuals for entry into productive careers as well as

other life roles. "The success of this integrated system hinges upon the full commitment of Iowa's secondary schools, and community colleges to increasingly interconnected and collaborative relationships in the design and delivery of vocational-technical education to Iowa's citizens" (State Board of Education, 1992, p. 3).

A substantial part of the high schools' and community colleges' commitment to the interconnected and collaborative relationships through curriculum articulation rests with administrator leadership (Selman & Wilmoth, 1989). Key administrators in the secondary schools and postsecondary community colleges will have the leadership responsibilities in the curriculum articulation effort. There has been no investigation of what is occurring with vocational-technical curriculum articulation between the secondary and postsecondary community colleges in Iowa. Nor has there been any examination of Iowa's community colleges presidents', top level administrators', middle level administrators', high school superintendents', and principals' perceptions dealing with ideal and actual curriculum articulation practices. There are no data available that indicate if these perceptions differ among these administrators.

This study, by providing information on community college presidents', top level administrators', middle level

administrators', high school superintendents', and principals' perceptions regarding ideal and actual vocational-technical curriculum articulation practices as measured on the HS-CCVEPI, should indicate to the State Department of Education whether there were differences in the key administrators' perceptions. If differences of the perceptions were detected as a result of the study, it could be a signal to the Department of Education that it may have concerns with the key administrative personnel who are responsible for providing leadership in the vocational-technical articulation process. In addressing these concerns, it should be clear that the Department of Education's goal would be to provide assistance for specific high school and community college administrative categories in order that articulation practices progress from where they are now to where they should be (ideal).

The results of the study should indicate whether key administrator perceptions vary depending on what administrative position they hold. If the differences of the perceptions vary among the administrative categories, the Department of Education then could investigate the sources of difference and focus its inservice activities by addressing the different needs of each administrative level.

Therefore, the results of this study can be useful to the Department of Education as they make specific staff development plans as recommended in the Task Force's strategies for Goal 4, Delivery. As the Department of Education sets out to conduct seminars and workshops for educational administrators in the secondary schools and community colleges to help them promote the interconnected and collaborative relationships through vocational-technical curriculum articulation, it can specifically design the content of its staff development activities to better meet the needs of administrators at all levels. The goal of the Department of Education's inservice program would be to reduce and/or eliminate any differences between ideal and actual articulation practices in vocational programs as perceived by the various administrators in community colleges and high schools. Specifically, the Department of Education would attempt to provide inservice activities that would stimulate administrators to move from where they are now, actual, to that of ideal.

#### Assumptions

The following assumptions were made regarding this study:

1. It was assumed that the respondents could understand the statements of the instrument.

2. It was assumed that the respondents would react honestly, and their responses would accurately reflect their perceptions.

3. It was assumed that the presidents, top level administrators, middle level administrators, superintendents, and principals had an interest in, and knowledge of, vocational-technical curriculum articulation between the secondary and postsecondary community colleges.

4. It was assumed that the data obtained by use of the instrument in this study would provide a sound data base for the analysis of ideal and actual vocational-technical curriculum articulation in Iowa.

#### Delimitations

Vocational courses and programs in the State of Iowa are made available to post-secondary populations through the vocational-technical divisions of Iowa community colleges, and to secondary school populations through the Iowa high schools. The research was delimited to the state of Iowa. The data obtained as a result of the research were delimited to those gathered via the perception instrument, HS-CCVEPI.

The population for this study was identified from the State of Iowa Department of Education. The research was delimited to the following personnel:

1. Presidents of Iowa community colleges.
2. Top level administrators in the vocational technical divisions of Iowa community colleges.
3. Middle level administrators in the vocational technical divisions of Iowa community colleges.
4. Superintendents of Iowa school districts.
5. Principals of Iowa high schools.

#### Limitations

The instrument utilized in this study was the HS-CCVEPI. The study was limited to the extent that the research instrument was valid; the extent to which the respondents would interpret the instrument accurately; and the forthrightness of response to each item.

#### Definition of Terms

In order to provide uniformity of understanding and clarity to the terms that have special application for this study, the following definitions are provided (for reader clarity, some definitions are grouped in a logical order):

#### Administrators

**High School Principal**--The term refers to those building level administrators who carry the title principal and have administrative responsibility for grades 9-12 or 10-12 (Donaldson, 1991).

**Middle Level Administrator**--These are personnel who have middle level administrative responsibilities in

departments and/or programs in vocational-technical divisions of a community college. Titles may include, but are not limited to: Department Head, Department Chair, or Coordinator (Brann, 1972).

**President**--The chief executive administrator of a community college. In Iowa, the title is President (Vaughn, 1989).

**Superintendent**--The chief executive administrator of a K-12 school district (Konnert & Augenstein, 1990).

**Top Level Administrator**--These are personnel who have upper level administrative responsibilities in the vocational technical divisions of a community college. Titles may include, but are not limited to: Vice-President, Dean, or Director (Cohen & Brawer, 1989).

### Articulation

**Articulation**--This is the cooperative effort of educational personnel in the same or different administrative units to provide a continuous program of education from educational level to educational level without duplication or gaps in a program of studies which is directed toward specific goals (Strom, 1978).

**Articulation Agreement**--The written document which explains the decisions agreed upon and the process



used by the institution to grant advanced placement or credit (Herriage, 1989).

Communication Dimension--This is "an aspect of the articulation process which concerns activities specific to the facilitation of effective articulation relationships such as dialogue, counterpart, conversations and articulation policy statements" (Opachinch & Links, 1974, p. 7).

Information Dimension--This is "an aspect of the articulation process which concerns primarily external information giving elements which operate on individuals within and without the educational system in both a planned and an unplanned manner such as public relations, publications, recruitment, parental influence and peer influence" (Opachinch & Links, 1974, p. 8).

Interaction Dimension--This is "an aspect of the articulation process which concerns actual involvement of individuals, groups and institutions in cooperative experiences and activities such as facilities sharing, cooperative program planning and developing advanced standing policies in college programs" (Opachinch & Links, 1974, p. 8).

### Remaining Definitions

Community College--This term refers to a "publicly supported school which may offer programs of adult and continuing education, lifelong learning, community education, and up to two years of liberal arts, pre-professional, or occupational instruction partially fulfilling the requirements for a baccalaureate degree but confers no more than an associate degree; or which offers as the whole or as part of the curriculum up to two years of vocational or technical education, training, or retraining to persons who are preparing to enter the labor market" (General Assembly of Iowa, 1991, p. 2127).

Competency-Based Vocational-Technical Education--

Vocational-technical programs that are primarily concerned with specific activities (competencies) an individual performs in a given occupation role (Skinkle, 1981).

Merged Area--This term refers to any one of the fifteen geographical boundaries comprising counties and parts of counties in Iowa as established by the Iowa Legislature (Hompland, 1968).

Perceptions--This term refers to the understandings, opinions, and beliefs of the participants in the study as expressed in the High School-Community College

Vocational Education Articulation Perception  
Inventory (HS-CCVEPI).

Vocational Education--"These are organized educational programs which are directly related to the preparation of individuals with employability and specific job skills required for a paid or unpaid employment for additional preparation for a career. Skill development is provided by educational programs where the requirements of a baccalaureate degree are not necessary for initial employment and/or further specialized training" (Burmeister, 1989, p. 3).

Vocational-Technical Division--This is the administrative and instructional component of a community college in which the vocational-technical courses and programs are offered.

CHAPTER II  
REVIEW OF LITERATURE

Introduction

In Chapter I, the need for curriculum articulation from one institution to another was introduced. Specifically, the advantages of vocational education curriculum articulation between secondary and postsecondary institutions were indicated. In addition, the purposes of the study were stated: (a) to investigate the perceptions of presidents, top level administrators, middle level administrators, superintendents, and principals regarding ideal and actual vocational-technical curriculum articulation practices between the community colleges and the high schools, and (b) to investigate the differences of perceptions of the community college and high school administrators regarding ideal and actual vocational-technical curriculum articulation practices.

Curriculum articulation between secondary and postsecondary institutions is becoming more important in helping meet student needs. Parnell (1987) stated more and more young people emerge from high school not adequately prepared for college or for work. This predicament becomes more acute "as the knowledge base continues its rapid expansion, the number of traditional jobs shrink, and new jobs demand greater sophistication and preparation"

(Parnell, 1987, p. 1). A failure of the American educational system might be how it defines excellence. A major criterion identified to measure excellence is the percentage of high school graduates going on to a four-year college or university. The assumption is that all students are, or should be, headed for a college baccalaureate degree program. Parnell (1985) stated the 1980 census revealed that 17% of the American population 25 years of age or older hold a baccalaureate degree. Even with this dramatic growth of degree holders, more than three out of four students in the public schools are unlikely to achieve a baccalaureate degree.

For some of these students who are unlikely to earn a baccalaureate degree, a focused educational plan leading to an associate, associate in applied arts, or associate in applied science degree might begin in the secondary school. For such an educational plan to exist the curriculum at the secondary and postsecondary level must be articulated. As it turns out, this may not always be the case.

Curriculum articulation between the secondary and postsecondary two-year colleges has had a unique and varied history in the 20th century. Some educators have long been concerned with what appears to be "a lack of articulation between instructional programs offered in secondary and those offered in postsecondary institutions" (Jobe, 1986, p.

12). Parnell (1987), President of the American Association of Community and Junior Colleges, revealed that while there are many good things going on between the community colleges and high schools, "we found that not much is going on in the area of curriculum coordination" (p. 11).

An awareness of the historical development and dramatic growth of the community colleges, along with their multiple functions, may help one to understand the changing emphasis placed on curriculum articulation between these colleges and high schools during the 20th century. In addition, knowledge of criticisms leveled at the community colleges, and responses to the criticisms, should assist in understanding the complexity of the multi-function community colleges and the diverse roles they undertake.

In order to structure this review, the literature in this chapter is reported in the following sections: (a) a review of the origination and development of the two-year junior/community college; (b) the stated functions of the two-year junior community college; (c) the criticisms of the two-year junior community college; (d) the responses to the criticisms; (e) the need for articulating vocational education between the two-year junior/community college and the high school; (f) the vocational-technical administrative structure of the two-year junior/community colleges in Iowa;

- (g) the administrative structure in Iowa high schools; and,
- (h) a synthesis relevant to the purpose of the research.

The Historical Development of the  
Two-year Junior/Community College

The Evolution of the Junior College, 1850-1920

While there are those who claim that the two-year junior/community college is a 20th century phenomenon, its roots can be traced back to the 19th century. In the 1850s, Henry P. Tappan of the University of Michigan and in the 1870s, William Folwell of the University of Minnesota both advocated that the first 2 years of university study should be separated from the higher levels of university study (Wagoner, 1985). Tappan and Folwell both felt that the freshman and sophomore years of the university should be turned over to the secondary schools (Medsker, 1960). Tappan and Folwell were dissatisfied with what they felt was an inferior quality of American colleges when compared to the 19th century German universities.

Tappan drew distinctions between colleges and universities. True universities are institutions of research and inquiry; they have the materials, buildings, laboratories, libraries, and faculty required to engage in scholarship. "Colleges are institutions of teaching that should focus their efforts on the general education required of all literate persons. Colleges are preparatory to the

specialized studies which ought to take place in a university" (Diener, 1986, p. 23).

These university presidents, Tappan and Folwell, had considerable influence on other university presidents during this time period. Edmund J. James of Illinois, Richard H. Jesse of Missouri, Andrew S. Draper of Illinois, and David Starr Jordan of Stanford, in their addresses and publications, called for the separation of the first two years of college study from its higher levels (Fields, 1962).

It is interesting to note that many of the leaders of higher education in the 19th century were educated in Europe, and their ideas of university development were in contradiction to established American tradition (Blocker, Plummer, & Richardson, 1965). Traditional American educators at the time labeled these leaders as liberals. However, because their frame of reference was that of the German university, it could be argued that these reformists were actually quite conservative in their thinking.

In addition to the argument that there was a true distinction between a college and university, or the first two years and the remaining years at a university, a second argument was being developed by the universities' leaders for this separation. The university administrators and faculty were concerned that many secondary school graduates



were inadequately prepared for the rigorous demands of college study (Blocker et al., 1965). Administrators and faculty were complaining, "and not for the last time, that incoming students were of lower standards than they had been used to; the required extra coaching and preparatory work was beneath the dignity of institutions of higher learning" (Goodwyn, 1982, p. 165).

Because university leaders were educated in Europe, it is no wonder they were concerned with the inadequate preparation of students from American secondary schools. The European concept of a highly selective and limited enrollment in advanced study was a contradiction when compared to what was occurring in American universities (Blocker et al., 1965). It simply became an issue with these leaders to focus their energies on what could be construed as the selective and limited enrollment in the upper levels of the universities, and thus, not having to deal with the inadequately prepared student.

The third argument for the separation of the first two years of university work was based on a practical matter: increased enrollment. Between 1870 and 1900, while the nation's population doubled, attendance at the colleges and universities rose four and a half times (Goodwyn, 1982). The primary factor in the increased demand for higher education was an increase in the number of graduates from

the secondary schools (Cohen, 1985). With limited funds, university presidents were less compelled to allocate resources to the lower two years, since they were philosophically committed to the upper division of the university.

These concerns for the health and vitality of the emerging American university must be recognized as an important factor influencing the birth and development of the two-year junior/community college (Wagoner, 1985). The 19th century university leaders advocated the separation of the first 2 years of university work based on three arguments:

1. There was a true, distinct, philosophical difference between the overall purpose and mission of the two levels.

2. High school graduates were not prepared for the rigors of university work, and the universities felt it was not in their mission to enroll the less than prepared graduate.

3. Ever increasing enrollments were causing budget decisions not in the best interest of the scholarly purposes of the university.

It was not until the turn of the century that other university presidents and leaders took up the task of transforming the earlier sketches of a two-year college into

a more complete plan for a junior college with added rationale. Specifically, William Rainey Harper, David Starr Jordan, and Alexis F. Lange envisioned the new junior college as not only accepting the function of providing the general education curriculum that was being offered by the research-oriented university, but also saw it providing stability in a society impressed with the need for order and efficiency (Wagoner, 1985).

In 1892, President William Harper of the University of Chicago created two major divisions at the University, the Academic College and the University College. The Academic College was to be the freshman and sophomore years, and the University College was to include the upper division years. In 1896, these names were changed to Junior College and Senior College. Thus, Harper is generally credited as the first to use the term junior college (Brubacher & Rudy, 1976).

Harper created the upper and lower divisions for a variety of reasons. Not to be confused as an elitist, as were Tappan and Folwell, Harper promoted the junior college concept partially on the grounds that it would serve to democratize higher education through a downward extension of the university (Neufeldt, 1982). Thus, a junior college might beckon students who otherwise would never attend college. Secondly, the partitioning of the two divisions

might incline some students to find it both convenient and respectable to terminate or complete their college course at the end of 2 years. Providing such terminal facilities, Harper expected that this would appeal to the upper division and graduate colleges because their resulting student body would be more selective, and therefore permit more advanced work (Brubacher & Rudy, 1976). Third, Harper hoped that the secondary school would expand and include the junior college as a separate two-year institution. In 1901, beginning at Joliet, Illinois, Harper was influential in establishing the first junior college as a segment of the secondary school system.

Perhaps more important for Harper than the institutional arrangement and individual benefits were the social functions of the new junior college. As a progressive reformer, Harper's "revulsion against disorder in education" and his "admiration for devices calculated to make education more efficient" reflected his concern for more harmonious functions of the larger society (Storr, 1966, p. 214). He simply desired to put in place the machinery that would ensure structure, order, and efficiency in the larger society (Wagoner, 1985).

David Starr Jordan, the President of Stanford, shared many of the ideas of Harper concerning the philosophical basis for the junior college. While concerned that the

allowing of multitudes into the university "would cheapen and vulgarize higher education", Jordan was also concerned with "the democracy of the intellect", by which he meant that all should have a fair chance to be educated to the limits of their abilities (Wagoner, 1985, p. 7). It is interesting to note that Jordan was trained as a biologist and was impressed with the theory of evolution. As a result, he felt the destiny of the human race rested with the fittest "and feared that the masses, if not properly informed, could hold back the talented" (Wagoner, p. 7).

Alexis F. Lange, a faculty member at the University of California at Berkeley, viewed the emerging junior college not only important in terms of the functions it might inherit from the university, but also in terms of an evolving institution with a distinct mission. Lange focused attention on "the need for post graduate work in the public high schools; it was a theme on which he spoke and wrote at every opportunity" (Thornton, 1972, p. 50). He viewed the junior college as an extended high school and as a feeder to the university. In addition, Lange's view of the mission of the junior college was for the promotion of social and vocational efficiency "for those students not destined for university study and professional careers" (Wagoner, 1985, p. 8).

William Rainey Harper, David Starr Jordan, and Alexis F. Lange, while differing in some of their beliefs regarding the form and functions of the junior college, shared an ideological commitment. Whether the junior college was viewed as part of secondary education or higher education, or emphasized the university preparatory function or individual-social contribution, the basic goal held by these leaders of the junior college movement was a responsiveness to the ideal of a more efficient, orderly, and rational educational system.

The evolution of public and private two-year colleges was sporadic at the turn of the century. The development of some early junior colleges occurred long before Harper developed the name. Lasell Junior College in Auburndale, Massachusetts began offering standard college courses as early as 1852 (Thornton, 1972). Other colleges, such as Monticello College in 1835 and Susquehanna University in 1858, were examples of institutions that were organized to provide a college education with curriculum offerings similar to those that later developed at the turn of the century.

In 1859, at the university level, the University of Georgia began a plan to abolish its offerings for the first two years because it felt that students in the freshman and sophomore levels were too young and not adequately prepared

for the rigors of university work. The plan was interrupted by the Civil War and the University was closed. Upon its reopening in 1866, the plan to abolish the first two years was forgotten.

Following Harper's influence in Illinois, educators in Michigan and Indiana continued the momentum of developing junior colleges. On the west coast, Fresno College, located in California, began in 1910 (Garms, 1977). In 1917, the California State Legislature passed a bill providing for state and financial support for junior colleges (Fields, 1962). Minnesota and Missouri established public junior colleges in 1915, Kansas and Oklahoma in 1919, Arizona and Iowa in 1920, and Texas in 1921.

The junior colleges established in this period were true extensions of secondary education. They were housed in high school buildings, had closely articulated curricula with the high schools, and shared the same faculty and administration (Blocker et al., 1965).

By the end of World War I, the idea of the junior college, along with its multiple missions, had spread to many parts of the country. As the junior college neared the end of its first stage of development, circa 1920, confusion as to the form and function of the junior college existed. This confusion was underscored in a 1919 report issued by the Bureau of Education in which it was noted the junior

college was still in an experimental stage. The author of the report lamented that "we do not know what it should be, because we do not know what it is. Before we can clearly see what it is, we must know why it is" (Wagoner, 1985, p. 9).

#### The Expansion of Occupational Programs, 1920-1945

The next stage of the historical development of the junior college can be identified as the expansion of occupational programs. This stage began after World War I and ended at the close of World War II.

In an effort to help meet the needs of returning veterans after World War I, the federal government passed several vocational education bills (e.g., the Smith-Hughes Act). The primary educational recipients of this funding were the land grant colleges and secondary schools. This funding attracted the attention of public junior colleges desirous of sharing in the grants (Thornton, 1972). The state of California immediately passed legislation authorizing the junior colleges to extend their curriculum offerings to include mechanical, industrial, home economics, agriculture, civic education, and commerce. Other states followed in California's lead. By 1925, the American Association of Junior Colleges felt compelled to expand the definition of the junior college:



The junior college is an institution offering two years of strictly collegiate grade. This curriculum may include those courses usually in the first two years of the four-year college, in which case these courses must be identical, in scope and thoroughness, with corresponding courses of the standard four-year college. The junior college may, and is likely to, develop a different type of curriculum suited to the larger and ever-changing civic, social, religious, and vocational needs of the entire community in which the college is located. It is understood that in this case also work offered shall be on a level appropriate for high school graduates. (Thornton, 1972, p. 53)

In 1916, Chaffery Junior College claimed the distinction of offering the first terminal courses in California's public junior colleges. As an extension of the high school, "it offered the following terminal vocational courses: art, manual training, home economics, commerce, music, library training, general agriculture, farm mechanics, and soils" (Hill, 1942, p. 313).

