CONTRIBUTIONS OF VOCATIONAL EDUCATION
TO EDUCATIONAL REFORM
AS PERCEIVED BY
VOCATIONAL EDUCATION POLICY INFLUENCERS

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
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By

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* * * * *

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1993

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1993
To Mom and Dad,
who always told me and showed me I could do anything that I wanted

Margaret,
who always listened and helped me see good things on bad days

and

Kevin,
who supported my quest and was patient with our long-distance life
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CHAPTER 1
INTRODUCTION

Change is one of the few acknowledged constants in American society today. Education, as an integral institution in our society, is not insulated from the larger shifts taking place (Brock, 1992; Fullan, 1982; Zaltman, Florio & Sikorski, 1977). The dominant societal model of the past century, the industrial model, which brought structural change to public schools by replacing generalists and flexible, integrated, cross-subject instruction with subject area specialists and subject-specific blocks of time, is itself being replaced (Oakes, 1986a, 1986b). This former policy fit the economic model of the era, the industrial model (McDaniel, 1989); however, the models of the technology age and service-based economy are rejecting this approach (Darling-Hammond, 1990; Gray, 1993; Holt, 1993; O'Looney, 1993; Wirth, 1993). The product of this rejection is the drive for change in education, educational reform, and all facets of the public education structure, including vocational education, are included in the reform vista. As Gray (1993) noted, "...it seems timely to remember the teachings of John Dewey. Dewey believed that the central purpose of education is to promote the 'growth' of those being educated" (p. 373). Statements made by
John Dewey in 1916 characterized "the theory of education as a deliberately conducted practice" (p. 387). This statement and others by Dewey were based in his positions that "the educative process is a continuous process of growth," (p. 63) and education is tied with "continuous reconstruction or reorganizing of experience" (p. 376); educational reform is asking that education apply these principals to itself.

Waves of reforms have dominated much of the educational literature for over ten years. National reports on education and educational reform have become a way of life during the past decade. Starting with "A Nation At Risk" from the U.S. Department of Education in the early 1980s, these reports belabor the problems with the educational institution in this country. More recent reports include the concern now emanating from the business/industry sector. The Forgotten Half (1988), Workplace Basics: the Skills Employers Want (1988), America's Choice: High Skills or Low Wages (1990), What Work Requires of Schools: a SCANS report for America 2000 (1991), and Learning a Living: A Blueprint for High Performance (1992), all developed by groups with heavy business, industry and labor representation, focus on educational reform in concert with strengthening the nation's ability to compete economically in a global society. General Accounting Office reports on school to work transitions and preparing youth for employment, and federal legislation (most notably the
Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990) specifically tie the work of schools to the continued economic viability of the country.

The reform sought in recent reports reflects a much broadened function for the educational institution. As Reich (1983) states, "Even if America were to devote more resources to education, simply more of the same would not prepare its youth for roles in flexible-system enterprises, working collaboratively to solve novel real-world problems" (pp. 215-216). In addition to providing students with an academic knowledge base, the education system is being asked to provide a workplace knowledge base including interpersonal, team, communication, and leadership skills. Reform is calling for the integration of real-world experience into the classroom, the use of cooperative/collaborative techniques, and the development of an outcome-based approach to education. The educational system is further being called upon to address concerns external to the education institution itself; international economic competition, business needs, poverty, teen pregnancy and under/unemployment are among these concerns (Asche, 1991). This expanded role being given to education and supported by legislation is acting as a "trigger" (Nutt & Backoff, 1992, p. 9) for strategic change. As Sir Francis Bacon stated in 1625, "A wise man [sic] will make more opportunities than he [sic] finds."
The environment in which vocational education and the entire educational system find themselves adds to the precariousness of the situation. The demographics of the population, the expectations of and for students, teachers and schools, the nature of the workplace, and the ties between the school and the workplace are all changing. Futurists Naisbitt and Aburdene (1990) theorized 10 major world changes; these include an increasingly global economy, a global lifestyle, a renaissance in the arts, an emergence of free-market socialism, a decline of the welfare state, a religious revival, an increase of women in leadership positions, the rise of the Pacific rim, the age of biology, and the triumph of the individual. In considering more specifically the future for the world of work and family life, Cetron and Gayle (1991) cite trends affecting education to include multiple job changes, management issues of "quality, productivity, and the decline of the work ethic" (p. 230), 85% of the workforce based in the service economy, strong increases in the proportion of women and minorities in the workforce, and family structure changes resulting in more multi-families, single-parent families, dual income families and poverty-level families. They further refer to a shift from the "back-to-basics" to a "forward-to-future-basics movement," with much of its basis in advanced science and technologies used for problem-solving (p.228). The broadened function being placed on the educational system reflects a response to many of these trends. However, the
weakened economy and subsequent decreases in funding and levels of funding are already impacting the educational system.

Even though vocational education, as it is known today, has been given little to no mention in the vast majority of the reform literature, "The plight of vocational education should be a mainstream issue in the reform of secondary schooling" (Gray, 1991, p. 444). Many of the skills sought, via these reforms, in all public school graduates have long been a component of vocational education programs (Rosenfeld, 1984). Historically, vocational education sought to prepare students for productive and worthwhile worklife (Barlow, 1974b; Lakes, 1985; Miller, 1985, 1990). Attention to interpersonal skills, worklife know-how and communication, have been integral to vocational education; now (whether it is acknowledged or not) these skills are being sought in all students in order to maintain economic competitiveness (Brock, 1992; Silberman, Herr, & McDaniels, 1991). The purpose of the current federal vocational education legislation includes the function of preparing citizens for participation in a competitive global economy. The America 2000 educational goals, too, acknowledge the tie between education and the ability to contribute to economic competition in the global economy (U.S. Department of Education [USDOE], 1991).
Regardless of all the national and federal emphases on reforming education and the inclusion or exclusion of vocational education, the responsibility for the actual conduct of all education programs is maintained at the state level. With weakening of support from the federal government during the 1980s, state level education policy makers spearheaded the actions taken to effect educational reform. In contrast to policies of the 1960s and 1970s which were defined by educational interest groups, policies in the 1980s were largely shaped by business leaders and elected public officials (Mitchell & Goertz, 1990). "What was unique about the politics of state education reform in the mid-1980s was the relatively unimportant role of education interest groups in the formulation of new state policies" (Mitchell & Goertz, 1990, p. 5). However, Zaltman et al. (1977) noted that "educational institutions may seldom change without external influence."

The Problem

While business officials and elected officials set policy directed toward an educational system which serves a much broadened function, many programs coming under the purview of vocational education address the concerns associated with a broadened function and the trends projected by futurists. Special populations, dropouts, career guidance, and workplace knowledge have been part of vocational education's charge (American Vocational Association [AVA], 1990). Gray (1991, p. 437) stated that vocational education has the
opportunity to become a "modern phoenix" in the reform of the education system, modeling ways to address the concerns raised by a broadened educational function. The potential seems great for vocational education to contribute to the wider reform of the educational system.

Simultaneous to the wider reform, vocational education as a field and a focus of research is itself being redefined. Lewis (1990) contends that the core of that field is work, and vocational education will "come to be defined as education aimed at the preparation of people for a working life" (p. 13). This definition ties clearly with a major focus of the broadened function of educational system reform. In "Toward a new paradigm" (p. 13) for vocational education, Lewis proposes a model for research assuming working life as the focus of vocational education and the concepts work, occupations, labor markets, pedagogy, curriculum, context, ecosystem, clientele, and management as its anchors.

Currently available data from the field of vocational education is limited with respect to the evolving redefinition of vocational education. Some activity to define vocational education within the context of reform is taking place. For example, in one state, all education standards, including those for vocational education, are currently open simultaneously for review, with the goal being "one set of standards for all programs" because "one system of education designed to
meet the needs of all students as they work to reach the determined outcomes is desired" (Ohio Board of Education, 1992). Vocational education research has limited history in this type of endeavor; "traditional vocational research has tended to serve intrinsic ["what is best for the individual student"] goals" (Asche, 1991, p. 8).

The field of vocational education is not alone in being asked for increased policy relevance in its research; similar calls are being made across educational research. Kaestle (1993), reported that many policy influencers find fault with basic educational research; "basic research in education 'doesn't lay a very great claim on anyone's agenda save researchers" (p. 26).

Lewis' concepts of context and management include policy concerns associated with a broadened function for the educational system; however, "one of the major implications of educational reform may be an increased need for policy-relevant types of vocational research" (Asche, 1991, p. 8). Additionally, "vocational education research is significant if it is nontrivial and if it contributes directly or indirectly to...improving the human condition" (Swanson, 1991).

As Frantz and Miller (1990) state:

As the profession moves from the known to the unknown, it is imperative that contemporary issues and trends be identified and
analyzed with respect to their implications for developing new policies and improving the practice of vocational and technical education. (p. i)

Educational change theories (Fullan, 1982) support this statement, holding that many factors influence adoption and implementation of change. Among these factors are the existence and quality of innovations, access to information, advocacy from administrators, new legislation and the characteristics of the change itself (i.e. the need and relevance of the change). Key policy influencers, who are not often assisted by vocational education or vocational education research, provide vision and direction for the future regarding educational reform and vocational education. More than information is needed by these key people; "intelligence, which goes beyond information" is needed (Kaestle, 1993, p. 23). A consensus among key policy influencers as to the vision for the future role of vocational education programs and activities in this era of reform are substantially unexplored. Disparate or conflicting definitions, descriptions and expectations may be held.

The lack of a knowledge base concerning the perceptions vocational education policy influencers have of the future of vocational education holds the potential for unnecessary duplication or elimination of vocational education programs and practices which serve the interests of the reform movement and the redefinition of vocational education. Without an articulated base of intentions and directions
within the field and a clear concept of where the field needs to be, continued existence of secondary vocational education may rest in the hands of external change agents. The problem is to establish that knowledge base; the aspect of this problem to be addressed in this study is knowledge regarding perceptions held by vocational education policy influencers on the role and contribution of vocational education to educational reform in the future. Specifically, the vision held by key vocational education policy influencers of the future role of secondary vocational education, and consensus among these key individuals as to the most critical future directions will be sought.

**Objective of the Study**

To explore and describe those programs, activities and directions for the future which are the most critical components of the contribution of vocational education to the reform of education, as perceived by vocational education policy influencers.

**Significance of the Study**

As maintained by Asche (1991), vocational education research is predominated by work on intrinsic vocational education goals; that is, those goals focussed solely on the best interests of the students. The push for reform is being driven by elected officials and business, who would expand the function of the
educational system to include more instrumental societal goals. "A continuing problem faced by vocational educators is how to maintain an appropriate focus on the intrinsic goals of education...while satisfying the dominantly instrumental goals of politicians and policymakers" (Asche, 1991, p. 8). This study would help establish a knowledge base on vocational education within the context of the educational reform being brought to all of education through external forces. Little literature currently exists with regard to the directions and/or role of vocational education in the context of educational system reform.

The objectives of this study will establish what is currently perceived to be taking place from the viewpoint of vocational education policy influencers inside and outside the system of secondary vocational education, at a variety of levels. Insight will also be provided into what those same stakeholders perceive the role of secondary vocational education should be within the future of reform. A vision of this future role will provide guidelines for vocational educators and policy makers as they plan to meet the future of educational reform. It will assist policy makers in identifying gaps between what is being done, or not done, at different levels of the vocational education system and what should happen in the future. Identification of these gaps will allow vocational educators to target their efforts in addressing reform to those groups and those reform issues that are most problematic.
Definition of Terms

consensus - "general agreement" and "the judgement arrived at by most of those concerned" (Mish, 1984). In this study, consensus is defined as 80% of the certainty scores falling around the mean agreement/disagreement score among the Delphi panel members on a given item in a given delphi round. (allowable range of +/- 1.29 standard deviations around the mean certainty score)

future contribution - the degree to which the field of vocational education should contribute to educational reform in the future. In this study, future contribution is defined as the consensus vision of the delphi panel.

perception - the result of selection, organization, storing and interpretation of sensory data (Organ & Bateman, 1991) For the purpose of this study, a perception is defined as the certainty-scaled response of Delphi panel members to the delphi statements.

recognized leaders in vocational education and research - individuals within the field of vocational education who hold elected office in a vocational education professional association, administer vocational education related research or curriculum centers, demonstrate leadership to the
field through a consistent record of publication, or have received awards in recognition of their leadership and service to vocational education.

vocational education - "organized educational programs offering a sequence of courses which are directly related to the preparation of individuals for paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree" (AVA, 1990, p. 163)

vocational education policy influencer - individuals who actively or by virtue of their position, writing or research impact the development of policy regarding vocational education.
CHAPTER II

REVIEW OF LITERATURE

The role of vocational education in the reform of the educational system has received minimal attention in research. However, the waves of reform in education, educational change and the core philosophy of vocational education have been studied. This chapter reviews these areas and other relevant literature in nine sections: change and change in education, educational reform, vocational education system, governance of vocational education, philosophy of vocational education, future and trends, the Delphi technique, perceptions, and a framework summarizing the study.

Change and Change in Education

The body of literature on "change" is seemingly endless; change in individuals, change in groups, change in organizations, change as a process, change as an outcome, change and innovation have received much attention (Argyris, 1965; Baldridge, 1970; Baldridge & Burnham, 1973; Baldridge & Deal, 1983; Bennis, 1966; Bennis, Benne, & Chin, 1961, 1969, 1985; Bennis, Benne, Chin, & Corey, 1976; Bennis & Nanus, 1985; Hall, 1991; Morgan, 1985; Rogers, 1983; Rogers &
Shoemaker, 1971; Zaltman & Duncan, 1977; Zaltman, Duncan & Holbek, 1973; Zaltman, Florio & Sikorski, 1977). The concept of change has been defined in many ways; perhaps it is put most simply as "any significant alteration in the status quo" (Havelock, 1973, p. 4). Innovation is further defined as a change which is new to those experiencing it (Baldridge & Burnham, 1973; Havelock, 1973; Rogers, 1983; Zaltman et al., 1973).

Models of change are as abundant as definitions of change. Common to all are the factors of internal influence, external influence, process, diffusion, and action (Bennis et al., 1969; Bennis et al., 1976; Havelock, 1973; Nutt & Backoff, 1992; Rogers, 1983; Zaltman et al., 1977). Internal influence includes elements such as experience, organizational structure, and mission. External influence denotes such elements as governing bodies, legislation, expectations of others, and social environment. Process as a component of many models indicates the dynamic and ongoing nature of change, not change as a single event or a point in time. Diffusion refers to the spread of the change and change-relevant information; it is an awareness factor (Zaltman et al., 1977). Action is also referred to as adoption (Clark & Guba, 1965), implementation/continuation (Fullan, 1982), institutionalization (Zaltman, et al., 1977) and "stabilizing the innovation" (Havelock, 1973, p. 11).
Educational change has been the subject of considerable study, resulting in definitions and models specific to the education environment (Baldridge & Burnham, 1973; Baldridge & Deal, 1983; Clark & Guba, 1965; Sarason, 1971; Guba, 1965, 1967a, 1967b; Fullan, 1982; Zaltman et al., 1977). Again, the commonalities exist; internal and external influence, process, diffusion and action are major components. An additional consideration is added when educational change is discussed; the unique role of the educational system in society as an agent of societal change becomes an additional factor (Fullan, 1982; Rubin, 1978; Sarason, 1971; Zaltman et al., 1977). "The relationships between social forces and forces in educational systems are intricate and are often characterized by conflict and contradiction" (Zaltman et al., 1977, p. 4). Additionally, the educational system must cope with the "innovation establishment" of "firmly entrenched sponsors/disseminators of educational change--federal policy-makers, researchers, consultants, developers, project personnel of new programs, publishers, etc., all of whom have a vested interest in promoting educational change" (Fullan, 1982, p.1). "Change in education is more difficult than in many others sectors of society" (Zaltman et al., 1977).

Fullan (1982) holds that change in education is "multidimensional" (p. 30), involves closely held conceptions of education, and consists of a complex "dynamic interrelationship" (p. 33) between possibly altered materials and
technologies, teaching approaches and/or beliefs about education and teaching. Around a basic model of adoption - implementation - continuation, Fullan (1982) lists factors associated with each component of the model. Factors associated with adoption include new legislation/policy, advocacy from administrators, incentives, and access to information. Factors associated with implementation and continuation parallel each other; characteristics of the change (need, relevance, complexity), characteristics of the organization (school, district, agency, system), and characteristics of the environment (government, external supporters) all figure into Fullan's (1982) model of educational change.

Prior to Fullan, Guba (1965, 1967a, 1967b), Baldrige (1970), Clark and Guba (1965), and others studied educational change using similar models. Different words were used to describe the components; however, the basics were consistent. Guba (1965, 1967a, 1981) further emphasized the need for involvement of agencies and individuals in the process. All levels of government, school systems, universities, and schools of education, on both organizational and individual levels have roles to play in educational change and innovation. This is true for any educational change, and particularly for the all-encompassing transformations occurring under today's predominant change, educational reform.
**Educational Reform**


The reform proposals have striking similarities in the changes they propose for the system and for what is taught. Common to the proposals is the need for revision of the educational structure, the need for basic competency in academic skills, the need for the development of interpersonal skills, the need for
development of "leadership" skills, and the need for technological competency (Carnevale, 1988; Commission on the Skills of the American Workforce, 1990; Goodlad, 1984; Peters, 1992; Secretary's Commission on Achieving Necessary Skills (SCANS), 1991, 1992). One example of these reports is Learning a Living (SCANS, 1992). This report calls for the development of skills in resource management, information management, interpersonal skills, systems, and technology in all students, in addition to a three-part foundation of basic academic skills, thinking skills and personal qualities. Beck et al. (1991), following the successful testing of a model for general education in which "academic studies were challenged by a new vision of vocational preparation" (p. 6), called for additional research on restructuring and redesigning schools, specifically secondary schools.

These types of reforms reflect a much broadened function for the educational system, and require rethinking of the structure of the system (Tye, 1992). In addition to providing students with an academic knowledge base, education is being asked to provide a workplace knowledge base including interpersonal, team, communication, and leadership skills. These skills parallel those required by workers in a Total Quality Management environment, which is currently acknowledged to be a productive approach to management. This parallel is not purely coincidental; "what is important to realize is that models of education and
models of production will tend to mirror each other" (O'Looney, 1993, p. 376). The bureaucratic model of compartmentalized work is being replaced in the high performing workplace by the continuous improvement, quality-based, customer-centered approach (Darling-Hammond, 1990). Similarly, the fragmented approach to education as individual, single-subject academic competence may no longer be deemed appropriate for the education institution which is charged with the responsibility for preparing students to participate in a high performing workplace (Holt, 1993; Schmoker & Wilson, 1993; Wirth, 1993). To facilitate development of this workplace knowledge base, a variety of initiatives are being proffered. Among these are youth apprenticeship (Bailey, 1993; Hamilton, 1993), cooperative programs (Robertson-Smith, 1990), and articulation programs (Hull, 1989; Long, 1986).

Another theme common among the reform reports is the call for the development of standards. America's Choice (Commission on the Skills of the American Workforce, 1990) calls for the development of minimum levels of mastery in academic competency and the development of a system of certification/degrees for occupations. These certifications would be designed to enhance the professionalism and status of non-baccalaureate occupations and in doing so, attempt to alter the societal value attached to these occupations. As currently de-valued occupations achieve value and status through certification,
it is thought these certifications will elevate the status of the roles that the majority of the population (who do not complete a baccalaureate degree) will play in a globally competitive economy.

A final collective theme is the attention given to education as a total system. Aring (1993) asserts that one of the "failures of cooperation," which are in part responsible for the national decline in productivity, "show up in the way our vocational education system is isolated from its academic cousin, college prep" (p. 400). The emerging holistic view of education and its role in creating a better prepared workforce includes both the structure and content of the educational system.

In posing these reforms, the reports and their authors are trying to develop the one input into the economy over which they have the least control - their human resources. The education institution has had the primary responsibility for handling this resource, and while other resources could be more easily adapted to improve productivity, education was left to its own devices. The current move from industrial to technological/information society has minimized the gains to be realized through non-human resources, and attention is now being placed even more heavily on the educational institution to provide for human resource needs (Weisman, 1993). Attention to these aspects of the proposed reforms
may help the country participate more fully in a global economy; however, the
thrust of these and other reform proposals has been a subject of much debate.

The reform debate brought about a new realization both in and outside of the
educational community that educational reform and restructuring is not a simple
task (Fullan & Miles, 1992; McDaniel, 1989; Price, 1990; Timor & Kirp, 1989).
Education has been asked to play many roles for society and the evolution of
reform reflects shifting emphases as these roles are reconciled (Darling-
Hammond, 1990; McDaniel, 1989). Two parallel dimensions have emerged from
the debate. The first is the very public and politically correct movement,
characterized by the flurry of activity, mandates and national interest; the second
dimension is the local/regional, lower-key movement, characterized by
innovation and experimentation (Futrell, 1989; Goodlad, 1992; Timor & Kirp,
1989).

Each of these dimensions has taken precedence at varying times during the past
decade; however, the reforms can be viewed as coming in a series of four waves
(Futrell, 1989). The first wave of reform, an initial reaction to A Nation at Risk
(1983), rode a surge of state mandates, external control and top-down regulation;
the changes sought were more: more hours in a school day, more school days,
more testing, more rules. This was followed with a wave of school/education
profession-based movement; fundamental to this wave was teacher empowerment, decentralization, collaborative efforts and excellence plus equity for all students.

As the national economy weakened in the late 1980s, educational reform began a third wave, focussing on economic mandates. The third wave again contained many top-down directives, this time with the strong utilitarian motive of economic competitiveness. While much of the third wave economic-oriented language is still in evidence, a fourth wave has begun with a return to the grassroots focus of the second wave. The fourth wave of educational reform endeavors to combine the economic and student-oriented, intrinsic aspects of the earlier waves; in other words, "an education that prepares tomorrow's adults to meet ethical as well as economic imperatives - that prepares them not only for a life of work, but also for a life of worth" (Futrell, 1989). The task of the fourth and most current wave of reform is to redefine goals for education within this context, and to restructure a system in which those goals may be achieved. (Copa & Pease, 1992; Darling-Hammond, 1990; Futrell, 1989; Price, 1990; Timor & Kirp, 1989; Tye, 1992).

The overriding theme of the fourth wave, to enable individuals to be effective in life and in the labor force, incorporates the lessons learned during the
educational reform movement from its inception. "Specific policies do not guarantee educational excellence" (Timor & Kirp, 1989); mandates do not cause change to take place. The process of educational reform has a political aspect as well as an educational aspect that requires attention; but purely politically motivated reform has little chance for success. Shifts in policy will be necessary, as well as continuous concern for quality and improvement. (Asche, 1991; Fullan & Miles, 1992; Glines & Long, 1992; Kohl, 1992; McDaniel, 1989; Price, 1990; Timor & Kirp, 1989; Tye, 1992).

Concerns for quality and improvement found in the fourth wave can be traced to the development of the Total Quality Management (TQM) approach, and its increasing acceptance in business and industry. According to Schmoker and Wilson (1993), the primary concepts of TQM, "focus on constancy of purpose, continuous learning and a sense of improvement" (p. 390), "best codify what the schools need most if they are to improve substantially" (p. 395). Although this approach to educational reform is just being recognized, examples of reform which have embraced the concepts of TQM (intentionally or not intentionally) are coming to light (Holt, 1993; Schmoker & Wilson, 1993; Tribus, 1992). Reform based on these concepts shows promise; "Demingism is likely...to effect a far more significant improvement in the quality of a school's educational
program than the outmoded remedies currently being recommended at the national level" (Holt, 1993, p. 388).

Most importantly for reform, all those participating in or impacted by reform need to have a clear vision of reform and what is involved. Fundamental to reform and the recommendations of all the reports and authors is the concept of change. "Serious education reform will never be achieved until there is a significant increase in the number of people...who have come to internalize and habitually act on basic knowledge of how successful change take place" (Fullan & Miles, 1992).

A clear vision is predicated on an understanding of where the educational system has been and where it stands today. Vocational education is no exception; as vocational educators contemplate reform, they must remain cognizant of what brought the field to today.

**Vocational Education System**

The vocational education system in this country has a history dating back to the early years of the country’s existence. Early vocational education was primarily in the form of apprenticeships offered by craftspeople and businesses. Apprenticeship gave way to manual labor academies and mechanics institutes as
the industrial revolution began to take shape. Public concern grew for the education of all children; however, this era saw little formal government involvement in education and vocational education. ("200 Years," 1976; Barlow, 1976; Calhoun & Finch, 1982).

As the country grew, so did the need to formalize the system of vocational education. Federal involvement began with The Morrill Acts of 1862 and 1890, and the Hatch Act of 1887; these acts provided for the establishment and support of institutions specifically designed to teach agricultural and mechanical arts (Calhoun, 1982). These acts focussed on postsecondary education, and by the early 1900s, the federal government was being called upon to provide a public system of vocational education to help meet the needs arising from industrialization, automation, and an increasingly urban society (Barlow, 1974; Prosser & Quigley, 1949). From the Smith-Hughes Act of 1917 through the currently operating Carl D. Perkins Vocational and Applied Technology Education Act of 1990, the federal government has played a major role in the system of vocational education. Federal legislation provided the impetus for the establishment of state systems and the development of programs, helped with the expansion of occupational areas, shifted the focus of vocational education from providing programs to serving people with the most need, and has placed vocational education today in a vital position in support of national economic
competitiveness in an international economy (AVA, 1990; Calhoun, 1982; Lewis, 1989). All these pieces of legislation have influenced the structure of the contemporary system.

The contemporary system of vocational education is not easily or quickly described. At the federal level, responsibility for vocational education has been given to the Secretary of Education and the Assistant Secretary for Vocational and Adult Education. The federal role is to administer the federal legislation and monitor the system of vocational education nationwide. Much of the formal organization of vocational education rests in the hands of state and local governments. This has resulted in an array of different organizational and governance structures; governance will be discussed in more depth in the following section.

Although each state has its own plan for the organization of vocational education, the state maintains the responsibility for certification of teachers and programs, supervisory support, curriculum standards and in some cases curriculum development, and under the most recent federal legislation, standards and measures (Calhoun, 1982). Each state also maintains an independent advisory council, as required by federal statute (AVA, 1990). This council is predominantly comprised of business, industry and labor representatives, and is
charged with advising the state on its state plan and evaluating the total program of vocational education on a biennial basis (Joe Davis, Executive Director of the Ohio Council on Vocational Education, personal communication, October 29, 1991). The high level of business, industry and labor involvement in the council underscores the tie between vocational education and the world of work.

Teacher and local administrator preparation also vary from state to state. For secondary teacher preparation, two major models are followed; the baccalaureate degree teacher and the industry teacher. The baccalaureate degree teacher completes a baccalaureate program in teacher education, and meets state-set coursework, teaching experience and work experience requirements. The industry teacher is a skilled craftsperson in the field in which they will teach, usually as evidenced by a given number of years of work experience in the field. Workshops and formal courses on pedagogical issues and skills are required following employment as a teacher before regular teacher certification is granted from the state. Administrator certification is also state-administered; depending on the administrative position, state supervisor or superintendents certification may be required. Some states, such as Oklahoma, provide an additional specialized vocational education administrator certification for vocational administrators (Oklahoma Department of Vocational and Technical Education, 1991).
Through the years, vocational education has developed program areas as societal needs have emerged. Originally, three program areas were founded in the Smith-Hughes Act of 1917: agricultural education, home economics education, and trade and industry education. Currently, seven areas are recognized as the major program areas in secondary vocational education: agricultural education, business education, health occupations education, home economics education, marketing education, technology education, and trade and industrial education. Each area emphasizes the hands-on development of work skills supported by cognitive development in related theory and technology (Barlow, 1974a, 1974b, 1976; Calhoun, 1982; Thompson, 1973).

Programs are delivered through a variety of mechanisms. Programs may be offered as a part of the offerings in a comprehensive high school, in a vocational center that serves a single school district, or in a regional vocational center that serves several districts. Students may spend as little as one class period per day in their vocational program, or as much as an entire day at a the vocational center. The delivery mechanism, as with the program areas, has evolved to meet the needs arising in a given state, region, or local district.

In addition to the specific program areas, vocational education also includes a variety of interrelated programs and activities. These include efforts such as
programs for special populations, career planning and development programs reaching into the middle school and often primary school levels, tech-prep programs linking high school vocational preparation with postsecondary education in a seamless educational experience, and individualized and competency-based instruction (AVA, 1990).

The program areas, interrelated programs and activities, and delivery mechanisms continue to evolve and adapt within the frame of vocational education. *The Unfinished Agenda* (1984) called for a variety of reforms within the vocational education system, in areas such as access, equity, curriculum, teacher recruitment and preparation, standards and accountability, articulation and leadership. Reforms have taken place within program areas; for example, the National Academy of Science (1988) issued a report entitled *Understanding Agriculture: New Directions for Education*, which called for a rethinking and adjustment of the philosophy of agricultural education. The agricultural curricula is being revised to reflect an agri-science focus, agricultural literacy, and knowledge of and in agriculture (Oklahoma Department of Vocational and Technical Education, 1991; Ohio Department of Education, 1991).

Another example could be taken from home economics education; curricula has expanded to include topics such as family life, life transitions and community
service (Carlene Thompson, Home Economics Education, Delaware Joint Vocational School, personal communication, October 29, 1991). The basis for instruction in home economics today is to strengthen families and the quality of family life, and content includes issues related to economic, social and nutrition/wellness aspects of life. (Ohio Home Economic Network, 1990; Willis, 1990).

This discussion only provides an overview of the system as it exists today. While each facet of the system will impact and be impacted by any change or reform, the governance structure for a given vocational education system is likely to control the depth and endurance of the reform. The locus of control and authority within the system are dictated by governance structure (Council of State Policy & Planning Agencies, 1986).

**Governance of Vocational Education**

Responsibility for conduct of education and the structure of the educational system within a state is the constitutional responsibility of each state (Council of State Policy & Planning Agencies, 1986; Gentry, 1979). As a result, the delivery of education has taken place within a variety of different governance structures, resulting in a variety of structures for vocational education governance. The governance structure delineates the "centers of power and authority in the
education system of a state" (Council of State Policy & Planning Agencies, 1986, p. 2). The nature of the governance structure, therefore, influences the scope and delivery of vocational education (Ramirez & Swanson, 1987).

Vocational education governance structure has been defined as "the administrative organization used by a state to administer, control, and manage the functions, resources, services, and personnel in the state's vocational education systems" (Gentry, 1979, p. 9). In classifying governance structures found in vocational education, four types of governance have evolved from literature (Council of State Policy & Planning Agencies, 1986; Faddis et al., 1986; Florida State Council on Vocational Education, 1986; Gentry, 1979, 1987). The four types are: a single board for primary, secondary, vocational and higher (postsecondary) education; two boards, one for primary, secondary and vocational education, and one for postsecondary education; three separate boards for primary and secondary, vocational, and postsecondary education; and miscellaneous structures, including vocational education administered by higher education, vocational education split into secondary and postsecondary components and administered separately, and vocational education administered by the chief state school officer.
The most recent work on vocational education governance structures dates to the mid-1980s; a renewed look at state governance structures for vocational education is called for by Hoachlander (1989), and the current National Assessment of Vocational Education. While governance resurfaces as an issue accompanying reform, the determination of appropriate governance structures should support the philosophy under which vocational education exists.

**Philosophy of Vocational Education**

"Vocational education lacks a coherent philosophy;" so begins Miller (1985, p.1) in his work on the principles and philosophy of vocational education. The concept of a philosophy has been much discussed among vocational educators; both the first and fourth yearbooks of the American Vocational Association devoted much or all of their chapters to the discussion of vocational education philosophy (Barlow, 1974; Law, 1971). Any number of other documents and articles have wrestled with the issue (Barlow, 1974a, 1976; Evans, 1971; Hillison & Camp, 1985; Kazanas et al., 1973; Lakes, 1985; Miller, 1985; Pautler, 1990; Thompson, 1973). A statement of philosophy, however, is not easily achieved.

Philosophy is a way of looking at the world, a lens through which decisions are made and actions interpreted. Philosophy provides a structure or conceptual framework for the field, in this case vocational education. Vocational educators
who dealt with philosophical issues focussed on the questions of truth, reality and value within vocational education; these questions together help define the underlying assumptions on which vocational education is based (Barlow, 1974a; Kazanas et al., 1973; Miller, 1985). Philosophy allows an individual to know "what he [sic] is doing and why" (Morris, 1961). Additionally, a philosophy can illuminate the gap existing between "the social condition (what is) and the philosophical condition (what should be)" (Thompson, 1973, p. xi). Miller (1985) defined philosophy as "a conceptual framework for synthesis and evaluation that represents a system of values to serve as a basis for making decisions that project vocational education's future" (p. 3).

Historically, vocational education established principles and goals long before an attempt at articulating a philosophy was made. Debate on the goals and principles dates back to the early 1900s. This debate crystallized around the positions of Snedden and Prosser, who advocated the development of a vocational education system to provide working class children with skills to work and participate in a democratic society, and Dewey, who advocated a holistic system which incorporated these same workplace skills into the comprehensive education of all children in a democratic society (Barlow, 1974a, 1974b; Kazanas et al., 1973; Lakes, 1985; Miller, 1985). The resolution of the debate at that time was the creation of a system of public vocational education separate from the

The principles upon which this system of public vocational education were founded have been loosely grouped into three types: people, programs and processes (Miller, 1985). Under these categories fell such items as citizenship, general education, theory plus practice, individualized instruction, national significance and cooperation between employer, educator and student (Barlow, 1974a). Principles for vocational education have evolved over time as societal and legislative changes occurred. Career guidance, lifelong learning, accessibility to all, community-based, intracurricular student organizations, professionally and technically competent teachers, and direct relationship to the world of work have become mainstays of vocational education. As societal changes continue at a quickened pace, vocational education principles will continue to evolve (Ediger, 1988).

These principles, which play a vital role in guiding the action taking place in vocational education, have led to work on developing a philosophy for vocational education. Miller (1985) contends that the philosophical position of vocational education is grounded in pragmatism; experience is the commonality in many of the principles employed by vocational education. "The world of vocational
education emerges as a place of experience" (Miller, 1985, p. 220); "Vocational education is a field of practice...," (Lewis, 1991). As such, the pragmatic nature of the philosophy allows for the unfinished state of the philosophy; as experience is accrued, vocational education philosophy and principles incorporate that experience. When the philosophical questions of truth, reality and value are posed to facets of vocational education, the pragmatic approach relies on experience to "validate the truthfulness of the assumption" (Miller, 1985, p. 226). This experience which shapes vocational education philosophy will be shaped in part by the environment in which vocational education finds itself; that environment is itself facing tremendous change as society moves into the future.

**Future and Trends**

In the world of the future, the education system has a great deal facing it in both the near and distant future. The demographics of the population, the expectations of and for students, teachers and schools, the nature of the workplace, and the ties between the school and the workplace are all changing (Brodhead, 1991; Cetron & Gayle, 1991; Hodgkinson, 1991; Naisbitt and Aburdene, 1990; Reich, 1983; Toffler, 1990). A statement by Reich (1983) sums up much of the futurists’ visions: "Even if America were to devote more resources to education, simply more of the same would not prepare its youth for roles in flexible-system enterprises, working collaboratively to solve novel real-
world problems" (pp 215-216). The key to his statement for vocational education can be found in three phrases familiar to vocational educators which are imbedded in this quote: flexible, working collaboratively, real-world problems.

In this context, many of the trends cited by Cetron and Gayle (1991), Naisbitt and Aburdene (1990), Reich (1983), SCANS (1992), Toffler (1990), and others, have explicit and implicit ramifications for vocational education. Although any of these authors could be cited, Cetron and Gayle (1991) itemize common trends concisely. In Cetron and Gayle's review of seventy-five trends which will influence education, they refer to a shift from the "back-to-basics" to a "forward-to-future-basics" movement, with much of its basis in advanced science and technologies used for problem-solving (p. 228). They observe that employers spend $210 billion on training and that business-education partnerships "to reduce remediation costs and to develop technical skills" will expand (p. 229). Cetron and Gayle further devote an entire section, 20 of the 75 trends, to "The Connection to Jobs and Work." Included among these 20 trends are a predicted shortage of entry-level workers and the "enormous" difficulties facing employers to adapt to "the educational, social, economic, and technological changes in the workplace, home, and school" (p. 230).
Vocational education is also mentioned explicitly in a number of these trends. It is forecast to be "a major part of the debate" in the redetermination of a core curriculum, along with basic skills and artistic education (Cetron & Gayle, 1991, p. 226). Cetron and Gayle also stipulate that "vocational education, with emphasis on higher technical literacy, will be required for increasing numbers of students. Access to state-of-the-art vocational education will be demanded by more parents and clients" (p. 228). They also anticipate that "secondary students will come to value vocational education more highly as reform efforts bring about a restructuring of schools, especially an integration of academic and technical skills" (p. 228). In the case of this trend, the restructuring/integration of academic and technical skills is already underway in many educational systems. The specific references to vocational education indicate the growing awareness in education and society of the value, benefits and potential of vocational education. It behooves educators to consider the implications of the trends cited by futurists as change is being planned and implemented (Alley, 1985).

To develop these assessments of future trends, futurists have a variety of tools at their disposal. Techniques include environmental scanning, brainstorming, trend analysis and extrapolation, cross-impact analysis, the Delphi technique, scenarios and individual judgmental forecasting (Haas, 1987; Hood, 1984;
Morrison, Renfro, & Boucher, 1984; Murphy & Cancellier, 1982; Norris & Salomon, 1983). Individual judgement forecasting, in which experts make "guesstimates" about future events, may be incomplete or incorrect; however, "it will nevertheless have provided something very useful: an intelligent base case" (Morrison et al., 1984, p. 42). The delphi technique has been used in numerous studies to establish a foundation for additional research and development activities (Alley, 1985; Delbecq, 1986; Finch & Crunkilton, 1979; McCampbell & Stewart, 1992; Morrison et al., 1984; Weaver, 1988). Fundamental to futures research is the use of multiple techniques and the inclusion of participant perspectives in developing forecasts. Participant perspectives can be assessed by soliciting participant perceptions with regard to the issue at hand.

**Delphi Technique**

The Delphi technique, one of the forecasting techniques commonly used by futurists, is a group process for obtaining a collective judgement about future events, activities, issues, or solutions (Delbecq, Van de Ven, & Gustafson, 1986; McCampbell & Stewart, 1992; Weaver, 1988). Delbecq et al. (1986) defined the process as "a method for the systematic solicitation and collation of judgements on a particular topic through a set of carefully designed sequential questionnaires interspersed with summarized information and feedback of opinions derived from earlier responses" (p. 10). The Delphi technique takes advantage of the "simple
truisms" that "the group as a whole encompasses at least as much (and usually more) information than any single member" (Dalkey, 1972, p. 4). What differentiates the Delphi technique from other collective judgment techniques is that Delphi does not require face-to-face contact between participants; individuals respond anonymously and in isolation, interacting only via the summarized responses on each successive questionnaire. As Dalkey (1972) explains, the combination of anonymity, controlled feedback, and a statistical expression of the group's response provide a means for incorporating the best of individual thought with the best of group interaction.

Pioneered by Dalkey and Helmer at the Rand Corporation in the 1950s, the Delphi technique was originally used to forecast probable scenarios regarding critical national defense issues (Dalkey, 1967, 1971; Helmer, 1966, 1967). Panels of experts were established to anonymously provide opinions about potential courses of action by unfriendly nations. Opinion statements were synthesized and resubmitted to the panel until a consensus was reached. This initial use of the Delphi technique, forecasting military actions, was quickly broadened to include forecasting, planning, predicting policy impact, and exchanging the most current scientific information in a variety of fields beyond the military strategy (Brockhaus, 1975; Dalkey, 1972; Delbecq et al., 1986; Linstone & Turoff, 1975; Weaver, 1972). According to Delbecq et al. (1986), "Delphi can be applied to
a wide range of program-planning and administrative concerns" (p. 84). In education, the Delphi technique has been used for long-range institutional planning, curriculum developments, program development, and issue clarification (Alley, 1985; Cyphert & Gant, 1969; Finch, 1985; Finch & Crunkilton, 1979; Judd, 1971; McCampbell & Stewart, 1992; Morrison et al., 1984; Skutsch & Hall, 1973; Sweigert & Schabacker, 1974; Weaver, 1988).

Use of the Delphi technique is predicated on the problem being investigated, characteristics of potential panel members, and the time available (Delbecq, 1986). The appropriate circumstance for conducting a Delphi is one in which pooled judgement, independent idea generation, equitable participation, interaction for the sake of clarification only, and anonymity are sought; while normative pressures, social role impacts and reactive idea generation are to be minimized. The Delphi technique "is, above all, a rapid and relatively efficient way to 'cream the tops of the heads' of a group of knowledgeable people" (Dalkey, 1972, p. 21). Primary advantages to conducting a Delphi are the large number of ideas typically generated, the complexity of thought required to put ideas into writing, proactive search for ideas (no reliance on another panel member to get ideas started), the opportunity to obtain judgements from geographically isolated experts with minimal expense, the equitable participation of all panel members (lessened influence of dominant individuals), and the
maintenance of diverse views within the panel. Limitations of the Delphi technique are the reverse of its strengths; anonymity and distance provide no opportunity for social reward and feedback, verbal clarification, or direct conflict resolution. It is also important to keep in mind that the Delphi technique elicits judgements, not truths about the future (Weaver, 1971). Still, the Delphi technique is appropriate in a wide range of situations.

The Delphi technique, whether the classic technique developed by Dalkey and Helmer or a modified version, has several common elements. These include the solicitation of independent judgements on a topic, feedback on the responses, opportunity to revise or substantiate opinions, and anonymity between panel members (Dalkey, 1972; Delbecq, 1986; Linstone & Turoff, 1975; Macmillan, 1971). In the classic Delphi, an open-ended question is presented to panelists with instructions for panelists to provide their opinions. Responses are then synthesized, and a second questionnaire developed which presents the original responses and asks panelists to rate or prioritize responses. Panelists may also give feedback to support or oppose responses. Again, responses are synthesized and a new questionnaire developed to be distributed to panelists. This process is repeated until consensus is reached. (Bruno, 1976; Dalkey, 1967; Delbecq, 1986; Linstone & Turoff, 1975).
The modified Delphi technique differs from the classic technique in the structure of the initial questionnaire distributed to the panelists. In a modified Delphi, the first questionnaire is made up of a set of pre-developed statements instead of an open-ended question (Delbecq et al., 1986; Judd, 1972). This approach has the advantages of saving time for both the researcher and the panelists, minimizing the potential for panelists dropping out from the later rounds, insuring that items important to the researcher are included (Judd, 1972).

Regardless of the approach taken, use of the Delphi technique over the last thirty years has found that consensus is generally achieved in three to four rounds of questionnaires (Delbecq, 1986; Sweigert & Schabacker, 1974; Uhl, 1975). Studies of the optimal number of rounds include Cyphert and Gant (1971), who found that nearly all respondents had developed their opinion by the third round of the Delphi, and Brooks (1979), who indicated that consensus was achieved in three rounds with little to no change evidenced by a fourth round of questionnaires. The achievement of consensus represents the collective judgement of the panel, as perceived by its member, on an issue.

**Perceptions**

Perceptions, often also called attitudes, have received much attention by investigators of social phenomena and change. Much work focusses on what
individuals will do, and the tie between perceptions, beliefs, intended behavior and actual behavior has established (Fishbein & Ajzen, 1975). This adds strength to the importance of the perception.

Organ and Bateman (1991) define the term perception as the result of the selection, organization, storing and interpretation of sensory data. Fishbein and Ajzen (1975) stipulate that attitudes have three characteristics; attitudes are learned, predispose action and "such actions are consistently favorable or unfavorable toward the object" (p. 6). Thus perceptions are the basis for the formulation of attitude.

Measurement of attitudes has become more refined; four types of scales are commonly used in the measurement of attitude. These scales are the equal-appearing interval scale, the cumulative scale, the semantic differential scale and the summated rating scale (Ary, Jacobs & Razavieh, 1990; Kerlinger, 1973). All four scales are designed to place an individual at some point on an agreement continuum of the attitude being investigated. Of the four, the summated rating scale has been found to be easier to construct, and in some studies, more reliable (Ary et al., 1990). An example of the summated rating type scale is the Likert-type scale (Ary et al., 1990; Kerlinger, 1973). In a direct comparison of the Likert scale and the Thurstone scale (equal-appearing interval), the Likert scale
was determined to be less time consuming, less laborious, and yielding of higher reliability coefficients with fewer items than the Thurstone (Edwards & Kenney, 1946).

**Framework Summarizing the Study**

The following figure, Figure 1, summarizes the issues and concepts from the literature that will be incorporated into this study. The literature on change and change in education provided the basis for shape of the framework; factors common to change and specifically educational change include external and internal influences. Among these external and internal influences are "firmly entrenched sponsors/disseminators of educational change—federal policy-makers, researchers, consultants, developers, project personnel of new programs, publishers, etc., all of whom have a vested interest in promoting educational change" (p.1), new legislation/policy, and access to information (Fullan, 1982). The literature on educational reform, vocational education system, governance of vocational education, philosophy of vocational education, and future and trends provided the items which appear under the four main issues categories. The Delphi technique and perceptions literature provided the organization for the shape, bringing the internal and external influence on change of the policy influencer into contact with the issues derived from the literature. The resulting framework guided the development of the methodology for the study.
Figure 1. Framework
CHAPTER III

METHODOLOGY

The methodology for the study will be organized into five sections. These sections include the research design and approach, panel selection, instrumentation, data collection procedures, and data analysis.

Research Design and Approach

In order to determine the components of vocational education which should contribute to the reform of education in the future according to vocational education policy influencers, and to establish consensus among those policy influencers on the most critical of these components, a descriptive research study was designed. The method employed was the Delphi technique. The Delphi technique has been used successfully in developing consensus on the future directions in education (Alley, 1985; Finch & Crunkilton, 1979; Helmer, 1977; McCampbell & Stewart, 1992; Morrison et al., 1984; Sweigert & Schabacker, 1974; Weaver, 1988). For this study, a modified Delphi technique was employed; this entailed the use of a pre-determined set of statements on the initial Delphi instrument (Delbecq, 1986; Judd, 1972).
Panel Selection

The Delphi panel was selected from nominations made by recognized leaders in vocational education and research. Nominators were contacted by telephone; and informed of the purpose and nature of the study (see Appendix A). Up to five names of vocational education policy influencers were solicited from each of the nominators. Individuals receiving more that one nomination or nominators who nominated themselves were automatically included in the panel; the remaining panelists were selected based on their background and professional position to insure diversity of experience among panelists. A total of 23 panelists were selected to form the panel; ten to fifteen panelists has been deemed to be of sufficient size for a homogenous group of people (Delbecq, 1986). Dalkey, in a study of the relationship between Delphi panel size and the error and reliability of responses, found that the mean error was .5 or lower and the reliability index was .8 or higher with 15 to 20 member panels (Dalkey, 1972, pp. 17-19).

Selected panelists were then contacted by telephone, and similarly to the nominators, informed of the purpose and nature of the study, and their being nominated to participate in the study. Selected panelists were then asked for their participation. Of the 23 contacted, 20 agreed initially to participate. Fifteen were able to complete the three rounds.
Telephone contact was followed with a letter to panelists, thanking them for their participation and outlining the procedure for the Delphi. Also included with this letter was the first round Delphi instrument, a stamped return envelop, and a specialty tea bag incentive.

**Instrumentation**

Specialized instruments were developed for use with the panelists in this study. Three instruments were developed, each one drawing from the responses to the previous instrument. Each of the three instruments was accompanied by a cover letter, a stamped return envelop and a small incentive.

For the first round instrument, 20 items were developed to reflect positions, concepts and activities identified in the review of educational change, educational reform, and vocational education literature. Content validity, the judgement of whether the items represent the intended domain with the intended audience, was established by recognized leaders in vocational education and educational reform who were not panelists (See Appendix B for list of these leaders). Given the nature of the Delphi technique, additional types of validity were not appropriate for the instruments. Criterion validity, concurrent validity, and construct validity are concerned with the relationship of the items with some relevant external criterion and a psychological trait; neither of these are a
consideration in the Delphi technique which seeks judgements on future events or activities (Ary et al., 1990). Essentially, the validity of the Delphi items evolved through the consensus on agreement or disagreement with each statement by the Delphi panel.

Similarly, neither ecological nor population validity are pertinent to this study; no attempt will be made or is intended to generalize the results of the consensus building to any situation or population. The objective of the Delphi technique is to gain consensus among knowledgeable individuals on the current best forecast of future events or activities; consensus is specific to the situation presented in the Delphi items and the knowledgeable individuals who become the Delphi panel.

Reliability, the "degree of consistency with which it [the instrument] measures whatever it is measuring" (Ary, et al., 1990, p. 268), is also a moot issue in a Delphi study of this nature. By design, the Delphi technique strives to achieve stability in response to the Delphi items. No attempt is made to summate responses across items, as is done in the techniques for establishing indices of internal consistency reliability; to do so would be an artificial manipulation of the data. Changing responses from one round of the process to the next is the means by which consensus is achieved, and is accepted as essential to the Delphi
process (Delbecq, Van de Ven, & Gustafson, 1986; McCampbell & Stewart, 1992; Weaver, 1988); thus, coefficients of stability were also deemed inappropriate.

For each item, panelists were asked to agree or disagree with the statement and to indicate their level of certainty (using a five-point Likert scale). The scaling method used for the items in the instrument was the certainty method (Wolins & Dickinson, 1973). In this type of scaling, subjects were asked to indicate, on the five-point scale of certainty, how strongly they agree or disagree with the item. This numerical five-point scale was combined with the response to the dichotomous item, agree/disagree, and then transformed into normal values based on a normal Z-scale. This scoring, therefore, facilitates the process of determining when the pre-established level that represents consensus is reached.

The certainty method also had the effect of clustering all the lower certainty responses, those in the middle of the continuum from agree to disagree, to the center of the normal scale, and spreading those responses to either end of the original scale even farther from the center (Lux, 1992). The final scale values went from negative eight to positive eight, and represented both agreement/disagreement and level of certainty (see Table 1).
In addition to the predetermined items, panelists were asked to suggest other concepts or activities which they believed should also be included among the items and what directions educational policy must take in order to achieve these directions. Responses to these items were incorporated in successive instruments as additional items.

For the second and third round Delphi instruments, responses from the preceding instrument were analyzed and formatted into the next instrument. Condition for deleting an item from the successive instrument was achievement of consensus, as operationalized in the "Definitions." In the case of the mean score falling within the weak agreement or disagreement scores (from -2 to 2 certainty values), items were retained into the next round. If the standard deviation for an item was greater than 3.5 certainty scale points, the item was also retained into the next round. In the instance where 10% of the panelists lie outside the range of consensus and four or more standard deviations from the item mean, the item will be retained and those panelists asked to justify or
reconsider their response. Once consensus (as previously defined) with a mean certainty value of greater than +/-2 was reached on an item, it was not included in successive instruments. Second and third round instruments consisted of the continued items from the previous instrument, new items suggested by panelists, the percentage of panelists agreeing and disagreeing with the item, comments from panelists from the preceding instrument, and space for additional comments. The Round 2 instrument contained 18 items continued from Round 1 and 25 items suggested by panelists. The Round 3 instrument consisted on 30 items from Round 2 and added six new items suggested by panelists.

Data Collection

The Delphi instruments were distributed by two-day mail. The mailed packet consisted of the instrument, an individually addressed cover letter, a self-addressed stamped return envelope, and an incentive. The cover letter included a short discussion of the importance of the study and the significance of their participation, an assurance of confidentiality, the deadline date for returning the instrument, and thanks for their participation. The final round cover letter also included the offer of a copy of the study summary. Panelists were given one week from the date of the cover letter to respond. One follow-up phone call was made to those who had not responded by the deadline date (Dillman, 1978).
Data Analysis

Data were analyzed descriptively. For each round, the percentage of agreement and disagreement, and the mean certainty were calculated for each item. The reaching of consensus was also checked by determining the number of responses that fell within the allowable range of +/- 1.29 standard deviations around the mean certainty score for the item. Special cases, as described in the Instrumentation section, were dealt with in the previously established manner when such cases were found. Comments were compiled and synthesized as appropriate; representative comments were included in the instrument for the successive round.

Following the final round, mean certainty scores were calculated for each item. A final check for consensus was made, using the same rules established for the previous rounds. Along with these statistics, variability was described through standard deviations for those items on which consensus was and was not achieved. These types of statistics have been deemed appropriate for use as accurate descriptive statistics with the Delphi technique (McC Campbell & Stewart, 1992).

Final comments were also reviewed and synthesized to further describe the panelists understanding of each item. Common themes accompanying a given
item were described and presented along with the statistical description for that item.
CHAPTER IV

RESULTS

All-encompassing changes are taking place in education under the name "educational reform." While studies have documented educational change, components of change, and the impact of local level educational reform pilot projects, macro-level issues regarding system-wide directions have been largely perspectives of scholars. A systematic study of those who will influence the future of vocational education, via related policy, within the context of educational reform had not yet been conducted. This study endeavored to fill that gap in knowledge. Its objective was:

to explore and describe those programs, activities and directions for the future which are the most critical components of the contribution of vocational education to the reform of education, as perceived by vocational education policy influencers.

In order to explore these directions, a panel of vocational education policy influencers nominated by leaders in the field participated in a three-round, modified Delphi study. In this modified Delphi study, the selected group of panelists was mailed the Round 1 instrument on which a number of literature-
based items were listed, and asked to agree or disagree with the items as a component of vocational education's contribution to the reform of education in the future. Panelists were instructed to keep in mind the overriding question of the study: What programs, activities and directions are critical components of the contribution of vocational education to the reform of education? Comments with regard to the substance of the issues were also solicited. Initial items were drawn from the literature on educational reform and vocational education, and dealt with curriculum, school organization and management, governance structures, and assessment systems. Items on which a pre-determined statistical consensus level (either in agreement or disagreement) was not reached were repeated on the second round instrument, along with summarized panelist comments, the percentage of panelists in agreement and disagreement with each item and their response from the previous round. Additional items suggested by panelists on Round 1 were added to the Round 2 instrument. Round 2 was then mailed to panelists for their input. This process was repeated for a third round. Following Round 3, statistics of central tendency and variability were calculated for all Round 3 items; final comments were also reviewed and synthesized to further describe the panelists' understanding of each item. Common themes accompanying a given item were described and presented along with the statistical description for that item.
This chapter presents the results from each of the three rounds of the Delphi process in chronological order. Percentages of agreement and disagreement, mean certainty and standard deviations are presented; summarized participant comments supplement the statistical data. Items on which consensus was reached are presented. Final round results are additionally described with item medians and interquartile ranges. Final comments are reviewed and synthesized to further describe the items as understood by panelists.

**Results from Round 1**

Round 1 was comprised of two sections: twenty literature-based items relating to educational reform and two open-ended items allowing panelists to suggest additional items for Round 2. At the conclusion of Round 1, two items (preparation of students for a productive work life and development of students’ workplace knowledge) achieved consensus. Eighteen items ranging from school choice to changes in governance were continued in Round 2, accompanied by 25 items suggested by panelists. Table 2 presents the percentages of agreement and disagreement with each of the original items; this information was provided to panelists during Round 2. Table 3 presents the mean and standard deviation of the certainty score for each item, further indicating which items attained the predetermined consensus conditions.
Table 2. Percentages of agreement and disagreement on Round 1 responses to original items, n = 15.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AGREEMENT</th>
<th>DISAGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of students for a productive work life</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Development of students' workplace knowledge</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>Vocational education as one of the principal goals of the reformed educational system</td>
<td>77%</td>
<td>23%</td>
</tr>
<tr>
<td>Vocational education as a subset within the educational system</td>
<td>69%</td>
<td>31%</td>
</tr>
<tr>
<td>Alternative assessment programs</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>School choice programs (i.e., vouchers)</td>
<td>31%</td>
<td>69%</td>
</tr>
<tr>
<td>Apprenticeship programs</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Entrepreneurship education programs</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Outcome-based instruction</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Revision local governance structures</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>Revision state governance structures</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>Revision the federal governance structure</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Site-based management programs</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>National education standards, as called for in the <em>High Skills or Low Wages</em> and <em>Learning a Living</em> national reports</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Career guidance programs (beginning at the primary grade level)</td>
<td>77%</td>
<td>23%</td>
</tr>
<tr>
<td>Preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive worklife</td>
<td>92%</td>
<td>8%</td>
</tr>
<tr>
<td>Vocational education as a content area of education</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Joint participation of vocational educators and other educators in determining the direction of reform</td>
<td>85%</td>
<td>15%</td>
</tr>
<tr>
<td>Articulation programs</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Specific occupational preparation</td>
<td>62%</td>
<td>38%</td>
</tr>
</tbody>
</table>
Table 3. Means and standard deviations of Round 1 responses to original items, n = 15.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation of students for a productive work life*</td>
<td>7.79</td>
<td>0.77</td>
</tr>
<tr>
<td>Development of students' workplace knowledge*</td>
<td>6.21</td>
<td>3.03</td>
</tr>
<tr>
<td>Vocational education as one of the principal goals of the reformed educational system</td>
<td>4.29</td>
<td>4.48</td>
</tr>
<tr>
<td>Vocational education as a subset within the educational system</td>
<td>2.29</td>
<td>5.08</td>
</tr>
<tr>
<td>Alternative assessment programs</td>
<td>3.50</td>
<td>3.29</td>
</tr>
<tr>
<td>School choice programs (i.e., vouchers)</td>
<td>-1.14</td>
<td>5.25</td>
</tr>
<tr>
<td>Apprenticeship programs</td>
<td>6.36</td>
<td>2.26</td>
</tr>
<tr>
<td>Entrepreneurship education programs</td>
<td>4.00</td>
<td>3.80</td>
</tr>
<tr>
<td>Outcome-based instruction</td>
<td>5.64</td>
<td>3.64</td>
</tr>
<tr>
<td>Revision local governance structures</td>
<td>0.50</td>
<td>4.50</td>
</tr>
<tr>
<td>Revision state governance structures</td>
<td>0.69</td>
<td>4.68</td>
</tr>
<tr>
<td>Revision the federal governance structure</td>
<td>0.62</td>
<td>6.17</td>
</tr>
<tr>
<td>Site-based management programs</td>
<td>3.64</td>
<td>3.64</td>
</tr>
<tr>
<td>National education standards, as called for in the High Skills or Low Wages and Learning a Living national reports</td>
<td>4.79</td>
<td>3.69</td>
</tr>
<tr>
<td>Career guidance programs (beginning at the primary grade level)</td>
<td>3.43</td>
<td>4.82</td>
</tr>
<tr>
<td>Preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive worklife</td>
<td>5.00</td>
<td>2.88</td>
</tr>
<tr>
<td>Vocational education as a content area of education</td>
<td>3.92</td>
<td>4.23</td>
</tr>
<tr>
<td>Joint participation of vocational educators and other educators in determining the direction of reform</td>
<td>5.07</td>
<td>4.92</td>
</tr>
<tr>
<td>Articulation programs</td>
<td>4.67</td>
<td>4.55</td>
</tr>
<tr>
<td>Specific occupational preparation</td>
<td>1.93</td>
<td>5.24</td>
</tr>
</tbody>
</table>

items which achieved consensus; that is, 80% of the certainty scores falling within +/- 1.29 standard deviations of the mean certainty score, given the mean certainty score greater than +/-2 and standard deviation less than 3.5.
For each item, panelists were asked to give their definition of the item and their rationale for their position. Representative comments, as provided to panelists on Round 2, are presented for items which attained consensus in the following paragraphs. Lists of responses to each item are found in Appendix D. Comments from items which continued into Round 2 are briefly summarized by item.

**Preparation of students for a productive work life.** Consensus was that this item was a critical component of the contribution of vocational education to educational reform. Definitions of this item ranged from "integrated activities in all classes to support workforce skills & knowledge" to "everything voc ed, career ed, & voc adult ed does to prepare learners for work life." Rationale could be characterized by one response: "A productive worklife is a prerequisite for autonomy - a major goal of education." Comments further indicated that "all students will need to have meaningful employment to maintain [a] standard of living" and "curs is a society based on work. If education doesn’t serve economic requirements, its cultural role can’t be served either because people without jobs don’t and can’t participate effectively in the culture."

**Development of students' workplace knowledge.** Panelists also agreed that this items was critical. Definition of this item included statements such as "broad
based approach to workplace knowledge including broad transferable/generalizable skills, basic skills, & occupationally specific skills" and "giving students an understanding and appreciation for tools, facilities and climate where work takes place." This item was deemed to be a critical component because it "facilitates school to work transitions," it is "essential element in connecting academic learning to real-life applications," and "schools have a responsibility to prepare students for civic, family & and work - without providing students knowledge of workplace, how can responsibilities be met."

**Nonconsensus items from Round 1.** The remaining items did not achieve consensus in Round 1; opposing comments represent the disparity among panelists. For vocational education as one of the principal goals of the reformed educational system, agreement was voiced as "most reformationists would have rather ignored vocational education, but ultimately had to acknowledge something like it, in fact, they didn't want to use the term." Disagreement was expressed as "voc ed isn't a goal -- it's a vehicle to get us to our goal." The item vocational education as a subset within the educational system was supported with comments such as "It is an integral component of any comprehensive education system;" this was countered with "it must be an equal partner in the educational system" and "being a subset is one of the reasons voc ed has trouble today -- it should be integral."
Responding to the item alternative assessment programs, agreeing panelists commented "need to assess beyond what paper + pencil tests can measure" and "vocational education has perhaps done more than any other educational endeavor to build educational experiences on valid student assessments." Disagreement was supported with "important for some students or programs, but not all" and "I don't think voc. ed. has anything unique to offer in this area." On school choice programs (i.e., vouchers), those supporting this as a critical component stated "In some geographic areas school choice will provide options not otherwise available." Representative of those disagreeing with this item were the statements "will leave the have-nots behind. What we need are better schools all around" and "No - simply because of the word voucher -- however, the answer would have been the reverse if the question had been choice for students to select (within a structure) a choice of focus - i.e professional/technical/science/arts."

Responding to the item on apprenticeship programs, supportive comments included "this is an excellent way to provide workplace knowledge and transition from school to work" and "Many of the principles + procedures that underlie apprenticeship programs are supported by new research in cognitive science." In contrast, less agreement was voiced as "has popular political appeal, but is
only one part of a comprehensive program" and "So long as we are clear as to purpose...work-based education. The purpose is not to learn a trade necessarily."

When considering entrepreneurship education programs as a critical component, comments in agreement included "learners need to understand what is required to be an entrepreneur -- as one and/or what is takes to be one" and "entrepreneurship is essential workplace knowledge..." In disagreement, panelists commented "trendy," "not an option for many," and "while vocational education can and does contribute to entrepreneurial education, that should not be its principle purpose."

With regard to the item outcome-based instruction, comments in agreement were typified by "Voc Ed must be outcome based - driven by standards of workplace. If it is not, the program is pointless." Those in disagreement with this item as a critical component made statements such as "Cliche. Fad. Assumes education not to be purposive as it is" and "Idea has merit but needs to be defined clearly to merit my support."

Three items dealt with revision of the governance structures of education, one each at the local, state and federal levels. Panelists in agreement with revising governance at the local level commented that this is "important to instituting standards and working toward national goals" and it "needs to be done to
implement site-based mgmt. in educ." Disagreeing with this item, panelists commented that "more revision of 'thinking' rather than structure needed at this level" and "schools belong to the public. They need to have a say." With regard to state governance structures, supportive comments included "Voc Ed is buried in the bureaucracy now in most states" and "this is a critical need in voc ed because the traditional dominance of the SDVE [state department of vocational education] must be broken to move more decision making to the local level. The state should become a service organ to local schools...a facilitator of local decision NOT the major decision maker in voc ed." Disagreement was expressed with comments such as "this causes considerable tumult but does not necessarily cause change. change comes from commitment + leadership" and "the structure is there now in many states." At the federal level, panelists agreeing that revision in governance structure as critical stated that there is "need for a national workforce policy + a stronger U.S. Dept of Education" and "need [for] closer relations with Departments of Labor and Commerce." Those disagreeing with this item stated "we're not likely to change the constitution - nor do I want to," "Federal role is the issue" and "While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."
On the item of site-based management programs, support was expressed as "allows for innovation - risk taking," "until the commitment + vision is created at the local level, action will not occur" and "as a part of governance restructuring it can be important to reform." In contrast, disagreement was reflected by statements such as "not opposed to site-based mgt [management] - to the contrary - but to suggest it is a critical component just does not fly." With regard to national education standards as called for the High Skills or Low Wages and Learning a Living national reports, panelists in agreement with this item as being critical stated that "everything that SCANS calls for is inherently voc ed," and "without standards there is not focus’ standards give the direction + allow measurement of progress." Panelists who disagreed stated "standards don’t create people who meet them," and "most such standards become too academic without appropriate flexibility."

In support of the item on career guidance programs (beginning at the primary grade level), panelists asserted that "students need good information and experience related to lifelong options for being a productive person," and "career decisions need a basis for support which is currently lacking. Students need information early to make quality decisions." Panelists in disagreement with this item as being critical stated that "I see career guidance as a post-secondary activity. Vocational immaturity of most children precludes it," and "This is not
a vocational responsibility but an institutional responsibility. However, not much has happened w/o [without] vocational money!" On the item of preparation of special needs students for a productive work life, support was made in statements such as "all our citizens must be productive," "these kids need our help to get into the workplace" and "simple sense of equity and because the 'at risk' population is approximately 25% of the students population -- that is a lot." The opposing view was typified in the statement "important to targeted groups but not the driving force of school reform which is needed for the majority of students."

Agreement with the item vocational education as a content area of education was supported with "there are specifics about V. E. [vocational education]. It's not just a method," and "if [it's] market driven & designed to accommodate market need, then it's content." In disagreement, panelists made comments such as "voc. ed. is not [a] content area but it's any content which related more to one job than to all of [the] world of work." With respect to the item on joint participation of vocational educators and other educators in determining the direction of reform, panelists in agreement with this as being critical commented "we need a comprehensive system of education that integrates purposes and outcomes rather than separates into parcels and areas." The contrasting view was also found in panelist comments; "Voc educators have never been called upon or highly involved in school reforms. In fact, V. E. [vocational education]
rarely looks beyond its own programs to broader school goals + needs -- it focusses inwardly; doesn't need to act in collaboration with broader school reform + is rarely called upon to do so."

The item articulation programs was supported with statements that included "career paths including foundations of occupational cluster requirements seem only too logical - one has to wonder why it is really only beginning to happen," and "it can help schools move toward more situated/contextual learning for all subjects + provide for multiple student intelligences." Disagreement with this item as a critical component was expressed with "articulation only means a smooth transition - this is a given. There are not separate articulation programs - all should connect with something." On the item of specific occupational preparation, panelists voiced agreement by stating "this is the one single characteristic that makes voc ed unique & different! People don't get jobs based upon 'principles of work', 'occupational clusters,' or 'employment skills.' They get jobs as info specialists, plumbers, machinists and merchandising specialists," and "But of course! The issue is when does the specific preparation trigger in. Again the patterns of the workplace should lead the decision - i.e. [sic] crafts ed should begin at high school." Panelists disagreeing with this item stated that "vocational ed in high schools has sometimes been too specific - need general skills today," and "only incidentally during K - 12."
Results from Round 2

Round 2 was comprised of three sections: the 18 literature-based items remaining from Round 1, 25 items suggested by panelists in Round 1, and an open-ended item allowing panelists to suggest additional items for Round 3. At the conclusion of Round 2, five original items and eight panelist-suggested items achieved consensus. Thirty items were continued into Round 3, accompanied by six items suggested by panelists. Table 4 presents the percentages of agreement and disagreement with each of the Round 2 items; this information was provided to panelists during Round 3. Table 5 presents the mean and standard deviation of the certainty score for each item, further indicating which items attained the predetermined consensus conditions. Round 1 statistics are provided for ease of comparison.