A new generation of junior college spokesmen appeared during the 1920s. The single topic, terminal education, was popularized more than any other during this inter-war period. Leonard V. Koos, of the University of Minnesota, published a detailed study of the junior colleges in 1925, The Junior-College Movement. Koos (1925) reported that the junior college was already moving beyond its original mission of being concerned with transfer function. Koos coined the term, mental democratization, to suggest that all youth had a right to receive education suitable to their intellect. He maintained that the junior college was the

proper institution for the class of students who were to enter the semiprofessions (Wagoner, 1985). In addition, Koos asserted that students seeking the terminal courses could do so earlier than university students, could remain under the influence of the home longer, and could receive a more personal college environment.

Walter Crosby Eells became the first editor of The Junior College Journal in 1930. He also was a spokesman for the terminal function of the junior college mission. Eells argued that only a small percentage of those who transfer to a university would have a reasonable chance of success. Instead, with proper guidance, more students should be channeled into the terminal programs. As a result, Eells believed the student would be more successful in college, work, and life.

Another strong advocate for the semiprofessional education was President Lawrence Snyder of Los Angeles Junior College. Snyder, more than Eells, saw the total function of the junior college. For a junior college to meet the needs of all students, both a transfer curriculum and a semiprofessional education curriculum must be offered. Snyder advocated that if a junior college was to be truly a college, it cannot allow itself to become merely a vocational institution. "It must have well-established

courses which embrace both cultural and utilitarian subjects" (Thornton, 1972, p. 54).

During this stage of its development, the junior college grew rapidly. Several influences contributed to this rapid expansion. First, the leadership of state educational departments, particularly in the area of vocational education, established under the Smith-Hughes Act of 1917 and other Federal legislation, promoted the growth of junior colleges especially if they were considered a part of secondary education (Thornton, 1972). However, it must be emphasized that not all the enrollment increases were due to the vocational curriculum. During the later part of this stage, 1940, the ratio of enrollment was two to one, the transfer student over that of the vocational student (Wagoner, 1985).

The second major influence of increased enrollment was the depression of the 1930s. The depression actually created two situations. One, with widespread unemployment, vocational education was encouraged as it was perceived to give one a competitive advantage in the job market. Second, some of those who may have planned to enter the university were forced to enroll in a junior college because of the financial situation created by the depression. As a result, the junior college was one institution which benefited from the depression.

As the second stage of development was drawing to closure, the United States was preparing for war. Because of the technological demands of the war, those in the Federal Government were convinced that higher education had a vital role to play in the war effort. In 1940, the President's Commission on Higher Education picked out the junior colleges as potentially the most important part of the tertiary system (Goodwyn, 1982). The Commission's report stated that the purpose of the junior college should be of educational service to the entire community. The ultimate importance of the report was to further redefine the junior college's role as a more active agent in the local community.

#### The Community College Concept, 1945-1965

After 12 years of economic depression and 4 years of war, American society seemed determined to abandon the constraints it had endured. Hodgson (1976) described the fusion of demographic trends, government policy, and business interests into what he termed a "suburban-industrial complex" that led to an almost insatiable demand for new homes, appliances, automobiles, and other goods and services.

Demands for educational access were also cited by returning veterans. Supported by the GI Bill, former servicemen entered all levels of higher education. Among

their selection was the junior college. By 1947, 40% of the junior college enrollment were veterans. As a result, the junior college was, for the first time, being embraced as a fully legitimate member of the American educational system (Wagoner, 1985).

In addition to the interest in the junior college by returning veterans, the junior colleges were in the media spotlight as a result of support from various national foundations, and by recommendations from educational commissions. On July 13, 1946, President Harry S. Truman created the President's Commission on Higher Education. Popularly known as the Truman Commission, it developed a blueprint for higher education in postwar America, containing goals that had the potential for revolutionizing American education and indeed much of American society (Vaughan, 1983).

The Truman Commission Report placed such significance on the role that the nation's junior colleges should play in broadening the base of higher education, that Vaughan (1983) stated that the report, in retrospect, may be considered the community college's manifesto. The Report called for opening the doors of higher education to members of society who previously had difficulty in accessing it. These were members of the lower socioeconomic groups; blacks, women, and working adults.

To accomplish the goal of opening these doors, the Commission asked for an expanded network of two-year colleges. These colleges were to be so closely tied and committed to their community that the Commission labeled them "community colleges" (Vaughan, 1983, p. 21). Use of the term, community college, stimulated much thinking about the role of the junior college. With the talk of universal higher education, the Commission placed the community colleges clearly in the camp of higher education. As a result, federal legislation materially shaped the mission of the community college (Vaughan, 1984).

In the end, the community college envisioned by the Truman Commission was not just a technical school, vocational school, or junior college; it was to be a comprehensive community college encompassing all three functions and more. The Commission saw the essential characteristics of the community college as follows:

It should conduct community surveys to determine community needs.

It shall design its programs to meet the needs of a cross section of the population, including older adults who needed to alternate their time between work and college attendance.

It should integrate general and vocational-technical education.

It shall offer the first two years of a four-year degree or a professional study.

It should serve as the center for a comprehensive program of adult education. (Vaughan, 1983, p. 23)

To further accomplish its goals, the Commission called for states to enact legislation for state-wide plans that

would put the community college within commuting distance of all citizens. As a result, individuals who could never have afforded to move away from their home or their community, would have an equal access to higher education. This was a major goal in the democratization of higher education. The Report of the President's Commission on Higher Education, that was issued in 1947, proved to have major influence on the third stage of development of the community college.

Leland L. Medsker became a major spokesperson for the community college during this period. He was at the forefront of the push for establishing the community college as a comprehensive, multi-purpose institution (Wagoner, 1985). In addition to calling for closer ties between the community college and business and industry, Medsker encouraged adult education and community service as an additional function for the community colleges. Medsker was also concerned with the number of students who failed at the community college or failed when they transferred. He advocated a redoubling emphasis on the guidance and the student personnel function of the community college. Thus, the remedial or salvage function was adopted by most community colleges. Adoption of the salvage function, which had been noted as early as 1931 by Eells, enabled the institution to offer a second chance to those students whose

prior educational experiences were less than encouraging (Medsker, 1960).

By the 1960s, near the end of their third stage of development, "the community college appeared to have entered its golden era" (Wagoner, 1985, p. 13). The community college label and concept had essentially captured the two-year college movement. Most states had enacted legislation calling for statewide community college systems. The Carnegie Corporation and the Kellogg Foundation, among others, supplied the community colleges with generous grants. Students at all levels benefited from the National Defense Education Act of 1958. The community college's responsiveness to the needs and interests of individuals, their communities, and the larger society, combined with its relative low cost, placed the institute in a seemingly golden position (Wagoner, 1985).

#### The Period of Consolidation, 1965-Present

The community college of the 1960s had multiple functions. These were the transfer functions, vocational educational functions, adult and continuing education functions, and its newly acquired remedial functions. The additional functions given to the community college over the next several stages of its historical development, coupled with the general increase in the nation's population, brought about substantial growth. Enrollment rose from 2.4



million in 1971 to 4.2 million in 1978 (Goodwyn, 1982). In the 1980s, enrollment increased to 4.5 million. The number of institutions increased from eight at the turn of the century to 1219 community colleges in 1985 (Wagoner, 1985). Many of the colleges have grown large; there are at least 45 community colleges that have an enrollment of over 15,000 students.

Cohen (1985) credits the growth to the following factors:

Minority groups, low-ability students, students from low-income families, and older students could access the community college easier than other postsecondary colleges.  
The ability to attract and meet the needs of part-time students.  
Community colleges attracted ethnic minorities. 40% of all ethnic minorities in college were in the community college.  
The availability of the community college within reasonable commuting distance.  
The community college had absolved the educational functions previously offered by other agencies: law enforcement, firefighting, health, technology and nursing education. (p. 149)

In the late 1980s, the era of rapid growth started to decline, and in some cases stopped. This was primarily due to the significant drop of high school graduates over the previous decade. With declining enrollment came financial cutbacks. With financial cutbacks came internal and external criticism of the community college. Challenges to the open-door philosophy and the multiple comprehensive mission were being made across the nation. "Perhaps it

might have been expected that an institution so readily influenced by the current of social order must experience the ebb as well as the surge of changing tides" (Wagoner, 1985, p. 13).

Cross (1981) stated that the community college, unencumbered by tradition, had always billed itself as a responsive institution. A revival of energy, along with a renewed sense of mission, is needed for the community college to meet the challenges as it enters the last decade of the 20th century.

#### The Stated Functions of the Two-Year

##### Junior/Community College

Throughout the historical development of the two-year junior/community college, multiple functions of these colleges have evolved and in some cases changed. In this section, these functions will be identified. It is understood that these functions are generalized and that not all of the functions may be served by any given two-year junior/community college.

##### Original Functions

William Rainey Harper, who is credited with being the father of the junior college, identified that the immediate function of the junior college "was to offer instruction of some nature as that typically offered to freshmen and sophomores in the leading colleges and universities"

(Wagoner, 1985, p. 6). The instruction of the liberal arts curriculum was based on the humanities, science and social science (Cohen & Brawer, 1989). This function, later to be labeled as the transfer function, was obviously inherited from the basic university function. Alexis F. Lange saw the junior college as an evolving institution with a more distinctive function; i.e., one of promoting a social and vocational education for those who would not go on to a university.

In the early decades of the two-year junior/community college, the earlier global, generalized functions began to be more closely identified and labeled. Proctor (1927) listed four basic functions of these colleges:

1. The "preparatory" function. Through the duplication of course work, students could attend a smaller institution, and prepare for advanced work in the upper division of a university.
2. The "popularizing" function. By the states and communities providing educational opportunity to those who could not move away from their home or community, students could obtain a postsecondary education.
3. The "terminal" function. Through this function, the junior college could provide terminal courses, usually vocational, to those who could not, for whatever reason, go further in college.
4. The "guidance" function. The junior college must effectively guide its students, like other colleges, in order that they succeed at the college. (p. 12)

In Koos' study (1925), he determined that the most popular function cited was offering two years of work acceptable to colleges and universities. For those students not going on to the universities, the junior college was to provide opportunities to round out their education and/or provide preparation for specific occupations. Whitney (1928) and Campbell (1930) found similar functions cited by the junior colleges in their studies. Hillway (1958) and Palinchak (1973) also identified the same basic functions of the early junior colleges.

The popularizing role of the junior college became its next function. Primarily, this function is addressed when the two-year junior/community college is established to meet the needs of those who otherwise could not attend college. Proctor felt the junior college should be the "peoples' college, presenting the highest local form of popular education" (Proctor, 1927, p. 18). By minimizing handicaps that occur in the college's location, one's economic situation and home obligations, the two-year junior/community college may satisfactorily perform its popularizing function.

The terminal or vocational role was added to the functions of the two-year junior/community college. Many had begun to "recognize the need for instruction in preparation for the so-called semiprofessions, those

occupations requiring more training than the high school can give but less than the traditional four years of college" (Hillway, 1958, p. 64). Since the traditional college made no provisions for this type of training, the two-year junior/community college took up this function. As a result, educational programs for those seeking to be draftsman, junior engineers, accountants, medical assistants, secretaries and others began to be offered.

The terminology used in this function has never been exact. The words terminal, vocational, technical, semiprofessional, occupational, and career have all be used interchangeably or in combination as in vocational-technical (Cohen & Brawer, 1989). While the term "terminal" was used in the early history to describe one of the college's functions, many educators objected to the term and suggested vocational be used in its place. Terminal conveyed to many the closing of the door to future educational opportunities. While most agree, the term is still being used by a few educators today.

#### Developing Functions

The vocational function of the two-year junior/community college, popularized by Koos and Eells between World War I and II, grew to be a very popular function in the 1930s and 1940s. Those seeking employment during the Depression of the 1930s saw the acquisition of a

postsecondary vocational education as an advantage. The Federal government and the nation's businesses and industries were looking for a higher skilled employee as it began to tool up for the war effort.

During the 1950s and 1960s, the vocational education movement, sometimes referred to as the career education movement, was growing in popularity in the elementary and secondary schools. After being exposed to a variety of occupations in the elementary grades, the rationale was that the student could study and prepare for a specific career at the high school level and beyond. The two-year junior/community college was the only postsecondary educational unit designed to further fulfill the needs of students who were seeking an additional career or vocational education. "It was a unique institution of higher learning whose developing philosophy centered around the concept of career education. Close ties with local businesses made it possible for the community college to gear its programs to the needs of the labor market" (Spring, 1989, p. 154).

As the two-year junior/community college was growing, (not only in size, but with multiple functions), it began to "attract students with many different ambitions, with varying backgrounds, and with extended ranged of abilities" (Thornton, 1972, p. 68). As a result, it became clear that the potential student and the enrolled student, in order to

make effective use of the college, needed assistance and advice as to choosing appropriate courses of study. Thus, the guidance function was adopted.

Guidance processes were developed to help students make decisions as to what type of education to pursue at the community college, vocational education or general education. These decisions were arrived at by utilizing the results of aptitude tests, and being presented with facts about career fields and occupational trends. In addition, after enrollment, these students often required further guidance that pertained to problems they encountered as students. Because of its diverse offerings and students, the two-year junior/community college seemed to have a greater need for a guidance function more than other types of colleges.

#### Recent Functions

In addition to the transfer function, the vocational function, and the guidance function, the two-year junior/community college of the 1960s and 1970s added two additional functions to its lists. These were the development of learning skills, and the continuing education and community service functions.

The development of learning skills function was added to the list of functions in order that the community colleges could meet the needs of certain students who

required additional assistance to help them obtain their educational goals, as well as other students who desired to improve their personal aptitude and behavior (McGrath & Spear, 1991). "Because of the broad range of abilities, interests, and educational and experiential backgrounds in the student body, the community college must be particularly effective in its efforts to provide developmental education" (Thornton, 1972, p. 63).

To meet this function, the colleges must be able to provide: (a) teachers, who are dedicated, competent and humane; (b) counselors, who can assist these students; (c) additional financing, because a lower faculty-student ratio is required; and (d) a diversity of curricula, where students can succeed and grow educationally. Remedial, compensatory, and developmental are the most utilized terms for courses and programs designed to teach reading, writing, and arithmetic (Cohen & Brawer, 1989).

Not all results of this function would be immediate. Some of the students provided help and assistance by way of the developing learning skills will succeed in the traditional ways measured by a college, by completing a course or program. Others will be successful in later activities in life such as job placement or advanced study.

The continuing education and community services function rests on a basic premise that one's education is



never considered sufficient or complete. "The need for educational opportunities for persons employed full-time includes, both credit and non-credit courses, paralleling daytime offerings as well as courses developed especially for this clientele, courses in daytime or evening hours, and broadly cultural as well as specifically occupational courses" (Thornton, 1972, p. 67). To meet this function, the college may offer short-term courses or workshops ranging from airbrushing to welding, aircraft piloting to flower arrangement, photography to how to deal with death, etc. These activities may be offered on campus, off campus, through television or radio.

The community service aspect is the most recent function adopted by most two-year junior/community colleges. While universities may be viewed as a community of scholars or experts, the local community often looks to the community college, its departments, programs, and faculty to provide workshops, lectures, and short-term courses in a specific area in which there is an immediate need. Through this function, the college can once again be seen as meeting the cultural needs of its community.

As the two-year junior/community college nears a century of historical development, it can be seen that the college, which in the beginning was primarily a single-function college, has grown into a multiple-function

college. These are: (a) the transfer function, (b) the popularizing of educational opportunity function, (c) the vocational function, (d) the guidance function, (e) the development of learning skills function, and (f) the continuing education and community service function.

### The Critics of the Two-Year

#### Junior/Community College

The study of the two-year junior/community college movement, and its multiple functions has not escaped criticism (Cohen & Brawer, 1989). "Recent critics have questioned the assumptions that the institutions represented" (Neufeldt, 1982, p. 176). An awareness of these criticisms may have merit in trying to ascertain the possible reluctance of some educators of not openly communicating or collaborating with their local community college. In this section, an examination of these criticisms, along with responses to the criticisms will be presented.

#### The Criticisms

One of the major criticisms of the two-year junior/community college is that it has not served to democratize higher education, but has instead served as a sorting institution (Karabel, 1972, 1986). Neufeldt (1982) argued that because of the social and academic tracking prevalent in higher education, and specifically within the two-year junior/community college, higher education does not

necessarily lead to social mobility. As a result, the universities remain selective without appearing to sacrifice the concept of equal opportunity. "Despite its rhetoric of equality, the community junior college has remained in the bottom track in higher education, both in terms of the class origins and occupational destinations of its students" (Neufeldt, 1982, p. 177).

Karabel (1972) claimed that the massive expansion in community college enrollment in the 1950s and 1960s was due to an increase in the proportion of technical and professional workers in the labor force. People were looking for minimal postsecondary training to secure those newly created technical positions. As a result, more people went to community colleges to help in gaining employment, however, it "resulted in little or no change in the overall extent of social mobility and economic equality (Karabel, 1972, pp. 525-526).

Zwerling (1976) supported the claims that the community college plays an essential role in maintaining the pyramid of America social and economic structure. He claimed that the community college was remarkably effective in controlling social mobility because its students come primarily from the lowest socioeconomic classes of college attendees, its dropout rate is the highest of any college population, and dropouts and graduates alike enter lower

level occupations than the equivalent student who attends the university.

Pincus (1986) asserted that the unemployment rate for the community college graduate was from one-fourth to one-half. With nonwhite and lower social economic students more likely to attend a community college, success by way of graduating does not necessarily mean success in improving social status. Richardson and Bender (1987) pointed out "there has been little change in economic and social class mobilities for minorities because their curricular choices have been so concentrated in career and vocational areas" (p. 1).

While the community colleges claim to democratize higher education with its open door policies, the critics conclude that non-white and lower social economic students are more likely to dropout than their counterparts who attend senior institutions. "Dropout occurred because of the economic sacrifice of attending school and because of the middle class character of the school itself" (Cohen & Brawer, 1989, p. 347).

Other evidence that points to the fact that the two-year junior/community college does not serve to democratize high education was founded in its earliest promoters, Tappan and Folwell. Critics pointed out that these University Presidents were not necessarily interested in promoting and

establishing a two-year junior/community college, but instead created an institution that would serve to sort out and divert students from the university. The functions assumed by these colleges, beyond that of the transfer function, especially that of the vocational, further demonstrated that there were basic differences between the university and the two-year junior/community college, and as a result, sorting would take place.

The critics projecting the sorting image have shifted the focus from the stated functions to the nonstated functions of the two-year junior/community college. These revisionists have extended the stated democratization function based on access, to the nonstated function of that of outcomes. Thus, the revisionists would claim that because the two-year junior/community college sorts or tracks its students, it does not function as democratization of higher education.

Burton R. Clark (1960b) studied the patterns of attendance among students at San Jose City College (a two-year institution). His findings revealed large discrepancies between student aspirations and their realizations. The social process that enabled students to enter the two-year junior/community colleges with high hopes never to be realized was referred to as "cooling out" (Karabel, 1972, p. 537).

Clark (1960b) stated that through the "cooling-out" function, the two-year junior/community college moved students from a transfer major to a one-year or two-year vocational, business, or semiprofessional program. As a result, the students relinquished their original intention, and accepted a substitute that had lower status both in the college and in society in general. Zwerling (1976) asserted that the chief function of the community college was to "assist in channeling young people to essentially the same relative positions in the social structure that their parents already occupy" (p. 33).

The "cooling-out" process was viewed by Clark (1960a) and Karabel (1972) as a long involved process that leads the student to make other educational choices within the two-year junior/community college, rather than dropping out of the college itself. This is accomplished by the college through a number of steps:

1. Pre-admission tests are given that can cast doubt on the student's original educational choices.
2. Having students meet with a counselor to seek advice on course selection based on test results.
3. Offering a course such as Orientation to College that places special emphasis on unrealistic student aspirations.

4. Sending out mid-term deficiency letters to students who are earning poor grades.

5. Placing students on probation at the end of a term.

After being exposed to the steps of the cooling-out process, a student is more likely to reconsider alternative choices within the two-year junior/community college. As a result, students will be convinced that they have made this decision, and that the two-year junior/community college has not served as a sorting institution. Clark (1980) reexamined his thesis 20 years later and found that little had changed. Community colleges were found to have the cooling-out process well in place.