As in Round 1, panelists were asked to give their definition of the item and their rationale for their position. Representative comments, as provided to panelists on Round 3, are presented for items which attained consensus in the following paragraphs. Lists of responses to each item are found in Appendix E. Comments from items which continued into Round 3 are briefly summarized by item.
Table 4. Percentages of agreement and disagreement on Round 2 items, n = 14.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AGREEMENT</th>
<th>DISAGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational education as one of the principal goals of the reformed educational system</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Vocational education as a subset within the educational system</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Alternative assessment programs</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>School choice programs (i.e., vouchers)</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Apprenticeship programs</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Entrepreneurship education programs</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Outcome-based instruction</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Revision local governance structures</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Revision state governance structures</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Revision the federal governance structure</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>Site-based management programs</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>National education standards, as called for in the High Skills or Low Wages and Learning a Living national reports</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Career guidance programs (beginning at the primary grade level)</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive worklife</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Vocational education as a content area of education</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Joint participation of vocational educators and other educators in determining the direction of reform</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Articulation programs</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Specific occupational preparation</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Dropout prevention</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Secondary/postsecondary distinction and coordination</td>
<td>60%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Table 4. (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Comprehensive&quot; vocational education</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Postsecondary vocational education and the employment and training system</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Increased academic requirements/credentials for vocational teachers</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Re-think program evaluation - use proactive measures</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>Focus on work rather than jobs at the K - 12 level</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Employer and union involvement</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>Reward and incentive system for teachers and administrators</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Alternative teacher education strategies</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Integration of vocational and academic education</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Tech prep</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Certificate of initial mastery</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>State-of-art facilities</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Teacher inservice</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Research</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Coalitions</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Knowledgeable leadership</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Local, state and federal funding</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Experience based learning in context</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Focus on learners - &quot;talent developers&quot;</td>
<td>88%</td>
<td>12%</td>
</tr>
<tr>
<td>Purpose of school is workplace oriented</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Schooling is community-based</td>
<td>90%</td>
<td>10%</td>
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<tr>
<td>Lifelong learning is a primary goal of education</td>
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<tr>
<td>Elimination of the general education track</td>
<td>100%</td>
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Table 5. Means and standard deviations of Round 2 responses, n = 14.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ROUND 1</th>
<th></th>
<th>ROUND 2</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Standard Deviation</td>
<td>Mean</td>
<td>Standard Deviation</td>
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<td>Vocational education as one of the principal goals of the</td>
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<td>4.48</td>
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<tr>
<td>reformed educational system</td>
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<tr>
<td>Vocational education as a subset within the educational system</td>
<td>2.29</td>
<td>5.08</td>
<td>2.64</td>
<td>5.19</td>
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<td></td>
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</tr>
<tr>
<td>Alternative assessment programs</td>
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<td>3.29</td>
<td>4.09</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
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<tr>
<td>School choice programs (i.e., vouchers)</td>
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<td>5.25</td>
<td>-3.73</td>
<td>3.74</td>
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<tr>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Apprenticeship programs*</td>
<td>6.36</td>
<td>2.26</td>
<td>6.82</td>
<td>2.17</td>
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<td></td>
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<td></td>
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<tr>
<td>Entrepreneurship education programs</td>
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<td></td>
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<td>Outcome-based instruction</td>
<td>5.64</td>
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<td>5.73</td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Revision local governance structures</td>
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</tr>
<tr>
<td></td>
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<tr>
<td>Revision state governance structures</td>
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<td>Revision the federal governance structure</td>
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<td>Site-based management programs</td>
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<td></td>
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<td>National education standards, as called for in the High Skills or</td>
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<td>3.69</td>
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<td>3.81</td>
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<tr>
<td>Low Wages and Learning a Living national reports</td>
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<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Career guidance programs (beginning at the primary grade level)</td>
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<td>4.82</td>
<td>4.55</td>
<td>5.12</td>
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<td></td>
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<td>Preparation of special needs students (as defined in the Perkins</td>
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<td>2.88</td>
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<td>Vocational and Applied Technology Education Act) for a</td>
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<td></td>
<td></td>
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<tr>
<td>productive worklife*</td>
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<td>Vocational education as a content area of education</td>
<td>3.92</td>
<td>4.23</td>
<td>4.18</td>
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Table 5. (continued)

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<tr>
<th>Joint participation of vocational educators and other educators in determining the direction of reform*</th>
<th>5.07</th>
<th>6.27</th>
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<tr>
<td></td>
<td>4.92</td>
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<tr>
<td>Articulation programs*</td>
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<td></td>
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<td>Specific occupational preparation</td>
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<td>5.24</td>
<td>5.41</td>
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<td>Dropout prevention</td>
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<td>Secondary/postsecondary distinction and coordination</td>
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<td>&quot;Comprehensive&quot; vocational education</td>
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<td>Postsecondary vocational education and the employment and training system*</td>
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<td>Increased academic requirements/credentials for vocational teachers</td>
<td>#</td>
<td>3.73</td>
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<tr>
<td></td>
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</tr>
<tr>
<td>Re-think program evaluation - use proactive measures</td>
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<td>2.10</td>
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<td></td>
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<td>3.86</td>
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<tr>
<td>Focus on work rather than jobs at the K - 12 level</td>
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<td>Employer and union involvement</td>
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<td>Reward and incentive system for teachers and administrators</td>
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<td>Alternative teacher education strategies*</td>
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<td>Integration of vocational and academic education</td>
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<td>Tech prep</td>
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<td>Certificate of initial mastery</td>
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<td></td>
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<td>State-of-art facilities</td>
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<td></td>
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<td>3.77</td>
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Table 5. (continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>#</th>
<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>Teacher inservice'</td>
<td>#</td>
<td>5.73</td>
<td>3.25</td>
</tr>
<tr>
<td>Research</td>
<td>#</td>
<td>4.80</td>
<td>4.79</td>
</tr>
<tr>
<td>Coalitions</td>
<td>#</td>
<td>4.50</td>
<td>2.29</td>
</tr>
<tr>
<td>Knowledgeable leadership'</td>
<td>#</td>
<td>5.60</td>
<td>2.24</td>
</tr>
<tr>
<td>Local, state and federal funding</td>
<td>#</td>
<td>1.73</td>
<td>4.92</td>
</tr>
<tr>
<td>Experience based learning in context</td>
<td>#</td>
<td>5.78</td>
<td>1.69</td>
</tr>
<tr>
<td>Focus on learners - &quot;talent developers&quot;</td>
<td>#</td>
<td>4.13</td>
<td>3.02</td>
</tr>
<tr>
<td>Purpose of school is workplace oriented</td>
<td>#</td>
<td>2.10</td>
<td>4.16</td>
</tr>
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<td>Schooling is community-based'</td>
<td>#</td>
<td>3.60</td>
<td>2.58</td>
</tr>
<tr>
<td>Lifelong learning is a primary goal of education'</td>
<td>#</td>
<td>5.91</td>
<td>2.47</td>
</tr>
<tr>
<td>Elimination of the general education track'</td>
<td>#</td>
<td>5.55</td>
<td>2.54</td>
</tr>
</tbody>
</table>

items which achieved consensus; that is, 80% of the certainty scores falling within +/- 1.29 standard deviations of the mean certainty score, given the mean certainty score greater than +/-2 and standard deviation less than 3.5.

#items which appeared only on Round 2.

Apprenticeship programs. Consensus among panelists was that this item was a critical component of the contribution of vocational education to the reform of education. Typifying the comments of panelists was the statement "the more opportunities students have to learn on the rapidly changing (and continuously
changing) equipment and in the actual work environment the greater his/her chances will be for assured employment." However, many panelists added caution to their confident agreement; "no one program is a panacea," "little is known about the efficacy of apprenticeships as a learning strategy in vocational education," "very political," and "apprenticeship does not yet have a variety of good, tested models -- but they are coming...good apprenticeship is the original form of vocational education." One panelist further noted "apprenticeship in U.S. is not a youth program as it is in Europe; it is an adult program...It must expand beyond the construction trades + into new growth areas in the labor market if it is to become a more significant program...Nevertheless, its underlying principals of learning + approaches are powerful - can be applied in many areas of learning + this is what the cognitive science literature is showing."

**Entrepreneurship Education Programs.** Panelists also agreed that entrepreneurship education programs were critical components. Comments were supportive of the Round 1 remarks which agreed with this item; "we need ways to have graduates literally create jobs for themselves and others," and "vocational education provides excellent opportunities for students to become prepared for multi-career paths -- entrepreneurship (or self-employment) being a major one" exemplify these comments. Several panelists observed that this is a part of the contribution, commenting "entrepreneurship is a part of 'thinking,' using your
head to figure out a better way -- the American Spirit that has made the USA business person the competitor. But, entrepreneurship is no substitute for good skills -- its a piece of the picture."

Preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive workforce. Again, panelists were in agreement with a strong level of certainty on this item concerning special populations. Comments included "voc ed can and does prepare special needs students to become productive wage earners as it does for all students," and "this is a critical component of voc. ed. contribution to reform because voc. ed. has assumed a major role in this level + few other programs are available in the sec. schools. Agreement was tempered with some admonitions; "voc ed is very important for these students but it is not a social program - voc ed should be for all who want, need + can benefit. This includes special populations." It was also noted that "we need help in this program. We cannot do it all. We do have a wealth of experience."

Joint participation of vocational educators and other educators in determining the direction of reform. The consensus position of panelists was in agreement with this item, with one of the highest levels of certainty shown in this round. In support of their ratings, panelists stated "agree strongly - cannot integrate if
you don't involve all educators," and "absolutely! How can we expect vocational education to be a respected education if it is not an integral part of educational reform and if non-vocational educators never have an opportunity to work with and eliminate the myths about voc. ed." Noting a starting point, one panelist suggested that "perhaps the challenge is to sort out what voc ed can bring to the table in the larger context of redirecting the whole ed system." A single panelist maintained opposition to this item, stating "voc. educators have never been called upon or highly involved in school reforms. In fact, V.E. rarely looks beyond its own programs to broader school goals + needs -- it focuses inwardly; doesn't seek to act in collaboration with broader school reform + is rarely called upon to do so."

Articulation programs. Articulation programs were accorded consensus as a critical component of the contribution of vocational education to the reform of education; no panelist disagreed with this item in Round 2. One panelists simply stated "the comments above [from Round 1] say it all." During Round 2, remarks by panelists included "articulation is a must for learners as well as survival of [the] system," and "articulation horizontally through integration and common planning as well as vertical articulation through pre-requisite planning is essential." In changing opinion from disagreement in Round 1 to agreement in Round 2, a panelist explained "my earlier disagreement is because of the false
notion that articulation will address school reform. Yes, it will help, yes it is needed. But there is so much talk of articulation that we are missing the bigger point -- to make Tech Prep + other reform initiatives really work we need integration (that involves articulation and a lot more)."

Postsecondary vocational education and the employment and training system. Although consensus in agreement with this item was reached, it was with a low level of certainty. This was a new item, resulting from Round 1, for panelists; comments were mixed and contained cautions. Four panelists made comments such as "fuzzy" and "coordinated? combined? unclear direction." Comments which defined this item included "public postsec. voc ed must see itself as a part of the nation's E & T system; should become the one-stop shopping center for employment related needs (i.e., training, referrals, job search ass[essmen]t, etc.) & relate to other community employment providers." One panelist observed that "its all one larger system with no national policy, guiding or directing. We have a lot of band-aids on a big wound." Hedging of agreement was voiced as agreement "if this is meant to say we need a better understanding of what + how we can improve the understanding," and "community colleges (since they provide many vocational courses) offer JTPA training in many locations, so voc ed + emp[loyment] & training fit together there."
Alternative teacher education strategies. Consensus in agreement with this Round 1 generated item as a critical component was reached on its first review by panelists. Panelists maintained "we are too narrow + locked in," and that this is "critical to change! University teacher ed varies - some is excellent, some is entrenched in the past - we need alternatives." Mention was made of Holmes group initiatives: "Holmes Group 5th year programs & Professional Dev[elopment] Schools (PDS) are the only major reforms/alternatives I'm aware of." Those panelists in agreement but less certain commented "if it were possible to develop the agreement regarding what the teacher needed to know - then develop the "assessment" instruments to judge them - then why would one care where the individual gained those competencies," and "to a point. In the end, they must have good academic credentials."

Teacher inservice. The consensus position of panelists on this item was agreement. Panelist comments in support of agreement included "very important, We must 'retool' those in the field," "contributes greatly to reforming education. It is absolutely essential if there is to be any reform in, e.g. [sic], governance," and "probably the most critical program or process we need to consider. an extreme and crucial need today." One panelist noted that "educ. must start to view/think of teacher inservice more as industry views human resource dev. -- very different things with different underlying philosophies."
Educ. needs to think of inservice as longer range human resource dev. aimed at improving teachers/administrators + the system itself." Again a note of caution was raised; "more is always better - the questions are what skills are needed, how decided, how delivered." No comments were made by panelists who disagreed with this item as critical.

**Knowledgeable leadership.** All panelists were in agreement with this items as being a critical component of the contribution of vocational education to the reform of education. In support of that agreement, panelists observed "it's crucial that we have knowledgeable leadership for the complex programs we are carrying out," and "new doctorates are needed who have knowledge of systemic change and a far-reaching vision." Several panelists noted that "leadership [is] not now in place," and "needed but lacking in voc. ed." Along that line, it was noted that "what knowledge leaders need is the crucial element."

**Focus on learners - "talent developers".** Although the consensus position among panelists was in agreement with this item and many panelists provided no comments in support of their position. A number of the comments reflected an uncertainty with the meaning of the item. "?," "like the words - don't understand 'Talent Developers' - my definition may be different," and "do not know what this means, sounds nice" were among those comments. Comments in support of this
item were "yes, student centered education," "we do need people who are learners and not just possessors of content," and "This is the critical goal/obj. of K-12 educ. + should be the voc. ed. goal at secondary school level. This means that employers are not the directors of voc. program. Employer needs take second place to student needs at hi. sch. level. Employer needs are primary at the postsec. level. Sec. voc. programs focus on multiple intelligences + optimizing individual student talents."

Schooling is community-based. Consensus among panelists was that this Round 1 generated item was a critical component. Again, few comments were made in support of individual ratings for the item. Panelists commented in support of this item that "learning cannot be confined to the walls of the classroom," and simply "yes." While agreeing, one panelist asked "so what's new here?" In the view of another panelist, "if this is meant to recognize that schooling can occur in a variety of settings, not just the formal classroom, who could argue?" Those who disagreed with this item made no comment in support of their position.

Lifelong learning is a primary goal of education. The consensus position of panelists was in agreement with this item. In supporting this position, panelists stated that "it is what we claim about learning," and "lifelong learning ideas are to be instilled in all students if education is to work at all." A panelist, while in
agreement, indicated that "everybody is into this now." A second panelist voiced a caution with regard to this item; "hard to disagree, but not sure what one does with this."

Elimination of the general education track. This item was accorded consensus as a critical component of the contribution of vocational education to the reform of education; no panelists disagreed with this Round 1 generated item. Panelists maintained that "wandering around an unfocused track leads nowhere," and "this is accomplished by providing all students with vocational subjects and general academic subjects." "This is a good development if voc. ed. at secondary school level becomes broad-based, more generalizable prep. for life + work. If voc. ed. remains narrowly-focused, specialized job prep, then the general educ. track is needed. Voc. ed. needs to provide an alternative instructional learning approach to achieving broad general education skills + objectives. Otherwise, the general track is needed to do this." Two panelists tempered their agreement with "but - - not a 2 track system. Integrated Education," and "and the other tracks too!"

Nonconsensus items from Round 2. For the item vocational education as one of the principal goals of the reformed educational system, panelists asserted that "the education system will be reformed only if it makes as its goal the inclusion of vocational education courses for all students regardless of their career goal."
Representative of those disagreeing with this item were statements such as "voc ed isn't the goal, prep for work is. Voc ed. only focusses on less than baccalaureate-level work, schools focus on all of work, including professional-level work. Voc ed certainly is NOT a major focus of school reforms - now or in the past; it has never been a major goal of reformers + never will be. for work life is the key + the goal + voc. ed. is ONE approach for some students."

Responding to vocational education as a subset within the educational system panelists in agreement made comments such as "'subset' probably means different things to different panelists. However, the statement is very true. VE does not meet all goals of education but it does focus on several that are not present without voc ed. It must be integral -- not separate from other ed. Its purposes -- goals -- are an important part of restructured education." Those in disagreement with this item as an critical component of the contribution of vocational education to the reform of education made statements represented by the sentiments of one panelists; "contextualized learning is important for all students, work experience and career exposures are important for all -- so voc ed should not be a subset, only in sense that some students may go for further education and some may want job training."

On alternative assessment programs as a critical component, supportive comments included "Voc. Ed is the forerunner...and can contribute much to an
alternative assessment system for all education." Disagreement was supported by comments such as "It is correct to note that voc ed has made substantial contributions to build into the assessment of students education experiences on valid student assessments...If it means only voc ed should have alternative forms of assessment the answer is no -- if it means we should have support for more alternative forms of assessment for all students the answer is yes." In response to the item school choice programs (i.e., vouchers), those in agreement agreed with the comments "if the word voucher is dropped and the emphasis were on developing choice of focus for students, the vote would be a 5," and "voc. ed. can + should be a major choice/opportunity available to students at secondary + postsecondary levels. Many students who leave school early should be able to get back in at a later time...should be able to use vouchers for this." In disagreeing with this item, panelists maintained that "Choice is not the answer (nor the probleml)" and "we need equity among schools - competition won't solve our problems."

When considering whether outcome-based instruction was a critical component of the contribution of vocational education to the reform of education, panelists in support stated that "separating learning to know from learning to do is not the best approach. Doing and knowing is demonstrated through OBE instruction" and "an absolute must. It has proven its merit over the years." Those of the
opposing view commented that "OBE would be acceptable if outcomes were broadly based. Believe most still think of in terms of specific job skills and I don't find that acceptable. May need a clear definition."

The three items dealing with revision of governance structures were again continued into the next round. On the item of revision of local governance structures, supportive comments included "change is inevitable...if local school district revises its local governance structure, vocational education must be an integral part of that restructuring." Comments from those in opposition to this item as a critical component included "don't see how revision of governance structure will make any difference in reform." In commenting on the revision of state level governance, panelists in support of this item made statements such as "If we come up with an agreed on purpose of education that puts workplace education as an important outcome, local restructuring will also require revision state governance structures." Comments from panelists disagreeing with this item commented that "this is the same as local governance issue -- it is just 'moving furniture around.'" With regard to the federal level of governance, support was voiced by asserting "Dept of Labor + Ed need to be in a partnership to insure connected programs + more efficient use of dollars." Opposition was stated as "we don't need structure revision. We do need a policy on job education."
With regard to site-based management programs, panelists in agreement stated that "empowerment of front line work force is critical for quality processes," and "if we don't move many decisions to the 'front line' -- the teachers, principals, building level - we will not ever reform schools." In contrast, those in disagreement with this item as a critical component maintained that they "still need to be convinced this is a unique contribution of voc ed to the reform of ed in general." On the item national education standards, as called for in the High Skills or Low Wages and Learning a Living national reports, support was expressed through this representative statement: "if we cannot identify standards we have no specific outcomes to strive for. National standards are essential." Those in opposition to including this statement commented that "standards are a responsibility of the state."

When considering the item career guidance programs (beginning at the primary grade level) as a critical component, panelists who voiced agreement shared comments of "the earlier students learn about careers, character building, skill building and the work ethic, the greater their chances for understanding the contributions of all education, including vocational education, in their decision-making," and "essential. It's a critical component to the reform of education." Panelists holding the opposing view made comments which included "career decisions ought to be postponed. For one thing, schools do not have good
information about labor markets. For another, jobs and careers have become moving targets." Regarding the item vocational education as a content area of education, agreement was supported with comments such as "Yes...but, we should get away from the notion of distinct differences - Ag, Home Ec, Business, etc. These are all clusters where students specialize their skills and knowledge in the context of the bigger whole of education -- AVA has missed that distinction. We need strong foundations in Math Science, Communications + technology which are further developed through concentrated study in a content area -- content areas though don't stand alone." Disagreement with this item was supported with "not really content as I see it!," and "Voc. Ed. is comprised of many content areas just as, for example, 'Language' is comprised of English, French, German, Spanish etc."

Agreement with specific occupational preparation as a critical component of the contribution of vocational education to the reform of education was supported with the comments "for those going to work job readiness is a voc ed responsibility (still largest group)" and "while broad-based occupational education is necessary specific occupational preparation at the high school level is expected by employers in some vocational preparation areas." Disagreement with this item was expressed in comments such as "this is needed at post secondary level but not at lower grades," and "not in high school."
The balance of the items were in their first appearance in an instrument. In those instances noted, more than three panelists commented that the item was unclear and did not respond to the unedited suggested items from Round 1. With respect to dropout prevention as a critical component, panelists who voiced agreement commented that "this is one of the most important & unique potential contributions of sec. level voc. ed. As a goal, it helps to establish the place of voc ed in the schools - Can't be ignored," and "voc ed contributes to the prevention by providing relevancy and early experience of success." In opposition to this item as a critical component, panelists asserted that "dropout problems usually have societal roots. Curricular solutions mask the problem," and "while I disagree dropout prevention is a critical component of voc ed I believe voc ed does reduce dropouts." On secondary/postsecondary distinction and coordination support was expressed as "These 2 levels of programs must become distinct with distinctly different goals + objectives. They can't have one set of goal + objectives for all levels of programs -- secondary through adult. Moreover, voc. ed. needs to start earlier (in middle schools) & be related to subsequent level of the program. Sec. level voc. ed. should be education (not trng [sic]) & be broad-based for all students; postsec pros. [sic] should be training + specialized prep. for immediate employment." Those in disagreement commented that "we need educational programs for all learners, the distinction is unimportant," and "using
competency based instruction allows for improved articulation making this distinction unnecessary."

On the item "Comprehensive" vocational education, panelists in agreement with this item responded with "need to drop 5 traditional service areas at secondary school level + offer a 'comprehensive' voc ed. experience focused on: (a) the study of work in society, (b) study of work as careers, & (c) study of specialized skills + knowledge for work. Focus on 3 distinct goals + focus on work not jobs. Draw more heavily on community + workplace resources than now through apprenticeship + coop experiences." In contrast, panelists disagreeing with this item supported their position with "what does 'comprehensive' mean that voc ed does not...If this means 'generic' voc ed -- the answer is NO," and "unsure what panel member intended by inclusion of this element since comprehensive vocational existed (+ still exists) before the reform of education movement." Three panelists indicated that the item was unclear and chose not to respond.

With regard to the item increased academic requirements/credentials for vocational teachers, support of this item was expressed in comments such as "it is essential that staff be reviewed on an ongoing basis -- all teachers, not only vocational teachers, in concert with national professional standards being established," and "all teachers need to be academically competent. They also
need to have occupational competence." Panelists who disagreed stated "this is only really a concern for T & I teachers @ secondary school level," and "not convinced that academic credentials are the real issue." On re-thinking program evaluation - using proactive measures as a critical component of the contribution of vocational education to the reform of education, panelists supported their response with "this is what Perkins II requires," and "more immediate evaluations + benchmarking is needed." Disagreement was reflected by statements such as "don't think it is very influential on change. Don't know how it's any different from the concern for outcome-based instruction."

In support of the item on focussing on work rather than jobs at the K - 12 level, panelists contended that "preparation for work is general ed.; all students need it; sequence/program should move from general to specialized, from earlier grades to later grades," and "we need to promote the work/school connection earlier than is being done." In opposing this statement as a critical component, panelists commented that "some need jobs focus before grade 13," and "Too artificial...if one were to say 1st focus on gaining agreement about common body of knowledge required prior to developing choices for occupation focus then [I] would agree."
Agreement with employer and union involvement as a critical component of the contribution of vocational education was articulated in the representative statements "totally agree. But all employees are not unionized. Suggest you include labor + management. This may or may not involve unions," and "it's part of the public being involved." A further comment noted "the question is involvement in what - work site learning for credit? curriculum development and approval? assessment of skill + knowledge?" Those in disagreement with this item remarked that this item is "not really needed for reform," and "does this refer to business-industry collaboration? If so, I don't see it as critically important to reform." In considering whether the item reward and incentive system for teachers and administrators is a critical component, panelists who agreed supported their position with comments of "this has always been important for morale and advancement," and "a means to attract quality people and elevate profession." Panelists who disagreed supported their position by stating "don't think this has ever amounted to much of an influence on/for change," and "on what basis?"

The item integration of vocational and academic education was supported by panelists who agreed that this item was a critical component with statements such as "a must to prepare our students for global competition," "a great strength if done properly," and "provides new approaches to thinking about education by
voc ed and academic subject teachers." One panelist observed "this is the greatest issue for voc ed in school reform initiatives. No one seems to agree on what integration means." To support the opposing view, panelists contended that "this is conceptually weak. Assumes that voc ed does not already possess 'academic' attributes," and "I think this refers to the same thing as articulation - - e.g. [sic] horizontal integration = integration; vertical integrations = articulation." For the item tech prep, support was given by panelists through comments such as "a means to a more comprehensive system," "provides great opportunity for educators to plan and work together at secondary and postsecondary levels," and "best thing going in school reform! Let's make sure 'Tech Prep' does not become another idea that failed. States should set standards to assure rigor, integration etc." Disagreement was voiced in the comment "fad," and "This was a good way to generate a new funding stream that would force folks to come together to create an articulation process and give attention to the non BA world - but there is a danger of trying to make it more than it is."

With regard to the item certificate of initial mastery as a critical component of the contribution of vocational education to the reform of education, agreeing panelists asserted "this has always been an crucial area for voc education," "competency certificates in voc. ed. provide good experimentation for c. of i. m.,"
and "this is a good ideas bus scares a lot of people. It will be very difficult to break the American dream of a high school diploma at age 18 after 12 years of schooling." Panelists who contend this item is not a critical component commented "tends to imply single focused, job preparation as the goal." On the item state-of-art facilities, agreement was supported by the statements "makes for effective teaching and learning and high morale," "very important," and "it's hard to be opposed to good facilities, but isn't it more important to ask the question where can the student be exposed to the state of art equipment + then arrange for a portion of the education to occur in those facilities -- many of which will be in the workplace." Disagreement was justified with "don't think it's critical," and "what does this solve?"

In considering the item research, panelists expressing agreement stated "the base for all our decisions," "we need relevant research that can be applied. Too much of what's going on is related to the 'publish or perish' requirement of Higher Ed faculty -- the application, transfer of knowledge is not here," and "is necessary for progress to occur." Those who disagreed with this item made no comment in support of their positions. Agreement with the item coalitions was supported by "voc ed can point the way based on its successful past in this area, including community organizations and agencies as well as with business and labor," "our best chance to be efficient and effective," and "reform + restructure need to
involve the broad range of constituents. We need their assistance." Disagreement was advocated with comments such as "too vague to be of value," and "its [sic] hard to disagree with this. But more explanation needed -- who are the coalition partners." The call for more explanation of this item was echoed by three panelists who chose not to respond.

The item local, state and federal funding received weak agreement, supported by the comments of panelists such as "its [sic] a given[.] We must have support for any reform to take place," and "we’re in this together." Those disagreeing with this item commented that "there will never be enough plus given the clear variations in [ways] systems are funded what will be gained by trying to seek one best model," and "already exists." Agreement with the item experience based learning in context received support via comments represented by "Voc Ed has to its credit a history of experience based learning in context," "it fits the philosophy of the pragmatists + aligns with the cognitive scientists," and "cognitive science results show the merits of contextual + situated lbg. [sic] + provide much theoretical support for what voc. ed. has been doing. It also supports apprenticeship + coop program approaches, student voc. organization, + workplace learning of all types." In opposition, disagreement was expressed by the statements "how is ‘in context’ different than experience based?" and "isn’t that what voc ed is?"
In considering the item purpose of school is workplace oriented, panelists who agreed supported their agreement with "all students will eventually work - the variable is the amount of education," "yes, but let's be broader about it -- is that the purpose of school or a focus of education?" and "one of the purposes of schooling is to help student understand what is required to be a productive citizen." Those panelists holding the contrary view commented that "one (1) purpose of school (K - 12) is workplace preparation. The primary purpose of Sch. [sic] + voc. ed. at postsec level may be workplace prep," and "narrow view of schooling."

**Results from Round 3**

Round 3 was comprised of four sections: the 30 literature-based and panelist-suggested items remaining from Round 2, six items suggested by panelists in Round 2, an open-ended item allowing panelists to suggest any items still needed, and an open-ended item allowing panelists to comment on the Delphi process. At the conclusion of Round 3, an additional six original items and eight panelist-suggested items achieved consensus. Panelists had not reached consensus on 22 items. Table 6 presents the percentages of agreement and disagreement with each of the Round 3 items. Table 7 presents the mean and standard deviation of the certainty score for each item, further indicating which
Table 6. Percentages of agreement and disagreement on Round 3 items, n = 14.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AGREEMENT</th>
<th>DISAGREEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational education as one of the principal goals of the reformed educational system</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>Vocational education as a subset within the educational system</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Alternative assessment programs</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>School choice programs (i.e., vouchers)</td>
<td>0%</td>
<td>100%</td>
</tr>
<tr>
<td>Outcome-based instruction</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Revision local governance structures</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>Revision state governance structures</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Revision the federal governance structure</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td>Site-based management programs</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>National education standards, as called for in the <em>High Skills or Low Wages</em> and <em>Learning a Living</em> national reports</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Career guidance programs (beginning at the primary grade level)</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Vocational education as a content area of education</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Specific occupational preparation</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Dropout prevention</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Secondary/postsecondary distinction and coordination</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>&quot;Comprehensive&quot; vocational education</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Increased academic requirements/credentials for vocational teachers</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Re-think program evaluation - use proactive measures</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Focus on work rather than jobs at the K - 12 level</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Employer and union involvement</td>
<td>73%</td>
<td>27%</td>
</tr>
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Table 6. (continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reward and incentive system for teachers and</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>administrators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration of vocational and academic education</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Tech prep</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Certificate of initial mastery</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>State-of-art facilities</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Research</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Coalitions</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Local, state and federal funding</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Experience based learning in context</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Purpose of school is workplace oriented</td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>Citizen/Community advisory committees</td>
<td>89%</td>
<td>11%</td>
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<tr>
<td>Technology education</td>
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<td>30%</td>
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<tr>
<td>Systemic change</td>
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<td>11%</td>
</tr>
<tr>
<td>Value of vocational training</td>
<td>78%</td>
<td>22%</td>
</tr>
<tr>
<td>Pre-service preparation of educators</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Implement waiver programs at all levels</td>
<td>67%</td>
<td>33%</td>
</tr>
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</table>

items attained the predetermined consensus conditions. Statistics from the previous rounds are included for ease of comparison.

As in earlier rounds, panelists were asked to give their definition of the item and their rationale for their position. Representative comments are presented for items which attained consensus in the following paragraphs. Lists of responses
Table 7. Means and standard deviations of Round 3 responses, n = 14.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ROUND 1</th>
<th>ROUND 2</th>
<th>ROUND 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Standard Deviation</td>
<td>Mean Standard Deviation</td>
<td>Mean Standard Deviation</td>
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<tr>
<td>Vocational education as one of the principal goals of the reformed educational system</td>
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<td>3.91 4.76</td>
<td>1.64 6.09</td>
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<tr>
<td>Vocational education as a subset within the educational system</td>
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<td>2.64 5.19</td>
<td>4.27 4.75</td>
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<tr>
<td>Alternative assessment programs*</td>
<td>3.50 3.29</td>
<td>4.09 2.64</td>
<td>5.73 2.05</td>
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<tr>
<td>School choice programs (i.e., vouchers)*</td>
<td>-1.14 5.25</td>
<td>-3.73 3.74</td>
<td>-5.36 2.64</td>
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<tr>
<td>Outcome-based instruction*</td>
<td>5.64 3.64</td>
<td>5.73 3.60</td>
<td>6.82 2.17</td>
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<tr>
<td>Revision local governance structures</td>
<td>0.50 4.50</td>
<td>0.20 4.98</td>
<td>0.09 5.96</td>
</tr>
<tr>
<td>Revision state governance structures</td>
<td>0.69 4.68</td>
<td>1.70 4.63</td>
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<tr>
<td>Revision the federal governance structure</td>
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<td>0.18 5.17</td>
<td>-0.45 5.33</td>
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<tr>
<td>Site-based management programs*</td>
<td>3.64 3.64</td>
<td>5.00 2.22</td>
<td>5.18 2.62</td>
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<td>National education standards, as called for in the High Skills or Low Wages and Learning a Living national reports</td>
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<td>5.82 3.81</td>
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<td>Specific occupational preparation</td>
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<td>1.18 5.41</td>
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<td>Dropout prevention</td>
<td>#</td>
<td>2.73 4.11</td>
<td>4.73 4.35</td>
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<tr>
<td>Secondary/postsecondary distinction and coordination</td>
<td>#</td>
<td>1.60 4.72</td>
<td>3.27 4.37</td>
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Table 7. (continued)

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<tr>
<th>&quot;Comprehensive&quot; vocational education</th>
<th>#</th>
<th>2.50</th>
<th>3.16</th>
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<td>Re-think program evaluation - use proactive measures</td>
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<td>Reward and incentive system for teachers and administrators</td>
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<td>Certificate of initial mastery'</td>
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<td>Coalitions'</td>
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<td>Local, state and federal funding</td>
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<td>Experience based learning in context'</td>
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<td>Purpose of school is workplace oriented'</td>
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<td>4.16</td>
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<td>2.30</td>
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<tr>
<td>Citizen/Community advisory committees</td>
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<td>+</td>
<td>5.11</td>
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<td>Technology education</td>
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<td>+</td>
<td></td>
<td>2.80</td>
<td>3.60</td>
</tr>
</tbody>
</table>
Table 7. (continued)

<p>| | | | |</p>
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<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Systemic change</td>
<td>+</td>
<td>+</td>
<td>3.67</td>
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<td>Value of vocational training</td>
<td>+</td>
<td>+</td>
<td>3.78</td>
</tr>
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<td>4.29</td>
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<td>Pre-service preparation of educators'</td>
<td>+</td>
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<td>6.00</td>
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<td>1.73</td>
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<td>Implement waiver programs at all levels</td>
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<td>+</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
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<td>4.37</td>
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</tbody>
</table>

Items which achieved consensus; that is, 80% of the certainty scores falling within +/- 1.29 standard deviations of the mean certainty score, given the mean certainty score greater than +/-2 and standard deviation less than 3.5.

#items which appeared only on Round 2 and 3.

+ items which appeared only on Round 3.

to each item are found in Appendix F. Comments from items which had not achieved consensus are briefly summarized by item.

Alternative assessment programs. The consensus of the panelists was in agreement with this item as a critical component of the contribution of vocational education to the reform of education. Through the three rounds, agreement became more and more certain, and the variability among panelists perceptions decreased. Representative of panelist comments is the statement: "Voc. Ed. is the forerunner...and can contribute much to an alternative assessment system for all education." Other panelists stated that "Assessment must cover observation, demonstration & evaluation (cognitive) dimensions," and "the support is based on the understanding that what we need is not just
alternative assessment programs for only voc ed (which has done a great job in assessments) but an improved assessment system for all phases of ed."

**School choice programs (i.e., vouchers).** The consensus position of the panelists was that this item was not a critical component. Again, the position held by panelists grew in certainty (with decreasing variability) through the three rounds. The disagreement with this item was supported with comments of "I oppose vouchers in any form or approach. They take away from equity in public education. Give every student a good school in his [sic] area at state expense if necessary," and "public schools are consistent with our democratic form of governance and need to provide for all students." One panelist voiced disagreement with the item based on one word; "No - simply because of the word voucher -- however, the answer would have been the reverse if the question had been choice for students to select (within a structure) a choice of focus - ie professional/technical/science/arts - whatever. The qualifier word - voucher throws off base the concern about choice (within a structure) that students should have a right to expect. Choice needs attention and thought -- vouchers are a bug-a-boo."

**Outcome-based instruction.** This item was accorded consensus in agreement by panelists in Round 3. The level of certainty increased through the three rounds
and was among the highest in Round 3; over the three rounds, the variability decreased. In support of their agreement, panelists commented that "all of education should be outcome based," and "Outcome based education is multi-dimensional. Student must demonstrate what they know, are able to do & are like in the work place. That's voc ed!" Another panelist stated that "I still feel strongly that students should be able to demonstrate what they can do and know as a result of both academic and vocational education. 'The proof is in the performance.'" The support was also tempered by the concern "that we might be lulled into testing for outcomes because they are easy to test for rather than appropriate."