The second criticism leveled at community colleges pertains to their role as schools. "The critics say that the community college is doing a poor job as a feeder institution to the universities, that it serves as grades 13 and 14 for only a small percentage of matriculants and 'cools out' the others" (Cohen & Brawer, 1989, p. 349). For decades the community college graduate achieved lower grades at the university than those earned by upper-division students who had entered the university as freshman. The community college graduates were found to be less likely to graduate, and if they did, it often required more time (Alderman, 1988; Cohen & Brawer, 1989).

Reliable nationwide data are not available on the degree of success achieved by students in vocational-technical programs. However, some statewide data indicate that most successful graduates find employment in the field. The process of determining placement data varies as a result of different needs by different colleges. There appears to be no standard process as to how placement figures are arrived at. Pincus (1986) deplored the lack of data to judge the effectiveness of vocational-technical programs. "By and large, there is no good evidence that vocational education in community colleges delivers on its promises of secure employment, decent pay, and ample career opportunities" (Pincus, p. 49).

To help prepare for the open admissions movement which started in the 1960s, "the colleges were urged by the Carnegie Commission on Higher Education to adopt an 'open door' policy admitting all high school graduates and otherwise qualified individuals" (Brubacher & Rudy, 1976, p. 261). Because of their multiple functions, these colleges could best meet individual needs whether it be in transfer or vocational programs. The critics maintained that the colleges had to dilute their curriculum to help meet some of these needs. As a result, the critics contended that the curriculum offered was of little value or worth to the student, and further emphasized that the two-year



junior/community college was a second-best institution. Goodwyn (1982) stated that this second-best institution served to cast doubt on the academic qualifications of students wishing to transfer to a university.

In summary, the criticisms leveled at the two-year junior/community college primarily fall into two categories:

1. The two-year junior/community college has not democratized higher education, but has served instead as a sorting institution.

2. The two-year junior/community college has failed to live up to some of its functions; i.e., its transfer function and its vocational function.

#### Responding to the Criticisms

The first criticism was that the two-year junior/community college has not served to democratize higher education but serves to function as a sorting institution. These critics would lead one to believe that the real benefit of these colleges should only be "measured by the extent to which they contribute to the overthrow of the social-class system in America" (Cohen, 1982, p. 356).

The colleges can and do make it easier for people to move between social classes (Ben-David, 1977). This is accomplished primarily in two ways. One, by having the college located within reasonable access to those desiring postsecondary education. If it were the unstated function

to sort, distance would increase and access would then be lessened. Second, most students are not sorted within a two-year junior/community college. With few exceptions, most students can enter any transfer or vocational program, thereby preparing them for a variety of occupations with differing levels of social status. Thus, the argument can be made that a student can indeed move from one social-class system by selecting the two-year junior/community college in which to receive an education.

The critics' fundamental flaw is that they have attempted to shift the meaning of educational equality from individual to group mobility. Ben-David (1977) stated:

Higher education can make a real contribution to social justice only by effectively education properly prepared, able, and motivated individuals from all classes and groups. . . . Higher education appears to have been primarily a channel of individual mobility. . . . It can provide equal opportunities to all, and it may be able to help the disadvantage to overcome inherited educational disabilities. But it cannot ensure the equal distribution of educational success among classes or other politically active groups. (p. 158-159)

The second criticism was that the two-year junior/community college has not lived up to some of its claims or functions; i.e., the transfer and vocational functions.

The critics cited figures of the percentage of students who transferred to universities after they graduate from the community college. However, uniform data are not available

to illustrate the number of students who transfer after one semester, one year, or after several years. Cohen and Brawer (1989) stated that students who started out at a community college were less likely to obtain bachelor's degrees. Much of the difference relates not only to a different environment, but also to the logistics of relocating at a different institution.

Vocational-technical programs are established with the intent of serving students by preparing them for employment and serving industries by supplying them well trained workers. Follow-up studies routinely find 80 to 90% of the program graduates saying that they were helped and that they would recommend the program to others (Cohen & Brawer, 1989). Pincus (1986) stated that data on program success or lack of success must be judged with caution. Students who leave programs before graduation and enter employment in the field ought to be counted as program successes. Students who graduate, but who do not obtain employment because they choose to transfer to a university, ought not to be counted as unemployed.

Vocational-technical education is to be a conduit through which people move to prepare themselves to do something that they presently cannot. For some students the curriculum has served its purpose if it allowed students, those that may dropout of the program, to be put in touch

with those who know where jobs may be obtained. At the other extreme, is the student who has taken all the vocational-technical curriculum, and learned the necessary skills, but failed to find a job, or after obtaining one, found it unsatisfactory. The critics failed to accommodate the fact that for some dropouts the program had succeeded, and for some graduates, the program had failed.

Cohen and Brawer (1989) reflected:

That the real benefit of the community college cannot be measured by the extent to which it contributes to the overthrow of the social-class system in America. Nor can it be measured by the extent to which the colleges changes the mores of the community. It is a system for individuals, and it does what the best educational forms have always done: It helps individuals learn what they need to know to be effective, responsible members of their society. (p. 357)

#### Need for Articulation

During the early stage of development and growth of the two-year junior/community college, the faculty, administration, board of education, facilities, and mission were the same as that of the high school (Blocker et al., 1965). Curriculum articulation appeared to take place as a result of the same personnel, faculty and administrators, working in both the secondary and postsecondary institutions. As a result, curriculum articulation was not a concern.

Thornton (1972) indicated that as a result of a variety of factors, the emerging two-year junior/community college

became to be governed by a separate board of education, had different faculty and administrators, was housed in separate facilities, and had a different mission than the high schools. As a result, curriculum articulation between the two separate institutions occurred on an irregular basis (Tillery & Deegan, 1985; Wilbur, 1984).

There is increasing information regarding the desirability of curriculum articulation between the two institutions. Kintzer and Wallenbarger (1985) reported that higher education, like other areas of modern society, has been more client-oriented and quality-conscious. As a result, community college leadership has an interest in articulation. Gross (1988) suggested that the effect of college/school collaboration can be very powerful and lead toward a reformation of American education. Opachinch and Links (1974) stated:

Articulation between educational levels, especially in occupational education, has only benefits. Students are the most important beneficiaries; those who have taken high school programs in a similar technical specialty are not penalized by having to retake courses and are encouraged to prepare themselves for high order jobs. The schools also benefit; they can maximize the use of their personnel, facilities and equipment, thereby having available resources to devote to other pressing problems. Society benefits, too; there is more thorough training of skilled manpower. (pp. 5-6)

Pautler (1990) stated that to assure that vocational programs are related to local and statewide needs, secondary programs need to be articulated with postsecondary programs.

"By being offered as an articulated program, students and their parents will recognize the importance of vocational education as a path to further education" (Pautler, 1990, p. 243).

Articulation can serve to enhance the community college's vocational-technical courses and programs. "This potential for increasing enrollment and attracting a better prepared and higher ability student encourages institutions to articulate" (Warmbrod & Long, 1986, p. 29).

Information concerning the latter two decades of the 20th century presents an additional advantage of articulation. The composition of young America is changing. The number of blacks and Hispanic youth is increasing, and yet they continue to be underrepresented among high school and college graduates (Viar, 1991). The need to serve these populations are reinforced through high school and college articulation (Boyer, 1981). "Community college leadership needs to reach back and work hand in hand with high schools in order to increase motivation and to bring more students into programs which will develop the skills they need both to be successful in our institutions and to be successful in life" (McCabe, 1988, p. 112).

Even with the positive aspects of articulation, Linson, Wilson, and Hunt (1971) stated that there was a general waste of tax monies, educational facilities, and time as a

result of the failure to articulate educational curriculum from one institution to another. Parnell (1987) reported that there was little that was taking place in the area of curriculum coordination between the secondary and postsecondary two-year junior/community colleges. Hechinger (1984), Cohen and Brawer (1987), and Selman and Wilmoth (1989) reported similar findings. This failure to articulate was brought about by a "lack of communication between institutions" (Linson et al., p. 30).

This lack of communication is the result of a highly decentralized educational structure. More than fourteen thousand independent school districts operate in the United States. In most states, responsibility for the actual operation of the schools has been delegated to the local school districts. There are over twelve hundred public and private two-year community, junior colleges. These colleges operate under local board of trustees or as part of a state university system. It, therefore, is rare that those responsible for the operation of the school districts and the two-year junior/community colleges get together to discuss collaboration. "As a result of the overall fragmentation and lack of communication between educational entities, student learning suffers" (Hull & Parnell, 1991, p. 18).

Hodgkinson (1985) believed that "almost everyone working in education perceives it as a set up discrete institutions working in isolation from each other" (p. 1). Educators who work in any institution have little connection with any other level of educational institution. As a result, Hodgkinson sees educators defining the school as a unit, and not the people who move through it. It is only the students who see the separate institutions as a system, because it is they who can experience all the institutions.

Gillie (1973) stated that the experience of the student must be a continuous and cumulative process. The ideal structure is to provide each student the opportunity to progress from each educational experience at his own intellectual and social pace. "The Carnegie Foundation for the Advancement of Teaching has renewed its traditional view of education as a seamless web and of the need for schools and colleges to work together" (Daly, 1985, p. 1).

"Iowa is nationally recognized as a leader in educational and occupational training of its youth and adult populations" (Iowa Department of Education, 1989, p. 1). In order for the state to remain in the forefront of educating an advancing and changing workforce, the Department of Education felt that its educational system must provide programs which result in a competent and productive population that is well trained and able to adapt to a



variety of challenges. Part of this mission compels that a comprehensive and diverse quality vocational education be available to all citizens in the state. "This includes current and emerging occupations requiring other than a baccalaureate or advance degree" (Iowa Department of Education, p. 2).

Iowa legislators responding, in part to the Department of Education's recommendations, public criticism for lack of vocational-technical curriculum articulation between high schools and community colleges, and the need to train and retrain competent workers for the 21st century, passed Senate File 449 unanimously in both the House and Senate in 1989.

Chapter 280A, Area Vocational Schools and Community Colleges, requires that secondary vocational education "be competency-based, and articulated with postsecondary programs of study" (Herriage, 1989, p. 2). Senate File 449 identifies six service areas in the vocational education offerings: (a) agriculture education; (b) business and office education; (c) health occupational education; (d) home economics education; (e) industrial education; and (f) marketing education. Chapter 280A was amended in Section 280.27 and requires all vocational offerings at the community colleges to be competency-based and be articulated with local school vocational education programs.

The articulation process, as outlined in Senate File 449, states that teachers and administrators from both the secondary and postsecondary institutions shall meet to identify competencies required at each level, and jointly propose agreements of articulation between the two levels. Such joint agreements will facilitate the secondary-postsecondary transition and will likely reduce duplication between the two levels. Articulation agreements are to be signed by both institutions. This vocational standard was set to be implemented in July 1992.

While curriculum articulation between educational levels in vocational education have stated needs and benefits, the enactment of Iowa Senate File 449 has necessitated mandatory efforts between secondary and postsecondary institutions. It now becomes a question of not whether an institution should articulate with the other, but how quickly the process can begin and to the level in which the curriculum can be articulated.

#### Administrative Structure

#### The Vocational-Technical Administrative Structure In Iowa Community Colleges

Selman and Wilmoth (1989) have indicated that the leadership necessary for articulation of vocational education to take place between the secondary and postsecondary two-year junior/community colleges is

perceived to rest with postsecondary administrators. The presidents will assign the responsibility of initiating and maintaining articulation agreements to their top level administrators. These administrators will eventually delegate this responsibility to middle level administrators as they work closely with the specific vocational-technical courses and programs.

The vocational administrative structure in each Iowa community college varies. J. E. Hawse (personal communication, April 13, 1992) stated that the president of a community college is given the authority from the local community college board of trustees to organize and, if necessary, reorganize the administrative structure to meet the unique needs of that college.

As a result of different administrative structures, the titles of top level and middle level vocational administrators in Iowa community college vary. Lепley (1991) identified the following titles for top level vocational administrators in the State of Iowa: (a) Vice President of Educational Services; (b) Campus Dean; (c) Vice President of Academic Affairs; (d) Vice President of Instruction; (e) Dean of Instructional Services; (f) Dean; (g) Dean of Vocational-Technical Education; (h) Dean of Applied Technology; (i) Dean of Applied Science and Technology; (j) Dean of Industrial and Technical; (k) Vice

President; (l) Director of Vocational-Technical Education; (m) Dean of Technical Education; and (n) Dean of Instruction.

Middle level administrative titles also vary due to the different administrative structures. The titles include:

(a) Chair of Industrial Technology; (b) Chairperson of Industrial Technology; (c) Chair of Industrial Division; (d) Manufacturing Technology Program Leader; (e) Manager of Mechanics Division; (f) Manager of Technology Division; (g) Department Head of Technology and Industry; (h) Department Head; (i) Department Coordinator; (j) Division Chairperson; (k) Department Chair of Engineering Technologies; (l) Department Chair of Industrial Technologies; (m) Department Chair of Business Technology, and (n) Department Chair of Aviation (Lepley, 1991). These middle level vocational education administrators report directly to the top level vocational educational administrators.

#### The Administrative Structure in Iowa High Schools

During the 1991-1992 academic year, there were 425 elementary-secondary (K-12) school districts in the state of Iowa (State Board of Education, 1992). These districts are to provide opportunities for students to enroll in vocational offerings which are designed to prepare individuals to enter and advance in the work force immediately following graduation from high school and also

to continue vocational occupational preparation in postsecondary institutions.

The chief executive officer of the elementary-secondary (K-12) district is the superintendent. This position reports directly to an elected board of education. During the 1991-1992 academic year, G. Ghan (personal communication, July 27, 1992) reported that of the 425 school districts, 119 districts shared superintendents due to small student enrollment in some elementary-secondary districts.

The high school principal has administrative responsibilities for the high school, grades 9-12 or 10-12. Among the responsibilities is curriculum planning. R. H. Decker (personal communication, July 24, 1992) stated that in smaller districts the principal reports directly to the superintendent. In larger districts, principals report to the superintendent, assistant superintendent, or director.

#### A Synthesis Relevant to the Purpose of This Research

In this review of literature, it has been documented that as students move from one institution to another, it can often result in unnecessary duplication of educational resources and curriculum, and can cause the student to waste time, effort, and loose motivation (Whitlock, 1978). This can be particularly true for the vocational student who

moves from the secondary school to the two-year postsecondary community college.

The unnecessary duplication of educational resources and curriculum was often the result of a variety of factors: the emerging two-year junior/community college became to be governed by a separate board of directors, had different faculty and administrators, was housed in different and distant facilities, and had different missions than that of the high school (Thornton, 1972). This decentralized educational structure resulted in a lack of communication between the high school and community college. Hull and Parnell (1991) stated that due to the overall fragmentation of the educational institutions and the resultant lack of communication, the student learning suffered.

The review of literature has revealed an increased desirability to articulate vocational curriculum between the secondary schools and community colleges. Opachinch and Links (1974) reported that as a result of curriculum articulation, not only does the student benefit, but that the different institutions benefit by way of maximizing the use of personnel, facilities and equipment, and society in general who benefits by way of having a more highly skilled work force.

In the state of Iowa, articulation of vocational education curriculum is now mandated between the secondary

schools and community colleges (Iowa Department of Education, 1989). Selman and Wilmoth (1989) have indicated that the leadership necessary for this articulation to take place is perceived to rest with the postsecondary administrators. The community college presidents, top level administrators, and middle level administrators will work closely with high school superintendents and principals to initiate and expand curriculum articulation agreements. The joint curriculum articulation agreements will facilitate the transition from the secondary level to the community college level and will likely reduce duplication.

#### Summary

The review of literature relating to articulation of vocational education curriculum between the secondary and postsecondary two-year junior/community college revealed the need for effective articulation. It was documented that when vocational education curriculum articulation does not take place, time, facilities, and money are wasted. The historical evolution and growth of the two-year junior/community college was cited. As these colleges evolved, they distanced themselves from the high schools, and the resultant loss of articulation was noted. The failure to articulate appears to rest primarily with poor communication between the secondary and postsecondary two-year community/junior colleges.

Recent state mandates are forcing key administrators to address the issue of vocational-technical education curriculum articulation. It was noted that various administrative structures exist in the different two-year junior/community colleges in Iowa. However, key administrators are identified as providing leadership in the curriculum articulation process. The top level and middle level vocational education administrators in the community colleges are identified in the literature as the primary leaders of curriculum articulation between the high schools and their colleges. These administrators will collaborate with the high school superintendents and principals in initiating and enhancing the curriculum articulation of vocational education.



## CHAPTER III

### METHOD

#### Introduction

The need for curriculum articulation from one educational institution to another was introduced in Chapter I and established in Chapter II. The advantages of vocational education curriculum articulation between the secondary and postsecondary two-year junior/community colleges were identified. The purposes of the study were stated: (a) to investigate the perceptions of presidents, top level administrators, middle level administrators, superintendents, and principals regarding ideal and actual vocational-technical curriculum articulation practices between the community colleges and the high schools, and (b) to investigate the differences of perceptions of the community college and high school administrators regarding ideal and actual vocational-technical curriculum articulation practices.

The study was designed to answer the following research questions:

1. To what extent do middle level administrators in Iowa community colleges perceive that articulation in its three dimensions (information/communication/interaction) should exist (ideal) in vocational education programs in respective institutions?

2. To what extent do middle level administrators in Iowa community colleges perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

3. To what extent do top level administrators in Iowa community colleges perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

4. To what extent do top level administrators in Iowa community colleges perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

5. To what extent do presidents in Iowa community colleges perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

6. To what extent do presidents in Iowa community colleges perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

7. To what extent do superintendents in Iowa school districts perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

8. To what extent do superintendents in Iowa school districts perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

9. To what extent do principals in Iowa high schools perceive that articulation in its three dimensions should exist (ideal) in vocational education programs in respective institutions?

10. To what extent do principals in Iowa high schools perceive that articulation in its three dimensions actually exists in vocational education programs in respective institutions?

11. To what extent do the perceptions of administrators differ regarding actual and ideal articulation in its three dimensions (information/communication/interaction)?

12. To what extent are the differences between the perceptions regarding ideal and actual articulation practices of vocational education programs a function of administrative categories?

In Chapter II, the review of related literature was reported. Specifically, references were reported that: (a) revealed the need for effective articulation; (b) the growth and development of the two-year junior/community colleges, and the different emphasis on articulation; (c)

the stated functions of the two-year junior/community college; (d) the criticisms of the two-year junior/community college and responses to those criticisms; (e) mandated curriculum articulation in Iowa; (f) the administrative structure in Iowa community colleges and Iowa high schools; and, (g) the key individuals identified as leaders in the curriculum articulation movement as top level and middle level vocational administrators at the community college.

The purpose of this chapter is to describe the design of the study, the methods employed in the design of the instrument, the population of the study, the collection of data, and the data analysis utilized.

#### Design of the Study

An ex post facto design was selected for this study to attempt to ascertain the differences of perceptions between ideal and actual articulation of vocational education curriculum of: (a) presidents of Iowa community college; (b) top level administrators of Iowa community colleges; (c) middle level administrators of Iowa community colleges; (d) superintendents of Iowa high schools; and, (e) principals of Iowa high schools. Borg and Gall (1989) referred to this method as ex post facto research, since causes are studied after they have presumably exerted their effect on a variable. The causal-comparative method is aimed at the

discovery of possible relationships between or among variables, but not causes.

#### Design of the Instrument

A handbook for articulating high school and community college vocational education curriculum was developed by Opachinch and Linkszt after their study in 1974. Three dimensions of articulation (information/communication/interaction) and a survey instrument that identified several articulation practices were enumerated in Opachinch and Linkszt's handbook. Kauer (1979) adapted Opachinch and Linkszt's survey instrument for a study of articulation practices between area vocational schools and community colleges in Missouri, and between comprehensive high schools and community colleges in Missouri. For this study, the researcher adapted, with permission, the name of the instrument, and the articulation dimensions and practices statements from Kauer's instrument in the development of this study's instrument (Appendix A).

The following procedure was employed: (a) a basic instrument was constructed from statements taken from Kauer's study; and (b) the basic instrument was presented to selected individuals to review content validity. The people selected to participate in the pilot study were: (a) a community college president; (b) a community college top level administrator; (c) a community college middle level

administrator; (d) a high school superintendent; and (e) a high school administrator. These administrators were from institutions adjacent to one another outside the state of Iowa.

The individuals were charged with reviewing the instrument to evaluate content validity and to suggest modification. Information received was utilized in revising the instrument.