**Site-based management programs.** Panelists again reached consensus in agreement. The level of certainty of panelists responses increased over the three rounds. Panelists in support of this item stated that "this management level could (and should) be able to foster greater integration among all disciplines, including voc. ed. as well as identify targets and provide needed support services," and "if we don't move many decisions to the 'front line' -- the teachers, principals, building level - we will not ever reform schools." Further, "Voc ed must have some freedom to respond & adapt to local population & employment needs." Caution was expressed along with the support; "its [vocational education] purpose & mission is a constant & not negotiable."
Career guidance programs (beginning at the primary grade level). The consensus position of panelists was in agreement with this item as a critical component of the contribution of vocational education to the reform of education. Over three rounds, the level of certainty associated with responses increased, and after rising in Round 2, the standard deviation of the rating decreased to a level less than that of Round 1. In supporting their agreement, panelists noted "career guidance very important at all levels," "essential to career decision making," "this needs to be a focus within all school to work transition efforts," and "students must become aware of options early to develop a 4 year plan to be adequately prepared." One panelist maintained "career guidance focusses on the student's personal decision-making needs about self as well as education, training and employment." Those in doubt of the criticality of this item expressed their position through statements such as "Not sure this is a contribution of voc ed, but it is critical to voc. ed. Good career guidance is a total educational & societal responsibility," and "the function is critical the question is if it a voc ed responsibility."

Vocational education as a content area of education. Although panelists concurred that this item is critical, the level of certainty was among the lowest of all the items achieving consensus. Panelists noted some confusion over the meaning of this item. "The answers reflect the confusion about the terminology."
Everyone appears to agree with the heading but definitions by what is meant vary substantially. I agree with the Yes...But comment above" represents the misgivings stated by panelists. The Round 2 comment referenced in the comment was reiterated by several panelists, and read "yes...But, we should get away from the notion of distinct differences - Ag, Home Ec, Business, etc. These are all clusters where students specialize their skills and knowledge in the context of the bigger whole of education -- AVA has missed that distinction. We need strong foundations in Math Science, Communications + technology which are further developed through concentrated study in a content area -- content areas though don’t stand alone." Support was voiced through the comments "Voc educ content should permeate the curriculum," and "voc ed is a content are as long as it is job focused. Voc ed cannot just be about work; it’s about getting ready for a job!"

**Integration of vocational and academic education.** The consensus position of the panelists was in agreement with this item as a critical component of the contribution of vocational education to the reform of education. No panel member disagreed with this item. This item was accorded the highest level of certainty of any response in Round 3, and the variability of responses among panelists was among the lowest. Representative comment from the panelists include "they are mutually compatible. Adds new dimension to learning," and
"a single system is important for all of education." One panelist summarized their agreement by noting "while there has been integration of academics and vo. ed. as taught by voc ed instructors, the reform occurs when voc ed and academic instructors plan curricula and instruction together."

**Tech prep.** Panelists reached consensus in agreement with tech prep as a critical component of the contribution of vocational education. All panelists were in agreement. During the two rounds in which this item appeared, the certainty of the responses of panelists increased while the variability decreased to one of the lowest values in Round 3. Panelists supported their agreement by reiterating that this "provides great opportunity for educators to plan and work together at secondary and postsecondary levels," and stating "could add an element of richness to voc ed if properly managed & implemented." A note of caution was expressed in one statement of support; "Tech prep could become the "high road" of voc tech edu. Unfortunately, I'm fearful it may be "business as usual" under a new name." However, one panelist noted "The time has come!"

**Certificate of initial mastery.** This item achieved the consensus position of agreement in the second round in which it appeared. However, the level of certainty was among the lowest and the variability among the highest for items achieving consensus. The comments of some panelists reflected this hesitation;
one noted that "unsure of how postsecondary admission requirements will relate
to or accept C.I.M.," and another clarified a statement from Round 2 with "for
the person who believes it implies single focused - job prep means that they have
not had opportunity to study America Choice -- it means just the opposite."
Regardless, those voicing strong support stated "initial mastery implies a standard
of performance. That's always been important for good voc ed!," and ".-how
important it is to provide context + some definition."

Research. The consensus position of panelists was in agreement with research
as a critical component; no panelist disagreed with this item. The level of
certainty panelists expressed in their position increased over the two rounds in
which this item appeared, and the variability decreased. Comments in support
this item included "a major contributor to change decision. Applied research by
those on the firing line could bring about reform," and "a must for future
direction." Several panelists commented directly on current research being
supported on the federal level; "all worthy initiatives should be well grounded in
research, BUT, I'm not talking about the kind of research?? conducted at the
NCRVE!," and "we need relevant research than can be applied. too much of
what's going on is related to the 'publish or perish' requirement of Higher Ed
faculty -- the application, transfer of knowledge is not here"!!! Agree  Current
National Center is missing the point!" represent these thoughts.
Coalitions. All panelists were in agreement with this item as a critical component of the contribution of vocational education to the reform of education. The level of certainty associated with the responses of panelists increased during the two round, and the variability remained steady. Supporting the agreement, panelists commented "good voc ed is a corporate movement. It's a piece of a larger picture," and "on all fronts!" Panelists noted the concern that the definition of this item was unclear; "Its hard to disagree with this. But more explanation needed -- who are the coalition partners." Another panelist observed "how can anyone be opposed but vagueness does not make good policy."

Experience based learning in context. The consensus of panelists was agreement with this item as a critical component; again, all panelists were in agreement. Over the two round in which this item appeared, the level of certainty increased and the standard deviation decreased. To support their agreement, panelists remarked that this "puts purpose, meaning into learning," and it "has and will continue to contribute to reform of education if adapted/adopted by other disciplines." A measure of concern tempered the agreement; "how is 'in context' different than experience based?," and "not sure of meaning here. But seems appropriate." However, several panelists maintained that "it fits the philosophy of the pragmatists + aligns with the cognitive scientists," and "Voc Ed has to its credit a history of experience based learning in context."
Purpose of school is workplace oriented. This item achieved a consensus in agreement, however the level of certainty was the lowest among all the items achieving consensus. Comments were indicative of that low certainty; panelists noted that "purpose of school is preparation for life-long living, among which is what is work? Why work? How? When? Where?", and "Not sure what it means? School has other purposes." Panelists further couched agreement with cautions; panelists stated they agreed "as long as this in not construed to mean it is the only - or indeed the most important purpose of school," and "education is about life & life is work (productive employment) Historically, education in this country has been for the purpose of perpetuating education."

Pre-service preparation of educators. This item was accorded consensus by panelists in Round three, which was the first time it appeared. Consensus was in agreement with this item as a critical component of the contribution of vocational education to the reform of education. In support, panelists maintained that "before there can be reform, there must be pre-service as well as inservice preparation of future teachers and administrators in techniques of integration, standard setting, varied forms of assessment, tech-prep, competency and outcome based education and site based management." One panelist held that "I'm not sure the "Before there can be reform..." is accurate, but in support of reform there must be change in preservice and inservice teacher education.
A bigger question may be HOW to reform vocational teacher education?" Another observed that "teacher ed is wandering - little vision + leadership. They need a lot of help!"

**Nonconsensus items from Round 3.** The remaining items did not attain consensus in agreement or disagreement of the panelists during the three rounds of the Delphi. Many of the items were moving toward becoming issues, with the variability increasing over the three rounds. The comments accompanying each item reflect the positions of panelists in agreement and in disagreement with the item.

For the item vocational education as one of the principal goals of the reformed educational system, the certainty of the responses of panelists decreased and the variability increased from Round 1 to Round 3. Panelists in agreement supported their position with comments such as "Voc Ed is about preparing for work - prep for work is a major ed. reform," and "Voc Ed is one of the major reformers I see needed. Work is crucial to reform." In contrast, disagreement was voiced with the comment "Vo Ed is not one of the goals; it is a very important part of the reformed educational system."

With regard to the item vocational education as a subset within the educational system, panelists were moving toward but did not achieve consensus in
agreement with this item. The level of certainty was increasing and the standard
deviation decreasing. Comments in support of this item included "yes. If Voc
Ed is equal to Communications, Math, Science and Social Studies as a subset."
Other panelists noted that they "agree the word sub-set means different things
to different people but can anyone imagine an education system that does not
include a component that helps prepare people for work?" and vocational
education "may not be a sub-set if applicable to 60% of school population."

None of the three items dealing with the revision of governance structures
achieved consensus during the three rounds of the study. For all three, the
certainty of responses was low, and the variability high. On the item dealing
with the revision of local governance structures, responses and certainty
fluctuated, with the variability increasing over time. The item dealing with
revision of state governance appeared to be moving slowly toward a consensus
position in agreement, and the item on revision of the federal governance was
moving slowly toward disagreement. Comments on the item revision local
governance structures reiterated that "change is inevitable...If local school district
revised its local governance structure, vocational education must be an integral
part of that restructuring," and "form should follow function. The big challenge
is to get the functions right -- including getting the business input in the
development of standards done correctly - just mandating local advisory councils
won't fix the problem." In contrast, disagreement was supported with restatement of the Round 2 comment "governance is not the issue...The real issue is connecting education with the next step in a students life -- changing day to day instruction. You can change governance a thousand ways and not effect teaching -- that's where the real issue should be focussed."

Comments regarding the revision state governance structures also were mixed; in support of agreement, panelists noted "the agreement is checked only on the condition that it would mean we need to obtain a new vision regarding all levels of governments roles in the governance of education," and "this is a "sticky" issue! While there must be close ties between voc ed., economic development, business & industry, education is still a people business & thus, may be subject to a different set of rules than just economic ones. Don't really know the answer, particularly if voc ed is to coexist w/academic ed." Those in disagreement stated "Okay as is." and repeated that they "agree with this statement "This is the same as local governance issue -- it is just 'moving furniture around.'"" In support of the item revision the federal governance structure, panelists observed "the federal gov't cannot continue to pass separate & unique legislative initiatives, with separate & unique rules & regs, and then require collaboration at the state level. This country need a national policy on workforce development that serves as an umbrella over all federal workforce preparation legislation." Disagreement
was voiced through the statements "Labor and Education are at odds + need to come together but a governance change won't necessarily bring on the desired result," and "Okay as is. run by Dept. of education. Leave it alone."

In responding to the item National education standards, as called for in the High Skills or Low Wages and Learning a Living national reports, panelists maintained that "national standards are a must," "core standards must be industry endorsed & national in scope. Latitude should be provided for supplementary core standards and regional/local level based upon documented business/industry needs.,” and "standards are not just a responsibility of states - though states have important roles within the standard setting arena - standards must relate to the needs of the market place." Opposition can be exemplified by the statement "standards are a responsibility of the state."

Positions on the time specific occupational preparation appeared to be polarizing, with the variability in responses increasing with each successive round. In support of agreement, panelists observed that "those who say voc ed is not about preparing for a job (identifiable) don’t understand voc. ed. I don’t see any classified ads for skilled occupations that want just good employability skills. they require knowing & being able to do in relation to specific jobs," and "Should be made available for those whose future employers expect them to come job
ready -- specific skills, broad occupational skills, appropriate attitude, technologically current, etc." Several panelists reiterated that they "agree - the question is when specialization begins. Broad foundations are imperative." In contrast, disagreement was supported with statements of "Employability best at secondary level. Specific in Post Secondary."

With regard to the item on dropout prevention, panelist responses increased in certainty and variability over the two rounds in which this item appeared. Comments from those in agreement stated that "we must keep people in school," and "relevancy and immediate gratification of voc ed success motivates and peaks (piques) students interest." Characteristic of those uncertain about their position is the comment "Only as it offers viable options for students who might not otherwise be interested in school. Drop out prevention should not be voc ed's principle objective." Those in disagreement with this as a critical component held that "dropout prevention is critical - but not a responsibility of voc ed - though voc ed have provided tremendous support in the area."

The item secondary/postsecondary distinction and coordination appeared to be moving toward consensus during the two rounds in which it appeared. Panelists in agreement expressed that "The overarching issue is articulation - badly needed." Agreement with caution was expressed in the statements "I'm uncertain
about the "distinction" leading to reform since "distinction" has existed; however "coordination" across all disciplines contributes to reform, greatly," and "secondary voc ed should not be terminal. It should support basic skills & life long learning needs. Perhaps there's a greater need for reform at p/s level to pick up where sec. V. E. leaved [sic] off!" In disagreeing with this item, panelists reiterated that "we need educational programs for all learners, the distinction is unimportant," and "using competency based instruction allows for improved articulation making this distinction unnecessary." The key is integration - horizontally + vertically."

The item dealing with "Comprehensive" vocational education did appear to be moving toward consensus or dissensus; comments reveal a lack of clear definition of this items. Those indicating agreement with the item stated "I see comprehensive as inclusive of all fields and I believe that is needed," and "still not sure what is meant...the note "need to drop 5..." is very thoughtful if that what is meant by "comprehensive voc ed" - looks good to me." The comment from Round 2 referred to in this response was also revisited by several panelists, and read "need to drop 5 traditional service areas as secondary school level + offer a 'comprehensive' voc. ed. experience focused on: (a) the study of work in society, (b) study of work as careers, & (c) study of specialized skills + knowledge for work. Focus on 3 distinct goals + focus on work not jobs. Draw
more heavily on community + workplace resources than now through apprenticeship + coop experiences." Those indicating disagreement with this item noted "if comprehensive means a general education program about the world of work, then I disagree. Comprehensive means a wide array of occupation specific programs from which to select then I agree."

With regard to the item increased academic requirements/credentials for vocational teachers, panelists moved toward consensus over the two rounds in which this item appeared. Comments supporting this item included "High Tech and even any tech demands it," "all teachers need to be academically competent. They also need to have occupational competence," and "a comprehensive vocational program must be addressed by teachers with comprehensive credentials." Those disagreeing stated "The term 'increased academic requirements' is what makes me disagree though I totally agree with last point 'it is essential...[that staff be reviewed on an ongoing basis -- all teachers, not only vocational teachers, in concert with national professional standards being established]" and "this is an issue of appropriateness & balance. Yes, vocational teachers need academic skills, to teach academic related content, and reinforce basic academic skills. They must be prepared to relate to the present & future. They do not need to acquire 'academic credentials' just to meet artificial credentialling requirements."
On the item re-think program evaluation - use proactive measures, little movement toward consensus was seen during the two rounds it was considered by panelists. Comments revealed a lack of clarity on the meaning of the item. Those in agreement with this item stated that "Evaluation should be outcome-based or performance driven. Less emphasis on process," and noted that it is "hard to disagree with the words ---but still not sure what is meant by them." One panelist observed "there is no question that program evaluation results often lead to reform. However, I am uncertain what "proactive measures" means." In opposition to this item, several comments also indicated a lack of clarity; "what are proactive measures? What does it mean to rethink program evaluation?"

The item focus on work rather than jobs at the K - 12 level also made little movement toward consensus during the last two rounds. Comments representative of those who supported agreement with this item included "my high level of agreement is more related to a need to focus on the work ethic and why people work rather than on specific jobs," and "if - by chance - this means foundations + providing students with some knowledge about a broad band of occupational requirements - fine." Those voicing disagreement responded that "Some individual [sic] need specific job preparation before end of high school," and "we still need to train for specific jobs for H.S. graduates."
With regard to the item employer and union involvement, panelists appeared to move toward consensus in agreement; however, the certainty level of their responses was low and variability was still large. In supporting their agreement with this item, panelists maintained that "the more employment training moves toward employer-site training (youth apprenticeship etc.) the more reform will result in school-employer-union relationships," and "Voc ed is a partnership, must be sensitive to consumer (employer) needs. The employer is voc ed's customer."

One panelist tempered agreement through the comment "involvement - yes - in what - for what purpose - these remain the unanswered issues." In disagreeing with this item, panelists held that "not necessary for reform but could be important to society," and questioned "does this refer to business-industry collaboration? If so, I don't see it as critically important to reform."

Panelists were also uncertain with regard to the item reward and incentive system for teachers and administrators. Comments supporting agreement with this item included "important for morale and fairness," "since reward and incentive systems for staff have been minimal in the past, it certainly would contribute to reform in education if a system of rewarding, 'stroking' and showing visible, tangible signs of appreciation were instituted," "treat them as professionals in a corporation," and "a means to attract quality people and elevate profession." Panelists in disagreement with this item as a critical
component stated that "in principle it sounds great! In practice I don’t know for sure how to make it work fairly. Teachers can’t control the input (students) thus it’s difficult to guarantee a standard output," and "don’t think this has ever amounted to much of an influence on/for change."

Positions on the item state-of-art facilities became more certain over the two rounds in which this item appeared, however the variability among the responses also increased. The comments "or at least access to workplace facilities of high quality’ Good! Essential!," and "this is not an ed reform issue per se - but still not opposed just think it’s the wrong focus" are representative of comments from those in agreement with this item. One panelists also noted "I’ve responded as noted but what I really am interested in is a state-of-the-art learning environment, whether school-based or work-based. A move toward apprenticeship may have implications for school based facilities although the part-time voc schools in Germany are pretty state-of-the-art." Comments from those who disagree with this item are represented by the comments "don’t think it’s critical," and "it’s hard to be opposed to good facilities, but isn’t it more important to ask the question where can the student be exposed to the state of art equipment + then arrange for a portion of the education to occur in those facilities -- many of which will be the workplace."
The item dealing with local, state and federal funding appeared to move toward a consensus position of agreement during the two rounds in which it appeared. The panelists who agreed with this item remarked that "Voc ed is a tri-partite venture. national [sic] priorities, state economic needs, local programs -- all three valuable components," "partnership very crucial to Voc Ed," and "a variety so sources help to identify varing [sic] priorities." Disagreement was supported by the comments "already exists," and "there will never be enough -- have no idea where this leads."

The item citizen/community advisory committees appeared in only the final round, and received only few comments. In support of agreement, panelists noted "Yes, but not as voc ed has used them in the past -- need more involvement of various groups throughout the year on a day-to-day basis, especially parents and employers," "The schools belong to the public - its a way to keep them in ownership," and "Advisory committees + local involvement are essential." The statement "Not critical for reform of educ." was made in support of disagreement.

The item technology education also only appeared in Round 3, and the level of certainty indicated by panelists was low. Panelists who supported this item commented that "technology impact should be a part of all curricula K - 12."
Early introduction to the computer, alone, has reformed education," and "anything to make kids more aware of work + to integrate practical with abstract." One panelist observed that "technology education is important at all educational levels, but technology isn't necessarily voc. ed. Technology is applied science regardless of what it's intended outcome is. Technology is voc ed only when it is an essential part of job preparation." Disagreement was expressed with the comments "its [sic] only one approach + therefore not essential nor critical," and "not critical for reform of education."

The Round 3 item systemic change did not achieve consensus. Comments indicated that panelists were unclear as to the meaning of this item. Those who agreed with this item maintained that "change is a certainty + it should be systemic," "general reform movement is towards systemic change + voc ed ought to be there too," and "yes - change must come from deep within and must involve the system not cosmetic change." Disagreement was founded on the lack of clear understanding of the item; comments such as "I'm not sure what this means. There will need to be systemic change if voc ed is to assume its proper role but is this a contribution of voc ed?," and "not sure what this means" exemplify the lack of understanding.
With regard to the item value of vocational training, panelists were unable to achieve consensus in the one round in which the item appeared. Comment made in support of agreement included "needs a big PR Job to those unfamiliar with what vocational education really is and its value is to society as a whole as well as to individuals," and "Voc ed will never get its due respect w/o a cultural values change toward a respect for the working class." The question of clarity was again raised; one panelist who agreed with the item made the comment "not sure what this means; but, hard to disagree with!" In support of the disagreement, comments mainly focused on the need for definition of the item; these took the form of "don’t understand," and "not clear on meaning?"

The final item of Round 3 was the item implement waiver programs at all levels, which appeared only on Round 3. Few comments were made to support agreement or disagreement. Panelists who agreed and made comments indicated that this is "Necessary if reform is to take place," and "movement to outcomes will reduce need for all of the rules that focus on inputs." Those who disagreed noted that the "waiver program is not clear," and that this is "sometimes used as excuse."

Four new items were suggested by panelists in Round 3. These items were: student + parental views as basis for reform, educational planning, publication of a school report card, and documentation of competency attainment.
CHAPTER V
DISCUSSION

Extensive changes are taking place in education under the name "educational reform." While studies have documented educational change, the components and factors of change, and the impact of local level educational reform pilot projects (Darling-Hammond, 1990; Futrell, 1989; O'Looney, 1993), macro level issues regarding system-wide directions have been largely left to speculation and philosophizing. Vocational education, as one facet of the total educational system, has been conspicuously removed from much of the rhetoric surrounding educational reform (Asche, 1991). Systematic study of what vocational education should look like in the future given the impetus and direction of educational reform, particularly from the perspective of those influential in policy formation, is lacking. The lack of a knowledge base concerning the perceptions vocational education policy influencers have of the future of vocational education holds the potential for unnecessary duplication or elimination of vocational education programs and practices which serve the interests of the reform movement and the redefinition of vocational education.
This study endeavors to fill that gap in knowledge by exploring the following objective:

To explore and describe those programs, activities and directions for the future which are the most critical components of the contribution of vocational education to the reform of education, as perceived by individuals influential in the formation of vocational education related policy.

Without an articulated base of intentions and directions within the field and a clear concept of where the field needs to be, continued existence of secondary vocational education may rest in the hands of external change agents. The problem is to establish that knowledge base; the aspect of this problem addressed in this study is knowledge regarding perceptions held by vocational education policy influencers on the role and contribution of vocational education to educational reform in the future. Specifically, the vision held by key vocational education policy influencers of the future role of secondary vocational education, and consensus among these key individuals as to the most critical future directions will be sought.

**Methodology**

The study utilized a three-round, modified Delphi technique. In this technique, a selected group of panelists was mailed a Round 1 survey instrument with 20 literature-based items listed on it, and was asked to agree or disagree with the
issues as a component of vocational education's contribution to the reform of education in the future. These panelists included individuals influential in state and federal vocational education related policy who hold positions at state, national and federal levels both inside and outside of education and public service. Panelists then indicated the level of certainty of their response, and had the opportunity to provide a rationale for their position. Panelists also were given the opportunity to suggest additional items which they believe should be included. Agreement/disagreement and certainty scores were transformed into a single certainty scale value which represented the panelist's response to the item. When 80% of the certainty scores fell around the mean agreement/disagreement score on an item, consensus was judged to have been achieved for that item. Throughout the study, data were analyzed descriptively. The percentage of agreement and disagreement, and the mean certainty were calculated for each item in each round. In the case of consensus around a mean certainty value between +/-2 or a standard deviation larger than 3.5 scale units, the item was included in successive instruments.

Items on which consensus was not reached were repeated in the Round 2 instrument, along with new items suggested by panelists on the Round 1 instrument. The Round 2 instrument also provided panelists with the percentage
of panelists in agreement and disagreement with each item, summarized comments from panel members, and their response from the previous round.

This process was followed in the second and third round, each employing the same procedures for determining consensus and developing the succeeding instrument. Following the return of the Round 3 instruments, consensus calculations were made and all remaining items characterized with descriptive statistics.

Following the final round, mean certainty values were calculated for each item. Along with these statistics, variability was described through standard deviations for those items on which consensus was and was not achieved. These statistics have been deemed appropriate for use as accurate descriptive statistics with the Delphi technique (McCampbell & Stewart, 1992).

Final comments were also reviewed and synthesized to further describe the panelists responses to each item. Common themes accompanying a given item were described and presented along with the statistical description for that item.
Conclusions

Consensus among experts is not easily achieved, and this study proved to be no exception. The results of this study represent the collective opinion of a selected group of vocational education policy influencers as of this time; care must be taken not to construe their perceptions as that of the entire field of vocational education. However, their perceptions at this point in history give insight into the condition of vocational education within the context of educational reform as the turn of the century approaches. In review, of the 51 items considered during the three rounds of this Delphi, consensus was achieved in agreement with the following items as critical components of the contribution of vocational education to the reform of education:

- Preparation of students for a productive work life
- Development of students' workplace knowledge
- Alternative assessment programs
- Apprenticeship programs
- Entrepreneurship education programs
- Outcome-based instruction
- Site-based management programs
- Career guidance programs (beginning at the primary grade level)
- Preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive worklife
- Vocational education as a content area of education
- Joint participation of vocational educators and other educators in determining the direction of reform
- Articulation programs
- Postsecondary vocational education and the employment and training system
- Alternative teacher education strategies
- Integration of vocational and academic education
Tech prep
Certificate of initial mastery
Teacher inservice
Research
Coalitions
Knowledgeable leadership
Experience based learning in context
Focus on learners - "talent developers"
Purpose of school is workplace oriented
Schooling is community-based
Lifelong learning is a primary goal of education
Elimination of the general education track
Pre-service preparation of educators

Consensus was achieved in disagreement with one item; that item was:

School choice programs (i.e., vouchers)

Consensus was not attained on the items:

Vocational education as one of the principle goals of the reformed educational system
Vocational education as a subset within the educational system
Revision local governance structures
Revision state governance structures
Revision the federal governance structure
National education standards, as called for in the High Skills or Low Wages and Learning a Living national reports
Specific occupational preparation
Dropout prevention
Secondary/postsecondary distinction and coordination
"Comprehensive" vocational education
Increased academic requirements/credentials for vocational teachers
Re-think program evaluation - use proactive measures
Focus on work rather than jobs at the K - 12 level
Employer and union involvement
Reward and incentive system for teachers and administrators
State-of-art facilities
Local, state and federal funding
Citizen/Community advisory committees
Technology education
Systemic change
Value of vocational training
Implement waiver programs at all levels

**Items achieving consensus.** The items which achieved consensus included a wide range of programs, activities and directions for vocational education as most critical components of the contribution of vocational education to the reform of education. Items could be loosely grouped into specific programs/activities for students, specific activities/programs for teachers, system and coordination issues, and the focus, goals and philosophy of education and vocational education.

The largest number of the items that achieved consensus were program/activity oriented; the majority of those were student-focused programs that currently exist to some extent (apprenticeship programs, entrepreneurship education programs, outcome-based instruction, career guidance programs, articulation programs, tech prep, etc.). Two newer student-focused initiatives being put forward in educational reform literature, alternative assessment programs and certificates of initial mastery, also received the support of the panel. Programs for teachers received less attention, and the items were generalities with few specifics (pre-service preparation of educators, teacher inservice). Several teacher-related activities discussed in the literature did received consensus; these included alternative teacher education strategies and site-based management. System and coordination issues were also less likely to have achieved consensus; those that
did (joint participation of vocational educators and other educators in determining the direction of reform, postsecondary vocational education and the employment and training system, integration of vocational and academic education, coalitions) were action-oriented, involve collaboration with people and institutions outside of the traditional sphere of vocational education and are widely supported in literature.

The focus, goal and philosophical items appear to support the other consensus items. The "focus on learners" is evidenced in the array of programs deemed critical; "experience based learning in context" is seen in the nature of many of these programs. The concept of work was the foundation of three consensus items: development of students' workplace knowledge; preparation of students (including special populations) for a productive work life; purpose of school is workplace oriented. The item "schooling is community-based" spoke to the system concerns, and supports the consensus items addressing coordination. Underlying all of the items was that "lifelong learning is a primary goal of education," which achieved consensus the first time it was presented to panelists.

Several consensus items were more conspicuous for the comments made by panelists than for the subject of the item. The item "knowledgeable leadership" brought comments of "needed but lacking in voc. ed.," and "Its [sic] crucial that
we have knowledgeable leadership for the complex programs we are carrying out. Leadership not now in place." The item "research" was responded to with "all worthy initiatives should be well grounded in research, BUT, I'm not talking about the kind of research?? conducted at the NCRVE!," and "we need relevant research than can be applied. too much of what's going on is related to the 'publish or perish' requirement of Higher Ed faculty -- the application, transfer of knowledge is not here."

Panelists were not as definite about some consensus items as others. The most certain consensus was with the items "Preparation of students for a productive work life" and "Integration of vocational and academic education," both of which are espoused frequently in current literature. In contrast, "vocational education as a content area of education" barely achieved consensus, and from the comments of panelists, could have been given a variety of meanings.

One item achieved unanimous consensus in disagreement. Panelists did not consider "school choice programs (i.e., vouchers)" a critical component. The comments indicated major concerns with the concept of vouchers and the impact of choice on equity, quality, and the educational system.
Items not achieving consensus. The items not achieving consensus also exhibited commonalities. Specific activities with regard to teachers (increased academic requirements/credentials for vocational teachers, reward and incentive system for teachers and administrators) and coordination (employer and union involvement) were not accorded consensus, although through the three rounds they appeared to be moving in that direction. Items which seemed to have unclear or multiple definitions to many panelists (secondary/postsecondary distinction and coordination, "Comprehensive" vocational education, re-think program evaluation - use proactive measures, systemic change, value of vocational training) also did not achieve consensus.

Two of the items which were suggested by panelists, "technology education" and "dropout prevention," did not achieve consensus; but comments on both poles indicated that these were deemed the responsibilities of the broader system of education, not just vocational education. On the goal and philosophy level, panelists could not achieve a unified opinion with regard to "vocational education as one of the principle goals of the reformed educational system" and "vocational education as a subset within the educational system." In the case of "vocational education as one of the principle goals of the reformed educational system," positions seemed to be polarizing, making this more of an issue. Panelists also could not agree on the items "focus on work rather than jobs at the K - 12" or
"specific occupational preparation." Positions also appeared to be polarizing on the item "specific occupational preparation."

The lack of consensus on some items also seemed to be contrary to specific items which did achieve consensus. Although consensus was that some system related items needed to be dealt with, no consensus was achieved on the need for revision of any of the educational governance structures, either local, state or federal. Comments on consensus items regarding joint participation of vocational educators and other educators in determining the direction of reform, postsecondary vocational education and the employment and training system, integration of vocational and academic education, and coalitions included the need for a national policy to direct the employment and training system, however governance was viewed independently of that need. Consensus on the item "preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive worklife" as being critical contrasts with no consensus being achieved on the item "dropout prevention," which serves a group considered to be a special population. While the item "certificate of initial mastery" was considered a critical component, the "national education standards, as called for in the High Skills or Low Wages and Learning a Living national reports" did not achieve consensus as being critical.
Overall conclusions. Clear definition of items was critical; those items achieving consensus had clearly understood meanings or meanings clarified through the three round Delphi process. The bulk of the consensus items dealt with programs and activities; directions seemed more difficult items on which to reach agreement. Specific goals for vocational education within the context of reform were unclear and of issue for panelists.

Running throughout the panelist comments were several themes. One theme was that no single contribution or critical component exists; comments of "no one program of effort is a panacea," "it is a very important part of the reformed educational system," and "are an important part of restructured education" appeared in the discussion of items in all rounds. A second theme was a coordinated national-level employment and training policy; this concept appeared in comments from the three items on governance, "vocational education as a subset within the educational system," and "postsecondary vocational education and the employment and training system." A third theme was concern that vocational education not become a social program; this theme emanated from the items "dropout prevention," "vocational education as a subset within the educational system," "career guidance programs," "preparation of special needs students for a productive worklife," and items on governance." Interestingly, none of these themes was put forward as a stand-alone item.
One final theme is the notion that vocational education and vocational educators must participate: in internal reform and redefinition, in educational system reform, in community re-visioning, and in national level dialogue. The comments of panelists illuminated the diversity of thought about the role and direction of vocational education, the interaction between vocational educators and other educators at all levels, and the environment in which vocational education currently operates. These same comments underscore the notion of involvement; in the words of one panelist, "Voc. educators have never been called upon or highly involved in school reforms. In fact, V. E. rarely looks beyond its own programs to broader school goals + needs -- it focuses inwardly; doesn't seek to act in collaboration with broader school reform + is rarely called upon to do so." The extensive comments and participation of panelists seem to demonstrate the move toward higher levels of participation by vocational education in the total educational community.

**Implications for Knowledge**

As educational change literature holds, the programs, activities and directions explored in this study are "multidimensional" (Fullan, 1982, p.30), and consist of complex "dynamic interrelationship[s]" (p. 33). The polarization of panelists on some items highlights these complexities. Simplistic approaches to the contribution of vocational education to educational reform only avoids the
realities and prolongs the isolation of vocational education from the total educational community. Isolated activities, programs and directions are not going to move vocational education into the future of the reformed educational system.

The panelists in this study also concurred with Guba (1965, 1967a, 1981) in emphasizing the need for the involvement of a variety of agencies and individuals in the processes that are taking place. Change, educational change, educational reform, total quality improvement, and futures literature all stress the importance of vision and involvement; while this notion of involvement and collaboration is not new, the nature of that involvement and collaboration is no more clearly defined today than in the early days of educational reform.

This panel also supported many of the issues raised by the educational reform literature. Critical components as perceived by this panel included items of articulation, integration of vocational and academic education, preparation for productive work life, and development of workplace knowledge; all of these topics are consistent with the calls of reform reports dating to the 1980s and the current charge of education to prepare students for participation in a high performing workplace (Holt, 1993; Schmoker & Wilson, 1993; Wirth, 1993). The critical components identified in this study clearly fall in line with the fourth
wave of education reform observed by Futrell (1989), which combined the economic and student-oriented, intrinsic aspects of the earlier waves of educational reform; in other words, "an education that prepares tomorrow's adults to meet ethical as well as economic imperatives - that prepares them not only for a life of work, but also for a life of worth" (Futrell, 1989, p. 13-14). Clearly, while the task identified in this fourth wave is to redefine goals for education and to restructure a system in which those goals may be achieved (Darling-Hammond, 1990; Futrell, 1989; Price, 1990; Timor & Kirp, 1989; Tye, 1992), vocational education does not as yet have a clear set of goals within the context of the current environment.

Although change literature indicates the necessity of strong and visionary leadership, this leadership appears to be lacking in vocational education today. As a result, the elements of strategic planning and management which coalesce around this leadership are also largely absent. The critical components identified by this panel indicate that the lack of a "coherent philosophy" observed by Miller (1985, p. 1) still exists today. The comments of panelists and the conflict between items which attained consensus and closely related items which did not achieve consensus illustrate the variety of beliefs which underlie the positions held by policy influencers; a cohesive foundation which ties programs, activities and directions together appears to still be a need.
The results of this study also indicate that the knowledge being generated by much of the current research is not supportive of the issues being faced by vocational educators today. The harshness of some of the comments from panelists display frustration with the research support systems which should be helping to direct practice. Again, this frustration and the lack of communication is not a novel finding; however, the continuing trend repeated in this study gives further support to the perception that the producers of research knowledge in the field are and continue to be distanced from the practice of the field.

The framework developed for this study appears to have covered the primary areas of concern for policy influencers with regard to the critical components of the contribution of vocational education to the reform of education. The items originally included in the study and those generated by the panelists can be contained in and described by the four groupings content issues, purpose issues, process issues and structure issues. Although consensus was not achieved on all items, the responses of this panel add to the picture of potential contributions of vocational education, and the potential future direction of vocational education.
Implications for Practice

These findings, conclusions and implications for knowledge raise a number of issues with implications for practice. Foundational to many of the other issues is the conflict between isolation and involvement. The isolation of vocational education is frequently self-imposed and rooted in traditions; involvement is a popular expression and was discussed by panelists in a number of items, but rhetoric does not create the active involvement of vocational education in and with the broader educational system and educational reform. The consequences of continued isolation could be monumental; the separation of vocational education from the changes taking place in the educational system could spell the demise of the field of vocational education as it has been known. Non-involvement could lead to non-inclusion, or even intentional abandonment of what is called vocational education, particularly at the secondary level.

This potential demise can be viewed as positive or negative, and leads to discussion of another issue: the role of vocational education in the reformed educational system. Current practice is deeply divided on the subject of appropriate goals for vocational education, and the findings of this study exhibit that continuing division. What type of vocational education for whom at what level of their education provided where and by whom are all components of the role issue. Is the tight grip on occupational specific secondary programs a
remnant of an archaic vision of vocational education? Or, are there reasons based in current vision for these programs? Does a vision for vocational education currently exist? It seems that history overwhelms vocational education, and impedes much of the field from entertaining the potential of the environment of today. Answering these questions will require inward and outward reflection, and undoubtedly will cause agitation and upheaval within the field. The biggest barriers to developing answers, however, may lie in ourselves.

An issue tied to the role issue is that of the vision and philosophy of vocational education. The lack of a commonly held, working philosophy fuels the division on the role of vocational education in a reformed educational system. Without a base of what is real, true and of value in vocational education, how can a role and direction be defined? Can we even consider a role valid if it has an unclear foundation?

The results of this Delphi also raised a communication issue; widely used terms and phrases have a wide range of definitions. Even those influential in the development of policy for vocational education had a variety of definitions for terms, and meanings were often confused. If these knowledgeable individuals have this much difficulty, how much more problematic is the terminology for those outside of or tangentially involved in vocational education? This lack of
clarity and common definition might be construed as a measure of flexibility, or a sign of uncertainty. Either case holds the potential for definition to be made and imposed by external sources, removing the ability to self-determine direction from the field. Before vocational education can contribute effectively in the larger community, the field must clarify these meanings for itself.

The issue of appropriate teacher education relates directly to practice; questions raised by the panel include the variability of current teacher education programs, the necessity of a baccalaureate degree, and the continuing learning of teachers. Although the Holmes group initiative was mentioned, it did not figure prominently in comments; what ramifications does that fact have for vocational teacher education? Is this a continuation of the trends of isolation and limited involvement? Or is this a manifestation of the thought voiced in the comment "If it were possible to develop the agreement regarding what the teacher needed to know - then develop the "assessment instruments to judge them - then why would one care where the individual gained those competencies?" Who should decide "what the teacher needed to know" and how to judge them? Perhaps the responsibility for teacher education should be taken from the hands of teacher educators, and placed more directly in the hands of successful practicing educational professionals. The practice of teacher education has been slow to acknowledge the changes taking place in the school environment, and without
attention to these questions, could serve only to ill-prepare teachers and impede
the contributions vocational education could make to the total educational
system and educational reform.

Also in the realm of the college and university is the issue of the role of
research. Clearly, much of the research being conducted in vocational education
is not supportive of the practice of vocational education; should support of
practice be the role of research? If so, what does that mean for the current
status of vocational education research? Is the university the appropriate entity
to be called on for applied research, or should this practice-centered work be the
province of the state agencies? The issues emanating from this study make clear
demands for investigation; however in reality, many of the issues will be resolved
with or without the backing of relevant research. Can research be conducted in
a manner so as to aid in the timely resolution of issues, or do things just change
too fast for solid research studies to be completed? These issues also provide
links to other areas of research, including cognitive science, sociology,
psychology, and public policy; how is vocational education taking advantage of
advances in these areas within its own research? What are the ramifications if
vocational education research does not incorporate the work of other fields into
its own work?
A final implication for practice revolves around the issue of a coordinated, cohesive national employment and training policy. A number of panelists called for this, and alluded to potential changes and recombinations at the federal level. The practice of education, including vocational education and training, remains largely a state and local prerogative. National level mandates for cooperation between education and employment programs have had a temporal effect similar to that of shaking oil and water; would a national policy be able to function as an emulsifier to create such a coordinated and functioning national employment and training system? Embedded in these issues are a number of sub-issues including that of turf, power and control; is vocational education too caught up in these issues to focus on the total system issue and the total system goal? An interesting sub-issue is also found in the contradictory positions of panelists in this study; although a national level employment and training policy was the subject of much comment and included the idea of Labor, Commerce and Education combined efforts, panelists could not reach consensus on the revision of governance systems. Can governance be separated from a national policy spanning programs and activities of at least three separate federal agencies? Will the national policy be effective if it is?

The issues with implications for practice again underscore the complexities surrounding the future of vocational education and contribution of vocational
education to the reform of the total educational system. Practice is not detached from the issues; on the contrary, it is often bound by them. Dealing with these issues may be as complex as the issues themselves. Vocational education professionals must take a lead or be lead.

**Recommendations**

The conclusions and implications of this study lend themselves to a number of recommendations for policy makers, state departments of vocational education, professional associations, vocational teacher educators, researchers in vocational education, and vocational education policy influencers. Critical to the success of any of the following recommendations is the realization that while each of these groups should take action, all of them should consider the whole enterprise of vocational education and its role in educational reform as they take action. The future of vocational education as a field and a system lies in the concern for the system; interrelationships with other education and education-related systems as well as within the field will shape the face of vocational education for future learners.

Policy makers should work to develop coordinated cohesive policy which eliminates barriers created by agency turf and permits the collaboration which can result in a unified, learner-focused system. This may take the form of a
national employment and training policy, a consolidation of all employment and training activities to one currently existing agency, the creation of an employment and training agency, or some other creative policy option. The critical point is that the policy be comprehensive, and system (as opposed to program) oriented. Policies should be examined for those vestiges that no longer function in the current educational reform environment, and those components revised, discarded or replaced. Components deemed critical should be incorporated into the system generated with the aid of policy.

State departments of vocational education or equivalent state agencies also have a critical role to play, based on the findings of this study. The development of a vision and goals for vocational education is critical; the most worthwhile goals are based in a statement of philosophy. Perhaps a pragmatic philosophy is a starting point, but until some individual or group puts forward a concise statement of philosophy, mission and goals for discussion by the field, the programs, activities and directions will continue to be scattered. Rhetoric abounds, action has been in more limited supply. State departments of vocational education should spearhead this development in an ongoing process involving all types and levels of vocational education professionals. This action would represent the first steps in meeting another critical need: the development and implementation of a national level strategic planning process for the field
of vocational education. The concepts of strategic planning and total quality which found much favor in business and industry are moving into the public agency arena; strong vision and mission are basic to these concepts and their success. With the leadership of state agencies in the development of the philosophy, mission and goals, these agencies should be the force behind the action to create an ongoing national level strategic planning process.

State departments of vocational education are also in the best position to facilitate the establishment of clear definition and meaning for the programs, activities and directions which are critical components of the contribution of vocational education to educational reform and the future of vocational education. This is not to recommend 50 separate definitions; rather, the states should take the lead in the development of nationally accepted definitions. Education is still the responsibility and prerogative of the states.

Professional associations have the responsibility to their members to foster awareness of the total integrated educational system, and the contributions of their members to that system. Professional associations should provide a stronger forum for discussion of the vision and goals for vocational education, and for the development of shared meanings for critical components. Awareness
and involvement across the field are critical to moving the field into the reformed educational system.

Teacher educators also must consider the findings of this study as they re-design teacher education programs. Vocational teacher educators should look beyond the Holmes group initiatives to develop alternative teacher education strategies, and examine the outcome they strive for through their programs, that is, an effective vocational educator. By defining this clearly and establishing approaches to assessing those qualities, characteristics and knowledge, more appropriate programs may be developed with the sole aim of developing effective vocational educators. This may or may not require the completion of identical coursework or even a degree program for all prospective teachers. Such initiatives would require close communication with state departments of vocational education and vocational education administrators, to insure that the outcomes of teacher education programs coincide with the needs of these other groups.

The subject of research in vocational education has been reviewed in detail previously; however in the spirit of recommendations, those engaged in vocational education research should actively seek practice-relevant topics for study. College, university, state agency and federally-funded researchers
especially should seek to conduct research with more direct implications for the reforms taking place "on the firing line." Research exclusively for the sake of publication or other vocational education researchers leaves a wide range of critical issues unstudied and a sizable number of decisions made without research support. Policy makers should support practice-relevant research by funding this type of work exclusively.

Vocational education researchers should also seek out relevant work from other fields; just as vocational educators hold that the study of applied learning has long been a part of vocational education and is not new, other fields may have insights which could aid vocational education research and ultimately the field. In addition to seeking out work from other fields, researchers should be studying alongside researchers from other fields, to achieve interdisciplinary perspectives and responses to the complex issues surrounding educational reform and vocational education. Researchers cannot afford the indulgence of single-view studies which ignore the interconnectedness and complexity of the issues as hand.

The many questions raised by this panel, though not all new, merit revisiting and reconsideration; these provide a starting point for practice-related study. The questions of when occupational specialization should begin, where should skills be taught, how should vocational teacher education be reformed, what functions
can best be carried out by each level of government, what is the purpose of the secondary/postsecondary distinction, what are proactive program evaluation measures, what does employer and union involvement mean today ("work site learning for credit? curriculum development and approval? assessment of skills and knowledge?")), and if "in context" is "different than experience based" are questions raised by panelists during the course of this study. These valid questions need to be reassessed and contemplated in the changing environment of vocational education today.

Policy influencers, some of whom were the participants in this study, have provided the insight which lead to these recommendations. They too should heed their own advice, and maintain a system-wide view as they seek to advocate new vocational education related policy. Proffering narrow policy focused on a single program or an individual problem will not support the comprehensive structure and direction indicated by the findings reported here.

Finally, all vocational educators should "seek to act in collaboration with the broader school reform," and be wary of continuing to be dependent on an inward focus as a source of ideas and change. Just as the world is fast becoming a global economic community, vocational education must participate in the larger educational community. Communication is also a critical issue in terms of
collaboration; vocational educators at all levels should work to improve the contacts with those external to the field (other educators, education-related groups, policy influencers) as well as within the field.

**Future Study**

As outlined in the previous sections, the need for further study is great. Additional work should be undertaken to:

1. refine the list of critical components;
2. address questions raised by the panelists in this study;
3. determine if the items critical to policy influencers are seen as critical by other stakeholders in vocational education, (e. g., local, state and federal administrators, teacher educators, teachers, and legislators);
4. document the development of a vision, focus, and philosophy for vocational education;
5. explore the definitions of items included in this study, especially those items which were unclear or had multiple meanings;
6. establish a longitudinal study of the implementation and impact of the activities, programs and directions incorporated into future vocational education within the reformed educational system; and
7. investigate the items on which panelists appeared to be polarizing (i.e., those items which were becoming issues).
In addition to the items discussed in the recommendations for vocational education research, these seven are of critical importance for both the immediate and longer term future of vocational education given the environment of educational reform.

No one study will provide the definitive answer; rather as one panelist noted, the issues are complex and must be addressed simultaneously. This study has made a start on the clarification of the shape of vocational education in the reformed educational system of the future. Much of the insight garnered here provides just a glimpse at what those who have demonstrated impact on vocational education related policy are seeing as the contributions of vocational education; this glimpse shows some accord as well as a certain amount of confusion and vagueness about certain programs, activities and directions. As another of the panelists also noted, vagueness does not make good policy; neither will ambiguities lend themselves to effective change. Change will occur with or without the support and guidance of relevant research, and the choice is to become wholly involved or be passed by.
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APPENDIX A

Nominators
NOMINATIONS PANEL

Dr. Larry E. Miller, Professor, Agricultural Education

Dr. N. L. McCaslin, Associate Professor, Comprehensive Vocational Education

Dr. Ray D. Ryan, Executive Director, Center on Education and Training for Employment

Dr. Susan Imel, Director, Clearinghouse for Vocational, Career and Adult Education, Educational Resources Information Center.

Dr. Morgan V. Lewis, Senior Research Scientist, Center on Education and Training for Employment
APPENDIX B

Content Validity Panel
Content Validity Panel

Dr. Larry Miller

Dr. N. L. McCaslin
APPENDIX C

Delphi Panel
Dr. Roy Peters, State Director, Oklahoma Department of Vocational and Technical Education
Dr. Trudy Anderson, State Director, Idaho Division of Vocational Education
Dr. Darrell Parks, Director, Vocational and Career Education, Ohio Department of Education
John Jennings, General Counsel for Education, Committee on Education and Labor, U. S. House of Representatives
Bret Lovejoy, AVA Assistant Executive Director for Government Relations
Dr. Frank Pratzner, Associate Professor, Ed. Studies, The Ohio State University
Dr. Ted Lewis, Associate Professor, University of Minnesota
Dr. Dewey Adams, Professor, Agricultural Ed., The Ohio State University
Claudia Leppert, Program Improvement/Curriculum Specialist, Oregon Department of Education
Belinda McCharen, Head, Guidance Division, Oklahoma Department of Vocational and Technical Education; AVA Vice President for Guidance Division.
Dr. Robert Taylor, Executive Director Emeritus, National Center for Research in Vocational Education
Dr. Marion Holmes, Commission Member, National Commission on Secondary Vocational Education; Executive Director for Career and Vocational Education, School District of Philadelphia (retired)
Joan Wills, Institute for Educational Leadership
Dr. Mel Miller, Professor and Director of Occupational and Adult Education, Oklahoma State University
Hillary Rodham Clinton*, co-author America's Choice: High Skill or Low Wages?
Dr. Anthony Carnevale*, American Society for Training and Development
Dr. Augusta Kappner**, Assistant Secretary Designee for the Office of Vocational and Adult Education
Dr. George Copa**, Professor, University of Minnesota
Andy Hartman**, Education Coordinator, Committee on Education and Labor (for Representative William Goodling)

*completed one round
**completed no rounds
APPENDIX D

Round 1 Comments
PREPARATION OF STUDENTS FOR A PRODUCTIVE WORK LIFE
All students will need to have meaningful employment to maintain Standard of Living. Integrated activities in all classes to support core workforce skill + knowledges.
We are missing this element now - the H.S. Curriculum is College and General Track driven. Tech Prep - in a word - linking high quality voc ed together with Applied Academics
Purpose, focus, relevance are necessary to connect schools & education process to world outside of education. Purpose, role & mission
55-60% of high school aged youth don't continue education after high school - need technical skills to survive. Essential, job specific academic, occupational & employability skills required by business & industry entry-level employment.
Vocational ed, it done properly, can motivate and educate students and prepare for employment. A good vocational program integrating academic + voc ed and connecting high school to further education or training.
This is what I see as the main component of education reform. Quality vocational-technical education with clear focus, structure, and sequences of courses.
Most of the recent Gallup-PDK surveys of the public's attitude toward schooling show this as a very high priority goal for schools (ranked in top 3-5 priority goals.)
It is also the top priority of current voc. ed. at sec. & postsec. levels. Includes everything voc.ed., career ed., + voc. adult ed. does to prepare learners for work life.
A productive worklife is a prerequisite for autonomy - A major goal of education. Broadly conceived programs required.
This is mainline voc ed mission and concur with it as important to reform. Giving students skills, competence and positive attitudes toward work in their lives.
There is a need to provide more information + exploration to facilitate career decision-making. Career awareness, exploration + a career plan encompassing a career goal + education + training involved.
Central to Voc Ed. purpose. Career planning, employability + employment skills Individuals gain a sense of purpose through a productive work life. Experience related to the workplace.
This defines the very reason voc ed is essential. Occupation specific + academic foundations.
Ours is a society based on work. If education doesn't serve economic requirements, it's cultural role can't be served either because people without jobs don't and can't participate effectively in the culture. Generic as opposed to job specific learning that mixes applied learning + academic learning.
DEVELOPMENT OF STUDENTS' WORKPLACE KNOWLEDGE
All students should have the opportunity of choice and in order to make a wise choice need educational training on what the workforce will require. Integrated program of study the teaches core workplace skills plus a student choice of advanced technical skills for occupational area of interest.
Believe students succeed when they see relevance to what they are taking. School to Work Transition programs such as Youth Apprenticeship, Coop Ed. etc. Majority - 95% or more - of all students will be workers. Knowledge of expectations of employers is essential to success in future. Purpose, role & mission
Enhances purpose & value (worth) of education facilitates school to work transition. Understanding expectations & demands of the job & the employee. Vocational ed. can help students learn about what is involved in employment. Career guidance and actual exposure to work experiences. Essential element in connecting academic learning to real-life applications. Specific knowledge of work life and SCANS skills.
Knowledge of the workplace is needed for workplace success (i.e., generalizable, basic skills, occup. specific skills) Should be a broad approach to workplace knowledge including broad transferable/generalizable skills, basic skills, & occupationally specific skills.
Students should have broad knowledge about work and workplaces. Programs should include opportunity for visits to workplaces. The curriculum should reflect contemporary realities such as diversity, use of technology, etc.
Knowledge of workplace is critical to ones career. Giving students an understanding and appreciation for tools, facilities and climate where work takes place.
Students have a limited view of the workplace, thus make limited decisions. Combination of career awareness in elem, career exploration in junior high career guidance + youth apprenticeship, cooperative learning +/or Tech Prep Central to Voc Ed. Assume workplace learning central to worker prep. Being informed is important in good decision making. Career information and guidance including exploration.
Schools have a responsibility to prepare students for civic, family + work - without providing students knowledge of workplace - how can responsibility be met. General requirements of all workplaces - also SCANS most essential plus for those who have chosen some specific occupational track knowledge of all the career opportunities.
Contact with the workplace is good but employer based training is major workplace education system after student in on the job.
VOCATIONAL EDUCATION AS ONE OF THE PRINCIPLE GOALS OF THE REFORMED EDUCATIONAL SYSTEM

80% of students do not go on to 4-year colleges. Our H.S. program must be providing an entry level and beyond to work and connection to TPAD. TPAD programs Certificate of advanced Master Endorsement programs for worked based Learning that ties to school of work transitions at 12th grade and CC-TPAD completion.

Voc Ed isn’t a goal - it’s a vehicle to get us to our goal. Connects majority of students to life after formal education process. Not well understood by general public - many see voc ed as a dead end - need a connection to continued success.

Most reformationists would have rather ignored vocational education, but ultimately had to acknowledge something like it, if in fact, they didn’t want to use the term. I’m not sure how to respond. Does question fit the context of the issue?

Education ought to have both academic and employment goals. Reformed education must integrate voc and academic ed. While the statement reflects vocational educators’ desire, I rated this a 3 because other educators + policy makers may not see it the same way. The goal of reform really is better student outcomes. Vocational education is a means of achieving that goal. More voc. ed. in the school system. More emphasis on applied learning.

I don’t think voc. ed. is the goal of the ed. system. I think it is a means/approach rather than the end. The end or goal is preparation for a productive work life & voc. ed. is a major approach to the goal. I think voc. ed. is a major component of the reformed ed. system. preparation for a productive work life is a broad goal of K - 12 educ. & voc. ed. can be an effective program for achieving this goal for all students.

Knowledge of vocations, and the world of work should be an outcome of schooling. Schools should provide links with the world of work. General orientation. Active learning. Community based.

Ones work and preparation for work are top priorities in any reform movement. Skill, competence and attitude development of work with respect to education. Increased need for technological educational base in careers. Exploratory courses such as Technology Ed. in Jr. High + opportunities for technical skills classes in high school through the comprehensive H.S. or vocational center. It should be avail. to all students.

Central to comprehensive educ. prog. prep for work

Most educators do not value vocational education. Reform should be based on the requirements of the workplace - a much broader concept.

Over 70% of the jobs do not require a BA degree. An improved "professional" development educational opportunity for the individual who will fill these jobs.
Professional/technical Development Program focused on career paths (i.e. graduated levels) of educational preparation.

VOCATIONAL EDUCATION AS A SUBSET WITHIN THE EDUCATIONAL SYSTEM
Not yet determined as a subset. It should be an integrated curriculum w/ academics in an occupational endorsement + context. Integrated black courses - areas of study - for Certificate of Advance Mastery Endorsements.
We must have Voc ed to achieve the goal. High quality, modernized voc ed programs.
Voc Ed is build on broad-base of education and requires integration of voc ed and breadth of entire education program. Voc ed provides occupational skills within scope of broad liberal education.
Not sure what's meant by subset. It is an integral component of any comprehensive educational system. An optional route, both in terms of learning environment and mission.
being a subset is one of the reason voc ed has trouble today - it should be integral.
a subset is isolated and may be less important.
For vocational education to play an important role in reform, it must be an equal partner in the educational system. Voc. ed. viewed as subordinate to "academic" learning.
Preparation for productive work life is a major goal of ed. system + voc. ed. can be a major way to achieve this goal at the secondary school level. At postsec. level public voc. ed. is one of several programs/agencies aimed at workplace prep. Postsec. voc.ed. is a component of both the educ. system + the Employment & Training system (as in sec. voc. ed. to a degree). This direction acknowledges that voc. ed can contribute to broad school objective/goals at both the sec. & postsec levels.
In the K - 12 system, vocational education should find expression (a) as supportive of general education (b) in a limited way, as work preparation.
Similar to above. Voc ed is a major component of any public education program. Increased need for integration of academic + vocational ed. Educational system should encompass K - 12, Voc Ed + Higher Ed. without artificial barriers.
Voc Ed is needed to have an Ed System. Voc Ed is element, contrib. to comp. educ.
Need to go beyond the academic/voc ed argument. Also see this as a separation of academic + voc ed.
Not sure really what this implies. Education must provide a series of options (or tracks) for individuals and the economy. This must include the arts, sciences, social sciences, and the professional/technical track discussed above. Not sure I can [define] since I believe options are the essential issue --- not subsets
Needs to be integrated into academic education.
ALTERNATIVE ASSESSMENT PROGRAMS

Alternative programs will be in place to determine student placement and insure success of student choice in CAM. Early WBL skill assessment and career ed. preparation then assessment of skills + knowledges through portfolios, demonstration and checklist methods.

We must know "what we have" for proper program placement + appropriate remediation. Career Awareness, Career Counseling, Career Exploration, Remediation.

Vocational education assessment is not accurately accomplished through standardized norm reference testing alternative outcome based measures are needed. Alternative assessment can mean a lot of things but suggests other than standardized norm referenced tests.

Vocational education has perhaps done more than any other educational endeavor to build educational experiences on valid student assessments. An up-front determination of an individuals interests, aptitudes, & abilities. vocational ed has frequently incorporated competency testing so that experience is valuable. competency and skill based testing.

Important for some students or programs, but not all. Different evaluation and testing methods to measure improvement.

I don't understand what this item has to do with voc. ed. or what is being referred to. For example, alt. assessment of what -- students or programs? I think all educ. progs. need alt. assessment programs for students & programs. I don't think voc. ed. has anything unique to offer in this area. I don't know what this item means or to what if refers, programs or students. The statement is too broad to make any judgement about its importance or contribution.

Vocational education has its own rhythm. The assessment should be consistent with the peculiar dynamics of vocational education programs.

Doesn't sound like mainline voc ed. Another way to assess an education program?

Students have varying learning styles + skill attainment levels. Portfolio assessment, demonstration or scenario assessment in addition to traditional cognitive means.

Need accountability + feedback to learner and instruction. outcome based inst. Need to assess beyond what paper + pencil test can measure. Measuring a broad range of abilities and areas

If I understand the question do I think something other than traditional teacher grading is essential, the answer is yes - absolutely. A third party assessment - based on criteria defined by requirements of industry - that would include a mix of paper/pencil/performance assessment.
SCHOOL CHOICE PROGRAMS (I.E., VOUCHERS)
School Choice is critical to student success. Parents play a major role. Career education is critical from K-on w/ sufficient parent involvement from 7 to 10. Endorsement choice at 10 depends on career training. We need equity among schools -- Competition won't solve our problems. In some geographic areas school choice will provide options not otherwise available. Providing choice to students, parents to have student pursue a program of choice. Unrealistic in rural, sparsely populated areas. Vocational education has always been a program of choice. Students & parents (if appropriate) select the program of choice. Choice is a diversionary issue which if implemented may well lead to creaming. Choice, generally, means sending public money to private schools - as an ultimate objective.
Could be useful to attract students/parents to focus schools that incorporate education for employment, but not sure choice will be taken advantage of. Ability to switch to schools which offer desired programs and chance to succeed. Voc. ed. could be a major school choice for students. Consequently, vouchers & magnet voc. schools (career centers, JVSs) could become major alternatives for students at secondary & postsec. levels. Vouchers allow students a broad choice of alternative programs. They provide for great flexibility in meeting individual student needs. They guarantee access to a fixed & minimum amount of public educ. for students.
Will leave the have-nots behind. What we need are better schools all around. A non-solution - class based.
I don't care for voucher system. Freedom to choose any school. Concern for possible segregation by race, gender + equal opportunity. Parent who have transportation for children can choose the school they with regardless of neighborhood.
Not essential for viable Voc Ed. alternate funding + governance of educ. Public schools are a right of the people. Allowing private interest groups to have their way at public expense.
No - simply because of the word voucher -- however the answer would have been the reverse if the question had been choice for students to select (within a structure) a choice of focus - i.e. professional/technical/science/arts - whatever Individual student should have right choose a track for specialization by the time they reach 10th grade. importance of public education

APPRENTICESHIP PROGRAMS
All students will be required to have a work experience. Traditional and non-traditional programs are being developed. Working w/ D of Labor + unions to set up state legislation to implement all aspects of apprenticeship. Three national projects ongoing to support youth apprenticeship curr development.
This is an excellent way to provide workplace knowledge and transition from school to work -- Youth Apprenticeship

Apprenticeship is the original form of vocational education master teaching the novice. Many definitions today -- critical elements -- driven by industry not education; very organized program of instruction, far more intensive than Coop. Why in very early stages, a strong apprenticeship initiative must build on the in-place & proven system of vocational education. A business/industry defined and driven unique blend of school and work-based learning in a particular craft or skill area.

if youth apprenticeship means giving students a change to be in school and to learn on a job they will motivate many and give good skills. youth apprenticeship means a joint school-work program with actual job experience under a mentor. Has a popular political appeal, but is only one part of a comprehensive reform program. Formal combination of school-place learning and work-site training leading to skilled employment.

Many of the principals & procedures that underly apprenticeship programs are supported by new research in cognitive science. Thus, they are gaining recognition + are being implemented by academic educators to better provide for situated + contextual learning of abstract academic content. Apprenticeship programs are earn while you learn programs of job prep. They are focused in the workplace & are practical progs. They are concentrated in construction trades & in unionized occupations. They are not youth progs in U.S. They are small & not growing in enrollments or finances.

So long as we are clear as to purpose. By apprenticeship I mean work-based education. The purpose is not to learn a trade necessarily. Apprenticeships in various forms allow for applied learning - not a panacea - not a way to curb youth unemployment as in Germany.

The apprenticeship is a best option for many students. on the job training sponsored by business/industry/education.

The need to involve students in meaningful applied learning + development of skills by graduation. Structured workplace experience related to educational plan of study w/ industry an active teaching partner.

Workplace learning + employer involvement essential. all occup. partnership - schools + employers.

Work is critical to understanding and being prepared to successfully move into the workplace. Education in the workplace.

Substantially more opportunities for learning need to occur - in an adult based setting - so students can learn 1st hand work ethics plus specific skills. An articulated agreement of knowledge + skills to be learned on the job - between student/school/employer - including guarantee of job rotation.

learn + earn
ENTREPRENEURSHIP EDUCATION PROGRAMS
Entrepreneurship is a core program for all students. Industry committee’s are identifying this area as a core set of skill for all students. Most new businesses will come from future voc ed graduates. These should not be separate programs but integrated into high quality voc ed. Entrepreneurship is essential workplace knowledge for small, independent business. Knowledge necessary to effectively own/operate a business. While vocational education can and does contribute to entrepreneurial education, that should not be its principle purpose. It should focus upon the masses and offer unique support to those who may be entrepreneurially inclined. A program that prepares individuals to own and operate a small-business. helpful to encourage start-up of business but not for many a real option. encouraging students to think of starting own business. Again, only one aspect or program alternative in quality voc. ed. not essential to all education reform. Learning to convert ideas into products and services in the economy. Entrep. programs ultimately lead to the creation of new employment & thus they are important at both sec. & postsec. levels, from an economic position. They help schools contribute to overall econ. growth. A program to help students establish & operate new businesses/enterprises.
Important. It teaches people to be employers. That different. It changes the mindset. Can’t be narrow. Broad, proactive. Emphasize vocational EDUCATION. An excellent option in current society. Programs to prepare people to own + operate their work or business.
Growth opportunities for small business. Career information, curriculum which can be infused with academic curriculum - marketing programs a possible emphasis within Voc Ed. self employment Learners need to understand what is required to be an entrepreneur -- as one and/or what it takes to be one. Self directed and sustaining employment. Our country will only survive if more people understand what makes the economy churn forward. Business mgt principles, human resource mgt principles, financing + economic context realities.
trendy

OUTCOME-BASED INSTRUCTION
Separately Learning to know from learning to do is not the best approach. doing and knowing is demonstrated through OBE instruction. OBE training of voc ed and CC faculty together. Connection to academic ed. OBE and aligning curriculum for learning within occupational contexts.
All students must be taught to industry standards. - High Quality Voc Ed. Voc Ed must be outcome based -- driven by standards of workplace. If it is not, the program is pointless. Establishment of standards by workplaces -- curriculum driven of those standards.
Vocational education has always been performance driven. Other reform initiatives could learn from vocational education in this regard. An educational program based upon pre-determined end results & indicators to measure student progress toward those ends.

The whole trend of school reform is towards this + vocational ed can contribute because have used employment statistics + such. showing success of programs by showing attainment of occupational skills or employment.

Ed. reform must focus on results, not process. What is the intent of education and was it obtained. A tool for accountability. focus on desired end, rather than process.

Again, this program is broader than voc. ed. & its current importance is based on how it is being applied in academic programs. It is not a new program -- it is competency-based educ. by a different label. It has been common in voc. ed. but not as common & not easy to implement in academic programs. It works for training but is difficult to apply in education. A prog. to base lrg. on specific behavioral objectives stated as precisely as possible in measurable terms in order to get beyond vague & general curriculum specification & goals.

Cliche. Fad. Assumes education not to be purposive as it is. Not the case in voed. Voc ed has wealth of experience with this concept. Institution built around products which are to be produced (people).

Need to eliminate lock-step instruction + to have greater accountability for learning. Established levels of performance which students must attain to move to the next competency.

Voc Ed must be performance oriented. C.B.E.

No clear definition of what is to be outcomes. Idea has merit but needs to be defined clearly to merit my support. Broad range of standards covering cognitive, affective + psychomotor areas.

This should not be to the exclusion of some criteria commonly referred to as input based instruction -- but the instruction should be driven by clearly understood outputs. 1st general agreements by the appropriate stakeholders on what students need to know - then instruction that incorporates techniques such as co-operative education - because this is what is needed in todays workplace.

**REVISION LOCAL GOVERNANCE STRUCTURES**

Connecting is better than coordination several agency services will be connected through integrated planning and physical locations. Investments in ed. will be allocated jointly. Integrated planning. Legislative formation of workforce quality council to oversee education + training programs in state.

We need regional, locally governed, locally tax supported voc ed schools in all states - Regional AVTS's

Local governance must be the decision of the local taxpayer - community. Local school Boards
Kinda ambivalent on this one. Certainly vocational education must be involved and is impacted upon by governance issues. If this includes the area of "standards," I would change my response to strongly agree. Any local legal or authoritative policy provision that dictates how voc. ed. functions. a side issue. revising school structure or powers of school boards
Important to instituting standards and working toward national goals. Restructuring or rethinking school boards, site-based management, streamlining of administration.
Needs to be done to implement site based mgmt. in educ. Has no particular of unique relevance to voc. ed beyond any other school prog. The need to reduce hierarchy & bureaucracy at both local & state level in order to operate more effectively by putting decision-making & quality assurance at the lowest most effected areas in an organ. In educ. it leads to site based mgmt. In voc. ed. it will force a major change in state-level domination of voc. educ.
In the sense that voed takes on status. More a revision of "rethinking" rather than structure needed at this level.
Cannot focus here and on skill development too. Changing the way local government is structured and carried out.
Schools must begin to generate greater financial support at the local level. Deregulation of school funding + governance laws.
Need more citizen + parent involvement + employer subordinate units. decentralization
Schools belong to public. They need to have a say. (some regions/states do need revision of local governance to eliminate politics in school decisions and policy making) Deciding on who/how policy making and budgeting and financing of education occurs.
While I belief there is a need to change the overall governance structure of education the focus would be placed at the wrong level to just say change local governance.
"Schools belong to public. They need to have a say. (Some regions/state do need revision of local governance to eliminate politics in school decisions and policy making)"

REVISION STATE GOVERNANCE STRUCTURES
Same
Voc Ed is buried in the bureaucracy now in most states - We need voc ed governed by a separate state voc ed board. Separate State System for Voc Ed.
This causes considerable tumult but does not necessarily cause change. Change comes from commitment + leadership. State Boards of Ed., Higher Ed, Comm Colleges, Voc Ed. etc.
Voc ed plays a key in creating a state level climate for workforce training. Vocational edu. is both & education & economic issue and they are the
responsibility of the state. State precipitated legislation, rules & regs, or policy
governing education & vocational education.
might be helpful but could just be moving furniture around. putting voc ed in a
separate state agency or together w/JTPA, etc.
More cooperation efforts and elimination of "turf" issues is moderately important
to change. Revision governing Boards - taking politics out of education.
This is a critical need in voc.ed. because the traditional dominance of the SDVE
must be broken to move more decision making to the local level. The State
should become a service organ. to local schools & programs & a facilitator of
local decisions NOT the major decision maker in voc.ed. Defined as SDVE.
Again, I would call more for shifts in philosophy - e.g. being proactive about the
efficacy of voed. Forging closer ties between programs and labor markets through
information.
Too distant from main voc ed objectives. Changing the way state government is
structured and carried out.
The need to make education more closely allied with dept. of labor functions.
Coordinate education + training function within education, specifically in voc ed
+ have labor support not compete in training but to assist in placement + job
development.
Need separate Bd. for Voc Ed. Specialization, adequate time + attention to
workforce prep. issues.
Believe structure is there now in many states. See previous response on
governance - apply to state.
Again I think there are some serious governance issues in ed but they have
nothing to do with voc ed per se

REVISED THE FEDERAL GOVERNANCE STRUCTURE
Dept. of Labor + Ed need to be in a partnership to insure connected programs
+ more efficient use of dollars. Already seeing joint funding projects (SCANS -
etc.)
Need closer relations with Depts of Labor and Commerce.
Labor + Education are at odds _ need to come together but a governance change
won't necessarily bring on the desired result. Combining Ed + Labor - what is
really needed is combining of federal programs - for consistency in definitions,
regulation, etc.
States take their leads from the "Feds" particularly if the "feds" leverage with
money. Federal workforce training legislation, rules & regs.
again a side issue. combining voc ed w/JTPA etc.
While changing the structures on the state & local level can be critical, since
education is primarily a state responsibility, I don't see as important a role for
restructuring the federal level governance system. Reforms can take place without
it. Consolidation of program and bureaucracies. Reduction of federal
requirements -- flexibility.
The future of postsec. voc. ed. is likely to be effected signif. by the new Clinton admin. & the heavy involvement of the E.S. Dept. of Labor (Reich) in voc. prep. Public postsec. voc. ed. could come under the jurisdiction of USDOL & this could have signif. implications for it. Federal gov't structure is the U.S. Dept. of Educ., Office of Voc. & Adult Ed. (OVAE). OVAE could be shifted to USDOL.
Shift from focus on voc ed as social intervention -- handicapped etc. Be broader in orientation so as to give voed a more holistic image. Top down agenda setting should be reversed.
Not enough time to devote to this effort. Changing the way federal government is structured and carried out.
Need for a national workforce policy + a stronger U.S. Dept of Education. Technical assistance to states in program quality + development. a progressive direction for workforce preparedness + less fragmented training programs.
We're not likely to change constitution - nor do I want to. Federal legislation.
Same as above
"While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."