The instrument, Appendix B, consisted of two five-point schemas to solicit responses from each statement regarding ideal (should be done) and actual (extent being done). The instrument was divided into the three dimensions of articulation: information, communication and interaction. The format consisted of 48 statements of effective articulation practices centered on the page with the ideal responses in the column to the left and the actual responses in the column to the right. The five ideal and actual responses are: extensively, occasionally, seldom, rarely, and never. Two scores were obtained from each respondent, one score based on his/her perception of ideal articulation and one score based on his/her perception of actual articulation.

Conceptually, and for analysis purposes, each scale was viewed as a continuum and assigned numerical values one through five as follows: under ideal and actual, extensively

was assigned a five; occasionally, a four; seldom, a three; rarely, a two; and never, a one. While Stevens (1946) stated that the variables involved in the use of an analysis of variance must be measured at least on an interval scale, Anderson (1961) concluded that the type of measuring scale used had little relevance to the question of whether to use a parametric or nonparametric test. The researcher then concluded that the variables involved in the use of an analysis of variance could be measured by ordinal scales as utilized in the study's instrument .

At the end of the instrument were two open-ended questions to which the participants were to respond. Specifically, the questions were:

1. Regarding your position at your institution, how important is vocational curriculum articulation between high schools and community colleges?

2. How well do you think the process of initiating and expanding vocational education curriculum articulation between high schools and community colleges is working in your area? The constant comparative method of qualitative analysis was utilized to analyze the administrators' responses to the two open-ended question (Glaser & Strauss, 1967).

### Population of the Study

The population for the study was community college presidents, top level administrators, middle level administrators, high school superintendents, and high school principals in Iowa. The population listing was achieved by obtaining the data from the State of Iowa's Department of Education.

Fifteen public community colleges were identified and listed in the 1992 Directory of Iowa Community Colleges:

- (a) Northeastern Iowa Community College, with campuses at Calmar and Peosta;
- (b) North Iowa Community College at Mason City;
- (c) Iowa Lakes Community College, with campuses at Estherville and Emmetsburg;
- (d) Northeast Iowa Technical College at Sheldon;
- (e) Iowa Central Community College at Fort Dodge;
- (f) Marshalltown Community College at Marshalltown;
- (g) Ellsworth Community at Iowa Falls;
- (h) Hawkeye Community College at Waterloo;
- (i) Eastern Iowa Community College, with campuses at Davenport, Bettendorf, Clinton, and Muscatine;
- (j) Kirkwood Community College at Cedar Rapids;
- (k) Des Moines Area Community College at Ankeny and Boone;
- (l) Western Iowa Technical Community College at Sioux City;
- (m) Iowa Western Community College at Council Bluffs and Clarinda;
- (n) Southwestern Community College at Creston;
- and (o) Southeastern Community College,



with campuses at West Burlington, Keokuk, and Fort Madison (Iowa Department of Education, 1991a).

During the 1991-92 academic year, there were 425 public elementary-secondary (K-12) school districts in the state of Iowa (State Board of Education, 1992). The following identifies the number of school districts by merged area:

(a) Area Education Agency 1--26 districts; (b) Area Education Agency 2--28 districts; (c) Area Education Agency 3--24 districts; (d) Area Education Agency 4--18 districts; (e) Area Education Agency 5--42 districts; (f) Area Education Agency 6--21 districts; (g) Area Education Agency 7--26 districts; (h) Area Education Agency 9--23 districts; (i) Area Education Agency 10--39 districts; (j) Area Education Agency 11--57 districts; (k) Area Education Agency 12--28 districts; (l) Area Education Agency 13--33 districts; (m) Area Education Agency 14--22 districts; (n) Area Education Agency 15--25 districts; and (o) Area Education Agency 16--13 districts (Iowa Department of Education, 1992). Of the 425 school districts, 119 shared superintendents during the 1991-92 academic year (G. Ghan, personal communication, July 27, 1992). Each school district had a secondary principal position, providing the district served students in grades 7-12 or 9-12.

The entire population of Iowa's community college presidents, top level administrators, and middle level

administrators were asked to participate in the study. The names and addresses of presidents and top level administrators were obtained from the 1992 Directory of Iowa Community Colleges (Iowa Department of Education, 1991a). Specifically, 15 community college presidents and 18 top level administrators were identified. No list of middle level administrators existed. For this study, the researcher contacted each top level administrator, by mail, to acquire the names and addresses of middle level administrators within the vocational-technical division at the community college (Appendix C). Seventy-seven names and addresses of middle level administrators were obtained. One middle level administrative position was eliminated from the list when it was learned that the position was currently vacant. One name of a middle level administrative position was eliminated from the list when it was discovered that the person, employed at one community college, was listed at two of its campuses. A total of 75 middle level administrators were identified to participate in the study.

Ten elementary-secondary school districts were chosen at random from each of the 15 merged educational areas (Iowa Department of Education, 1992). This was done by using a table of random numbers (Glasnapp & Poggio, 1985). A total of 150 elementary-secondary school districts were selected in Iowa. It was determined that when identified schools had

shared superintendents, the second school administered by a shared superintendent was eliminated. Another school district was then selected in the same merged area to replace the school that was deleted from the list, by using the same process of random numbers. This occurred eight times.

Of 21 selected schools, it was found that their students, in grades 7-12 or 9-12, were being sent to another school district. There was no high school principal employed at the originally selected school district. A high school principal was then identified from the school district that the selected school district's students were assigned to attend. In two cases, the originally selected school had their 7-12 or 9-12 students attend two or more schools. The researcher then selected the first of the schools listed in the Iowa Educational Directory and obtained the name of the high school principal. Of the 21 elementary-secondary districts that students were to attend, 6 of the school districts were on the original list of randomly selected schools. Fifteen school districts were not on the original list of selected schools. When a selected school district had more than one high school, one of the district's high schools was randomly selected and its high school principal was chosen. In the end, 150 high

school superintendents and 144 high school principals were asked to participate in the study.

A total of 402 community college and high school administrators were selected to participate in the study. Specifically, these were 15 community college presidents, 18 community college top level administrators, 75 community college middle level administrators, 150 high school superintendents, and 144 high school principals.

#### Collection of Data

Before any data were collected from individual administrators, approval to conduct the study was requested of, and given by, the Institutional Review Board of the University of Northern Iowa (Appendix D). "The Institutional Review Board is a committee charged with reviewing projects involving human subjects that are sponsored by the University of Northern Iowa" (Ratliff, p. 5).

On January 15, 1993, the administrators selected to participate in this study were sent the instrument (Appendix B), a cover letter (Appendix E), a scoring sheet (Appendix F), and a postage-paid return envelope. The cover letter indicated the nature and importance of the study. To be able to identify respondents and non-respondents, a specific numeric code was printed on each scoring sheet that was matched to a specific administrator. As a result of the

first mailing, 201 respondents, or 50% of the 402 administrators who had been sent the materials, returned their scoring sheets.

The 201 non-respondents were mailed a follow-up letter (Appendix G), an instrument (Appendix B), a scoring sheet (Appendix F), and a postage-paid return envelope on February 8, 1993. Sixty-two administrators responded to the second mailing. After the first and second mailings, a total of 263 administrators, or 65.4% of the those 402 administrators requested to participate in the study, had returned their responses.

Those not responding after an additional two weeks were mailed a letter (Appendix H) requesting that they participate in the study by responding to either of the instruments previously mailed. An additional 38 administrators responded to the third mailing. As a result of the three mailings, a total of 301 administrators, or 74.9% of the 402 administrators requested to participate in the study, had returned their responses. Of the 301 administrators who replied, 7 administrators chose not to fully complete the perception inventory. Consequently, there were 294 instruments, or 73.1% of the administrators' instruments requested, available for data analysis.

### Data Analysis Procedures

The data analysis consisted of two types. First, inferential statistics were applied. Three 2 x 5 Analysis of Variance (ANOVA) (articulation-administrative categories) with repeated measures on articulation, conducted on each of the three dimensions, were employed to evaluate whether differences existed among the perceptions of the respondents and to ascertain if interactions were present. Second, data were summarized using descriptive statistics of central tendency, variability, and the form of distribution. This included mean, standard deviation, and range. The respondents' information on the scoring sheets was converted to statistical data and analyzed at the Academic Computer Center located at the University of Northern Iowa.

It was anticipated that the obtained data met two conditions necessary for the use of analysis of variance. These conditions were: (a) each of the groups must be a random sample from a normal population, and (b) the variances of all groups must be equal in the population (Glasnapp & Poggio, 1985; Norusis, 1988; Smith, 1985).

### Summary

The researcher utilized an ex post facto design in an attempt to ascertain the differences of ideal and actual articulation of vocational education curriculum between Iowa community colleges and high schools, as perceived by

presidents, top level administrators, middle level administrators, superintendents, and principals. The entire population of community college presidents, top level administrators, and middle level administrators were asked to participate in the study. A random selection of Iowa elementary-secondary school districts were identified. High school superintendents and principals of the selected school districts were identified and asked to participate in the study. The instrument was designed as a result of reviewing the related literature and seeking permission to use the statements of one instrument. A pilot study was conducted outside the state of Iowa. Administrators asked to participate in the pilot study included community college and high school administrators.

A cover letter, instrument, and scoring sheet were sent to the administrators selected to participate in the study. The data analysis consisted of descriptive and inferential methods. Three 2 x 5 Analysis of Variance (ANOVA) (articulation-administrative categories) with repeated measures on articulation, conducted on the three dimensions of articulation, were employed to evaluate whether differences existed among the respondents and to ascertain if interactions were present. The constant comparative method of qualitative analysis was utilized to analyze the administrators' responses to the two open-ended questions.

## CHAPTER IV

### PRESENTATION AND ANALYSIS OF DATA

The purpose of this study was two-fold: (a) to investigate the perceptions of community college middle level administrators, top level administrators, presidents, high school superintendents, and principals regarding ideal and actual vocational-technical curriculum articulation practices between community colleges and high schools, and (b) to investigate the differences of perceptions of the community college and high school administrators regarding ideal and actual vocational-technical curriculum articulation practices. The review of literature revealed that few studies had been conducted which examined the vocational-technical curriculum articulation perceptions of administrators at community college and high school levels.

The study was designed to answer 12 research questions. To gather data to answer these questions, the investigator adapted the statements from the HS-CCVEPI (Kauer, 1979). In this chapter, the findings of the study, that is, the data from the perception inventories are presented and analyzed.

#### Response to the Inventory

On January 15, 1993, 402 administrators selected to participate in this study were sent the instrument (Appendix B), a cover letter (Appendix E), a scoring sheet (Appendix F), and a postage-paid return envelope. As a result of the



mailing, 201 respondents, or 50% of the 402 administrators who had been sent the materials, returned their scoring sheets.

The non-respondents, 201 administrators, were mailed a follow-up letter (Appendix G), an instrument (Appendix B), a scoring sheet (Appendix F), and a postage-paid return envelope on February 8, 1993. Sixty-two administrators responded to the second mailing. After two mailings, a total of 263 administrators, or 65.4% of those requested to participate in the study, had returned their responses.

A letter (Appendix H) was mailed February 24, 1993 to the non-responders requesting that they participate in the study by responding to either perception inventory previously sent to them. As a result, 38 administrators responded to the third mailing. A total of 301 administrators, or 74.9% of the 402 administrators requested to participate in the study, had returned their responses. No additional follow-up request was done. Of the 301 administrators who replied, seven chose not to complete the inventory. Consequently, there were 294 usable perception inventories available for the analysis of data. This represented 73.1% of the total administrators originally requested to participate in the study. Table 1 presents data on the response rate by administrative category.

Table 1

Response Rate by Administrative Categories

Administrative Categories	<u>N</u> Asked To Participate	Responders	Percentage of Categories
Presidents	15	11	73.3
Top Level Administrators	18	12	66.7
Middle Level Administrators	75	55	73.3
Superintendents	150	106	70.7
High School Principals	144	110	76.4
Total	402	294	73.1

Data Analysis

The following section presents an analysis of the responses to the research questions submitted at the outset of the investigation. The data from the returned inventories were analyzed at the Academic Computer Center at the University of Northern Iowa. SAS, version 6.07, was used for preparing the data for analysis and for providing statistical treatment of the data.

Analysis of the data involved both descriptive and inferential procedures. Descriptive procedures were

utilized to describe the extent of how administrators perceived articulation in its three dimensions should exist (ideal) and actually exists. Administrators' mean scores, with standard deviations, are presented for both ideal and actual articulation in each dimension by administrative category.

A second set of analysis involved inferential procedures utilizing three separate 2 x 5 Analysis of Variance (ANOVA) (articulation-administrative) to examine the main effects of administrative categories, articulation, and the interaction between those factors. The between-subjects variable was administrative categories: community college presidents, top level administrators, middle level administrators, high school superintendents, and principals. The within-subjects variable was actual and ideal articulation as measured by the HS-CCVEPI. Hypotheses are presented as null hypotheses, that is, statements that no differences exist between the populations being compared. The investigator used .05 as the acceptable level of significance. If a significant main effect and/or interaction was detected, appropriate post hoc comparisons were conducted to determine the source of differences.

Because there were unequal  $n$  in the study (see Table 1), the design resulted in unequal cell sizes. Therefore, it was necessary to utilize the General Linear Models

procedure in SAS for unbalanced analysis (Lindman, 1992). The Type III analysis in SAS(GLM) produced the analysis of variance necessary to allow the testing of hypotheses concerning the unweighted means that the researcher was interested in (Barcikowski, 1983). The results of the analysis are presented separately by articulation dimensions.

#### Information Dimension

The means and standard deviations from administrative scores on the information dimension are presented in Table 2. A summary table of Analysis of Variance (ANOVA) is presented in Table 3.

#### Research Questions 1 Through 10

Research questions 1 through 10, presented in Chapter 1, asked to what extent administrators perceived that articulation in its three dimensions (information/communication/interaction) should exist (ideal) and actually exists. These research questions, pertaining to the information dimension, are addressed in Table 2. Based on the administrators' mean scores, as presented in Table 2, it is apparent that administrators, in all categories, perceive that additional articulation efforts need to transpire in the information dimension.

Table 2

Administrators' Mean Scores of the Actual and Ideal  
Articulation of the Information Dimension

Administrative Categories	Information Dimension	
	Actual Articulation	Ideal Articulation
Presidents	2.81 (.53)	4.22 (.44)
Top Level Administrators	2.74 (.51)	4.05 (.70)
Middle Level Administrators	2.73 (.74)	4.17 (.67)
Superintendents	3.07 (.61)	4.00 (.57)
High School Principals	3.12 (.55)	4.08 (.50)
All Categories	3.00 (.63)	4.07 (.56)

Note. Numbers given are means with standard deviations shown in parentheses.

Research Question 11 and Hypothesis Test

Research Question 11. To what extent do the perceptions of administrators differ regarding actual and ideal articulation in its three dimensions (information/communication/interaction)?

Table 3

Summary Table of Analysis of Variance For The Dependent Variable, Information Dimension

Source	df	SS	MS	F
Between-subjects	293			
Group	4	2.11	.53	1.54
Error	289	100.26		
Within-subjects	294			
AI	1	86.87	86.87	** 252.86
Group * AI	4	6.39	1.60	** 4.65
Error-within	289	99.29	.34	
Total	587	376.19		

Note. \*  $p < .05$ . \*\*  $p < .01$ .

Null Hypothesis 1. There are no differences in perceptions of articulation of vocational education programs between the ideal and actual articulation of the information dimension as measured by the scores on the HS-CCVEPI.

Results indicated there were significant differences, [ $F(1,289) = 252.86, p = .0001$ ], therefore, Null Hypothesis 1 was rejected. The administrators' mean score ( $M = 4.07$ ) for ideal articulation in the information dimension was significantly different from that of the mean score ( $M =$

3.00) of the actual articulation in the information dimension at the .05 level. High school and community college administrators clearly believe that additional articulation efforts ought to be occurring in the information dimension.

#### Research Question 12 and Hypothesis Test

Research Question 12. To what extent are the differences between perceptions of articulation practices of vocational education programs a function of administrative positions?

Null Hypothesis 2. There is no interaction between administrative categories and articulation of the information dimension as measured by scores on the HS-CCVEPI.

The results of the analysis indicated a significant interaction between articulation of the information dimension and the five administrative categories, [ $F(4,289) = 4.65, p = .0012$ ], therefore, Null Hypothesis 2 was rejected. An interaction plot is presented in Figure 1 to assist the reader in understanding the nature of the interaction.

It is noteworthy the data reveal that while the high school administrators perceive that more articulation efforts are taking place in the information dimension, than what the community college administrators believe,

perceptions from two of the three community college administrative categories indicate more efforts ought to be put forth in this dimension.

A follow-up with simple main effect analysis for both actual articulation x administrative categories, and ideal articulation x administrative categories was completed. The

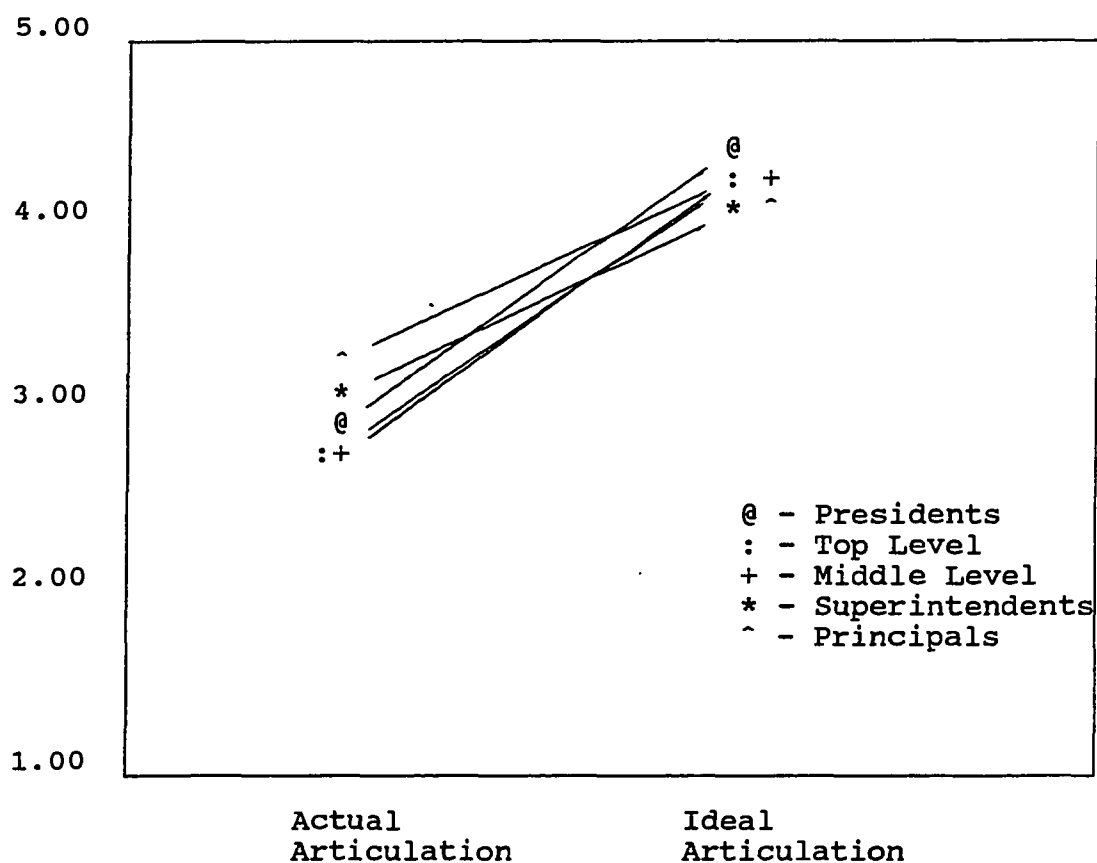


Figure 1. Interaction--Administrative Categories and, Actual and Ideal Articulation in the Information Dimension



following null hypothesis was tested: Null Hypothesis 3. There are no differences in perceptions of administrators of different categories in the actual articulation of the information dimension as measured by scores on the HS-CCVEPI.

Results indicated that there were significant differences [ $F(4,289) = 4.79, p = .0009$ ], therefore, Null Hypothesis 3 was rejected. Tukey's Studentized Range (HSD) Test was used to determine the means between which significant differences existed (Huck, Cormier, & Bounds, Jr., 1974). Not all the administrative categories differed from one another. However, it was discovered that the middle level administrators' mean score ( $\bar{M} = 2.73$ ) differed significantly from those of the high school principals' mean score ( $\bar{M} = 3.12$ ). Also, the middle level administrators' mean score ( $\bar{M} = 2.73$ ) differed significantly from those of the superintendents' mean score ( $\bar{M} = 3.07$ ). Based on these data, high school administrators clearly perceive that there are more articulation efforts taking place in the information dimension, than do the community college middle level administrators.

Null Hypothesis 4. There are no differences in perceptions of administrators of different categories in the ideal articulation of the information dimension as measured by scores on the HS-CCVEPI.

Results indicated that there were no significant differences, [ $F(4,289) = 1.07, p = .3704$ ], therefore, Null Hypothesis 4 was not rejected. Administrators, in general, feel the same as to what should be occurring in articulation practices of the information dimension.

The test for between-subject (administrative categories) effect revealed no significant differences [ $F(4,289) = 1.54, p = .1920$ ]. Results indicate that any differences in administrators' perceptions were essentially the same whether they were actual or ideal articulation of the information dimension.

Overall, it is clear that all community college and high school administrators attest that when it comes to articulation of vocational education curriculum in the information dimension, they were not satisfied with the current level of articulation practices and indicated that additional efforts need to be made. While high school administrators perceive more efforts in this area are presently taking place, as compared to the perceptions of the middle level administrators, all community college and high school administrators feel essentially the same as to the degree that articulation efforts should take place in the future in the information dimension.

### Communication Dimension

The means and standard deviations from administrative scores on the communication dimension are presented in Table 4. A summary table of Analysis of Variance (ANOVA) is presented in Table 5.

#### Research Questions 1 Through 10

Research questions 1 through 10, presented in Chapter 1, asked to what extent administrators perceived that articulation in its three dimensions (information/communication/interaction) should exist (ideal) and actually exists. These research questions, pertaining to the communication dimension, are addressed in Table 4. Based on the administrators' mean scores, as presented in Table 4, it is apparent that all community college and high school administrators feel additional articulation efforts in the communication dimension ought to be occurring.

#### Research Question 11 and Hypothesis Test

Research Question 11. To what extent do the perceptions of administrators differ regarding actual and ideal articulation in its three dimensions (information/communication/interaction)?

Null Hypothesis 5. There are no differences in perceptions of articulation of vocational education programs between the ideal and actual articulation of the

Table 4

Administrators' Mean Scores of the Actual and Ideal  
Articulation of the Communication Dimension

Administrative Categories	Communication Dimension	
	Actual Articulation	Ideal Articulation
Presidents	3.25(.73)	4.62(.19)
Top Level Administrators	3.57(.62)	4.52(.56)
Middle Level Administrators	3.23(.79)	4.44(.55)
Superintendents	3.11(.78)	4.17(.55)
High School Principals	3.07(.64)	4.12(.58)
All Categories	3.14(.73)	4.23(.57)

Note. Numbers given are means with standard deviations shown in parentheses.

communication dimension as measured by the scores on the HS-CCVEPI.

Results indicated there were significant differences, [ $F(1,289) = 175.89, p = .0001$ ], therefore, Null Hypothesis 5 was rejected. The administrators' mean score ( $\bar{M} = 4.23$ ) for

Table 5

Summary Table of Analysis of Variance For The Dependent Variable, Communication Dimension

Source	df	SS	MS	F
Between-subjects	293			
Group	4	9.17	2.29	** 5.34
Error	289	117.08	.41	
Within-subjects	294			
AI	1	75.47	75.47	** 175.89
Group * AI	4	1.11	.28	.65
Error-within	289	124.00	.43	
Total	587	426.50		

Note. \*  $p < .05$ . \*\*  $p < .01$ .

ideal articulation in the communication dimension was significantly different from that of the mean score ( $\bar{M} = 3.14$ ) of the actual articulation in the communication dimension at the .05 level. High school and community college administrators clearly believe that additional articulation efforts ought to be occurring the communication dimension.

### Research Question 12 and Hypothesis Test

Research Question 12. To what extent are the differences between perceptions of articulation practices of vocational education programs a function of administrative positions?

Null Hypothesis 6. There is no interaction between administrative categories and articulation of the communication dimension as measured by scores on the HS-CCVEPI.

The results of the analysis indicated no significant interaction between articulation of the communication dimension and the five administrative categories, [ $F(4,289) = .65, p = .6283$ ], therefore, Null Hypothesis 6 was not rejected. An interaction plot is presented in Figure 2 to assist the reader in understanding that there was no significant interaction present.

The results of the test for differences in the between-subjects, administrative categories, [ $F(4,289) = 5.34, p = .0004$ ], suggested a follow-up analysis. Tukey's Studentized Range (HSD) Test was used to determine the means between which significant differences existed (Huck et al., 1974). Not all administrative categories differed from one another. However, it was discovered that the top level administrators' mean score ( $\bar{M} = 4.00$ ) differed significantly from those of the high school superintendents' mean score ( $\bar{M}$

= 3.64) and from those of the high school principals' mean score ( $\bar{M} = 3.60$ ). The middle level administrators' mean score ( $\bar{M} = 3.83$ ) differed significantly from that of the principals' mean score ( $\bar{M} = 3.60$ ). Based on these data, the differences in perceptions of two of the three community

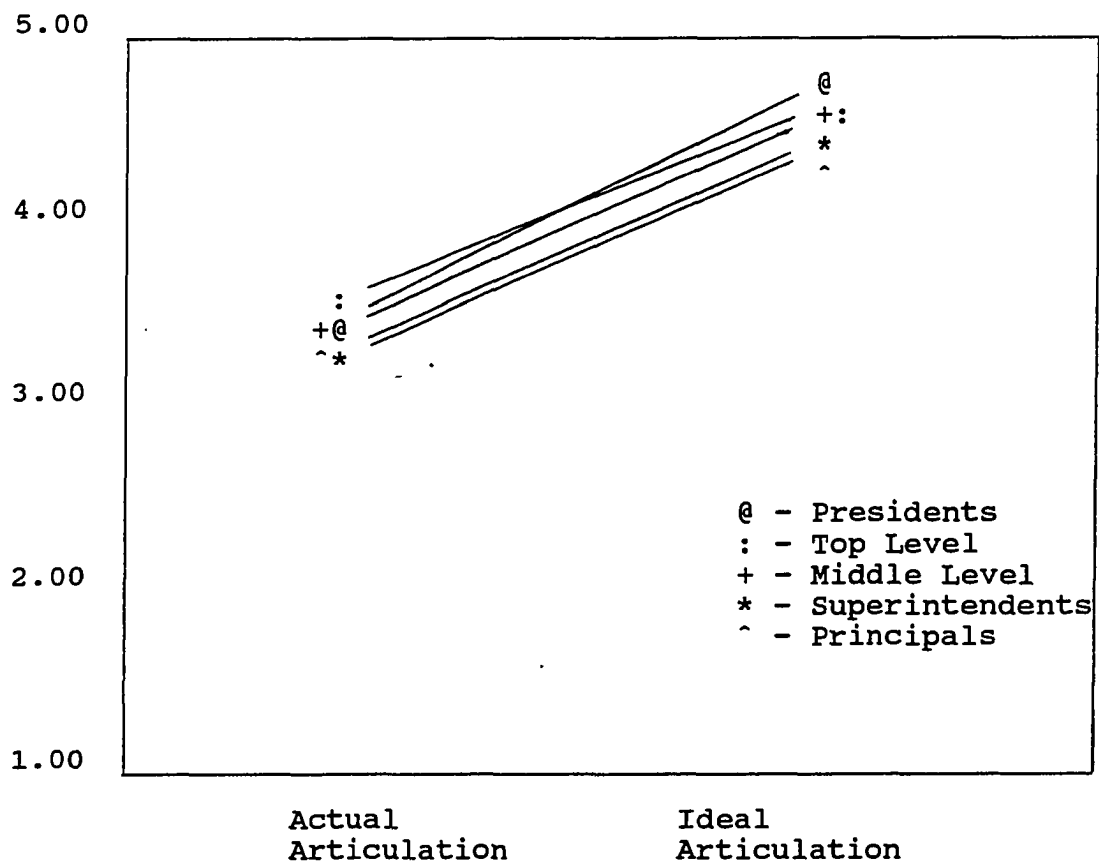


Figure 2. Interaction--Administrative Categories and, Actual and Ideal Articulation in the Communication Dimension

college administrative categories and the two high school administrative categories are essentially the same in the communication dimension

Overall, it is apparent that community college and high school administrators, in general, are not satisfied with the current level of articulation efforts in the communication dimension and desire that additional efforts be implemented. Administrators in two of three community college administrative categories not only believe more articulation efforts are taking place in the communication dimension, as compared to high school administrators' perceptions, but that ideal situations would include greater effect than what the high school administrators expect.

#### Interaction Dimension

The means and standard deviations from administrative scores on the interaction dimension are presented in Table 6. A summary table of Analysis of Variance (ANOVA) is presented in Table 7.

#### Research Questions 1 Through 10

Research questions 1 through 10, presented in Chapter 1, asked to what extent that administrators perceived that articulation in its three dimensions (information/communication/interaction) should exist (ideal) and actually exists. These research questions, pertaining to the



Table 6

Administrators' Mean Scores of the Actual and Ideal  
Articulation of the Interaction Dimension

Administrative Categories	Interaction Dimension	
	Actual Articulation	Ideal Articulation
Presidents	2.63 (.97)	4.25 (.56)
Top Level Administrators	2.69 (.50)	4.16 (.71)
Middle Level Administrators	2.37 (.68)	3.84 (.95)
Superintendents	2.48 (.80)	3.90 (.82)
High School Principals	2.34 (.67)	3.76 (.76)
All Categories	2.42 (.73)	3.86 (.82)

Note. Numbers given are means with standard deviations shown in parentheses.

interaction dimension, are addressed in Table 6. Based on the administrators' mean scores, as presented in Table 6, community college and high school administrators, in general, clearly believe that additional articulation efforts in the interaction dimension need to occur.

### Research Question 11 and Hypothesis Test

Research Question 11. To what extent do the perceptions of administrators differ regarding actual and ideal articulation in its three dimensions (information/communication/interaction)?

Null Hypothesis 7. There are no differences in perceptions of articulation of vocational education programs between the ideal and actual articulation of the interaction dimension by the scores on the HS-CCVEPI.

Results indicated there were significant differences,  $[F(1,289) = 182.04, p = .0001]$ , therefore, Null Hypothesis 7 was rejected. The administrators' mean score ( $M = 3.86$ ) for ideal articulation in the interaction dimension was significantly different from that of the mean score ( $M = 2.42$ ) of the actual articulation in the interaction dimension at the .05 level. High school and community college administrators clearly believe that additional articulation efforts ought to be occurring in the information dimension.

### Research Question 12 and Hypothesis Test

Research Question 12. To what extent are the differences between the perceptions regarding ideal and actual articulation practices of vocational education programs a function of administrative positions?

Table 7

Summary Table of Analysis of Variance For The Dependent Variable, Interaction Dimension

Source	df	SS	MS	F
Between-subjects	293			
Group	4	6.18	1.55	2.16
Error	289	138.35	.48	
Within-subjects	294			
AI	1	130.21	130.21	** 182.04
Group * AI	4	.28	.07	.10
Error-within	289	206.71	.72	
Total	587	656.00		

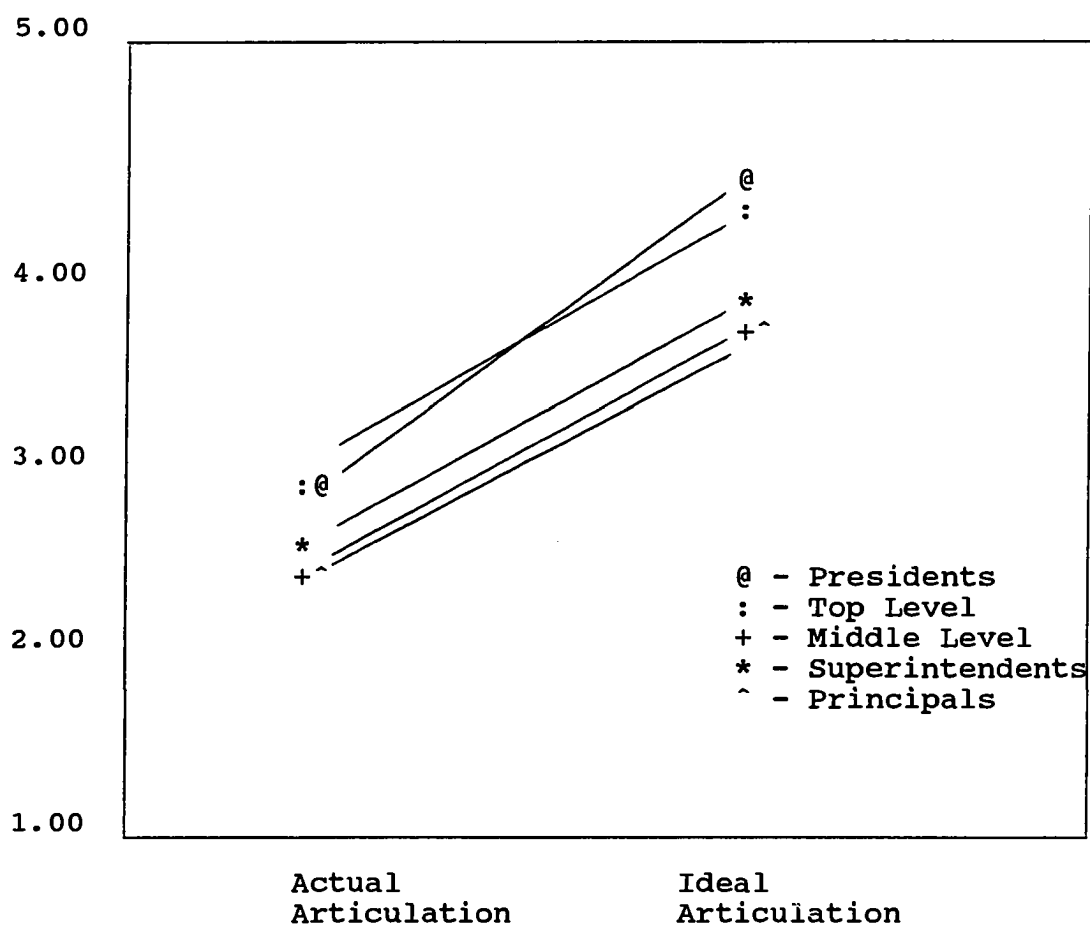
Note. \*  $p < .05$ . \*\*  $p < .01$ .

Null Hypothesis 8. There is no interaction between administrative categories and articulation of the interaction dimension as measured by scores on the HS-CCVEPI.

The results of the test indicated no significant interaction between articulation of the interaction dimension and the five administrative categories, [ $F(4,289) = .10, p = .9825$ ], therefore, Null Hypothesis 8 was not rejected. An interaction plot is presented in Figure 3 to

assist the reader in understanding that there were no significant interactions present.

The test for between-subject (administrative categories) effect revealed no significant differences [ $F(4,289) = 2.16, p = .0736$ ]. Results indicated that



**Figure 3.** Interaction--Administrative Categories and, Actual and Ideal Articulation in the Interaction Dimension

administrators' perceptions were essentially the same whether they were actual or ideal articulation of the interaction dimension.

As in the information and communication dimensions of articulation, it is apparent that all community college and high school administrators believe that additional articulation efforts in the interaction dimension need to transpire. Administrators' perceptions were essentially the same in either actual or ideal articulation of the interaction dimension.

#### Analysis of Narrative Responses

Near the end of the HS-CCVEPI, the responders were given two questions requiring narrative responses. The questions were:

97. Regarding your position at your institution, how important is vocational curriculum articulation between high schools and community colleges?

98. How well do you think the process of initiating and expanding vocational education curriculum articulation between high schools and community colleges is working in your area?

To effectively discover and analyze trends in the administrators' responses, the constant comparative method of qualitative analysis was utilized. Glaser and Strauss (1967) stated the constant comparative method is concerned

with generating and plausibly suggesting many categories and properties about general problems. In using the constant comparative method of qualitative analysis, D. Tidwell (personal communication, June 16, 1993) indicated there was no need for another reader to analyze the responses for inter-reader reliability. Investigators are presumed to have expertise in the field being analyzed, and as a result, should effectively interpret and analyze the responses utilizing the constant comparative method of qualitative analysis.

Before analyzing the administrators' responses for Questions 97 and 98, the investigator first separated all responses by question and administrative category. In the first-level analysis, categories for the responses were developed using the language of the responders. The resultant categories, for the responses in the first-level analysis that pertain to Questions 97 and 98, appear in Appendix I.

During the second-level analysis of the constant comparative method of qualitative analysis, collapsing of similar categories was suggested to aid in the analysis and presentation of responses (Glaser & Strauss, 1967). The process of collapsing similar categories involved the investigator analyzing responses placed under categories during the first-level analysis to determine if responders,

while using different terminology, were essentially saying the same thing (D. Tidwell, personal communication, July 8, 1993). Upon review of the original categories, and after consulting definitions of the categories, collapsing of some categories in each of the administrators' groups was done (Costello, 1991). The new categories appear in Appendix J.

Percentages of responses in the resultant categories were calculated to assist in the analysis. The investigator identified the categories and percentage of responses for Question 97 for each administrative category. They are:

Presidents. Extremely Important, 40%; Very Important, 50%; and, Important, 10%.

Top Level Administrators. Extremely Important, 25%; Very Important, 37.5%; and, Important, 37.5%.

Middle Level Administrators. Extremely Important, 28.6%; Very Important, 40.8%; Important, 20.4%; and, Not Important, 10.2%.

Superintendents. Extremely Important, 22.4%; Very Important, 50%; Important, 23.5%; and, Not Important, 4.1%.

Principals. Extremely Important, 16.8%; Very Important, 43.6%; Important, 28.7%; Relatively Important, 3%; and, Not Important, 7.9%.

Overall, administrators in all categories believe that vocational education articulation between the high schools and community colleges is extremely or very important. Only

a very small percentage indicated articulation was not important.

The investigator identified the categories and percentages of responses for each administrative category for Question 98. They are:

Presidents. Very Well, 50%; Well, 20%; Fair, 10%; and Very Slow, 20%.

Top Level Administrators. Very Well, 25%; Well, 25%; Fair, 37.5%; and, Very Slow, 12.5%.

Middle Level Administrators. Very Well, 14%; Well, 10%; Fairly Well, 32%; Not Well, 28%; and, Improving, 16%.

Superintendents. Very Well, 11.5%; Well, 16.7%; Fairly Well, 26%; Not Well, 13.5%; Very Slowly, 15.6%; Improving, 8.3%; and, Just Starting, 8.3%.

Principals. Very Well, 10.8%; Well, 18.6%; Fairly Well, 13.7%; Not Well, 12.7%; Poorly, 4.9%; None, 2.9%; Very Slowly, 14.7%; and, Just Starting, 21.6%.

Overall, community college presidents and top level administrators view the process of vocational education articulation as working very well or well. A substantial portion of the community college middle level administrators, high school superintendents, and principals believe that the articulation process is not working very well.



After the first- and second-level analysis, the constant comparative method of qualitative analysis suggests a third-level of analysis. At this level, the investigator summarizes, in his or her language, what the responders stated by category. Therefore, the summary of responses, in each category, for each administrative category for Question 97 follows:

Presidents. The presidents who perceived that vocational curriculum articulation between the high schools and community colleges was Extremely Important felt that articulation was good for the students; it reduced the purchases of costly equipment; and, it maintained relationships with the high schools. One president indicated,

Vocational articulation between the high school and the community college is extremely important. The importance is derived from the fact that I truly believe that very few occupations that will pay a living wage can be taught at the high school level, or at least the training completed at the high school level. Consequently, it is a real disservice for students to engage in a vocational curriculum at the high school level that is aimed at a minimal pay level or is not articulated to the community college.

Presidents who indicated that articulation was Very Important said so because it would help students progress in a technological society, and that it would save students time and money. One president stated, "Very important. Saves students time and money. Will help to keep at risk

students in high schools and then into advanced placement at the community college vocational programs."

The president who rated articulation as Important stated that there should be a continuum of education from Kindergarten through the second year of postsecondary education.

Top Level Administrators. Top level administrators indicated that vocational curriculum articulation between the high schools and community colleges was Extremely Important because it strengthened vocational programs at both levels, and that the Iowa Department of Education encouraged it. A top level administrator stated,

Articulation is essential, not only for those students who continue their study at a community college, but to help strengthen vocational programs at the secondary level. It also will improve programs at the community colleges by allowing for more advanced technical studies. This will be critical as we develop Tech-Prep programs.