SITE-BASED MANAGEMENT PROGRAMS
Empowerment of front line work force is critical for quality processes. Implementing total continuous improvement as a basic operational strategy. Site-based decision making councils are required in all schools.
Set standards, enforce them, but give local sites the ability to run programs/schools.
Until the commitment + vision is created at the local level action will not occur.
Be careful with this definition - it does not mean ship all funds to local level - it means place decision making in hands of people most equipped to make the decision - like empowering front-line workers.
Somewhat tentative about this. Site based management must address"how" not "what"! What determined by business/industry/labor across the occupational area; not just the local labor mkt. Decisions made locally. Little interference or "top down" structure/process imposed from state or federal level.
whole trend of school reform is towards outcome-based ed. + then deregulation of structures - too often voc ed is too regulated. if I believe voc ed is too regulated, I don't see how it can contribute to reform as seen in site-based management.
As part of governance restructuring it can be important to reform. But more teachers will be required. More teacher control + reduction of administration.
Because site based mgt. is more effective & it involves more of the concerned & effected parties in major decisions effecting the school. These people are in the best position to make local decision. Managing schools (progs.) at the local school level; pushing more of the important school decision to the local district & school level rather than the state level.

Allows for innovation - risk taking. Requires much staff development time, and vigorous leadership. Has implications for teacher preparation - participative mgt needed as aspect of programs.

Management approaches are critical to voc ed. Local approaches to programs management.

School building personnel need to be able to participate in the educational management of students + to affect policy + budget. School site determines learning activities, budget and scheduling.

Seems to work. Decentralization

Allows public to be more responsible for schooling. Local public committees have influence with school building based personnel.

I'm not opposed to site-based mgt - to the contrary - but to suggest it is a critical component just does not fly

work best

NATIONAL EDUCATION STANDARDS, AS CALLED FOR IN THE HIGH SKILLS OR LOW WAGES AND LEARNING A LIVING NATIONAL REPORTS

To be competitive in the global ed. market - must set world class standards and require schools to teach to them. WCS committees's are being conducted at this time to match endorsement areas for CAM and TPAD programs.

Believe we must have standards to teach to - they must be industry driven. National Industry Standards.

Without Standards there is not focus; standards give the direction + allow measurement of progress. Establishing clear outcome measures.

Everything that SCANS calls for is inherently voc. ed. Also, voc ed is experiencing great success w/ the SAE standards in automotive. Industry defined determinants of skill performance. (worker performance) job related & measurable.

good vocational pgms have had standards, e.g. job placement or achievement of competencies. using standards to judge success + not relying on regulations or structures.

Will be important as a measuring device to see if we are achieving goals and to see how we compare with other nations. Identifiable and measurable outcomes that every student should attain.

Because it's currently in vogue! It's supportive of current accountability bandwagon. It may have value in the basic skills areas. Occup. st'ds. defined by business & ind. people for entry-level performance expectations.
A way to avoid mediocrity. A state high school leaving test would convey much information about what schools are up to. Quality in all programs. Standards are crucial to all aspects of education. Levels of performance a person might do in any job or task. Developing International manufacturing standards need for better prepared national workforce. Involvement of business/industry, education + govt. to develop industry skill standards + educational expectations for workforce prep. Need stimulus + peer pressure to move states + local forward. Goal setting Most such standards become too academic without appropriate flexibility. A national system of standards for all schools. The standards can be the focus of what "needs to be" plus a way to mobilize and organize industry groupings to finally provide coherent definitions of what they need. The development of a national/voluntary/skill standard board with authority to recognize industry groupings that have responsibility to articulate graduated levels of knowledge required - plus help develop + manage an assessment system. standards don't create people who meet them

CAREER GUIDANCE PROGRAMS (BEGINNING AT THE PRIMARY GRADE LEVEL)
Students must be prepared to make a significant program choice at 16 or at the end of the Cert. of Initial Mastery, therefore career ed is required from K - 12. K - 6 career awareness, 7-9 career exploration, 10-12 career preparation. New 21th century school law requires programs. We must have guidance to help kids find direction. Career Guidance. Essential to career decision making. Not a narrowing or tracking methodology; career guidance is information to make informed choices. This is not a voc. ed. responsibility but an institutional responsibility. However, not much has happened w/o voc. ed money! Orientation to the world of work, career exploration and informed career decision making. of the few good pgms in country, voc ed is the initiator. helping kids think of employment and learn of job skills early Key element in helping students decide, or begin to decide, what career path and education path to pursue. Must know where you are going before you can get there. Counseling on what careers are and how to get into them. Guidance has never received adequate support at any school level + I don’t see this changing in economically tight times. It includes one-on-one counseling as well as group classes & activities aimed at improved self- & career awareness. I see career guidance as a post-secondary activity. Vocational immaturity of most children precludes it. We should teach about careers, as general education. We should not "guide."
Some career information and counseling can be provided by voc ed programs. Information on careers.
Career decisions need a basis for support which is currently lacking. Students need information early to make quality decisions. National emphasis on this is needed. A developmental sequential program w/ measurable competencies for students. A career plan should be developed to guide the courses taken in school. Career planning essential to efficient workforce development. Career awareness, exploration + prep. (includes choice.)

Students need good information and experience related to lifelong options for being a productive person. Career education awareness, exploration, preparation and lifelong learning.

Clearly not opposed to some general exposure at primary level but have yet to be convinced this must be a mandate - however by 7th grade it should be a part of formal curriculum. Presentation of options, working conditions, career advancement opportunities in different types of occupations, cost of obtaining necessary credentials, anticipated income opportunities.

"Essential to career decision making" "Students need good information and experience related to lifelong options for being a productive person."

"This is not a voc. ed. responsibility but an institutional responsibility. However, not much has happened w/o voc. ed money!"

PREPARATION OF SPECIAL NEEDS STUDENTS (AS DEFINED IN THE PERKINS VOCATIONAL AND APPLIED TECHNOLOGY EDUCATION ACT) FOR A PRODUCTIVE WORKLIFE

All students to have equal opportunities. New law calls for an alternative program for students to meet all aspects of the CIM and CAM.

These kids need our help to get into the workplace - this will require assessment and remediation and extra help. High quality voc ed.

Important for targeted groups but not the driving force of school reform which is needed for the majority of students. Narrow targeting of groups in concentrated numbers voc ed can serve this group well but this in only a part of the population that need voc ed services.

For many individuals voc. ed. is the only hope for productivity & economic survival. It's a preventative rather than a treatment program, thus, in the long run less expensive. Individuals who experience personal, social, and/or economic barriers to getting & keeping competitive employment.

Voc ed has a disproportionately large number of such students and so can give lessons in how to help -- also bad examples of that. Good voc ed program help with special services, e.g. guidance, child care.

Reform efforts will have to include all students. Equal access to programs and modification of classroom and curriculum where necessary.

Voc. ed. is one of the few places in the school where special needs students have access to progs. that address their needs. It includes all voc. ed. services & progs.

Important, but not peculiar to voced. Voced becomes a convenient dumping ground - therapy - for students with other needs.
Everyone must share in special needs students' education. Helping special needs student achieve at highest possible level.

All our citizens must be productive. Support + resources to allow special students to learn in a mainstream environment - should have identified occupational goals for students.

Voc Ed must contribute to helping all groups become employable. Essential component of Voc Ed + Ed.

All individuals who have potential need to be prepared a productive citizens. Prep for involvement in work place activity for all.

Two -- simple sense of equity and because the "at risk" population is approximately 25% of student population -- that is a lot! Can't answer in specifics due to caveat of the Perkins definition.

VOCA TIONAL EDUCATION AS A CONTENT AREA OF EDUCATION

Vocational Ed. will look differently in Oregon. College Prep and Tech. Ed students will begin integrated courses of individual career goals being met. CAM - Integrated programs w/ College Prep and Tech Prep students in same classes. Youth apprenticeship and specific training programs will be available for all students.

Voc Ed is not the goal, but we must have high quality voc ed to achieve the goal. High Quality Voc Ed.

Voc ed must be integrated -- is a subset of the whole. There is too much compartmentalization of ed - we must integrate. Calling VE a content area suggests too much separateness. Content area specialization is more appropriate to apprenticeship + P-S education

I'm not sure what is meant by this statement. If market driven & designed to accommodate market need, than it's content. If it's just "another" subject for students to choose, then it's not content. The question is how do you define. In my opinion voc ed is a means to an end, not an end unto itself.

it should not be separate - all students can learn of jobs and skills needed.

separate track and isolated

Voc. Ed. must be substantial part of restructured curricula and refocused education. Students need skills training. I think "content area’ means voc. ed. as substance of coursework and curriculum, not just a process. Specific skills training.

Voc. ed. at the adult & postsec. level is the primary reason people seek educ. The current Clinton admin & many labor mkt. economists feel the U.S. needs to strengthen its postsec V.E. system. At the high school level, V.E. will need to define a broader program distinct from adult & postsec ed. if it is to survive let alone grow. Voc. ed. as a content area of ed. must contribute to overall school goals & also contribute to its specialized objectives. Voc. ed. is an organized program & sequence of inst. from grades 6 thru 14+: (a) education about & for
work (not jobs), (b) career & self-awareness, and (c) specialized skill prep. for work.
Yes. Education for and about work. I am assuming K - 12. Broadly conceived curricula.
Voc Ed. is not content area but its any content which relates more to one job than to all of world of work. Subject matter to be taught.
Need for well-prepared vocational educators. Identified voc. ed teacher prep programs.
Assume collegiate level teacher + admin need to understand Voc Ed role. part of prep of an educ. professional
There are specifics about V.E. it's not just a method. There is cognitive, affective + psychomotor regarding occupations + work.
Must be understood that I do not think of voc ed only as secondary - but include post high school. Essentially, the 70% of jobs that do not require a BA degree demands a content focus. The problem may be in an unclear definition of what this process means by the term voc ed. Mine is more expansive than most people so I cannot answer very well - the needs of the economy should drive the content in occupational preparation.
"There are specifics about V.E. It's not just a method."
"The current Clinton admin. & many labor mkt. economists feel the U.S. needs to strengthen its postsec V.E. system. At the high school level, V.E. will need to define a broader program distinct from adults & postsec ed. if it is to survive let alone grow."

JOINT PARTICIPATION OF VOCATIONAL EDUCATORS AND OTHER EDUCATORS IN DETERMINING THE DIRECTION OF REFORM
Parity is critical for values to change to respect vocational training and view it differently. Joint Boards planning Joint Teacher + Bus. Comm working on building curriculum frameworks for new CAM Endorsements.
We must educate the mind as well as the hands. Tech, High Schools that work, Youth Apprenticeship, High Quality Voc Ed.
Critical - integration. working cooperatively.
Voc ed must be viewed in the larger context of education. It is not only education for a tangible purpose, but a means of education for a high percentage of learners. Voc. education is an integrated process, pulling from many disciplines. It is a unique blend of head and hand skills.
voc ed is being ignored in school reform except for beginning discussions of Clinton's youth apprenticeship proposal. vocational educators are not at the table now when school reform discussed.
It's the only way real reform will take hold in the classrooms for a comprehensive approach. Coordination of lesson plans and teaching methods.
Voc. educators have never been called upon or highly involved in school reforms. In fact, V. E. rarely looks beyond its own programs to broader school goals +
needs -- it focuses inwardly; doesn't seek to act in collaboration with broader school reform + is rarely called upon to do so. academic & voc. ed. collaboration; looking beyond particular school grades or particular school subjects to identify a logical sequence of preparation for life & work across levels. Yes. Voed cannot continue to exist at the margin of the education mainstream. It must be proactive. Participation will ensure than voed ideas be authentically represented in policy documents in particular. Coalition and cooperation is crucial to any reform success we have. Mutual sharing of mission, resources and processes in education. Need for a coordinated education/economic system. Joint strategic planning w/all facets of education. Self evident - those involved contribute to decision. Educ planning We need a comprehensive system of education that integrates purposes and outcomes rather than separates into parcels and areas. Integration of learning toward commonly agreed purposes of schooling. While I understand the angst and sense of 2nd class citizenship some voc ed folks have - how could anyone really argue against that every one must be involved. Everyone is at the table - mutually engaged in the development - this however means more than just educators. "We need a comprehensive system of education that integrates purposes and outcomes rather than separates into parcels and areas"

ARTICULATION PROGRAMS
To eliminate duplication and promote integration. A part of TPAD and curriculum integration of academic + voc. ed. We need career paths for students. 2 + 2, Tech Prep, H. S.'s that Work, Youth Apprenticeship. I disagree - articulation only means a smooth transition - this is a given. There are not separate articulation programs - All should connect with something. There is no such thing as an articulation program. All programs should provide a smooth continuation of learning from one stage to the next. This is critical to reform. Voc ed does not exist for & unto itself. It must be articulated both horizontally & vertically! Horizontally to fully benefit from academic content; vertically to assure a coherent & logical sequence of learning & skill development experiences to prepare for more sophisticated technological needs. Blending of academic & occupational instruction & experience for a specific purpose and for the over-all educational good of the learner. Logically arranging educational experiences in a hierarchy of sophistication aimed at higher & higher levels of attainment with minimum duplication.

tech-prep can show the way to real reform of high schools. tech-prep + variants
Students, teachers, parents must see a clear connection to postsecondary education for reform to "sell." Written agreements between secondary + postsecondary institutions.

Articulation with academic progs. is crucial if voc. ed. is to remain a part of the public school system. It can help schools move toward more situated/contextual learning for all subjects + provide for multiple student intelligences. Articulation with postsec. V.E. is needed to improve image. Articulation refers to two dimension" (a) articulation betw academic & voc. curri. emphasized by recent finding of cognitive science (e.g., situated lrg., contextual lrg,) & (b) articulation between secondary & postsec. voc. progs. to counter the "dead-end" image of voc. ed. & to provide more coherent programs.

There should be a measure of curricular alignment between K - 12 and post-secondary. This does not mean that students should be tracked, however. High schools should concentrate on basic academics and generic voc ed. Post-secondary institutions could specialize.

Articulation is one of two concepts most crucial to any reform. Related two levels of education.

Need to eliminate duplication of programs + to expand skills of individuals in voc. programs. Identified competencies in program in high school + college

Lifelong educ. essential. - educ. should seamless, continuous etc. cont. educ. progress. 2+2 etc

Efficiency of learning and use of resources. Allow smooth flow - both vertical and horizontal.

Career paths including foundations of occupational cluster requirements seem only too logical - one has to wonder why it is really only beginning to happen. Articulated agreements addressing foundation knowledge through entry professional level (i.e. capable of working with minimal supervision) agreements should include work site components. Should be a state policy to make this happen between various levels of institutions.

"efficiency of learning and resources"

"Voc ed does not exist for & unto itself. It must be articulated both horizontally & vertically!

SPECIFIC OCCUPATIONAL PREPARATION

Particularly critical to join JTPA and CC to secondary initiatives to have better articulated programs. JTPA, our office and Community College in joint planning for workforce development: Y. Apprenticeship, Work Based learning and entry level and TPAD programs.

With specific occup. Prog's including broad knowledge of the industry coupled with Applied Academics. High Quality Vc Ed.

Specific Occupational training is very appropriate at some levels -- but broader based occ. skills are needed at the foundation. Narrow - industry specific.
This is the one single characteristic that makes voc ed unique & different! People don't get jobs based upon "principles of work," "occupational clusters," or "employability skills." They get jobs as info specialists, plumbers, machinists & merchandising specialists. Education & training of a real employment opportunity identified by a prospective employer & based upon an occupational (competency) analysis of the designated job.

vocational ed in high schools has sometimes been too specific - need general skills today. narrow job preparation.

Employers will always need workers trained for specific work. But some think a broader experience for all students is the way to go (i.e. "clusters") "narrow" skills training for a certain job.

needed for some sec. students & a critical program at postsec. level; should come at the end of general educ. + provide a transition from school-to-work. A prog. at both general & specialized skills needed for work (not jobs). Broader than voc. ed. programs now. Focused on broad transferable skills; employability skills, basic skills & knowledge about work as one of societies major social institutions (artic. with economics, citizenship, government studies) maybe as program within social studies curri.

Only incidentally during K - 12. Should be confined to post-secondary. Can't be justified given the nature of today's Labor market, and the vocational immaturity of students.

For some students, its a must. Preparation for one job.

Broader technical skills needed by workers today. Voc. program teaches only one level of an occupation rather than a core with spin-off occupations.

Needed for some students, should also be a part of 2 + 2. needed for work ready graduates.

For some not all -- there need to be viable options for all learners. Prep to work in a narrow range of jobs or a specific occupation.

But of course! The issue is when does the specific preparation trigger in - Again the patterns of the workplace should lead the decision - i.e. sec/crafts ed should begin at high school. Perhaps the definition should be that when it is time for someone representing the industry to review the curriculum, then it is specific occupation preparation.

"for some not all - there need to be viable options for all learners"

"specific occupational training is very appropriate at some levels - but broader based occ. shells are needed at the foundation"

NEW ITEMS

DROP OUT PREVENTION

Dropout prevention is one of the very few unique, specific opportunities/goals of voc. ed. at the secondary school level. Voc. ed. must contribute significantly to
this goal or go out of business at this level. All sorts of progs. & activities to help kids understand educ. & its importance to them; learning approaches & programs to actively involve kids in situated learning, hands-on learning

SECONDARY/POSTSECONDARY DISTINCTION AND COORDINATION
Voc. ed. at se. & postsec. levels must be distinct & each level must contribute to broader school goals & objectives. Perkins must distinguish betw. two level in the future & clarify voc. ed's roles at each level -- cannot continue as one huge vague program aimed at same goals at all levels. Clearly articulated program of preparation for work for all students (K - 12) beginning in grade 5 or 6 logically progressing thru grades 13 or 14 for all students -- college bound & non-college bound (in grades K - 12)

"COMPREHENSIVE" VOCATIONAL EDUCATION
Need voc. ed. "program" not 5 separate occupational areas each focused in only unique aspects of its area. Broader prog. - single set of goals distinct at secondary & postsec. levels; Logical career dev. & vocational prep. from grade 5 thru 14 +

POSTSECONDARY VOCATIONAL EDUCATION AND THE EMPLOYMENT AND TRAINING SYSTEM
Postsec. public voc. ed. must become a critical & central part of the emerging adult & postsec. employment & tng system; Clinton admin. will put heavy emphasis on Dept. of Labor & adult work prep & this will drive public voc. ed. at both levels. Postsec. public voc. ed. must be distinct from sec. level voc. ed.

INCREASED ACADEMIC REQUIREMENTS/CREDENTIALS FOR VOCATIONAL TEACHERS
Teachers should have degrees at minimum. They should be scholars. Will impact teacher certification requirements.

RE-THINK PROGRAM EVALUATION - USE PROACTIVE MEASURES
Specific-job placement is unrealistic in a Labor market that requires flexibility.

FOCUS ON WORK RATHER THAN JOBS AT THE K - 12 LEVEL
Generic education. Broad orientation to work needed.

EMPLOYER AND UNION INVOLVEMENT
Students need to be educated for existing or potential jobs and Business/Industry need to feel they have a voice in the educational process. Written agreements between schools, students + employers to accomplish a stated goal.
REWARD AND INCENTIVE SYSTEM FOR TEACHERS AND ADMINISTRATORS
We need to reward performance. Essential for quality enhancement + improvement.

ALTERNATIVE TEACHER EDUCATION STRATEGIES
Improvement essential to reform. experimentation, involvement

INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION
applied instructional technics + pract. improves learning, enhances academic voc bridge. Learning by doing.
Integration of academics and vocational education must take place for any education to be relevant. Blending or fusing vocational and academic concepts, principles and processes.
May be the most important element in reform. Combined elements of teaching technique and content.
Essential to school reform. A very different instructional methodology + organization of educational programs.
Educating the Hands + the Mind.

TECH PREP
New Image; Connects the Academic + Voc Ed.
Critical new movement in education. 2 + 2 - and more; broader than current federal legislation
Combines Articulation and Integration through formal agreements. Combined secondary and postsecondary education integrating academic and vocational education toward a technical degree or certificate.

CERTIFICATE OF INITIAL MASTERY
High Skills, Low Wages. Interesting concept - Can America really "buy" the idea? Need more info. to stimulate students + schools + to enable employers to make informed hiring decisions. Career passport, portfolio etc.

STATE-OF-ART FACILITIES
Must learn in settings most like the industry. Place where voc ed is taught.

TEACHER INSERVICE
A must if any reform movements are to succeed. Updating teachers on new developments.

RESEARCH
We lack adequate direction with respect to reform. Generation of new knowledge.
COALITIONS
Coordination of resources a must for reform. Fusing, blending efforts among organizations.

KNOWLEDGEABLE LEADERSHIP
Top leadership is inadequate to reform education; especially in relation to voc. ed. Those who manage the educational systems.

LOCAL, STATE AND FEDERAL FUNDING
Reforms will not occur without dedicated funding sources + political commitment. More money from all levels

EXPERIENCE BASED LEARNING IN CONTEXT
We are a pragmatic society. Learning activities are based on activity participation related to learner’s previous experiences. Almost all people can learn better if see abstract knowledge in concrete forms + good voc ed can do that. Seeing concretely abstract concepts.

FOCUS ON LEARNERS - "TALENT DEVELOPERS"
1/2 the students are "Neglected"
Schools (K - 12) in the future must be talent developers aimed at helping all students optimize their talents & abilities. Voc. ed. can be a signif. component. At high school level, voc. ed. must not focus on employer needs but on students needs & seek to contribute to development of multiple intelligences. Must reverse decades-old focus on employers needs at hi sch. level in V.E. Voc. ed. capitalizing on its pedagogical strengths; emphasize on learners & learner growth rather than subject matter transmission & meeting needs of the economy --FOCUS ON LEARNERS!! NOT JOBS

PURPOSE OF SCHOOL IS WORKPLACE ORIENTED
Expectation of society is to be productive. That is the workplace. It includes home. Redesign of school to make them focus on future roles of citizens.

SCHOOLING IS COMMUNITY-BASED
Education and learning occurs where people work and live. Schools too often place focus on learning for sake of learning rather than life as productive person. Schooling moves into a broader use of community.

LIFELONG LEARNING IS A PRIMARY GOAL OF EDUCATION
Learning is an on-going activity throughout life. Learning can be both productive and fun; challenging and useful. A emphasis on learning to learn rather than learning to jump hurdles.
ELIMINATION OF THE GENERAL EDUCATION TRACK
kids in the general track frequently just float, good voc ed can give motivation +
direction. giving a purpose to courses
A real problem to prepare students for the workplace. - H S's that work.
APPENDIX E

Round 2 Comments
Round 2 Responses, direct quotations in full

VOCATIONAL EDUCATION AS ONE OF THE PRINCIPLE GOALS OF THE REFORMED EDUCATIONAL SYSTEM

Voc ed isn't a goal -- it's a vehicle to get us to our goal. Vocational education is not a "goal." It is a type of education, and its purpose is to focus on skills, concepts etc. that's "for and about work."

Workplace skills can not be separated from knowledge. Learning to do can not be separated from learning to know. Work is doing + knowing.

The educational system will be reformed only if it makes as its goal the inclusion of vocational education courses for all students regardless of their career goal. Agree very strongly that voc ed is a principle player in restructured education.

True - voc ed's goals are the same goals that should be included in a restructured school -- hence it is a vehicle to get students to intended outcomes.

The presence or absence of Voc Ed can be a goal of reform and I believe it must be present in all education for reform to be effective.

The comments made me rethink - of course those who noted voc ed per se is not a goal are correct - student outcomes articulated by some reference to what students need to know as it related to being prepared for the world of work should be the goal indeed a principle goal of ed reform.

A reformed educational system should prepare all students to assume productive roles related to workplace. It should not be one or the other - voc ed vs (whatever else).

Voc ed isn't a goal -- but it is a proxy for programs for real life, estab + maintaining critical relations w/ employers + responds to real need -- ready for work for most of our H. S. grads

Voc. ed. isn't the goal, prep.. for work is. Voc ed. only focuses on less than baccalaureate-level work, schools focus on all of work, including professional-level work. Voc. ed. certainly is NOT a major focus of school reformers -- now or in the past; it has never been a major goal of reformers + never will be. Prep. for work life is the key + the goal + voc. ed. is ONE approach for some students.

VOCATIONAL EDUCATION AS A SUBSET WITHIN THE EDUCATIONAL SYSTEM

Yes. As long as we are clear about what "sub-set" means. What else are the other sub-sets? Voed has a general education aspect, then it has a job-specific one, the latter role increasing as one leaves the 12th grade.

Needs to be visable as skills + knowledges not just work-place ready skills.

See comments, previous page.

"Subset" probably means different things to different panelists. However, the statement is very true. VE does not meet all goals of education but it does focus on several that are not present without voc ed. It must be integral - not separate
from other ed. Its purposes -- goals -- are an important part of restructured education.
I see subset as an integral part of the system. I therefore, therefore, agree. I'm a bit less sure, however
Options are the issue
See previous comment
Educ can't be comprehensive w/out voc ed (goals)
Voc. ed. is a component of the educ. system + of the employment + tng. system. To remain in the educ. system it must contribute to broad educ. objectives + goals + address specialized goals as well. Voc. ed. is becoming a special ed. program aimed at meeting needs of special populations + allowing academic ed. to continue to be an elitist program for a selected few.
Contextualized learning is important for all students, work experience and career exposures are important for all - so voc ed should not be a subset, only in sense that some students may go for further education and some may want job training.

ALTERNATIVE ASSESSMENT PROGRAMS
I am not familiar with the literature here, but I believe that voed has so many different looks to it e.g. apprenticeship, hands-on, etc. that we must have a multi-faceted approach to assessment.
"paper and pencil is one way of assessing -- there are a hugh variety of others that match to individual learning styles.
Voc Ed is the forerunner of competency-based outcomes-based assessment system and can contribute much to an alternative assessment system for all education. Continue to agree that assessments of performance -- "what do you know and what can you do" -- are very important to school reform. Good voc ed assessment has always measured outcomes. This is what reformed education must measure.
I do see the need for some alternative assessment programs in some fields of voc. ed.
It is correct to note that voc ed has made substantial contributions to build into the assessment of students educational experiences on valid student assessments - but still am not sure what is meant by the question. If it means only voc ed should have alternative forms of assessment the answer is no - if it means we should have support for more alternative forms of assessment for all students the answer is yes.
Need to assess beyond what paper + pencil tests measure. Variety of assessment procedures are needed.
Voc Ed provides real life assess, perhaps less necessary in this area
I know of very little innovative + broadly applicable that is being done in voc. ed. with alternative assessment programs. We do what everyone else does, but often not as well. Probably the opportunities are there but we have not taken advantage of them + are unlikely to do so.
SCHOOL CHOICE PROGRAMS (I.E., VOUCHERS)
Choice is not the answer (nor the problem!)
School choice in an atmosphere of integrated academic + voc. programs is the only way to protect equity.
I agree with all reasons stated above for not utilizing vouchers etc.
Agree with most comments of panelists from round 1. Vouchers are not a way to get schools reformed effectively.
Vouchers or similar programs can do harm to public education.
Again if the word voucher is dropped and the emphasis were on developing choice of focus for students the vote would be a 5 as written it is a 1
Public schools are consistent with our democratic form of governance and need to provide for all students
Voc. ed. can + should be a major choice/opportunity available to students at secondary + postsecondary levels. Many students who leave school early should be able to get back in at a later time (probably at the adult & postsecondary level) & should be able to use vouchers for this. Voc. ed. would likely be one of the major options for many in this position.

APPRENTICESHIP PROGRAMS
Little is known about the efficacy of apprenticeships as a learning strategy in voed. Very Political. Also, seems to be geared to the underclass (the so-called forgotten half).
Youth app. defined not only as German/Danish model but sound principles that teach for mastery hand on learning for a vocation and an avocation. (life long learning).
The more opportunities students have to learn on the rapidly changing (and continuously changing) equipment and in the actual work environment the greater his/her chances will be for assured employment.
Apprenticeship does not yet have a variety of good, tested models -- but they are coming. If developed in quality way with heavy involvement from industry, apprenticeship is an excellent delivery method + an integral part of voc ed. "good" apprenticeship is the original form of voc ed. --- Jesus was an apprentice carpenter! Its been around a long time!
A revisited program which will be extremely important in this day.
No one program or effort is a panacea - that is not the way of the world but it is nice to see such high support
"Many of the principles + procedures that underlie apprenticeship programs are supported by new research in cognitive science. Thus, they are gaining recognition + are being implemented by academic educators to better provide for situated + contextual learning of abstract academic content"
Apprenticeship in U.S. is not a youth program as it is in Europe; its an adult program. Among the programs + agencies that provide voc. ed. (e.g. hi schools, bus + ind., military, proprietary schools, etc.), apprenticeship is the smallest.
program in enrollments + in funding. It must expand beyond the construction trades & into new growth areas in the labor market if it is to become a more signig. program. Currently, it is relatively trivial. Nevertheless, its underlying principals of learning & approaches are powerful & can be applied in many areas of learning & this is what the cognitive science lit. is showing.

ENTREPRENEURSHIP EDUCATION PROGRAMS
Shows students how to become employers rather than employees. Leads to autonomy.
Entrepreneurship is a basic skill that all students will need as a foundation skill for work as well as a personal quality. (ie marketing yourself)
Vocational Education provides excellent opportunities for students to become prepared for multi-career paths -- entrepreneurship (or self-employment) being a major one.
Agree with a lot of the comments in round 1. Entrepreneurship is part of "thinking," using your head to figure out a better way -- the American Spirit that has made the USA business person the competitor. But, entrepreneurship is no substitute for good skills -- its a piece of the picture.
We need ways to have graduates literally create jobs for themselves and others.
If it is only viewed as trendy then we are in real trouble.
Entrep. is a relatively small & not a critical component of voc ed. or of voc. ed's contribution to educ. reform. It is a program that has some elitist appeal to academics, but it is, & is likely to remain, a small part of voc. ed. & education.
"Learners need to understand what is required to be an entrepreneur - as one and/or what it takes to be one"

OUTCOME-BASED INSTRUCTION
Fad. See my round 1 response.
Outcome Based Ed. is overall exit outcomes that give direction and extended outcomes that require competency to be demonstrated. This will be the basis for students to demonstrate skills for global competitiveness in the workplace.
An absolute must. It has proven its merit over the years.
Voc ed is outcome based -- all of education should be.
Voc Ed is outcome or product driven.
The input criteria needs to remain (perhaps with a fresh look) but not to have outcomes - driven by needs of the workplace - makes the program pointless.
Outcome-based instruction is easier to implement in voc. ed. than academic areas because most voc. ed. is training (not educ.) & outcome-based instruction needs to be instruction that is aimed at relatively short-term, clearly defined objectives like those associated with training. At the secondary school level, voc. ed. should be more geared to educ; not training, & outcome-based instruction would be of limited value. At the postsec. level, outcome-based instruction would have much
greater application because, at this level, voc. ed. is most often specialized training. 
OBE would be acceptable if outcomes were broadly based. Believe most still think of in terms of specific job skills and I don’t find that acceptable. May need a clear definition.

REVISION LOCAL GOVERNANCE STRUCTURES
I probably should not answer this. Don’t know enough.
All training programs need to have same direction - be organized in inner-agency teams who solve problems together. The sum of the whole is greater than any individual part (roles).
Change is inevitable and constantly evolving. If local school district revises its local governance structure, vocational education must be an integral part of that restructuring.
Governance is not the issue although there is a lot of talk and flurry of activity on this topic. The real issue is connecting education with the next step in a student's life -- changing day to day instruction. You can change governance a thousand ways and not effect teaching -- that's where the real issue should be focused.
I don’t see how revision of governance structure will make any difference in reform.
The more interesting question is to think through what the impact will be on local governance systems when there are "outcome standards" developed by industry.
Revising local voc. ed. governance structures, to more toward site-based mgmt. is important. But the real need is for state-level governance revision in voc. ed. I think the Clinton Dept. of Labor is going to force changes in public postsec. educ. which, in turn, will change governance & programs in secondary level voc. ed.
"Schools belong to public. They need to have a say. (Some regions/state do need revision of local governance to eliminate politics in school decisions and policy making)"
Need to expand authority of Adv. Councils -- need real life inputs on world of work.

REVISION STATE GOVERNANCE STRUCTURES
Don’t know enough. I'm uncomfortable here.
Need to define the new learning organization and connect w/business and industry.
Same comment applies to the state governance structures as proffered for the local governance structure (See previous page "Revision Local Governance Structures). Vocational Education needs to work more closely and in tandem with Depts of Labor + Commerce.
This is the same as local governance issue -- it is just "moving the furniture around."
Similar to previous question.
The comments from Round 1 reflect a lack of a common vision regarding what are the essential functions that can most effectively be performed at this level of government - as well as the local level by the way - perhaps what is needed is a process to try + gain agreement about what functions can best be carried out by each level of government.

"This is a critical need in voc. ed. because the traditional dominance of the SDVE must be broken to move more decision making to the local level. The State should become a service organ to local schools...a facilitator of local decisions NOT the major decision maker in voc. ed."

If we come up with an agreed upon purpose of education that puts workplace education as an important outcome, local restructuring will also require revising state governance structures.

Perhaps some future in a coord bd.-council for NRD for work

REVISION THE FEDERAL GOVERNANCE STRUCTURE
What needs to be changed at the Federal level is the "philosophy" of voed. The current Perkins for example, conceives of voed as social rather than education policy.

Feds need to set the example for states, by eliminating duplication and cutting down in top management. Need to level organizations (schools + business)

Federal governance, via its various departments, should work more closely together, not necessarily by restructuring but by philosophy and policy.

A little like local + state -- Agree on need for Depts of Labor, Ed + Commerce to come together. We need national policy -- I don't think that requires governance change but it might help.

We don't need structure revision. We do need a policy on job education.

Revising governance structure for what purpose?

If public postsec. voc. ed. programs are shifted from the U.S. Dept. of Ed. to U.S. Dept. of Labor (which is not unlikely under the Clinton Admin.) this will force major changes in governance of voc. ed. from federal through local levels.

"While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."

SITE-BASED MANAGEMENT PROGRAMS
Voc education must have parity w/academic ed on these teams and in programs.
Voc Ed can contribute greatly to directly involving local, small businesses as well as larger businesses in apprenticeship-type training when site management programs are implemented.

If we don't move many decisions to the "front line" -- the teachers, principals, building level we will not ever reform schools.

Reform does focus on outcomes. Outcomes best dealt with at local site.
Not opposed but still need to be convinced this is a unique contribution of voc ed to the reform of ed in general
"Because site based mgmt is more effective & it involves more of the concerned & effected parties in major decisions effecting the school."
"School building personnel need to be able to participate in the educational management of students + to affect policy + budget
Focus of decision + local inputs on work needs etc. are essential

NATIONAL EDUCATION STANDARDS, AS CALLED FOR IN THE HIGH SKILLS OR LOW WAGES AND LEARNING A LIVING NATIONAL REPORTS
I support the concept of standards in education.
Support would class standards that are supported by the global education community.
A must if mobility of students to where jobs exist is deemed an important goal of vocational education.
If we cannot identify standards we have no specific outcomes to strive for - National standards are essential.
One of the most crucial aspects of voc. educ. reform today.
There must be a baseline
Nat'l. st'ds. can play an important function in reform but they aren't peculiar to voc. ed., nor should they be.
Standards are a responsibility of the state.

CAREER GUIDANCE PROGRAMS (BEGINNING AT THE PRIMARY GRADE LEVEL)
Career decisions ought to be postponed. For one thing, schools do not have good information about labor markets. For another jobs and careers have become moving targets.
Career education + Guidance connected thru K - 14 programs w/ the following components: career awareness, career exploration, career preparation, career evaluation and life long learning
Guidance is essential in developing school to work transition programs. Students must become aware of options early to develop a 4 year plan to be adequately prepared.
The earlier students learn about careers, character building, skill building and the work ethic, the greater their chances for understanding the contributions of all education, including vocational education in their decision-making
Essential. Its a critical component to the reform of education.
Essential for career planning.
Agree this is an institutional responsibility not just voc ed several institutions have some part of the action - eg Employment Services - lack of assigning responsibilities to assure kids get info may be part of the problem.
"Essential to career decision making," "Students need good information and experience related to lifelong options for being a productive person."
"This is not a voc. ed. responsibility but an institutional responsibility. However, not much has happened w/o voc. ed money!" *good pt. - not more of same.
"Guidance has never received adequate support at any school level + I don't see this changing in economically tight times"

PREPARATION OF SPECIAL NEEDS STUDENTS (AS DEFINED IN THE PERKINS VOCATIONAL AND APPLIED TECHNOLOGY EDUCATION ACT) FOR A PRODUCTIVE WORKLIFE
My disagreement here stems from the view that all of education not just voed must be concerned with special needs students. Voed can provide satisfactory experiences, but so can other kinds of education. Voed tends to be viewed as therapy.
Cultural pluralism as a focus for defining the platform for special needs in school reform - Get it away from only workforce based - It is more than that - It is a cultural shift.
Voc Ed can and does prepare special needs students to become productive wage earners as it does for all students
Perkins II does not use "Special Needs" -- uses Special Populations. "Special Populations" is a broader term + this is an important distinction. Yes, voc ed is very important for these students but it is not a social program - Voc Ed should be for all who want, need + can benefit. This includes Special Populations.
We need help in this program. We cannot do it all. We do have a wealth of experience.
All parts of the system must shoulder the task of helping all students
"All our citizens must be productive"
Voc Ed shows respons.
This is a critical component of voc. ed. contribution to reform because voc. ed. has assumed a major role in this level & few other programs are available in the sec. schools.

VOCATIONAL EDUCATION AS A CONTENT AREA OF EDUCATION
Yes, But we have to agree on what we mean by voed.
On one hand: It is teaching voc ed. + academics in a context not a content area.
On the other: That may be the only content area.
Voc Ed is comprised of many content areas just as, for example, "Language" is comprised of English, French, German, Spanish etc.
Yes - I continue to agree. But, we should get away from the notion of distinct differences - Ag, Home Ec, Business, etc. These are all clusters where students specialize their skills and knowledge in the context of the bigger whole of education -- AVA has missed that distinction. We need strong foundations in
Math Science, Communications + technology which are further developed through concentrated study in a content area -- content areas though don't stand alone. Not really content as I see it! It applies content from many areas. The answers reflect the need to be clear about what this survey is attempting to focus on. As written the questions lead one to "think" secondary voc ed. However if one thinks about preparing the workforce - regardless of the "level" of the institution
"There are specifics about V.E. It's not just a method."
"The current Clinton admin. & many labor mkt. economists feel the U.S. needs to strengthen its postsec V.E. system. At the high school level, V.E. will need to define a broader program distinct from adults & postsec ed. if it is to survive let alone grow."

JOINT PARTICIPATION OF VOCATIONAL EDUCATORS AND OTHER EDUCATORS IN DETERMINING THE DIRECTION OF REFORM
Must have parity!
Absolutely! How can we expect vocational education to be a respected education if it is not an integral part of educational reform and if non-vocational educators never have an opportunity to work with and eliminate the myths about voc. ed. Agree strongly - cannot integrate if you don't involve all educators.
Will give a comprehensive system with agreement.
Perhaps the challenge is to sort out what voc ed can bring too the table in the larger context of redirecting the whole ed system
"We need a comprehensive system of education that integrates purposes and outcomes rather than separates into parcels and areas"
But not at exclusion of employers, parents, etc.
Voc. educators have never been called upon or highly involved in school reforms. In fact, V. E. rarely looks beyond its own programs to broader school goals + needs -- it focuses inwardly; doesn't seek to act in collaboration with broader school reform + is rarely called upon to do so"

ARTICULATION PROGRAMS
Could be a sophisticated form of tracking.
A curriculum alignment activity for school reform.
Articulation horizontally through integration and common planning as well as vertical articulation through pre-requisite planning is essential.
My earlier disagreement is because of the false notion that articulation will address school reform. Yes, it will help, yes it is needed. But there is so much talk of articulation that we are missing the bigger point -- to make Tech Prep + other reform initiatives really work we need integration (that involves articulation and a lot more).
Articulation is a must for learners as well as survival of system.
The comments above say it all
"Career paths including foundations of occupational cluster requirements seem only too logical - one has to wonder why it is really only beginning to happen"
"...it can help schools move toward more situated/contextual learning for all subjects + provide for multiple student intelligences." "Voc Ed does not exist for & unto itself. It must be articulated both horizontally & vertically!"
"efficiency of learning and resources"
Continuous progress concern. (2 + 2 should be a 4 yr continuous progress concern)

SPECIFIC OCCUPATIONAL PREPARATION
Not in high school.
School to work skills for the 21st century. Skills and knowledges are set by business and industry, community groups.
While broad-based occupational education is necessary, specific occupational preparation at the high school level is expected by employers in some vocational preparation areas.
Agree - The question is when specialization begins. Broad foundations are imperative.
This is needed at post secondary level but not at lower grades.
The variance in the answers show a confusion, I think, about the focus of this exercise. The answers above are all appropriate at some point on a continuum of learning for individuals as well as some sense of what/who should drive the decision
"for some not all - there need to be viable options for all learners"
for those going to work job readiness is a voc ed respons (still largest group)
"specific occupational training is very appropriate at some levels - but broader based occ. skills are needed at the foundation" "needed for some sec. students...should come at the end of general educ. + provide a transition from school-to-work" "only incidentally during k-12. Should be confined to post-secondary" "broader technical skills needed by workers today"

DROP OUT PREVENTION
Gives kids motivation to stay in school
While I disagree Dropout Preven is a critical component of Voc Ed, I believe voc ed does reduce dropouts.
Dropout problems usually have societal roots. Curricular solutions mask the problem.
This agenda will be solved as we meet TPAD and integration commitments. Students will be motivated as delivery systems focus on individual learning styles. Early career goal identification + plan of study would prevent heroic dropout programs being necessary.
Voc Ed contributes to the prevention by providing relevancy and early experience of success
Voc ed is an excellent deterrent to dropouts - must begin early enough to catch potential dropouts. It is done best through regular program instruction geared to students needs. If viewed as an opportunity to show that the applied learning opportunities can do to help a larger group of students - why not We need to make lifelong learners of all who enroll in our schools However not distinctive to voc. ed. - we could-should list all educ goals - contribute to, reinforce + support This is one of the most important & unique potential contributions of sec. level voc. ed. As a goal, it helps to establish the place of voc. ed. in the schools - Can't be ignored.

SECONDARY/POSTSECONDARY DISTINCTION AND COORDINATION
Agree that tech prep makes coordination possible don't understand meaning of "distinction"
Same as articulation. What does "distinction" mean here?
Critical to reform - 10-14 and 10-16 should be connected program agendas and yet each will have it's own focus areas Using competency based instruction allows for improved articulation making this distinction unnecessary Coordination + articulation contribute to the reform. However, the secondary postsecondary distinction is not new.
Link between grades 11 + 12 + 12 + 14 is vital. Important to prevent overlap and duplication.
Too artificial. Would prefer to say the direction/critical components need to be to develop agreement regarding what the general base of knowledge needs to be before individuals move into occupational preparation phase of ed/ then by occupation clusters and in concert with the employer community develop the consensus on the graduated levels of knowledge required to move from entry to specialist
These 2 levels of programs must become distinct with distinctly different goals & objectives. We can't have one set of goals & objectives for all levels of programs - secondary through adult. Moreover, voc. ed. needs to start earlier (in middle schools) & be related to subsequent levels of the program. Sec. level voc. ed. should be education (not trng.) & be broad-based for all students; postsec. pros. should be training & specialized prep. for immediate employment.
We need educational programs for all learners, the distinction is unimportant. don't understand I'm not sure what this means.
"COMPREHENSIVE" VOCATIONAL EDUCATION
Leave out vocational - and add training programs - short term and long term driven by employment needs now and in the future.
We need to integrate academics into voc ed + support applied academics in schools
Unsure what panel member intended by inclusion of this element since comprehensive vocational existed (+ still exists) before the reform of education movement.
I think I agree -- what does "comprehensive" means that Voc Ed does not. I'm a little unsure. If this means "generic" voc ed -- the answer is NO.
Very important at advanced graduate levels for crucial leadership development.
Do not have any sense of what it means - need a better description
Topic need to be defined before I feel comfortable in responding
need to define - is comprehensive an array of options or some inclusive, broad offering for all or most
Need to drop 5 traditional service areas at secondary school level + offer a "comprehensive" voc. ed. experience focused on: (a) the study of work in society, (b) study of work as careers, & (c) study of specialized skills & knowledge for work. Focus on 3 distinct goals & focus on work not jobs. Draw more heavily on community & workplace resources than now thru apprenticeship & coop experiences.
What does this mean?
don't know what this means

POSTSECONDARY VOCATIONAL EDUCATION AND THE EMPLOYMENT AND TRAINING SYSTEM
Community colleges (since they provide many vocational courses) offer JTPA training in many locations, so voc ed + emp + training fit together there - if that's the meaning
Fuzzy
Wrong title - see above
The coordination between these entities should be strengthened.
Contributes to the quality and advanced employment status of students
 Totally agree - its all one larger system with no national policy guiding or directing. We have a lot of bandaids on a big wound.
I don't understand what this one means ?? Two systems?
If this is meant to say we need a better understanding of what + how we can improve the understanding
Public postsec. voc ed. must see itself as part of the nation's E & T system; should become the one-stop shopping centers for employment related needs (i.e., training, referrals, job search ass't., etc.) & relate to other community employment providers. JVSSs in Ohio will need to be shifted to predominantly adult & postsec. institutions.
Coordinated? combined? unclear direction. Therefore no response. 
We have a role in the E + T (nonsystem) What is point

INCREASED ACADEMIC REQUIREMENTS/CREDENTIALS FOR VOCATIONAL TEACHERS
Voed teachers need to be on par with mainstream teachers. This area of reform is as important as any.
Critical for all areas of voc. ed.
We need to focus on maintaining existing programs.
It is essential that staff be renewed on an ongoing basis -- all teachers, not only vocational teachers, in concert with national professional standards being established.
Yes I agree
Modern technology demands this.
Not convinced that academic credentials are the real issue
All teachers need to be academically competent. They also need to have occupational competence.
What about expanded + recurring work experience?
This is only really a concern for T & I teachers @ secondary school level.
don't understand

RE-THINK PROGRAM EVALUATION - USE PROACTIVE MEASURES
Follow-up studies are probably not the best way to provide data if program responsiveness is the goal. Other methods need to be found.
Use assessment as a building block for evaluation
More immediate evaluations + benchmarking is needed
This is what Perkins II requires.
What are proactive measures? What does it mean to rethink program evaluation?
Not sure what is meant by this nor at which level of evaluation is of concern.
different audiences need different types of evaluative information
Word proactive is problematic
Don't think it is very influential on change. Don't know how its any different from the concern for outcome-based instruction.
don't understand

FOCUS ON WORK RATHER THAN JOBS AT THE K - 12 LEVEL
General work skills + exposure + not specific job training
Broader rather than narrow.
Work defined as broad-based, academically rigerous (or tied to academic principles.)
We need to promote the work/school connection earlier than currently being done.
Since work occurs at all levels -- professional as well as non-professional, voc ed can be a major contributor to career preparation.
This sounds like generic voc ed -- While I tend to agree we must keep all work related education connected to industry. If this implies something else, we will never reform schools -- need standards
Employability is even better concept!
Too artificial plus what is so sacrosanct about 12 years - why not less or more - if one were to say 1st focus on gaining agreement about common body of knowledge required prior to developing choices for occupation focus then would agree
Some need jobs focus before grade 13.
Work + jobs are needed focus
Preparation for work is general ed.; all students need it; sequence/program should move from general to specialized, from earlier grades to later grades.

EMPLOYER AND UNION INVOLVEMENT
I see some employer involvement in voc ed but not uniformly, little union involvement.
Tied to standards and credentials needed for the now + future workforce.
Especially in school to work transition programs
Hopefully, a greater understanding of this area by students occurs through work-site training and preparation
Totally agree. But all employees are not unionized. Suggest you include labor + management. This may or may not involve unions.
Not really needed for reform.
The question is involvement in what - work site learning for credit? curriculum development and approval? assessment of skills + knowledge? what?
It's a part of public being involved.
Does this refer to business-industry collaboration? If so, I don’t see it as critically important to reform.

REWARD AND INCENTIVE SYSTEM FOR TEACHERS AND ADMINISTRATORS
Provide staff development and mini grants.
Through increased percentage of successful program completers being employed as going on to higher education
Depends on what this system is. I agree to performance rewards + merit pay -
This has a lot of variables.
This has always been important for morale and advancement.
However - this is a broad based reform agenda - not just a voc ed one
Don’t think this has ever amounted to much of an influence on/for change.
A means to attract quality people and elevate profession.
On what basis?
I don’t see much of this
ALTERNATIVE TEACHER EDUCATION STRATEGIES
To a point. In the end, they must have good academic credentials.
Don’t fragment the system -- good solid integrated program should not be alternative ed.
Critical to Change! University teacher ed varies - some is excellent, some is entrenched in the past - we need alternatives.
This would help teacher education serve more clientele.
If it were possible to develop the agreement regarding what the teacher needed to know - then develop the "assessment instruments to judge them - then why would one care where the individual gained those competencies?
We are too narrow + locked in.
Holmes Group 5th year programs & Professional Dev. Schools (PDS) are the only major reforms/alternatives I’m aware of.
I don’t see much of this

INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION
A great strength if done properly
Most critical foundation piece.
A must to prepare our students for global competition
Provides new approaches to thinking about education by voc and academic subject teachers
This is the greatest issue for voc ed in school reform initiatives. No one seems to agree on what integration means.
Necessary for effectiveness of teaching and for competent craftsman.
Since I prefer to move to the Certificate of Initial Mastery approach, thereby making this idea perhaps absolute my position is weak. However, my friends have convinced me we need to improve all forms of instruction + curriculum and this is a good way to push forward
We need a single system which shared common purpose.
[disagree] if it means loss of identity + total merger
I think this refers to the same thing as articulation -- i.e. horizontal integration = integrations, vertical integration = articulation. See "artic. Progs." p. 18.
This is conceptually weak. Assumes that voed does not already possess "academic" attributes.

TECH PREP
Another critical foundation piece. A major option.
Provides great opportunity for educators to plan and work together at secondary and postsecondary levels
Best thing going in school reform! Let’s make sure "Tech Prep" does not become another idea that failed. States should set standards to assure rigor, integration etc.
Program whose time has come! A cutting edge development. We have support.
This was a good way to generate a new funding stream that would force folks to come together to create an articulation process and given attention to the non BA world - But there is a danger of trying to make it more than it is A means to a more comprehensive system.
An alternative voc. program option that should move voc. ed. toward more broad-based, generalizable preparation for work.
Fad.

CERTIFICATE OF INITIAL MASTERY
competency certificates in voc. ed. provide good experimentation for c. of i. m. In order to establish a Benchmark for world class standards. This is a good idea but scares a lot of people. It will be very difficult to break the American dream of a High School diploma at age 18 after 12 years of school. This has always been one crucial area for voc. education. Simply because if it is possible to develop agreement on what people need to know at the basic level - then options/choices etc can then open up for all students Tends to imply single focused, job preparation as the goal. Related to school choice/vouchers. Voc. ed. can be viewed as an alternative instructional approach to achieve initial mastery of basic skills for students who have difficulty with academic instruction. The broad objective of initial mastery of fundamental skills remains the same for all students, but the instructional approach to achieve mastery can vary for different learners. At what point?

STATE-OF-ART FACILITIES
In school or Industry is critical for world competition Given the cost to maintain ever-changing equipment and facilities, not all of voc ed contributes this to educational reform Very important. Makes for effective teaching and learning and high morale. It's hard to be opposed to good facilities but isn't it more important to ask the question - where can the student be exposed to the state of art equipment + then arrange for a portion of the education to occur in those facilities - many of which will be the workplace Or at least access to workplace facilities of high quality. Don't think it's critical. What does this solve?
TEACHER INSERVICE

Needed.
Major area need to make school restructuring real.
Contributes greatly to reforming education. It is absolutely essential if there is to be any reform in, e.g., governance.
Very important. We must "retool" those in the field.
Probably the most critical program or process we need to consider. An extreme and crucial need today.
More is always better the questions are what skills are needed, how decided how delivered
We need to help change present personnel.
Recurring work experience needed
If there is to be reform in educ. & if voc. ed. is to be a signif. part of it, then inservice is very important. Educ. must start to view/think of teacher inservice more as industry views human resource dev. -- very different things with different underlying philosophies. Educ. needs to think of inservice as longer range human resource dev. aimed at improving teachers/administrators & the system itself.

RESEARCH

We don't know enough about many facets of vocationalism -- e.g. the sociology, psychology, of work.
Critical for a sound foundation Need to combine academic and voc. research
Ongoing contribution through voc. ed.
We need relevant research that can be applied. Too much of what's going on is related to the "publish or perish" requirement of Higher Ed faculty -- the application, transfer of knowledge is not there
The base for all our decisions.
More is always needed but the question is how to focus on what needs and audiences
Is necessary for progress to occur must be strengthened & funded at higher levels to make any real difference.
We need to know what changes are occurring plus related data.
not clear - a process essential to all educ.

COALITIONS

→of all kinds -- especially the community + parent groups.
Voc Ed can point the way based on its successful past in this area, including community based organizations and agencies as well as with business and labor
Its hard to disagree with this. But more explanation needed -- who are the coalition partners.
Our best chance to be efficient and effective.
Too vague to be of value
Too broad, don't know what is meant
Reform + restructure needs to involve the broad range of constituents. We need their assistance.
with whom for what purpose other E + T providers Employers, Employers, Employers* some good employer - school coalitions in voc ed

KNOWLEDGEABLE LEadership
New doctorates are needed who have knowledge of systemic change and a far-reaching vision.
Total agreement. What knowledge Leaders need is the crucial element.
Its crucial that we have knowledgeable leadership for the complex programs we are carrying out. Leadership not now in place.
How could anyone disagree not sure what to do with this Leaders should lead and new directions + reform requires quality leaders who are knowledgeable needed but lacking in voc. ed.

LOCAL, STATE AND FEDERAL FUNDING
Voc ed is underfunded
Critical to move education reform on a timeline technology will require.
Already exists
Of course
Its a given we must have support for any reform to take place.
There will never be enough plus given the clear variations in systems are funded what will be gained by trying to seek one best model?
See earlier discussion about the several governance items.
We in this together.

EXPERIENCE BASED LEARNING IN CONTEXT
Better than most traditional voc. programs -- It gets students in other settings.
Voc Ed has to its credit a history of experience based learning in context to its credit
Isn't this what voc ed is?
I'm not sure what this means?
How is "in context" different than experience based?
Cognitive science results show the merits of contextual + situated lng. & provide much theoretical support for what voc. ed. has been doing. It also supports apprenticeship & coop program approaches, student voc. organizations, & workplace learning of all types.
It fits the philosophy of the pragmatist + aligns with the cognitive scientists. Ambiguous. Isn't that the very essence of voed?
When done correctly
FOCUS ON LEARNERS - "TALENT DEVELOPERS"
Like the words - don't understand "Talent Developers" - my definition may be different.
Yes, student centered education
Agree
I'm not sure what this means?
Do not know what this means sounds nice
This is the critical goal/obj. of K - 12 educ. & should be the voc. ed. goal at secondary school level. This means that employers are not the directors of voc. programs. Employer needs take second place to student needs at hi. sch. level. Employer needs are primary at the postsec. level. Sec. voc. programs focus on multiple intelligences & optimizing individual student talents. 
We do need people who are learners and not just possessors of content?

PURPOSE OF SCHOOL IS WORKPLACE ORIENTED
Purpose of school is lifelong learning within all contexts - work being a major part of it.
All students will eventually work - the variable is the amount of education.
Yes but lets be broader about it -- is that the purpose of school or a focus of education?
This statement is not clear to me?
One of the purposes of schooling is to help students understand what is required to be a productive citizen
One (1) purpose of school (K - 12) is workplace preparation. The primary purpose of sch. & voc. ed. at postsec level may be workplace prep. Students are in process of moving into the workplace. Narrow view of schooling.

SCHOOLING IS COMMUNITY-BASED
Some - where appropriate
Yes.
I'm not sure what this means? Voc Ed? Academic Ed? Community-based?
If this is meant to recognize that schooling can occur in a variety of settings - not just the formal classroom who could argue?
Yes
Learning can not be confined to the walls of the classroom.
So what's new here?

LIFELONG LEARNING IS A PRIMARY GOAL OF EDUCATION
To life roles and performance expectations!
Vocational and technology educators, of necessity
Agree
Lifelong learning ideas are to be instilled in all students if education is to work at all. Hard to disagree but not sure what one does with this Yes It is what we claim about learning. Everybody is into this now. Not unique to voed. Some good adult voc ed courses

ELIMINATION OF THE GENERAL EDUCATION TRACK
But - not a 2 track system. Integrated Education. This is accomplished by providing all students with vocational subjects and general academic subjects Total agreement -- here's where educational reform must play a critical role. It would be desirable but not a must for school reform. And other tracks too! This is a good development if voc. ed. at secondary school level becomes broader-based more generalizable prep. for life & work. If voc. ed. remains narrowly focused, specialized job prep. then the general educ. track is needed. Voc. ed. needs to provide an alternative instructional learning approach to achieving broad general education skills & objectives. Otherwise, the general track is needed to do this. (Also see "School Choice.") Wandering around an unfocused track leads no where

NEW ITEMS

CITIZEN/COMMUNITY ADVISORY COMMITTEES
A must for programs to be relevant, up-to-date and tied to the work world. A citizen's group of 3-13 people who advise with respect to voc educ programs. Have emphasis on community inputs, Advisory councils w/employers, Educ is prep for real life. (Schools are isolated)

TECHNOLOGY EDUCATION
Technology Ed. as a systems educational program. Who is leading the promotion + inclusion of this major area. Technology education for all students K - 12 -- more than an instructional goal.

SYSTEMIC CHANGE
Systemic change in academic and voc. ed is critical. Who is leading the charge. Involve Bus + Ind to help define basic problem -- determine steps to solving problem and produce documents to support change. No real substantive changes are occurring that help connect higher educational and academic educators to workforce training visions.
VALUE OF VOCATIONAL TRAINING
Cannot move forward without a cultural value in place. Study and tour countries who value Voc. Ed. programs. Work w/all to help market and promote craftsman and artist as one value.

PRE-SERVICE PREPARATION OF EDUCATORS
Before there can be reform, there must be pre-service as well as inservice preparation of future teachers and administrators in techniques of integration, standard setting, varied forms of assessment, tech-prep, competency + outcome based education and site-based management. Changing college and university teacher education programs enabling reform.

IMPLEMENT WAIVER PROGRAMS AT ALL LEVELS
School reform is stifled because of existing rules and policies that restrict piloting of new ideas. Oregon has a waiver program, but is still too limiting to insure flexibility of implementation of new ideas.
APPENDIX F

Round 3 Comments
VOCATIONAL EDUCATION AS ONE OF THE PRINCIPLE GOALS OF THE REFORMED EDUCATIONAL SYSTEM

This goal will require thought. We need to figure out what voc ed would look like if everyone is to have it. There is also the age old problem of when should specific, that is job specific, voc ed begin.

Voc Ed prepared for work + life.

You cannot reform the educational system without looking at all aspects of the system, including voc ed.

Students must be provided with a comprehensive education preparing them for work - immediate or after postsecondary training. Vocational education is a significant component of a reformed system.

Vo Ed is not one of the goals; it is a very important part of the reformed educational system.

"agree very strongly that voc ed is a principle player in restructured education. True -- voc ed's goals are the same goals that should be included in a restructured school -- hence it is a vehicle to get students to intended outcomes."

Preparation for work imperative to nation's future.

Voc Ed is one of the major reformers I see needed. Work is crucial to reform.

"voc ed isn’t the goal, prep for work is. Voc. ed. only focusses on less than baccalaureate-level work, schools focus on all of work, including professional-level work. Voc ed. certainly is NOT a major focus of school reforms - now or in the past; it has never been a major goal of reformers + never will be. Prep. for work life is the key + the goal + voce. ed is ONE approach for some students."

voc ed is not a goal, it a procedure or process

Voc Ed is about preparing for work - prep for work is a major ed. reform - Agree Totally

"voc ed isn’t the goal, prep for work is. Voc. ed. only focusses on less than baccalaureate-level work, schools focus on all of work, including professional-level work. Voc ed. certainly is NOT a major focus of school reforms - now or in the past; it has never been a major goal of reformers + never will be. Prep. for work life is the key + the goal + voce. ed is ONE approach for some students."

Preparing students for work is the goal - having strong voc ed programs is a key objective.

VOCATIONAL EDUCATION AS A SUBSET WITHIN THE EDUCATIONAL SYSTEM

I assume that there are many subsets of educational system -- voc ed being one of them (those that make up a total educational system.

I'm interpreting subset not to mean lesser than but rather equal parts.

I would unsett "essential" subset.
"Educ can't be comprehensive w/ out voc ed. (goals)" "subset' probably means different things to different panelists. However, the statement is very true. VE does not meet all goals of education but is does focus on several that are not present without voc ed. It must be integral -- not separate from other ed. Its purposes -- goals -- are an important part of restructured education."
Does sub-set mean integral to, or somewhere at the margin? The meaning of the language we use is important. Voc ed either is a part of the mainstream or it is not. I believe it should be.
May not be a sub-set if applicable to 60% of school population.
Yes. If Voc Ed is equal to Communications, Math, Science and Social Studies as a subset.
See previous comment. Education should all have a workplace focus and thus a sub-set is not an appropriate descriptor.
Yes but should apply to many students, including those going on to college if possible
Agree with above comments
"contextualized learning is important for all students, work experience and career exposures are important for all -- so voc ed should not be a subset, only in sense that some students may go for further education and some may want job training" "voc. ed. is a component of the educ. system + of the employment & trng. system. To remain in the educ. system it must contribute to broad educ. objectives & goals & address specialized goals as well. Voc. ed. is becoming a special ed. program aimed at meeting needs of special populations & allowing academic ed. to continue to be an elitist program for a selected few."
Agree the word sub-set means different things to different people but can anyone imagine an education system that does not include a component that helps prepare people for work?

ALTERNATIVE ASSESSMENT PROGRAMS
Assessment must cover observation, demonstration & evaluation (cognitive) dimensions.
Again, alternative assessment to me means authentic assessment of outcomes. Voc educ is built on this concept.
Vo ed has traditionally leant itself to a variety of assessment modes, particularly performance testing.
I agree with the last statement above.
It depends on what the standard approaches are and whether the alternatives are workable.
"need to assess beyond what paper + pencil tests measure. Variety of assessment procedures are needed."
Agree with all of above comments
"...Voed has so many different looks to it...that we must have a multi-faceted approach to assessment" "need to assess beyond what paper + pencil tests measure. Variety of assessment procedures are needed."
The support is based on the understanding that what we need is not just alternative assessment programs for only voc ed (which has done a great job in assessments) but an improved assessment system for all phases of ed.

SCHOOL CHOICE PROGRAMS (I.E., VOUCHERS)
Vouchers as originally conceived carry a very negative connotation. too few parents and students have sufficient information or sophistication to be aware of all available choices and the advantages/disadvantages.
This would be anti-equity-backward.
One of the choices could be a magnet school occup. focused.
do not see vouchers as the way to bring about reform (as it relates to vocational education).
While voc. ed. has always been a "choice" program, it deserved the same consideration & support of all other aspects of public education - equity & parity.
I oppose vouchers in any form or approach. They take away from equity in public education. Give every students a good school in his area at state expense if necessary.
"Public schools are consistent with our democratic form of governance and need to provide for all students"
Agree with above comments
"No - simply because of the word voucher -- however, the answer would have been the reverse if the question had been choice for students to select (within a structure) a choice of focus - ie professional/technical/science/arts - whatever"
The qualifier word - voucher throws off base the concern about choice (within a structure) that students should have a right to expect. Choice needs attention and thought -- vouchers are a bug-a-boo.

OUTCOME-BASED INSTRUCTION
I still feel strongly that students should be able to demonstrate what they can do and know as a result of both academic and vocational education. "The proof is in the performance."
Is voc ed by nature not outcome-based?
Vocational education was, is, and should continue to be outcome based. Our difficulty may be in relating to a broader outcome based approach as it relates to an academic context.
Outcome based education is multi-dimensional. Student must demonstrate what they know, are able to do & are like in the work place. That's voc ed!
If outcome measures are broad and comprehensive.
Definition of OBE is controversial. My concern is that we might be lulled into testing for outcomes because they are easy to test for rather than appropriate.
All of education should be outcome based
"Outcome-based instruction is easier to implement in voc. ed. than academic areas
because most voc. ed. training (not educ.) & outcome-based instruction needs
to be instruction that is aimed at relatively short-term, clearly defined objectives
like those associated with training."
Good words - good concept - need attention + lots of hard work to develop
generally accepted and recognized - across the country - outcome based
credentials valued by employers

REVISION LOCAL GOVERNANCE STRUCTURES
Feel the same as I stated in #2 above.
Current governance structure is okay if one is assured a balanced perspective
regarding purpose & method of education. Presently there's a bias toward college
prep one dimensional learning environments. All students don't learn the same
things in the same way at the same rate. Yet, that's how schools are structured!
governance means different things - site-based management? home rule? local
boards? I believe that real reform will occur when local governance structures
support, endorse, nurture change.
One consideration at the local level has to be that the context of work expands
well beyond local boundaries. Local governance structures that lead to
parochialism would be retrogressive.
I see nat need for revision. The people run the schools. That's all we need.
"Goverance is not the issue...The real issue is connecting education with the next
step in a students life -- changing day to day instruction. You can change
governance a thousand ways and not effect teaching -- that's where the real issue
should be focussed."
"Goverance is not the issue...The real issue is connecting education with the next
step in a students life -- changing day to day instruction. You can change
governance a thousand ways and not effect teaching -- that's where the real issue
should be focussed." Agree
"Revising local voc. ed governance structures to more toward site-based mgmt. is
important."
Form should follow function. The big challenge is to get the functions right --
including getting the business input in the development of standards done correctly
- just mandating local advisory councils won't fix the problem.
"Schools belong to public. They need to have a say. (Some regions/state do
need revision of local governance to eliminate politics in school decisions and
policy making)"
REVISED STATE GOVERNANCE STRUCTURES
This is a "sticky" issue! While there must be close ties between voc ed., economic development, business & industry, education is still a people business & thus, may be subject to a different set of rules than just economic ones. Don't really know the answer, particularly if voc ed is to coexist w/academic ed.
Again, whatever state or local governance structure is in place, the leadership must be visionary and not pulled down by unnecessary beaurocracy and living with a 1960's view of voc. educ.
Last statement (above) expresses my view.
Okay as is.
If we have workplace focused education dominate public education, the old governance structure won't work.
Agree with this statement. "This is the same as local governance issue -- it is just 'moving furniture around'"
"If we come up with an agreed on purpose of education that puts workplace education as an important outcome, local restructuring will also require revising state governance structures" "This is a critical need in voc. ed. because the traditional dominance of the SDVE must be broken to move more decision making to the local level. The State should become a service organ to local schools...a facilitator of local decisions NOT the major decision maker in voc. ed."
The agreement is checked only on the condition that it would mean we need to obtain a new vision regarding all levels of governments roles in the governance of education.
"This is a critical need in voc. ed. because the traditional dominance of the SDVE must be broken to move more decision making to the local level. The State should become a service organ to local schools...a facilitator of local decisions NOT the major decision maker in voc. ed."

REVISED THE FEDERAL GOVERNANCE STRUCTURE
The federal gov't cannot continue to pass separate & unique legislative initiatives, with separate & unique rules & regs, and then require collaboration at the state level. This country need a national policy on workforce development that serves as an umbrella over all federal workforce preparation legislation.
If we want voced to be a part of the educational reform discourse, then it has to be under the auspices of the Dept of Education rather than labor...and the scholastic agenda should not be legislated.
Fed Role leads to structure. Form follows function.
I'm not sure if combining programs at the federal level is the answer to reform. After working with JTPA for a number of years and JOBS recently, I see real concerns with their performance and delivery methods. Voc. educ could be weakened rather than strengthened.
Last statement above expresses my position. I would include the Commerce Dept also.
Okay as is, run by Dept. of education. Leave it alone.
"While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."
Agree with this statement "Labor and Education are at odds + need to come together but a governance change won't necessarily bring on the desired result." "Dept of Labor + Ed need to be in a partnership to insure connected programs + more efficient use of dollars"
Same point made in prior question is applicable
"While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."