Top level administrators who indicated that articulation was Very Important failed to elaborate as to why they indicated articulation was Very Important. The top level administrators who thought articulation was Important indicated that it improved the vocational programs at both levels, and it developed better vocational graduates. One top level administrator indicated, "Articulation with high schools is vital if we are to maintain the vocational programs."

Middle Level Administrators. Middle level administrators who perceived that vocational curriculum articulation between the high schools and community colleges as Extremely Important indicated that articulation helped students reduce duplication of effort; it better prepared students at the high school level; it saved the taxpayers money; it promoted success for vocational programs at both levels; and, it promoted faculty to faculty communication between the educational institutions. One middle level administrator stated,

It is extremely important. Students entering postsecondary technical programs must have adequate preparation in basic skills as well as technical skills. Otherwise, they waste time remediating and do not have opportunities for advanced placement and advanced skills training at the community college level.

Those middle level administrators who felt articulation was Very Important felt so because it was their specific job; it helped to promote program enrollments; students progressed faster through their programs; it reduced duplication of student effort; and, it added credibility to the secondary schools' vocational programs. A middle level administrator said,

It can provide a very positive opportunity for high school students who have somewhat decided on a vocational or technical career to receive guidance from someone at the high school to take courses and vocational programs. It could provide them the opportunity for advanced standing or advanced placement in the colleges' programs.

The middle level administrators who indicated that articulation was Important indicated that articulation added continuity to the curriculum, and that it was mandated by the State. One middle level administrator responded, "This process is important and should evolve as part of a steady manner of curriculum development and implementation."

The middle level administrators who indicated that articulation was Not Important felt that the high schools should focus on the basic skills for students and that the community colleges should focus on the technical skills; there was no money allocated to promote and conduct articulation efforts; and, that some community college technical curriculum had no counterpart at the high school level. A middle level administrator stated, "Not very important. High school should prepare students in basic skills so they can learn the technical skills at the community college."

Superintendents. Superintendents who rated vocational curriculum articulation between the high schools and community colleges as Extremely Important said so because it helped prepare students for a rapidly changing technological society; it helped vocational programs to survive at the high school level; it aided in the students' transition to the community college; it reduced duplication of effort; and, it promoted efficient utilization of resources. One

superintendent indicated, "Articulation is extremely important because our students should not have to duplicate a course if they are proficient. Students can get more out of their education with articulation."

Those superintendents who felt articulation was Very Important indicated that it helped students acclimate to the community college; it promoted efficient use of limited resources; it was mandated by the Iowa Department of Education; it better prepared students for the job market; it reduced duplication of effort on all parts; and, it fostered knowledge of what each institutional level was doing. A superintendent responded, "Very important. Articulation offers an opportunity to conserve student time by identifying needed competencies and avoiding duplication of instruction and related costs."

The reasons cited by Superintendents as to why articulation was Important was that it was cost effective; it helped students and faculty at both institutions; it was mandated by the Department of Education; and, it helped promote and give credibility to the vocational offerings at the high schools. A superintendent stated, "With the new state vocational mandates, articulation is a must. It is one of the best things that have come out of the mandates."

Those Superintendents who thought articulation was Not Important indicated that only the community colleges should

have vocational offerings, and that the high schools should not be a mini-college. One superintendent indicated, "Vocational education in terms of specific programs ought to be taught by community colleges."

Principals. Principals who indicated vocational education curriculum articulation between the high schools and community colleges was Extremely Important felt that society demanded a more highly skilled technical worker; it prevented duplication of effort on the part of the student; it saved money and resources; high school students could better see the value of their courses; and, it allowed for a three or four year vocational program. One principal stated,

If we are setting up our four year high school programs with competency level approaches, I feel it is extremely important for high schools and community colleges to develop curriculum on a progressive scale, so that after two years of community college the student can become employable and productive in society.

Principals who felt articulation was Very Important perceived that articulation reduced costs for the students and the institutions; it met the requirements of S.F. 449; it helped students set goals; it promoted communication between the two levels; it gave students credit for what they have learned; it helped students see the future; it reduced duplication of effort; and it met the needs of students. One principal responded,

The articulation between high schools and community colleges is very important. It gives the high schools the directions to move with their vocational curriculum. The students that are going to be vocational driven have a path to follow as they progress to their future.

Principals who thought articulation was Important said so because they had to comply with the Department of Education mandates; it helped a small population of students; and, it prevented duplication of effort. A principal stated, "It is becoming mandatory so it is probably important. It gives high schools direction in where to go with curriculum development and change."

Principals who indicated that articulation was Not Important felt that they had no students utilizing the process; that the community colleges were of little help and assistance with articulation efforts; and, that it served as another hurdle for students. One principal responded, "Not very important. The two are distinct separate facilities and organizations. The school district's vocational programs and the community college's programs do not work cooperatively."

Overall, the reasons cited by the administrators as to how they perceived the importance of vocational education curriculum articulation between the high schools and community colleges varied. The responses ranged from the ideal--that it was good for society, that is was good for the two levels of institutions and their respective

vocational programs, and that it was good for the student, to that of the practical--articulation was mandated, so it had to be done.

The summary of responses, in each category, for each administrative category for Question 98 follows:

Presidents. The presidents who responded as to how well the process of initiating and expanding vocational educational curriculum articulation between the high schools and community colleges was working as Very Well indicated that in one case their college was gaining momentum; the process was in place whereby the two educational levels were communicating and working very well together; and, in one case, their college was responsible for most high school vocational programs in their area. A president responded,

In the \_\_\_\_\_ Iowa area, I believe we have a process of communicating and working together. We are at the formative stages of what we can do together at the secondary and postsecondary level, and I believe there is a great amount of work yet to be done.

Presidents who responded Well indicated that they had a well documented initiative with a large number of high schools, and were looking toward the Tech-Prep initiative to assist in the articulation efforts. One president stated, "We have a well documented initiative and are currently working with 56 high schools. Actual agreements are slow in reaching finalization." The presidents who suggested the



process was working Fair and Very Slow did not elaborate as to why they felt that way.

Top Level Administrators. Top level administrators who responded Very Well as to how the process of initiating and expanding the vocational education curriculum articulation process between the high schools and community colleges indicated that they felt they were ahead of most other community colleges, and that it was moving along very well. A top level administrator indicated, "The process is moving along well. Will accelerate in the years to come. Good attitudes exist in high schools and community colleges."

Top level administrators who thought the process was working Fair felt that while efforts had been initiated in this area, more articulation efforts needed to take place. One top level administrator stated, "Fairly well, but need additional emphasis and marketing."

Top level administrators who felt that the process was Very Slow indicated that most of the high schools in their area did not have vocational programs to articulate with. A top level administrator responded, "The process is very slow."

Middle Level Administrators. Middle level administrators who responded Very Well as to how the process of initiating and expanding vocational education articulation between the high schools and community colleges

indicated that high school and community college instructors were working very well with one another; that all the schools had an interest in articulating; and, they wanted their students to receive college credit for what they learned in high school vocational programs. One middle level administrator felt, "Excellent. High schools and community college instructors are working together, better now than in the past 20 years."

Those middle level administrators who thought the process was working Well felt: the articulation process met the S.F. 449 requirements; it initiated dialogue; it coordinated efforts for advanced students at the high school level; and, that only a limited number of students would take advantage of the articulation process. A middle level administrator responded, "The process is working well, however, we have had only a handful of students take advantage of the agreements."

The middle level administrators who indicated that the articulation process was working Fairly Well thought so because, while some initiatives were underway, much more needed to be done. They also felt it was a very time consuming process, and that there was a lack of cooperation between the high schools and community college. One middle level administrator stated, "Slowly, but fairly well. Seems to be a desire to meet the minimum requirement and not much

more. Believe there is still some perceived job security threat among high school vocational teachers."

Middle level administrators who thought the articulation process was working Not Well indicated that high school students were not mature enough to make long term decisions; that the process was non-guided and very involved; that high schools have not defined their course competencies; and, the articulation was at a stand still. One middle level administrator responded, "Not very well. There is confusion passed from the state regarding S.F. 449. In our district we are finally making a step towards the process."

Middle level administrators who thought the process of articulation was Improving felt that communication between the two institutions had greatly improved; acceptance and perceptions of the process had improved; and, that Tech-Prep would help speed up the articulation process. A middle level administrator stated, "The process is in its infancy and will continue to expand and grow in the future."

Superintendents. Superintendents, responding Very Well, as to how they felt the process of initiating and expanding vocational education curriculum articulation between the high schools was working, indicated that they found the community colleges to be very receptive to the process; had several courses already articulated; felt that

S.F. 449 was responsible for the initiation and success of articulation; and, that Tech-Prep would continue to promote articulation between the two levels of institutions. A superintendent indicated,

We have found the community colleges to be very receptive to the idea of articulation. They have assisted us in the articulation process. We have also found most of their faculty to be interested in negotiating articulation agreements. All parties have a 'they can do' attitude. This is a change from years past when K-12 was not seen as being an equal partner in the educational process.

Those superintendents who felt the process was working Well indicated that while certain agreements were going well, much more needed to be done; that the Iowa Department of Education was a hurdle and not a help in the process; finding time when key faculty and administrators from the two institutions can get together was extremely challenging; and the lack of programs and populations made it a difficult process. One superintendent felt, "A sincere effort is beginning to improve communication and articulation. I believe much more must be done, but people will need to have time to do it."

Those superintendents who thought the process was working Fairly Well indicated that while efforts were good in some vocational areas, in others, they were nonexistent; and, that high school faculty were afraid of any change in the status quo. A superintendent responded, "It is working

in some areas because of the initiative of staff members at \_\_\_\_\_ Community College."

Superintendents who felt that the process of articulation was working Not Well indicated that scheduling and transportation problems presented formidable and challenging issues; that there was hesitancy at the community college level; and, that more funding was needed if the process was to truly work. One superintendent stated, "Not well. Colleges do not ask what the high schools are doing."

Those superintendents who stated that the articulation process was working Very Slowly thought that financial constraints were hurting the process; that high school faculty were not highly motivated in this activity; responses from the community colleges had been slow; and, that it is not a planned, orderly process. A superintendent responded, "Very slowly. The high school teachers are not highly motivated in this activity yet. There are a lot of unknowns."

Superintendents in some areas felt they could not assess as to how well the process was working as they were in the process of Just Starting. These superintendents indicated that the process was just beginning to take shape and that much more needed to be done. One superintendent stated,

We are beginning, but there is a great deal of unnecessary duplication. Many vocational students do not get varied offerings in the local schools due to high cost of equipment. Just answering the questionnaire brought to mind how far we have to go to improve vocational options for students.

The superintendents who indicated the process was Improving felt that the process was getting better and steadily improving, but had a ways to go before it was effective. A superintendent responded, "It is improving but it still has a ways to go before it is truly effective."

Principals. Principals who responded Very Well as to how they thought the process of initiating and expanding the vocational education curriculum process was working indicated that there were many good people at both levels of institutions working on the articulation process; special committees were working on the process; and, that curriculum directors at the high schools and coordinators at the community college were instrumental in establishing the success of the process. One principal stated, "Very well due to very good people working administratively at \_\_\_\_\_ and teaching in our high school."

Those principals who indicated the process was working Well stated that they had several articulation agreements in force, but there could be a lot more done in the area of articulation agreements. A principal indicated, "Pretty good. Articulation agreements have been signed and some curriculum writing has been done. Continued togetherness

between the high schools and community colleges needs to continue."

The principals who perceived the process as working Fairly Well thought that students were moving through their vocational programs faster; that many students were not taking advantage of the process; and, while there was a lot of interest in the process from the smaller districts, that the larger districts did not fully support it. A principal stated, "Fair. The process is difficult. Too much expected from overworked staff. This should have been implemented over the summer."

The principals who felt the process was working Not Well indicated they were forced to eliminate programs; that community colleges needed to set stronger guidelines for the articulation process; that neither institution really understood their role in the process; and, that distance between the institutions prevented students in accelerating through the vocational programs. One principal said, "Again, not going well, yet. Neither side really understands their role in articulation at the present time."

The principals who perceived the process as working Poorly failed to indicate as to why they felt this way. Principals who thought the process was working Very Slowly indicated that the community colleges needed to be more assertive in establishing what they need, and that plans

need to be developed to help the high schools with the articulation process. A principal responded, "It is a slow, slow process. Schools need to ask for help from the colleges and the state."

Principals who felt the articulation process was not working (None) indicated so because both the high schools and community colleges needed to re-define their mission and roles concerning vocational education. One principal indicated, "It is not. Part of it is our problem. High schools need to define their mission and roles. Community colleges need to do the same. Provisions for differences need consideration. Are high schools to be mini-colleges of the future?"

The principals who felt that the process was Just Starting indicated that they were in the infant stages of the articulation process; were hopeful of success; and, felt some resistance on the part of community college faculty. A principal stated,

We are really just getting articulation agreements in place and will know how it works when we have students attend the community college from our program. It is working well in that there is more communication between the colleges and high school.

Overall, the reasons cited by the community college and high school administrators as to how they believe the articulation process is working varied. A greater percentage of community college presidents and top level



administrators believe the process is working well, while a greater percentage of the community college middle level administrators, high school superintendents, and principals believe that the articulation process could be much improved.

Various reasons were cited by the administrators as to how they felt the process was working. Administrators, in all categories, whose responses were categorized as Very Well or Well indicated that they felt that successful communication procedures had been established between the high school and community college. These administrators cited the number of successful articulation agreements already in place and stated they were pleased with the cooperative spirit between the two institutions. The administrators, whose responses to Question 98 were categorized as Not Well, Poorly, or Very Slowly, indicated: that there was a general lack of understanding with the articulation process; it was a very time consuming process; and that plans needed to be developed to help both educational levels with the articulation process.

At the end of the HS-CCVEPI, the responders were given an opportunity to indicate if they desired a summary of the study. If the respondents wanted a summary of the study they were to mark the "A" circle in item 99 on the scoring sheet. One hundred thirty six respondents, or 46.3% of the

294 respondents, indicated they wanted a summary copy of the study. This percentage may indicate that a number of community college and high school administrators have an interest in learning more about articulation and want to know how other administrators perceive articulation practices.

CHAPTER V  
OVERVIEW, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

The purpose of this study was two-fold: (a) to investigate the perceptions of community college presidents, top level administrators, middle level administrators, high school superintendents, and principals regarding ideal and actual vocational-technical curriculum articulation practices between the community colleges and high schools, and (b) to investigate the differences of perceptions of the community college and high school administrators regarding ideal and actual vocational-technical curriculum articulation practices. The study included a self-assessment of perceptions of the community college and high school administrators regarding articulation practices on the HS-CCVEPI instrument. Descriptive procedures were utilized to describe the ways in which administrators perceived articulation practices. Inferential procedures were utilized to examine if differences in administrators' perceptions existed. Qualitative methods were utilized to analyze the administrators' responses to the open-end questions.

Chapters I, II, and III presented the conceptual background necessary for this study, presented a review of the related literature, and described the instrumentation used in the study. Chapter IV presented the data generated

by the instrument, HS-CCVEPI. The purpose of this chapter is to present an overview of the study, present conclusions the data suggest, and offer recommendations for educational practitioners and researchers.

### Study Overview

#### Vocational Education Curriculum Articulation

Within the formal education structure in the United States, most students proceed from one educational institution to another. Rarely do students complete their formal education within a single institution. This is particularly true for students engaging in vocational education. Most likely the vocational student moves from exploratory programs at junior high school to high school, then to technical college, junior and/or senior college or university (Selman & Wilmoth, 1989). Whitlock (1978) stated that these moves often resulted in unnecessary duplication of educational resources and curriculum, and caused students to waste time, effort, and lose motivation. This can be particularly true for the vocational student who moves from secondary school to the postsecondary community college.

The primary reason for the unnecessary duplication of educational resources and curriculum was due to the emerging two-year junior/community college becoming separate, both physically and philosophically, from the secondary school (Thornton, 1972). As a result, community colleges and high

schools became two distinct institutions, was governed by two separate board of directors, had different faculty and administrators, was housed in different and distant facilities, and had clearly different missions. This decentralized structure brought about a lack of communication between the community colleges and high schools. With the overall fragmentation of the educational institutions and the resultant lack of communication, Hull and Parnell (1991) stated that the student learning suffered.

Curriculum articulation is a significant approach to solving problems associated with the student transition from one educational institution to the next. Hull and Parnell (1991) defined curriculum articulation as "a process for linking two or more educational systems to help students make a smooth transition from one level to another without experiencing delays, duplication of courses, or loss of credit" (p. 42).

In the 1980s, there was a renewed, nation-wide interest in articulating vocational education courses and programs between the secondary schools and the community colleges. Hodgkinson (1986) and Parnell (1990) stated that the days were clearly over when these two distinct institutions remain isolated from one another; and, that the colleges needed to begin developing collaborative relationships with

the secondary schools. In one state, Iowa, articulation of vocational education curriculum is now mandated between the secondary schools and the community colleges (Iowa Department of Education, 1991b).

Selman and Wilmoth (1989) stated that the responsibility for leadership in articulation of vocational education was perceived to rest with postsecondary administrators. Community college presidents, top level administrators, and middle level administrators should work closely with secondary administrators, specifically the superintendents and principals, to foster interconnected and collaborative relationships through vocational education curriculum articulation.

Few studies have been conducted which examine the vocational curriculum articulation perceptions of administrators at community colleges and high schools. In the review of literature, no study was found that dealt with these perceptions of administrators in Iowa. At a time when it is not realistic or economically feasible to duplicate curriculum and/or resources, it is important to understand the vocational education curriculum articulation perceptions of those who will ultimately be given the task of initiating and enhancing articulation efforts. The administrators who will ultimately provide the leadership to facilitate the process of vocational education curriculum articulation

between the secondary schools and community colleges include the community college presidents, top level administrators, middle level administrators, high school superintendents, and principals.

### Conclusions

The study utilized descriptive procedures to identify the extent that community college presidents, top level administrators, middle level administrators, high school superintendents, and principals perceived articulation in its three dimensions should exist (ideal) and actually exist. This study also utilized three separate 2 x 5 Analysis of Variances (articulation-administrative categories), with repeated measures on articulation to examine if significant differences existed among the administrators' perceptions regarding ideal and actual vocational education articulation practices between the institutions as measured by the HS-CCVEPI instrument. The constant comparative method of qualitative analysis was utilized to discover trends and analyze trends in the administrators' responses to the open-end questions. Based upon the data gathered from the 294 community college and high school administrators, the following conclusions were drawn:

1. The extent to which administrators, in the five categories, perceived that articulation in its three

dimensions actually existing and what should occur (ideal) varied. A visual inspection of administrative mean scores on actual and ideal articulation in the three dimensions, in Tables 2, 4, and 6, illustrates the magnitude of administrators' perceptions. While the reader may choose to compare one administrative category mean scores, actual and/or ideal articulation, in the three dimensions, it was not the investigators' intent to determine differences or relationships among the three dimensions.

2. Significant differences in perceptions of articulation of vocational education programs between ideal and actual articulation of the information, the communication, and the interaction dimensions were identified. In all cases, the administrators perceived that more should be taking place in articulation efforts than what was presently occurring.

3. Significant interaction was identified between administrative categories and articulation of the information dimension. Significant differences were identified in administrators' perceptions in what was taking place, currently, in the information dimension. High school superintendents and principals perceived more was taking place now (actual) in the information dimension than the community college middle level administrators did. No significant differences were observed in perceptions of



administrative categories in what should (ideal) be taking place in articulation efforts in the information dimension.

4. No significant interaction was observed between articulation of the communication dimension and the five administrative categories. Significant differences between the perceptions of administrative categories and articulation in the communication dimension were observed. The differences in perceptions between the top level administrators and those of the high school superintendents and principals were essentially the same for both actual and ideal articulation in the communication dimension. The differences in perceptions between the middle level administrators and those of the principals were also essentially the same for both actual and ideal articulation in the communication dimension.

5. No significant interaction was observed between articulation of the interaction dimension and the five administrative categories. No significant differences in perceptions of administrative categories in the interaction dimension were identified.

6. A substantial number of administrators, in each administrative category, perceived vocational curriculum articulation between the high schools and community colleges as being Extremely Important and Very Important. Only a small percentage of middle level administrators,

superintendents, and principals viewed articulation as Not Important.

The administrators who perceived articulation as Extremely Important and Very Important viewed articulation as: good for students preparing for a career in a highly skilled technological society; good for vocational programs at both the secondary and postsecondary levels by increasing enrollment and credibility; it reduced costs, duplication of effort, and promoted efficient use of resources; it helped initiate and maintain relationship between the two levels and its faculties; and, it was a specific requirement of S.F. 449. The administrators who viewed articulation as Important indicated: it was mandated by S.F. 449; it served to improve and add credibility to the offerings at both levels, and thereby its graduates. The administrators who indicated articulation was Not Important felt: that there was no money allocated by the State to assist in the process; that the programs at both levels were dissimilar in curricular offerings; and, that only community colleges should offer vocational curriculum.

7. The administrators' perceptions as to how well the process of initiating and expanding vocational educational curriculum articulation between high schools and community colleges varied and tended to be spread out among the second-level categories. While the majority of presidents

and top level administrators viewed the process as working Very Well and Well, only a minority of middle level administrators, superintendents, and principals viewed the process as working that way. A substantial portion of the latter-mentioned administrators viewed the process as working Fair, Not Well, and Very Slowly. A small number of superintendents and principals indicated that it was too early to assess the process as their school had just recently begun the process.

Presidents and top level administrators who responded Very Well and Well indicated: their college was ahead of most community colleges as to the number of articulation agreements in place with the high schools; and that faculty from the two institutions were working together to foster such agreements. The middle level administrators, superintendents, and principals who thought the process was working Fair, Not Well, or Very Slowly indicated: that it was a very time consuming process; scheduling and transportation presented many hurdles to overcome; there was a lack of time for the faculty and administrators from the two levels to get together to foster the process; and, there was a lack of guidance as to how to proceed from the community colleges and the Iowa Department of Education.

## Discussion

The study originated from questions as to how key community college and high school administrators perceived vocational curriculum articulation practices occurring (actual) and how they would like the process to occur (ideal). The investigator was also interested if any differences in perceptions were a result of specific administrative function. The literature suggested that leadership of articulation efforts was perceived to rest with postsecondary administrators who would work closely with secondary administrators (Selman & Wilmoth, 1989).

Analysis of perceptions of community college presidents, top level administrators, middle level administrators, high school superintendents, and principals indicated large discrepancies as evidenced by significant differences and/or interactions in perceptions as measured by the HS-CCVEPI in the following areas:

1. Administrators, in all categories, perceived that additional efforts in articulation practices ought to be occurring (ideal) than what was presently occurring (actual) in all three dimensions of articulation (information/communication/interaction).

It is particularly noteworthy that administrators, collectively, indicated that additional articulation efforts and practices needed to take place. This should be a clear signal to the Iowa Department of Education that there

appears to be an overall consensus, by the community college and high school administrators, that there is general support for what is occurring in articulation efforts, but that they are not satisfied with the level of current efforts and believe that there ought to be additional efforts implemented in the vocational education articulation process.

2. There was interaction between administrative categories and articulation in the information dimension. Administrators differed by categories as to how they perceived articulation practices taking place (actual) in the information dimension. High school superintendents and principals perceived more efforts were taking place in this area, as compared to community college middle level administrators. All administrators feel essentially the same as to what should be the level of articulation efforts in the future in the information dimension.

The information dimension consists of those external information elements operating within the educational systems. Such efforts include public relations, publications, recruitment, and parental and peer influence (Opachinch & Links, 1974). Therefore, it would be reasonable to conclude that high school administrators, in general, are more aware of, and utilize more specific elements making up this dimension. Perhaps, efforts in this

dimension are seen as more necessary, and therefore made more known, at the secondary level as compared to the postsecondary level.

Of the 14 statements of effective articulation practices in the information dimension in the HS-CCVEPI, 10 statements were stated in such a way as to describe what high schools should do. Perhaps in understanding the focus of the instrument's statements in the information dimension may also help explain why there was interaction in this dimension.

3. Administrators' perceptions did not differ as to how they perceived articulation practices in articulation of the communication dimension. Differences in perceptions between the community college top level administrators and middle level administrators, and those of high school principals were essentially the same for both ideal and actual articulation in the communication dimension. Differences between top level administrators and those of high school superintendents were essentially the same for both ideal and actual articulation in the communication dimension.

The communication dimension of the articulation process concerns itself with the facilitation of effective articulation efforts involving dialogue, conversations, and articulation policy statements (Opachinch & Links, 1974).

One could conclude that high school superintendents and principals do not feel as strongly as the majority of community college administrators as to the necessity of increasing dialogue and meetings resulting in a potentially higher rate of articulation agreements.

4. Administrators' perceptions did not differ as to how they perceived articulation practices in articulation in the interaction dimension. Differences between perceptions of administrative categories were essentially the same for both the actual and ideal articulation of the interaction dimension.

The interaction dimension of the articulation process involves actual involvement of individuals, groups, and institutions in cooperative experiences, and the development of advanced standing policies in community college programs. When compared to two of three community college administrative categories, high school administrators do not place as much emphasis in either actual or ideal articulation of the interaction dimension. One therefore could conclude that high school administrators do not feel the aspects of the interaction dimension, now or in the future, as important when compared to their counterparts at the community colleges.

5. Analysis of administrators' responses as to how important vocational curriculum articulation was between the

high schools and community colleges revealed overwhelming support as to its importance. The nature of the responses varied from the ideal view--that overall, society, the two levels of institutions, the vocational programs, and that the student would benefit, to the practical view--it was mandated by the Iowa Department of Education.

6. As to how well the administrators viewed the process of articulation functioning, it appears that the perceptions varied a great deal. A greater percentage of community college presidents and top level administrators feel the process is working quite well as compared to perceptions in other administrator categories. A greater percentage of middle level administrators, superintendents, and principals indicated that the process of articulation was not working very well or very slowly.

The focus of the responses for community college presidents and top level administrators were based, in general, on the results of the communication procedures that had been established between the two educational entities and on the number of articulation agreements already in place. Responses of the middle level administrators and the high school administrators were based on what appeared to be their reactions to a slow, misunderstood process that they felt needed further development to assist both educational levels in completing articulation agreements.



7. There was general agreement found in the results and trends of the narrative responses and those data analyzed by descriptive and inferential methods in the study. Administrators, in general, were consistent in their support of articulation efforts between the two educational entities but desired that additional efforts take place.

The investigator perceived the results of this study as mixed. The Iowa Department of Education, and other interested parties, may view the study's results the same way. First, the Iowa Department of Education, and other interested parties, ought to be generally pleased with the degree of administrator participation, in all categories, in the study. This portrays a group of individuals who contributed to the body of knowledge which describes their professional responsibilities. Secondly, the Iowa Department of Education, and other interested parties, ought to be pleased, in general, that community college and high school administrators appear to support vocational education curriculum articulation practices and feel that additional efforts in this area ought to take place. Thirdly, the Iowa Department of Education, and other interested parties, may be concerned by the perceptions of the community college middle level administrators, high school superintendents, and principals who indicated that the process of articulation was working Fair, Not Well, or Very Slowly.

Fourth, the Iowa Department of Education should be able to observe the cognitive dissonance of the administrators' perceptions obtained as a result of the study. Clearly, Iowa community college and high school administrators are not content with the current level of articulation practices (actual) and feel that additional efforts should be exerted (ideal) with curriculum articulation.

As a result, the Iowa Department of Education may want to consider focusing its inservice activities that would pertain to curriculum articulation. To help continue the promotion of curriculum articulation and to help meet the general needs of community college and high school administrators, general inservice activities, by way of seminars and workshops, need to be continued. Specific inservice activities ought to be developed to meet the perceived needs of the community college middle level administrators, high school superintendents, and principals as expressed by their responses to the last narrative question of the study. By the Department of Education providing practical and specific assistance that incorporates the details of articulation process, these specific inservice activities ought to assist specific administrators in the development of articulation leadership skills that will help in initiating and enhancing the interconnected and collaborative articulation efforts.

### Recommendations for Future Studies

Vocational education curriculum articulation is a complex process. The process, as noted in this study, involves two different levels of educational institutions, along with the administrative components of both entities. Other individuals are, or should be, involved in the articulation process. As a result, more research must be completed to provide a more vivid understanding of this process. Recommendations for future studies follow:

1. Research should be completed on the perceptions of community college and high school administrators to determine if differences exist among the three dimensions of articulation.

2. Research should be performed also on the perceptions of community college and high school vocational education instructors to determine if differences exist between the two instructional levels in regards to actual and ideal articulation in its three dimensions.

3. Research should be completed also on perceptions of vocational education students at both educational institutions to determine if results of the vocational educational articulation process, the articulation agreement, increase student motivation and effort.

4. Research should be performed to determine if preparatory and inservice programs for administrators at

both institutions meet the needs of articulation leadership for those individuals who are, or will be, involved in the articulation process.

5. Research should be completed by replicating this study after two or more years to determine if administrators' perceptions have changed.

6. Research should be performed by changing research designs on this topic to arrive at greater understanding. Qualitative methods, such as case studies or interviews, would likely provide insights that were not discovered in this study and could add greatly to the existing body of knowledge.

The need for the initiation and expansion of vocational education articulation between the high schools and community colleges has been verified. The articulation process involves many individuals. Efforts to assist these individuals who work to initiate and enhance vocational education articulation are essential.

## References

- Alderman, C. (1988, January/February). Transfer rates and the other going mythologies: A look at community college patterns. Change, 20(1), 38-41.
- Anderson, H. H. (1961). Scales and statistics: Parametric and nonparametric. In H. Nelson (Ed.), Psychological Bulletin, 58,4 (pp. 305-316). Menasha, WI: The American Psychological Association, Inc.
- Barcikowski, R. S. (1983). Two-way nonorthogonal (unequal n) analysis. In R. S. Barcikowski (Ed.), Computer packages and research design, 2, (pp. 539-546). Lanham, MD: University Press of America.
- Ben-David, J. (1977). Centers for learning: Britain, France, Germany, United States. New York: McGraw-Hill.
- Blocker, C. E., Plummer, R. H., & Richardson, R. D., Jr. (1965). The two-year college: A social synthesis. Englewood Cliffs, NJ: Prentice-Hall.
- Borg, W. R., & Gall, M. D. (1989). Educational research: An introduction (5th ed.). New York: Longman.
- Boyer, E. L. (1981). High school/college partnerships. Washington, DC: American Association for Higher Education.
- Brann, J. (1972). An impossible job about to become tougher. In J. Brann & T. A. Emmet (Eds.), The academic department or division chairman: A complex role (pp. 5-27). Detroit, MI: Balamp.
- Brubacher, J. S., & Rudy, W. (1976). Higher education in transition: A history of American colleges and universities, 1636 - 1976. New York: Harper and Row.
- Burmeister, P. (1989, January). A report from the vocational education subcommittee of the higher education task force. Paper presented at the meeting of Iowa Area Planning Council, Des Moines, IA.
- Campbell, D. S. (1930). A critical study of the stated purposes of the junior college. Nashville, TN: George Peabody College for Teachers.

- Clark, B. R. (1960a). The "cooling-out" function in higher education. The American Journal of Sociology, 65(6), 569-576.
- Clark, B. R. (1960b). The open door college. New York: McGraw-Hill.
- Clark, B. R. (1980). The cooling-out function revisited. In G. B. Vaughn (Ed.), Questioning the community college role (pp. 15-31). New Directions for Community Colleges, No. 32. San Francisco: Jossey-Bass.
- Cohen, A. M. (1982). The American community college. San Francisco: Jossey-Bass.
- Cohen, A. M. (1985, April). Student access and the collegiate function of community colleges. Higher Education, 14(2), 149-163.
- Cohen, A. M., & Brawer, F. B. (1987). The collegiate function of community colleges. San Francisco: Jossey-Bass.
- Cohen, A. M., & Brawer, F. B. (1989). The American community college (2nd ed.). San Francisco: Jossey-Bass.
- Costello, R. B. (Ed.). (1991). Webster's collegiate dictionary. New York: Random House.
- Cross, K. P. (1981, March/April). Community colleges on the plateau. Journal of Higher Education, 52(2), 113-123.
- Daly, W. T. (Ed.). (1985). College-school collaboration: Appraising the major approaches. San Francisco: Jossey-Bass.
- Diener, T. (1986). Growth of an American invention. New York: Greenwood Press.
- Donaldson, G. A., Jr. (1991). Learning to lead. New York: Greenwood Press.
- Fields, R. R. (1962). The community college movement. New York: McGraw-Hill.
- Garms, W. I. (1977). Financing community colleges. New York: Teachers College Press.

- General Assembly of Iowa. (1991). Code of Iowa. Volume II, Des Moines, IA.
- Gillie, A. C., Sr. (1973). Principles of post-secondary vocational education. Columbus, OH: Charles E. Merrill.
- Glaser, B. G., & Strauss, A. L. (1967). The discovery of grounded theory. Chicago: Aldine.
- Glasnapp, D. R., & Poggio, J. P. (1985). Essentials of statistical analysis. Columbus, OH: Charles E. Merrill.
- Goodwyn, A. C. (1982, Spring). American community colleges: An inspiring example? New Universities Quarterly, 36(2), 163-171.
- Gross, T. L. (1988). Partners in education. San Francisco: Josse-Bass.
- Hechinger, F. M. (1984, October). School-college collaboration - An essential to improved public education. NASSP Bulletin, 68(474), 69-79.
- Herriage, P. (1989, November). Strategies for implementing requirements of s.f. 449. Paper presented at the meeting of vocational-technical administrators, Cedar Rapids, IA.
- Hill, M. E. (1942, February). History of terminal courses in California. Junior College Journal, 12(6), 311-313.
- Hillway, T. (1958). The American two-year college. New York: Harper & Brothers.
- Hodgkinson, H. L. (1985). All one system: demographics of education-kindergarten through graduate school. Washington, DC: Institute of Educational Leadership.
- Hodgkinson, H. L. (1986, December). Reform? higher education? don't be absurd! Phi Delta Kappan, 68(4), 271-274.
- Hodgson, G. (1976). America in our time. New York: Random House.
- Hompland, H. J. (1968). Selected factors influencing the determination of boundaries for selected area vocational-technical and area community colleges districts in Iowa. Unpublished master's thesis, University of Northern Iowa, Cedar Falls, IA.

- Huck, S. W., Cormier, W. H., & Bounds, W. G., Jr. (1974). Reading statistics and research. New York: Harper Collins.
- Hull, D., & Parnell, D. (1991). Tech prep associate degree. Waco, TX: The Center for Occupational Research and Development.
- Iowa Department of Education (1989). Position paper on new directions for vocational education. Report prepared by the Iowa Department of Education, Des Moines.
- Iowa Department of Education (1991a). 1992 Directory of Iowa community colleges. Report prepared by the Iowa Department of Education, Des Moines.
- Iowa Department of Education (1991b). Vocational education minimum standards and requirements S.F. 449: Questions & Answers. Report prepared by the Iowa Department of Education, Des Moines.
- Iowa Department of Education (1992). Certified enrollment. Report prepared by the Iowa Department of Education, Des Moines.
- Jobe, M. E. (1986, September-October). Designing a curriculum model to facilitate articulation: Secondary to postsecondary. ATEA Journal, 12-13.
- Karabel, J. (1972, November). Community colleges and social stratification. Harvard Educational Review, 42 (4), 521-562.
- Karabel, J. (1986). Community colleges and social stratification in the 1980s. In L. S. Zwerling (Ed.), The community college and its critics (pp. 13- 30). New Directions for Community Colleges, No. 54. San Francisco: Jossey-Bass Publishers.
- Kauer, K. U. (1979). Articulation among Missouri area vocational schools, high schools and community colleges as perceived by vocational administrators. (Doctoral dissertation, University of Missouri - Columbia, 1979). Dissertation Abstracts International, 40, 09A.
- Kintzer, F. G., & Wallenbarger, J. L. (1985). The articulation transfer phenomenon: Patterns and directions. Washington, DC: American Association of Community and Junior Colleges.



- Konnert, W., & Augenstein, J. J. (1990). The superintendency and the nineties: What superintendents and boards members need to know. Lancaster, PA: Technomic.
- Koos, L. V. (1925). The junior college movement. Boston: Ginn and Company.
- Lepley, W. L. (1991). Directory of trade/industrial and technical educational personnel in Iowa's community colleges for 1991-92. Des Moines: State of Iowa Department of Education.
- Lindly, C. A. (1987, Winter). Districtwide K-12 evaluation: An effective format to school improvement. North Central Association Quarterly, 61(3), 387-390.
- Lindman, H. R. (1992). Analysis of variance in experimental design. New York: Springer-Verlog.
- Linson, M. G., Wilson, J. W., & Hunt, M. G. (1971). Is articulation possible? American Vocational Journal, 46(7), 29-31.
- McCabe, R. H. (1988). The educational program of the American community college: A transition. In J. S. Eaton (Ed.), Colleges of choice (pp. 93-115). New York: MacMillan.
- McGrath, D., & Spear, M. B. (1991). The American crisis of the community college. Albany, NY: State University of New York Press.
- Medsker, L. L. (1960). The junior college: Progress and prospect. New York: McGraw-Hill.
- Menacker, J. (1975). From school to college: Articulation and transfer. Washington, DC: American Council on Education.
- Neufeldt, H. G. (1982, Summer). The community junior college movement: Conflicting images and historical interpretations. Educational Studies: A Journal in the Foundation of Education, 13(2), 172-182.
- Norusis, M. J. (1988). SPSS/PC+ Studentware. Chicago: SPSS Inc.

- Opachinch, C. A., & Links, J. A. (1974). A handbook for articulating high school and community college career programs (ED 104455). Cantonville, MD: Cantonville Community College.
- Palinchak, R. (1973). The evolution of the community college. Metuchen, NJ: The Scarecrow Press.
- Parnell, D. (1985). The neglected majority. Washington: DC: Community College Press.
- Parnell, D. (1987, January-February). The high school/ community college connection has opened the door for millions of Americans. ATEA Journal, 10-11.
- Parnell, D. (1990). Dateline 2000: The new higher education agenda. Washington, DC: Community College Press.
- Pautler, A. J., Jr. (1990). Vocational education in the 1990s: Major issues. Ann Arbor, MI: Prakken Publications.
- Pincus, F. L. (1986). Vocational education: more false promises. In L. S. Zwerling (Ed.), The community college and its critics (pp. 41-52). New Directions for Community Colleges, No. 54. San Francisco: Jossey-Bass.
- Proctor, W. M. (1927). The junior college. Stanford, CA: Stanford University Press.
- Ratliff, R. (1990). Handbook on human subjects review. (GC 1001). Cedar Falls: University of Northern Iowa.
- Richardson, R. C., Jr., & Bender, L. W. (1987). Fostering minority access and achievement in higher education: The role of urban community colleges and universities. San Francisco: Jossey-Bass.
- Roueche, J. E., & Barton, T. E. (1985). Leadership and the curriculum. In D. F. Campbell and Associates (Eds.), Leadership strategies for community colleges (pp. 40-53). Washington, DC: American Association for Community and Technical Colleges.
- Schools join, give IHCC contact. (1987, March). Des Moines Register, p. 3.

- Selman, J. W., & Wilmoth, J. N. (1989, Winter). Articulation practices and problems perceived by vocational personnel in selected secondary and postsecondary institutions. Journal of studies in technical careers, 11(1), pp. 25-37.
- Skinkel, J. D. (1981). The promises and limitations of competency-based instruction. In K. B. Greenwood (Ed.), Contemporary challenges for vocational education (pp. 1997-205). Arlington, VA: The American Vocational Association, Inc.
- Smith, G. (1985). Statistical reasoning. Boston: Allyn and Bacon.
- Spring, J. (1989). The sorting machine revisited. New York: Logman.
- State Board of Education. (1992). A new vision for vocational-technical education in Iowa. Des Moines, IA: State Board of Education.
- Stevens, S. S. (January-June, 1946). On the scales of measurement. In W. L. Valentine (Ed.), Science, 103, 2684 (pp. 677-680). Washington, DC: The American Association for the Advancement of Science.
- Storr, R. J. (1966). Harper's university: The beginnings. Chicago: The University of Chicago Press.
- Strom, Lawrence H. (1978). Articulation practices in selected industrial education programs between public secondary schools and community colleges in California (Doctoral Dissertation, University of Missouri-Columbia, 1979). Dissertation Abstracts International, 39, 10A.
- Thornton, J. W., Jr. (1972). The community junior college (3rd ed.). New York: John Wiley & Son.
- Tillery, D., & Deegan, W. L. (1985). The evolution of two-year colleges through four generations. In W. L. Deegan & D. Tillery (Eds.), Renewing the American community college (pp. 3-33). San Francisco: Jossey-Bass Publishers.
- Vaughan, G. B. (1983, April). Historical perspective: President Truman endorsed community college manifesto. The community and junior college journal, 53(7), 21-24.

- Vaughan, G. B. (1984, Summer). Forging the community college mission. Educational record, 65(3), 24-29.
- Vaughan, G. B. (1989). Leadership in transition: The community college presidency. New York: MacMillan.
- Viar, D. (1991). National issues, local action. In D. Angel & M. DeValut (Eds.), Conceptualizing 2000 (pp. 85-90). Washington, DC: The Community College Press.
- Wagoner, J. L., Jr. (1985). The search for mission and integrity: A retrospective view. In D. E. Puyear & G. B. Vaughan (Eds.), Mainstreaming instructional integrity (pp. 3-15). New Directions for Community Colleges, No. 54. San Francisco: Jossey-Bass.
- Warmbrod, C., & Long, T. (1986, October/November). College bound or bust. Community, technical, and junior college journal, 57(2), 29-31.
- Whitlock, B. W. (1978). Don't hold them back. Princeton, NJ: College Entrance Examination Board.
- Whitney, F. L. (1928). The junior colleges in America. Greeley: Colorado State Teachers College.
- Wilbur, F. P. (1984, October). School-college partnerships: Building effective models for collaboration. NASSP Bulletin, 68(474), 34-49.
- Zwerling, L. S. (1976). Second best: The crisis of the community college. New York: McGraw-Hill.

**APPENDIXES**

**Appendix A**  
**Permission Letter**

---

BLUE SPRINGS CAMPUS

---

OF THE METROPOLITAN COMMUNITY COLLEGES

---

1501 W. JEFFERSON ST. • BLUE SPRINGS, MO 64015

---

PHONE 228-2722

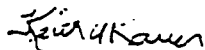
November 24, 1992

Mr. John W. Sorenson  
1107 Fleur Drive  
Waterloo, IA 50701

Dear Mr. Sorenson:

You have my permission to use the "High School - Community College Vocational Educator Perception Inventory" (refer your letter 11/20/92 attached). Best of luck with your study.

Sincerely,

  
Keith U. Kauer

**Appendix B**  
**High School-Community College**  
**Vocational Education**  
**Articulation Perception Inventory**



**High School - Community College  
Vocational Education  
Articulation Perception Inventory**

**Directions:** The following are statements associated with effective vocational education articulation practices. You are asked to place all of your responses to these statements on the answer sheet provided. A number 2 pencil must be used when recording responses on the answer sheet. Please, do not mark any responses on this inventory form. You do not need to fill in any other information on the answer sheet other than your responses to the statements. In the column to the left, indicate what would be ideal or should be done with curriculum articulation efforts between high schools and community colleges in your area, by filling in the appropriately numbered circle on the answer sheet matching the number on the inventory form. Then, in the column to the right, indicate your interpretation of what is actually being done with curriculum articulation practices in your area, by filling in the appropriately numbered circle on the answer sheet matching the number on the inventory form. Note: Be sure to respond both to the ideal and actual practices for each inventory statement. The statements are printed on both sides.

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)	I. Information Dimension	(A) (B) (C) (D) (E)
1. _____	The high schools publicize their vocational education programs in newspapers within the community college district.	2. _____
3. _____	The high school sends bulk mailings to residents and the community college(s) explaining their vocational education programs.	4. _____
5. _____	The community college operates a 24-hour a day recorded telephone message service, which explains their vocational education programs.	6. _____
7. _____	The community college provides advanced placement information for vocational education students in the high school.	8. _____

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)		(A) (B) (C) (D) (E)
9. _____	The community college informs parents of students enrolled in high school vocational education programs of vocational career preparation opportunities at the community college level.	10. _____
11. _____	The high schools have a statement/guideline that clearly describes what is considered a secondary level and community college course.	12. _____
13. _____	The high school maintains and circulates current vocational course descriptions/outlines to community colleges who offer vocational education courses.	14. _____
15. _____	The high schools are informed by the community college of special admission requirements for vocational education students.	16. _____
17. _____	The high schools are informed by the community college of the college's educational requirements.	18. _____
19. _____	The high schools inform the college of courses that are <u>not</u> designed as preparatory work for vocational education programs at the college.	20. _____
21. _____	The teaching qualifications and work experiences of newly hired high school vocational education faculty are forwarded to the community college	22. _____

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)

(A) (B) (C) (D) (E)

23. \_\_\_\_\_

The high schools have defined competencies needed by students to succeed in vocational courses and have informed the community college about these competencies.

24. \_\_\_\_\_

25. \_\_\_\_\_

The high school forwards records of standardized test score results and course grades of vocational education students upon transferring to the community college.

26. \_\_\_\_\_

27. \_\_\_\_\_

The high schools forward reports of job placement success of vocational students to the community college.

28. \_\_\_\_\_

**II. Communication Dimension**

29. \_\_\_\_\_

High school administrators meet at least once a year to discuss problems relating to vocational education and other matters of mutual concern with their counterparts in the community college.

30. \_\_\_\_\_

31. \_\_\_\_\_

High school counselors meet at least once a year to discuss problems relating to vocational education and other matters of mutual concern with their counterparts in the community college.

32. \_\_\_\_\_

33. \_\_\_\_\_

High school vocational teachers meet at least once a year to discuss problems relating to vocational education and other matters of mutual concern with their counterparts in the community college.

34. \_\_\_\_\_

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)		(A) (B) (C) (D) (E)
35. _____	Community college admission officers and high school counselors meet at least once a year to keep abreast of changing vocational education courses and program completion requirements.	36. _____
37. _____	High school vocational education faculty visit the vocational education faculty at the community college to observe instruction and to assess the preparation needed by potential entrants into the program.	38. _____
39. _____	Committees are established consisting of representatives from both the high schools and the community college for purposes of fostering communication between the two levels of vocational education programs.	40. _____
41. _____	The community college has an annual Open House or Career Day designed to acquaint high school students with the community college vocational programs.	42. _____
43. _____	The community college provides orientation programs for all incoming vocational education students.	44. _____
45. _____	The community college provides vocational education students from the high schools with scheduled opportunities to meet community college students who are studying in the same vocational area.	46. _____

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)

(A) (B) (C) (D) (E)

47. \_\_\_\_\_

High school vocational educational faculty visit socially with community college vocational education faculty.

48. \_\_\_\_\_

49. \_\_\_\_\_

The high schools are involved in discussions with the community college regarding the development of cooperative four year vocational education programs which would include basic preparation in the last two years of high school and specialized work continued at the community college.

50. \_\_\_\_\_

51. \_\_\_\_\_

High school vocational faculty attend joint meetings with community college vocational education faculty to discuss matters pertinent to vocational education programs at the high school and the community college.

52. \_\_\_\_\_

53. \_\_\_\_\_

The community college provides guided tours on a regular basis for potential vocational education students from the high schools.

54. \_\_\_\_\_

55. \_\_\_\_\_

The high schools sponsor a periodic luncheon/dinner meeting where vocational education faculty from both the high schools and the community college can communicate.

56. \_\_\_\_\_

57. \_\_\_\_\_

High school vocational education faculty use the telephone to converse with the vocational education faculty at the community college.

58. \_\_\_\_\_

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)

(A) (B) (C) (D) (E)

59. \_\_\_\_\_

The high schools sponsor articulation conferences between vocational education faculty from the high schools and faculty from the community college.

60. \_\_\_\_\_

**III. Interaction Dimension**

61. \_\_\_\_\_

The high schools and the community college utilize the same vocational advisory committee for vocational programs at both levels.

62. \_\_\_\_\_

63. \_\_\_\_\_

The community college has a policy of early admission for high school vocational education students who have completed an accelerated program.

64. \_\_\_\_\_

65. \_\_\_\_\_

The community college recognizes work completed by high school vocational education students by granting credit or awarding advanced placement in similar vocational education specialty programs at the college.

66. \_\_\_\_\_

67. \_\_\_\_\_

Vocational education articulation agreements are established between the high schools and the community college at the high school district level.

68. \_\_\_\_\_

69. \_\_\_\_\_

Uniform policies of advanced placement exist at the community college for potential vocational education students from the high schools.

70. \_\_\_\_\_

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)		(A) (B) (C) (D) (E)
71. _____	The high schools and the community college cooperate in standardizing procedures for using vocational education test results.	72. _____
73. _____	The high schools and the community college jointly appoint faculty members to teach vocational education courses.	74. _____
75. _____	The high schools and the community college jointly use vocational education facilities.	76. _____
77. _____	The high schools and the community college jointly share a vocational education administrator.	78. _____
79. _____	The high schools and the community college share the use of specialized equipment in vocational education programs.	80. _____
81. _____	Faculty from the high school and the community college cooperatively develop vocational education curricula.	82. _____
83. _____	The high schools and the community college utilize curriculum course guides and course outlines which were developed jointly at both levels for the purpose of avoiding duplication and content gaps in education programs.	84. _____
85. _____	The high schools and community college exchange vocational education faculty at periodic intervals.	86. _____

**Ideal: Should be done**

**Actual: Is being done**

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

- (A) - Extensively
- (B) - Occasionally
- (C) - Seldom
- (D) - Rarely
- (E) - Never

(A) (B) (C) (D) (E)

(A) (B) (C) (D) (E)

87. \_\_\_\_\_

Faculty from the high schools and the community college jointly write grant proposals and work on joint projects.

88. \_\_\_\_\_

89. \_\_\_\_\_

Vocational students groups (VICA, DECA, FFA, FHA, and FBLA) are sponsored jointly by vocational educators at the high schools and the community college.

90. \_\_\_\_\_

91. \_\_\_\_\_

Mass production of products and similar joint ventures are practiced cooperatively between vocational education faculty at the high schools and community college.

92. \_\_\_\_\_

93. \_\_\_\_\_

Vocational education faculty from the high schools and the community college have established joint committees for purposes of implementing a series of sequential career exploration to career specializing.

94. \_\_\_\_\_

95. \_\_\_\_\_

Vocational education publicity production and news releases are developed jointly by vocational educators at the high schools and the community college.

96. \_\_\_\_\_



**NOTE:** The following two questions require a brief narrative response. Please write your response in the space provided on this sheet. You may use the back of this sheet if necessary.

97. Regarding your position at your institution, how important is vocational curriculum articulation between high schools and community colleges?

98. How well do you think the process of initiating and expanding vocational education curriculum articulation between high schools and community colleges is working in your area?

If you would like a summary of this study, please respond on the answer sheet by marking the "A" circle in #99.

Thank you for your time completing this High School-Community College Education Articulation Perception Inventory. Please put the answer sheet and this last page of the inventory in the self-addressed stamped envelope, and place the envelope in the mail. It is very important that you do not bend, fold or staple the answer sheet. Do not return the first four pages of the perception inventory in the mail; you may keep it or discard it.

Thank you again.

**Appendix C**  
**Letter to Top Level Administrators**

[Date]

[Address]  
[City/State/Zip][Name]  
[Title]  
[College Name]  
[Address]  
[City/State/Zip]

Dear [Name]:

In the near future I would like to contact, by mail, each middle level administrator in the Vocational-Technical Division at your community college. The purpose of that communication would be to gather information that may be included in the research for my doctoral dissertation at the University of Northern Iowa.

By definition of middle level administrator, I am referring to those personnel who have middle level administrative responsibilities in departments and/or programs in vocational-technical divisions of a community college. Titles may include, but are not limited to: Department Head, Department Chair, or Coordinator.

Therefore, I am requesting that you or member of your staff provide me with the names, titles, and addresses of your middle level administrators. A sheet is attached where this information may be written or typed. If this information already exists and is printed, feel free to provide a copy of that information. This information can be placed in the self-addressed stamped envelope also included with this letter. I would like to have this information back to me by November 30, 1992.

If you would have any questions, please feel free to contact me. Thank you for supplying the requested information.

Sincerely,



John W. Sorenson

ENCL: form  
envelope

**Appendix D**  
**Human Subjects Review Permission**



December 3, 1992

Mr. John W. Sorenson  
1107 Flear Drive  
Waterloo, IA 50701

Dear Mr. Sorenson:

Your project, "High School-Community College Vocational Articulation Perception Inventory", which you submitted for human subjects review on November 19, 1992 has been determined to be exempt from further review under the guidelines stated in the UNI Human Subjects Handbook. You may commence participation of human research subjects in your project.

Your project need not be submitted for continuing review unless you alter it in a way that increases the risk to the participants. If you make any such changes in your project, you should notify the Graduate College Office.

If you decide to seek federal funds for this project, it would be wise not to claim exemption from human subjects review on your application. Should the agency to which you submit the application decide that your project is not exempt from review, you might not be able to submit the project for review by the UNI Institutional Review Board within the federal agency's time limit (30 days after application). As a precaution against applicants' being caught in such a time bind, the Board will review any projects for which federal funds are sought. If you do seek federal funds for this project, please submit the project for human subjects review no later than the time you submit your funding application.

If you have any further questions about the Human Subjects Review System, please contact me. Best wishes for your project.

Sincerely,

A handwritten signature in dark ink, appearing to read "Norris M. Durham".

Norris M. Durham, Ph.D.  
Chair, Institutional Review Board

cc: Dr. David A. Walker, Associate Dean  
Dr. Sharon Smaldino

**Appendix E**  
**Cover Letter for**  
**Perception Inventory**



[Date]

[Name]  
 [Institution Name]  
 [Address]  
 [City/State/Zip]

Dear [Name]:

As part of my research for the Doctor of Education degree at the University of Northern Iowa, I am conducting a comparative study of community college presidents, top level administrators, middle level administrators, high school superintendents, and principals regarding their perception of ideal and actual vocational education articulation practices. As a middle level administrator in one of Iowa's community colleges, I am personally interested in this study as all of us begin to prepare our students for the twenty-first century. The study is being conducted under the auspices of Dr. Sharon Smaldino of the Department of Curriculum and Instruction at the University of Northern Iowa.

Enclosed is a perception inventory which I would appreciate your participation by completing and returning your responses in the self-addressed stamped envelope. All responses to the statements are confidential and will be used only in statistical tables and only in combination with other answers from other respondents. If you would like to receive a summary copy of the study, please provide the necessary information on the last page of the inventory.

Your participation in this study will provide valuable information that may be used by administrators in Iowa's community colleges and high schools to better understand their role in vocational education articulation with the two institutions. I value your thoughts and opinions on this important matter and appreciate your participation in this study.

Sincerely,

*John W. Sorenson*  
 John W. Sorenson

Enclosures (3)

**Appendix F**  
**Scoring Sheet**



SIDE 1

GENERAL PURPOSE - NCS® - ANSWER SHEET  
SEE IMPORTANT MARKING INSTRUCTIONS ON SIDE 2

SEX (M) (F) (U)

GRADE ONE EDUC (0) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60)

NAME (Last, First, M.I.)

Grid for name entry with columns for Last, First, and M.I. and rows for letters A-Z and digits 0-9.

Form for BIRTH DATE (MO, DAY, YR), IDENTIFICATION NUMBER (A-J), and SPECIAL CODES (K-P).

Main answer grid with 60 rows of bubbles for letters A, B, C, D, E, numbered 1 through 60.

**Appendix G**  
**Follow-up Letter**  
**Utilized to Contact Non-respondents**



[Date]

[Name]  
 [Name of Institution]  
 [Address]  
 [City/State/Zip]

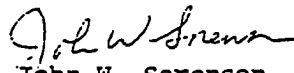
Dear [Name]:

Approximately two weeks ago you should have received a perception inventory concerning articulation of vocational education between Iowa high schools and community colleges. The purpose of the inventory is to compile information that may be used to gain a better understanding of administrators' perceptions of vocational education articulation between aforementioned institutions. As an administrator, your response is important.

If you have responded, please disregard this letter. At this time, however, I have not received your reply. It is through your assistance that a valid study can be accomplished. In the event you have misplaced the inventory, I have enclosed an additional copy. Please complete the inventory, at your earliest convenience; and return it in the envelope provided.

Thank you.

Sincerely,

  
 John W. Sorenson

Enclosures (3)

**Appendix H**  
**Second Letter**  
**Utilized to Contact Non-respondents**



[Date]

[Name]  
[Name of Institution]  
[Address]  
[City/State/Zip]

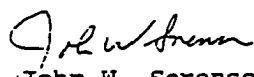
Dear [Name]:

Five weeks ago a perception inventory concerning articulation of vocational education between Iowa high schools and community colleges was sent to you. When I did not receive a response within a predetermined amount of time, a second inventory was mailed three weeks later.

If you have responded to either of these requests, please disregard this letter. As of this date, I have not received your reply. I do realize that individuals in your position have great demands placed upon your time. However, your responses to this inventory are very important. Your participation in this survey will provide valuable information to those who are working to enhance and broaden the education of our students today and in the future. In the event that you have misplaced both inventory copies, please contact me this week and I will send you another copy of the inventory.

Thank you in advance for your cooperation and input.

Sincerely,

  
John W. Sorenson

**Appendix I**  
**First-Level Categories**  
**of Administrators' Responses**

First-Level Categories for Administrative CategoriesResponses to Question 97Presidents

extremely important  
critical  
essential  
very important  
very  
important

Top Level Administrators

extremely important  
essential  
vital  
very important  
important

Middle Level Administrators

extremely important  
a must  
critical  
a priority  
vital  
very important  
very positive  
very  
highly important  
more important  
important  
not important  
not a high priority

Superintendents

extremely important  
vital  
critical  
extremely  
critically important  
very important  
more important  
very  
important

worthy  
fairly important  
somewhat  
valuable  
little importance  
not in students' interest

Principals

extremely important  
essential  
extremely  
vitaly important  
vital  
utmost importance  
absolutely necessary  
high priority  
very important  
more importance  
very  
important  
of importance  
necessary  
importance  
good  
relatively important  
somewhat important  
not very important  
of little or no importance  
not great  
not too important  
is not important



Responses to Question 98Presidents

very well  
considerable improvement  
gaining momentum  
well  
fair  
very slow  
very slowly

Top Level Administrators

very well  
ahead of most  
well  
fair  
fairly well  
very slow

Middle Level Administrators

very well  
excellent  
quite well  
great  
well  
good  
pretty well  
okay  
fairly well  
so, so  
moderately well  
only way to go  
not well  
not very well  
a mess  
is not  
stand still  
not good  
improving  
making progress  
expanding  
improved

Superintendents

very well  
quite well

extremely well  
very receptive  
well  
fine  
good  
doing well  
going well  
working well  
okay  
fairly well  
slightly well  
fair  
pretty well  
moderately well  
moderately  
mediocre  
necessary  
not well  
not very well  
poorly  
poor  
totally nonexistent  
little cooperation  
moving slowly  
slow  
very slow  
slowly  
just starting  
just beginning  
just begun  
beginning  
improving  
improving steadily  
expanding

### Principals

very well  
quite well  
very good  
remarkably well  
good  
okay  
well  
average  
pretty good  
B-  
fairly well  
minimally effective  
working well  
fair

not well  
poorly  
not very well  
not at all well  
not well enough  
not going well  
very poorly  
not good  
very slowly  
very slow  
slow boat  
slow process  
slow  
slow, slow  
it is not  
none  
just beginning  
recently started  
beginning stages  
just begun  
infant stages  
just under way

**Appendix J**  
**Second-Level Categories**  
**of Administrators' Responses**

Second-Level Categories for Administrative CategoriesResponses to Question 97Presidents

Extremely Important  
Very Important  
Important

Top Level Administrators

Extremely Important  
Very Important  
Important

Middle Level Administrators

Extremely Important  
Very Important  
Important  
Not Important

Superintendents

Extremely Important  
Very Important  
Important  
Not Important

Principals

Extremely Important  
Very Important  
Important  
Relatively Important  
No Importance

Responses to Question 98Presidents

Very Well  
Well  
Fair  
Very Slowly

Top Level Administrators

Very Well  
Fair  
Very Slowly

Middle Level Administrators

Very Well  
Well  
Fairly Well  
Improving  
Not Well

Superintendents

Very Well  
Well  
Fairly Well  
Not Well  
Very Slowly  
Improving  
Just Starting

Principals

Very Well  
Well  
Fairly Well  
Not Well  
Poorly  
Very Slowly  
None  
Just Starting