SITE-BASED MANAGEMENT PROGRAMS
Voc ed must have some freedom to respond & adapt to local population & employment needs. However, its purpose & mission is a constant & not negotiable.
Need local decision-making and action/risk takers!
This management level could (and should) be able to foster greater integration among all disciplines, including voc. ed. as well as identify targets and provide needed support services.
"Management is local but only because the State delegated this. The State is manager for education.
"Empowerment of front line work force is critical for quality processes"
"If we don't move many decisions to the 'front line' -- the teachers, principals, building level - we will not ever reform schools" "Empowerment of front line work force is critical for quality processes"
"If we don't move many decisions to the 'front line' -- the teachers, principals, building level - we will not ever reform schools" "Voc. Ed can contribute greatly to directly involving local, small businesses as well as larger businesses in apprenticeship-type training when site management programs are implemented" "Empowerment of front line work force is critical for quality processes"
Not opposed in any way to the concepts of site-based management not convinced in any way that this is an area where voc ed must make a unique contribution.
"Because site based mgmt is more effective & it involves more of the concerned & effected parties in major decisions effecting the school."
NATIONAL EDUCATION STANDARDS, AS CALLED FOR IN THE HIGH SKILLS OR LOW WAGES AND LEARNING A LIVING NATIONAL REPORTS
Standards should be a responsibility at all levels -- local to Federal with no exception for voc. ed.
Need a comprehensive, system wide standard development process that has an impact on all states. Jobs are often the same from state to state. No need for states to continually reinvent the wheel.
Standards are an imperative. I support standards with the proviso that there is equity -- that all have the opportunity to attain them.
Keep employers involved.
Core standards must be industry endorsed & national in scope. Latitude should be provided for supplementary core standards and regional/local level based upon documented business/industry needs.
National standards are a must.
"Standards are a responsibility of the state"
"To be competitive in the global ed. market - must set world class standards and require schools to teach to them" agree
"nat’l stds can play an important function in reform but they aren’t peculiar to voc. ed; nor should they be."
Standards are not just a responsibility of states - though states have important roles within the standard setting arena - standards must relate to the needs of the market place.

CAREER GUIDANCE PROGRAMS (BEGINNING AT THE PRIMARY GRADE LEVEL)
My position above is unchanged. Career guidance focusses on the student’s personal decision-making needs about self as well as education, training and employment.
This needs to be a focus within all school to work transition efforts.
Guidance folks need good information, which is not always easy to come by. Why do students need to be "guided." They need to know alternatives.
Yess, but not thru counselors - guidance needs need be curricular based !!!
Essential for development of career plans.
"Guidance is essential in developing school to work transition programs. Students must become aware of options early to develop a 4 year plan to be adequately prepared"
Not sure this is a contribution of voc ed, but it is critical to voc. ed. Good career guidance is a total educational & societal responsibility.
Career guidance very important at all levels.
"Guidance is essential in developing school to work transition programs. Students must become aware of options early to develop a 4 year plan to be adequately prepared"
"Essential to career decision making" agree 
"Essential to career decision making" Students need good information and experience related to lifelong options for being a productive person. Guidance has never received adequate support at any school level + I don’t see this changing in economically tight times" The earlier students learn about careers, character building, skill building and the work ethic, the greater their chances for understanding the contributions of all education, including vocational education in their decision-making"
The function is critical the question is if it a voc ed responsibility I think it is not.

VOCATIONAL EDUCATION AS A CONTENT AREA OF EDUCATION
Voc ed is a content are as long as it is job focused. Voc ed cannot just be about work; it’s about getting ready for a job!
While voc ed as currently defined has a number of sub-content (or subject areas) the overall focus in its broadest terms refers to specific skill-building and employment preparation.
Is this the same as subset?
Again, "content area" is somewhat misleading. Voc educ content should permeate the curriculum.
Voc. Educ. is an application of content from many fields.
"There are specifics about V. E. It's not just a method."
OK but really should have an integration of voc + gen ed for almost all
"Yes...But, we should get away from the notion of distinct differences - Ag, Home Ec, Business, etc. These are all clusters where students specialize their skills and knowledge in the context of the bigger whole of education -- AVA has missed that distinction. We need strong foundations in Math Science, Communications + technology which are further developed through concentrated study in a content area -- content areas though don't stand alone" agree
"Yes...But, we should get away from the notion of distinct differences - Ag, Home Ec, Business, etc. These are all clusters where students specialize their skills and knowledge in the context of the bigger whole of education -- AVA has missed that distinction. We need strong foundations in Math Science, Communications + technology which are further developed through concentrated study in a content area -- content areas though don't stand alone" The current Clinton admin. & many labor mkt. economists feel the U.S. needs to strengthen its postsec V.E. system.
At the high school level, V.E. will need to define a broader program distinct from adults & postsec ed. if it is to survive let alone grow."
The answers reflect the confusion about the terminology. Everyone appears to agree with the heading but definitions by what is meant vary substantially. I agree with the Yes...But comment above.
SPECIFIC OCCUPATIONAL PREPARATION
Should be made available for those whose future employers expect them to come job ready -- specific skills, broad occupational skills, appropriate attitude, technologically current, etc.
All students should be prepared for work +/- postsecondary education; however, some occupational training in a work-based setting would be beneficial to all students.
A large % of students go directly to work!
Very, very difficult to justify.
"for some not all - there need to be viable options for all learners" "specific occupational training is very appropriate at some levels - but broader based occ. skills are needed at the foundation"
those who say voc ed is not about preparing for a job (identifiable) don't understand voc. ed. I don't see any classified ads for skilled occupations that want just good employability skills. they require knowing & being able to do in relation to specific jobs.
Employability best at secondary level. Specific in Post Secondary.
"While broad-based occupational education is necessary, specific occupational preparation at the high school level is expected by employers in some vocational preparation areas"
"Agree - the question is when specialization begins. Broad foundations are imperative." agree
"for some not all - there need to be viable options for all learners" "specific occupational training is very appropriate at some levels - but broader based occ. skills are needed at the foundation" "needed for some sec. students...should come at the end of general educ. + provide a transition from school-to-work" "only incidentally during k-12. Should be confined to post-secondary" "broader technical skills needed by workers today" "Agree - the question is when specialization begins. Broad foundations are imperative." "This is needed at post secondary level but not at lower grades"
Agree -- the question is when specialization begins -

DROPOUT PREVENTION
Relevancy and immediate gratification of voc ed success motivates and peaks (piques) students interest
"voc ed contributes to the prevention by providing relevancy and early experience of success"
Voc. educ. could easily become the dropout prevention. We must guard against that inclination.
Vo Ed does prevent dropouts
This is voced as therapy. I don't subscribe to it.
Only as it offers viable options for students who might not otherwise be interested in school. Drop out prevention should not be voc ed's principle objective.
We must keep people in school.
"We need to make lifelong learners of all who enroll in our schools"
"Voc ed is an excellent deterrent to dropouts -- must begin early enough to catch potential dropouts." agree
"voc ed contributes to the prevention by providing relevancy and early experience of success"  "Voc ed is an excellent deterrent to dropouts -- must begin early enough to catch potential dropouts."  "This is one of the most important & unique potential contributions of sec. level voc. ed. As a goal, it helps to establish the place of voc ed in the schools - Can't be ignored"
Haven't changed my mind - dropout prevention is critical - but not a responsibility of voc ed - though voc ed have provided tremendous support in the area

SECONDARY/POSTSECONDARY DISTINCTION AND COORDINATION
I'm uncertain about the "distinction" leading to reform since "distinction" has existed; however "coordination" across all disciplines contributes to reform, greatly. Distinction + coordination between sec + pss should be the result of similarities/differences in occupational focus.
"Distinction" is unclear.
2 + 2 should be an articulated 4 yr curric. with differences based on occup. goals.
"using competency based instruction allows for improved articulation making this distinction unnecessary" "same as articulation" "We need educational programs for all learners, the distinction is unimportant"
Secondary voc ed should not be terminal. It should support basic skills & life long learning needs. Perhaps there's a greater need for reform at p/s level to pick up where sec. V. E. leaved off!
Articulation is a must.
"We need educational programs for all learners, the distinction is unimportant"
"using competency based instruction allows for improved articulation making this distinction unnecessary" The key is integration - horizontally + vertically.
"These 2 levels of programs must become distinct with distinctly different goals + objectives. They can't have one set of goals + objectives for all levels of programs -- secondary through adult. Moreover, voc. ed. needs to start earlier (in middle schools) + be related to subsequent levels of the program. Sec. level voc. ed. should be education (not trng) + be broad-based for all students; postsec progs. should be training + specialized prep. for immediate employment."
The overarching issue is articulation - badly needed

"COMPREHENSIVE" VOCATIONAL EDUCATION
Comprehensiveness of vocational education (as we now use the term) will contribute to reform if we encourage access/entry into voc ed by all students including those labeled "academic"
Comprehensive means occupational, academic, + employability.
"unsure what panel member intended by inclusion of this element since comprehensive vocational existed (+ still exists) before the reform of education movement" "what does 'comprehensive' mean that voc ed does not...If this means 'generic' voc ed -- the answer is NO"
What does "comprehensive" mean?
If it is borulgenized voc ed, then disagree. If it is a full array of options, then I agree.
If comprehensive means a general education program about the world of work, then I disagree. Comprehensive means a wide array of occupation specific programs from which to select then I agree.
I see comprehensive as inclusive of all fields and I believe that is needed.
Take position that comprehensive means broad based + focused.
"need to drop 5 traditional service areas as secondary school level + offer a "comprehensive' voc. ed. experience focused on: (a) the study of work in society, (b) study of work as careers, & (c) study of specialized skills + knowledge for work. Focus on 3 distinct goals + focus on work not jobs. Draw more heavily on community + workplace resources than now through apprenticeship + coop experiences." good comment
"need to drop 5 traditional service areas as secondary school level + offer a "comprehensive' voc. ed. experience focused on: (a) the study of work in society, (b) study of work as careers, & (c) study of specialized skills + knowledge for work. Focus on 3 distinct goals + focus on work not jobs. Draw more heavily on community + workplace resources than now through apprenticeship + coop experiences."
Still not sure what is meant - therefore no response but the note "need to drop 5..." is very thoughtful if that what is meant by "comprehensive voc ed" - looks good to me

INCREASED ACADEMIC REQUIREMENTS/CREDENTIALS FOR VOCATIONAL TEACHERS
Ongoing inservice as well as preservice in the impact of changing/advancing technologies and reformed deliver strategies, i.e., integration, articulation, tech-prep, youth apprenticeship etc. would contribute to reform in education a comprehensive vocational program must be addressed by teachers with comprehensive credentials. How can we advocate lifelong learning for students if teachers are not held to the same standard.
Need more real world + occup experience too!!
"we need to focus on maintaining existing programs" "vo ed teachers need to be on par with mainstream teachers. This area of reform is as important as any" "All teachers need to be academically competent. They also need to have occupational competence."
This is an issue of appropriateness & balance. Yes, vocational teachers need academic skills, to teach academic related content, and reinforce basic academic
skills. They must be prepared to relate to the present & future. They do not need to acquire "academic credentials" just to meet artificial credentialling requirements.

High Tech and even any tech demands it.
"All teachers need to be academically competent. They also need to have occupational competence."
"modern technology demands this" agree
"vo ed teachers need to be on par with mainstream teachers. This area of reform is as important as any" "All teachers need to be academically competent. They also need to have occupational competence." "this is only really a concern for T & I teachers @ secondary school level"
The term "increased academic requirements" is what makes me disagree though I totally agree with last point "it is essential..."

RE-THINK PROGRAM EVALUATION - USE PROACTIVE MEASURES
Evaluation should be outcome-based or performance driven. Less emphasis on process.
There is need for information driven decision making -- and this should not be after the fact, as in follow-up studies.
Unsure of "proactive measures" definition but belief that evaluation should be focused on outcomes achieved, processes employed, and quality standards.
There is no question that program evaluation results often lead to reform. However, I am uncertain what "proactive measures" means.
Not clear on meaning?
"more immediate evaluations + benchmarking is needed"
"more immediate evaluations + benchmarking is needed" agree
"what are proactive measures? What does it mean to rethink program evaluation?"
Don't know that is meant by this?
Hard to disagree with the words --but still not sure what is meant by them

FOCUS ON WORK RATHER THAN JOBS AT THE K - 12 LEVEL
My high level of agreement is more related to a need to focus on the work ethic and why people work rather than on specific jobs.
Voc educ can't become a generic career education program. However I do see that broadening occupational trng could be advantageous.
We still need to train for specific jobs for H.S. graduates
Focusing upon a realistic outcome (job) is what gives meaning to "work."
Employability is the key.
Some individual need specific job preparation before end of high school.
"This sounds like generic voc ed -- while I tend to agree we must keep all work related education connected to industry. If this implies something else, we will never reform schools -- need standards" agree
"Preparation for work is general ed.; all students need it; sequence/program should move from general to specialized, from earlier grades to later grades" "general work skills + exposure + not specific job training". If - by chance - this means foundations + providing students with some knowledge about a broad band of occupational requirements - fine

EMPLOYER AND UNION INVOLVEMENT
The more employment training moves toward employer-site training (youth apprenticeship etc.) the more reform will result in school-employer-union relationships
Employers are key in curriculum decision-making.
We do not emphasize the worker perspectives in voked. We should.
Increased employer involvement is the critical part for improving voc ed + reform in educ.
Especially employer involvement + support
Voc ed is a partnership, must be sensitive to consumer (employer) needs. The employer is voc ed's customer.
Not necessary for reform but could be important to society.
"It's a part of public being involved"
"Totally agree. But all employees are not unionized. Suggest you include labor + management. This may or may not involve unions." agree
"Does this refer to business-industry collaboration? If so, I don't see it as critically important to reform"
Involvement - yes - in what - for what purpose - these remain the unanswered issues

REWARD AND INCENTIVE SYSTEM FOR TEACHERS AND ADMINISTRATORS
Since reward and incentive systems for staff have been minimal in the past, it certainly would contribute to reform in education if a system of rewarding, "stroking" and showing visible, tangible signs of appreciation were instituted
Again, I can't know if this brings about reform.
Treat them as professionals in a corporation
In principle it sounds great! In practice I don't know for sure how to make it work fairly. Teachers can't control the input (students) thus it's difficult to guarantee a standard output.
Important for morale and fairness.
"A means to attract quality people and elevate profession"
"A means to attract quality people and elevate profession" agree
"Don't think this has ever amounted to much of an influence on/for change" "I don't see much of this"
On what basis --- could be stated another way -- God is in the details - and details matter in a big way in this arena
INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION
While there has been integration of academics and vo. ed. as taught by voc ed instructors, the reform occurs when voc ed and academic instructors plan curricula and instruction together.
Absolutely essential for jobs of the 1990's.
They are mutually compatible. Adds new dimension to learning.
Yes, if balanced. We give up occup. learning time to do remedial work for academics. Its a 2 way street!!!
What does this mean. Assumes that voced is non-academic.
A single system is important for all of education.
"Provides new approaches to thinking about education by voc and academic subject teachers"
Integration - horizontally + vertically is essential
"a great strength if done properly" "I think this refers to the same thing as articulation -- e.g. horizontal integration = integration; vertical integration = articulation" "A must to prepare our students for global competition"
If this will help improve the instruction technology for everyone - use it as a way to bring people to table - fine - but is it essential - no

TECH PREP
Agree with last statement above.
A great way to "package" applied academics + H.S. Vo Ed + articulation w/Community Colleges
Tech prep could bring about real change in secondary + postsecondary schools. Could add an element of richness to voc ed if properly managed & implemented. Tech prep could become the "high road" of voc tech edu. Unfortunately, I'm fearful it may be "business as usual" under a new name.
Very important to articulation.
See earlier comments.
Fad, will go away like hulla hoops.
"Provides great opportunity for educators to plan and work together at secondary and postsecondary levels"
"Best thing going in school reform! Let's make sure 'Tech Prep' does not become another idea that failed. States should set standards to assure rigor, integration etc." Totally Agree
"a means to a more comprehensive system" "an alternative voc. program option that should move voc. ed. toward more broad-based, generalizable preparation for work" "Provides great opportunity for educators to plan and work together at secondary and postsecondary levels"
The time has come!
CERTIFICATE OF INITIAL MASTERY
Initial mastery implies a standard of performance. That's always been important for good voc ed!
Initial master definition - what is it? I interpret it to mean the foundation of basic skills necessary to enter the next education phase - higher level academics or occupational training.
Unsure of how postsecondary admission requirements will relate to or accept C.I.M.
A statement of mastery but I don’t see certification as must for reform.
"Tends to imply single focused, job preparation as the goal"
"This is a good idea but scares a lot of people. It will be very difficult to break the American dream of a high school diploma at age 18 after 12 years of school" agree
"Related to school choice/vouchers, voc. ed. can be viewed as an alternative instructional approach to achieve initial mastery of basic skills for students who have difficulty with academic instruction. The broad objective of initial mastery of fundamental skills remains the same for all students, but the instructional approach to achieve mastery can vary for different learners."
-how important it is to provide context + some definition - for the person who believes it implies single focused - job prep means that they have not had opportunity to study America Choice -- it means just the opposite

STATE-OF-ART FACILITIES
"or at least access to workplace facilities of high quality" Good! Essential!
When accessed at the work site.
I've responded as noted but what I really am interested in is a state-of-the-art learning environment, whether school-based or work-based. A move toward apprenticeship may have implications for school based facilities although the part-time voc schools in Germany are pretty state-of-the-art"
Need to explore using on-site facilities in business + industry rather than supporting expensive labs.
simplistic
good teachers are more important.
a must for quality programs
"or at least access to workplace facilities of high quality"
"or at least access to workplace facilities of high quality" "It's hard to be opposed to good facilities, but isn’t it more important to ask the question where can the student be exposed to the state of art equipment + then arrange for a portion of the education to occur in those facilities -- many of which will be the workplace"
agree with these points
"don't think it's critical" "It's hard to be opposed to good facilities, but isn’t it more important to ask the question where can the student be exposed to the state
of art equipment + then arrange for a portion of the education to occur in those facilities -- many of which will be the workplace"
This is not an ed reform issue per se - but still not opposed just think it's the wrong focus

**RESEARCH**
All worthy initiatives should be well grounded in research, BUT, I'm not talking about the kind of research?? conducted at the NCRVE!
A major contributor to change decision. Applied research by those on the firing line could bring about reform
Yes. We need to ask good questions about voced.
Must be focused, sustained programatic effort
Need research with practical recommendations.
A must for future direction.
Research out to provide alternative answers to new and recurring problems.
but not narrowly focused just on voc ed, should be integration of voc + academic + general employment-based education
"We need relevant research than can be applied. too much of what's going on is related to the 'publish or perish' requirement of Higher Ed faculty -- the application, transfer of knowledge is not here"!!! Agree Current National Center is missing the point!
"Is necessary for progress to occur. Must be strengthened + funded at higher levels to make any real difference" "We need to know what changes are occurring plus related data" "We don't know enough about many facets of vocationalism -- e.g. the sociology, psychology of work."
More is essential but getting agreement on need - for whom is perhaps the more important question

**COALITIONS**
On all fronts!
Good voc ed is a corporate movement. It's a piece of a larger picture.
Essential to reform!
Same as articulation.
"Its hard to disagree with this. But more explanation needed -- who are the coalition partners" agree
What does this mean here?
"Too broad, don't know what is meant" "Too vague to be of value" "with whom for what purpose"
How can anyone be opposed but vagueness does not make good policy
LOCAL, STATE AND FEDERAL FUNDING
Voc ed is a tri-partite venture. national priorities, state economic needs, local programs -- all three valuable components.
Funding for research vis a vis reform is very important.
Funding can be the stimulus for change.
Partnership very crucial to Voc Ed.
A variety so sources help to identify varing priorities.
Its a given we must have support for any reform to take place" agree
"Already exists"
There will never be enough -- have no idea where this leads
?

EXPERIENCE BASED LEARNING IN CONTEXT
puts purpose, meaning into learning.
Has and will continue to contribute to reform of education if adapted/adopted by
other disciplines
Voc. educ's strength!
Not sure of meaning here. But seems appropriate.
"It fits the philosophy of the pragmatists + aligns with the cognitive scientists"
I agree with all of these statements.
"Cognitive science results show the merits of contextual + situated lng. + provide
much theoretical support for what voc. ed. has been doing. It also supports
apprenticeship + coop program approaches, student voc. organization, +
workplace learning of all types."
The comments say it all too ambiguous
"How is 'in context' different than experienced based?"
What else is new for voced?

PURPOSE OF SCHOOL IS WORKPLACE ORIENTED
Purpose of school is preparation for life-long living, among which is what is work?
Why work? How? When? Where?
Education is about life & life is work (productive employment) Historically,
education in this country has been for the purpose of perpetuating education.
Schooling should be broader than just work preparation.
Not sure what it means? School has other purposes.
"All students will eventually work - the variables is the amount of education."
All of above statements are good.
"Yes but let's be broader about it -- is that the purpose of school or a focus of
education?" "One of the purposes of schooling is to help students understand what
is required to be a productive citizen" "One (1) purpose of school (K - 12) is
workplace preparation. The primary purpose of Sch. + voc. ed. at postsec level
may be workplace prep." "Students are in process of moving into the
workplace.""Narrow view of schooling" "All students will eventually work - the variables is the amount of education."
As long as this in not construed to mean it is the only - or indeed the most important purpose of school

CITIZEN/COMMUNITY ADVISORY COMMITTEES
Yes, but not as voc ed has used them in the past -- need more involvement of various groups throughout the year on a day-to-day basis, especially parents and employers.
So long as they have good information upon which to provide advice.
Critical.
Keeps curriculum + instruction in perspective and community based.
I see this related in the employer linkage question.
A must for relevant programs
The schools belong to the public - its a way to keep them in ownership.
Advisory committees + local involvement are essential.
Not critical for reform of educ.

TECHNOLOGY EDUCATION
Technology impact should be a part of all curricula K - 12. Early introduction to the computer, alone, has reformed education
Technology education is important at all educational levels, but technology isn't necessarily voc. ed. Technology is applied science regardless of what it's intended outcome is. Technology is voc ed only when it is an essential part of job preparation.
Technology education should not be the old industrial model.
Technology education is general education.
NO!
not necessary if included in Voc. Ed.
Its only one approach + therefore not essential nor critical
Anything to make kids more aware of work + to integrate practical with abstract
I'm not sure what the statement means. Tech ed people are having an identity crises - they don't know where they belong - voc ed, general ed. They lack a vision -- a mission.
Not critical for reform of education

SYSTEMIC CHANGE
Change is evolutionary and continuous
This entire questionnaire deals with systemic change.
Not sure what this means
I'm not sure what this means. There will need to be systemic change if voc ed is to assume its proper role but is this a contribution of voc ed?
not clear on meaning?
Change is a certainty + it should be systemic.
General reform movement is towards systemic change + voc ed ought to be there too.
Yes - change must come from deep within and must involve the system not cosmetic change.
? Broad.
"Systemic change in academic and voc. ed is critical" Agree!

VALUE OF VOCATIONAL TRAINING
Prob is how to instill "cultural" based support for work.
Needs a big PR Job to those unfamiliar with what vocational education really is and its value is to society as a whole as well as to individuals
Not sure what this means; but, hard to disagree with!
Public must value voc. trng as much as postsecondary, academic prep.
Voc ed will never get its due respect w/o a cultural values change toward a respect for the working class.
not clear on meaning?
Emphasis should be on workplace ed.
Never been more valuable
don't understand

PRE-SERVICE PREPARATION OF EDUCATORS
I'm not sure the "Before there can be reform..." is accurate, but in support of reform there must be change in preservice and inservice teacher education. A bigger question may be HOW to reform vocational teacher education?
a given in importance to reform.
Reform won't come from T. Ed pre service but from those in schools who realize it isn't working. Pre service follows!!
My position as stated above is unchanged.
Don't we have this now?
An essential part of a profession
Teacher ed is wandering - little vision + leadership. They need a lot of help!

IMPLEMENT WAIVER PROGRAMS AT ALL LEVELS
Necessary if reform is to take place.
Sometimes used as excuse
"School reform is stifled because of existing rules and policies that restrict piloting of new ideas" Not really
Waiver requests must have strong rationale -- not just give me the money!
Should be held accountable for outcomes, however, I suspect a certain measure of process will still be required.
not clear on meaning?
Waiver program is not clear.
Movement to outcomes will reduce need for all of the rules that focus on inputs.

NEW ITEMS

STUDENT + PARENTAL VIEWS AS BASIS FOR REFORM
We seem to ask everyone but the students and parents what they want.

EDUCATIONAL PLANNING
Students must have career experiences, formal + informal throughout school. As critical decision times, students should commit to a path. An individual career plan based on interests, aptitudes, etc. per formal assessment, inventories etc. should be developed, implemented, + annually evaluated/revised.

DOCUMENTATION OF COMPETENCY ATTAINMENT
This should be similar to the certificate of initial mastery, however, students must leave vocational education with a verification of their credentials. Career passport or portfolio.

PUBLISH A SCHOOL REPORT CARD, ACHIEVEMENT, DROP OUT, JOB PLACEMENT, COMPLETION OF COLLEGE ETC.
APPENDIX G

Round 1 Cover Letter and Instrument
March 17, 1993

Dear [Name],

Educational reform has raised many issues for educators and about the future of the educational system. The approaches to reform are diverse, and the issues are complex. In an effort to describe and explore the role vocational education should play in addressing these issues and reforming education, a select group of individuals will be working to reach consensus on those programs, activities and directions which are critical components of vocational education's contribution to educational reform. Thank you for agreeing to participate as a member of this panel; you will be joining other individuals nominated as being forward thinkers and influential in the formation of vocational education related policy.

The objective of this study is to reach consensus on programs, activities and directions for the future; therefore, a modified Delphi technique is being used. As we discussed during our phone call, you will receive two rounds in addition to the one enclosed with this letter. The second and third rounds will be built from the panel's responses to the previous instrument. Each instrument will ask you to agree or disagree with an item, indicate how certain you are about your agreement or disagreement, provide a short rationale, and give a short description of how you understand the item. In addition, you have the opportunity to add items which you feel are missing, and give your thoughts on future policy directions to achieve the substance of the items. For each round, you will have approximately one week to complete the form and return it in the enclosed mailer. If you prefer, you may fax your responses to my attention at 614-292-1260.

The enclosed instrument should be returned no later than March 25. Should this date pose a problem for you, please contact me immediately at 1-800-848-4815. All your responses will be held in confidence, and used only in the development of the successive instrument and the summary data.

I look forward to working with you on this project, and await your response to this first instrument. I realize I am asking a lot from people who have many demands on their time; please accept my thanks and the enclosed specialty tea to enjoy while you complete the instrument.

Sincerely,

Larae Watkins

Agricultural Education
Business and Office Education
Home Economics Education

Industrial Technology Education
Marketing Education
Trade and Industrial Education
THE CONTRIBUTIONS OF VOCATIONAL EDUCATION TO EDUCATIONAL REFORM

a National Delphi Study

ROUND 1

Please return by March 25
INTRODUCTION

This instrument contains two sections. Section 1 asks you to respond to a number of pre-developed items, and to give your reasoning for your response. Section 2 asks you to respond to two open-ended questions, the responses to which may become additional items for Section 1 in the next instrument. Remember, the overriding question is:

WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Section 1

Directions: As you consider each program, activity or direction given, please:

1. circle whether you agree or disagree with the item as a critical component of the contribution of vocational education to the reform of education (see example),

2. circle the number which best corresponds with how certain you are of your position (using the following descriptions, see example), and

<table>
<thead>
<tr>
<th>least certain</th>
<th>somewhat certain</th>
<th>certain</th>
<th>very certain</th>
<th>most certain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

3. give a brief statement of the reasoning behind your position, and

4. describe how you understand or define the item.

EXAMPLE

Program, activity or direction:

PROGRAMMED INSTRUCTION

<table>
<thead>
<tr>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td>1 2 3 4 5 least 4 most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?
- no room for individualization

How do you define this program, activity or direction?
- teacher-proof curriculum materials
Section 1

WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREPARATION OF STUDENTS FOR A PRODUCTIVE WORK LIFE</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENT OF STUDENTS' WORKPLACE KNOWLEDGE</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOCATIONAL EDUCATION AS ONE OF THE PRINCIPLE GOALS OF THE REFORMED EDUCATIONAL SYSTEM</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Disagree</td>
<td>least</td>
<td>most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOCATIONAL EDUCATION AS A SUBSET WITHIN THE EDUCATIONAL SYSTEM</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Disagree</td>
<td>least</td>
<td>most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTERNATIVE ASSESSMENT PROGRAMS</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHOOL CHOICE PROGRAMS (i.e., VOUCHERS)</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPRENTICESHIP PROGRAMS</strong></td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td>least most</td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENTREPRENEURSHIP EDUCATION PROGRAMS</strong></td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td>least most</td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTCOME-BASED INSTRUCTION</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVISING LOCAL GOVERNANCE STRUCTURES</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
**What Programs, Activities and Directions Are Critical Components of the Contribution of Vocational Education to the Reform of Education?**

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revising State Governance Structures</strong></td>
<td>Agree</td>
<td>1 2 3 4 5 most</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
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<tr>
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<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revising the Federal Governance Structure</strong></td>
<td>Agree</td>
<td>1 2 3 4 5 most</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
</tr>
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</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHY PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<tr>
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<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SITE-BASED MANAGEMENT PROGRAMS</td>
<td></td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the reasoning behind your position?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How do you define this program, activity or direction?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NATIONAL EDUCATION STANDARDS, AS CALLED FOR IN THE HIGH SKILLS OR LOW WAGES AND LEARNING A LIVING NATIONAL REPORTS</td>
<td></td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the reasoning behind your position?</td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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</tr>
</thead>
<tbody>
<tr>
<td>CAREER GUIDANCE PROGRAMS</td>
<td></td>
<td>Agree: 1 2 3 4 5</td>
</tr>
<tr>
<td>(Beginning at the primary grade level)</td>
<td>Disagree: least most</td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

---

<table>
<thead>
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<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREPARATION OF SPECIAL NEEDS STUDENTS (as defined in the Perkins Vocational and Applied Technology Education Act) FOR A PRODUCTIVE WORK LIFE</td>
<td></td>
<td>Agree: 1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Disagree: least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOCATIONAL EDUCATION AS A CONTENT AREA OF EDUCATION</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOINT PARTICIPATION OF VOCATIONAL EDUCATORS AND OTHER EDUCATORS IN DETERMINING THE DIRECTION OF REFORM</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTICULATION PROGRAMS</td>
<td></td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction:</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIFIC OCCUPATIONAL PREPARATION</td>
<td></td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td>Agree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
Section 2

Directions: Use the space provided to respond to the two questions. You need only provide listings or bulleted thoughts; complete sentences are not necessary.

**WHAT ARE ADDITIONAL PROGRAMS, ACTIVITIES OR DIRECTIONS THAT SHOULD BE INCLUDED FOR THE PANEL'S CONSIDERATION IN THE NEXT INSTRUMENT?**

<table>
<thead>
<tr>
<th>Program, activity or direction: (Your Concern)</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

- What is the reasoning behind your position?

- How do you define this program, activity or direction?

<table>
<thead>
<tr>
<th>Program, activity or direction: (Your Concern)</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

- What is the reasoning behind your position?

- How do you define this program, activity or direction?
**WHAT ARE ADDITIONAL PROGRAMS, ACTIVITIES OR DIRECTIONS THAT SHOULD BE INCLUDED FOR THE PANEL'S CONSIDERATION IN THE NEXT INSTRUMENT?**

<table>
<thead>
<tr>
<th>Program, activity or direction: (Your Concern)</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
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<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
WHAT ARE ADDITIONAL PROGRAMS, ACTIVITIES OR DIRECTIONS THAT SHOULD BE INCLUDED FOR THE PANEL'S CONSIDERATION IN THE NEXT INSTRUMENT?

<table>
<thead>
<tr>
<th>Program, activity or direction: (Your Concern)</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

<table>
<thead>
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<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agree</td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td></td>
</tr>
</tbody>
</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?
What directions must educational policy, including vocational education policy, take in order to achieve the substance of these items?

THANK YOU!

Look for Round 2 next week.
APPENDIX H

Round 2 Cover Letter and Instrument
March 31, 1993

1~

Dear 2~:

The first round brought even more ideas than I could have anticipated; the combined results of everyone's thinking are found in the enclosed Round 2. Round 2 is structured in the same fashion as Round 1; each instrument will ask you to agree or disagree with an item, indicate how certain you are about your agreement or disagreement, and provide comments in support of your position. However, in addition to the items, you have summary information from Round 1. This information includes the percentage of panelists who agree with the item, the percentage who disagree, and some representative comments from panelists. Please review the summary information from Round 1 as you respond in this round. Also included in Round 2 are additional items suggested by panel members in response to Round 1.

Several items received consensus in Round 1. These items and the consensus position are:

- Preparation of Students for a Productive Work Life - Agreement
- Development of Students' Workplace Knowledge - Agreement

These items are not included in Round 2.

As with Round 1, you may continue to add items which you feel are missing, and give your thoughts on future policy directions to achieve the substance of the items. Your responses will continue to be held in confidence, and used only in the development of the Round 3 instrument and the summary data.

Round 2 should be returned no later than April 9. Should this date pose a problem for you, please contact me immediately at 1-800-848-4815. When you complete the form, please return it in the enclosed mailer. If you prefer, you may fax your responses to my attention at 614-292-1260.

Thanks again for your ideas and your help. In the interest of equal time for coffee drinkers, please enjoy the enclosed coffee single while you complete the Round 2 instrument.

Sincerely,

Larae Watkins

---

Comprehensive Vocational Education

OHIO STATE UNIVERSITY

203 Agr. Admin. Bldg
2120 Fyffe Road
Columbus, OH 43210-1044
Phone 614-292-4024
FAX 614-292-7007

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Agricultural Education
Business and Office Education
Home Economics Education

Industrial Technology Education
Marketing Education
Trade and Industrial Education
THE CONTRIBUTIONS OF VOCATIONAL EDUCATION TO EDUCATIONAL REFORM

a National Delphi Study

ROUND 2

Please return by April 9
INTRODUCTION

This instrument contains three sections. Section 1 asks you to review the Round 1 responses, and to consider your current position using the same format as Round 1. Section 2 respond to additional items suggested by panel members in Round 1. Section 3 asks you to respond to two open-ended questions, the responses to which may become additional items for Section 1 in the next instrument. Remember, the overriding question is:

WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Sections 1 and 2

Directions: As you consider each program, activity or direction given, please:

1. circle whether you agree or disagree with the item as a critical component of the contribution of vocational education to the reform of education (see example),
2. circle the number which best corresponds with how certain you are of your position (using the following descriptions, see example), and
   least  somewhat certain very most
   certain certain certain certain
   1 2 3 4 5
3. give comments in support of your position.

EXAMPLE

Program, activity or direction:

PREPARATION OF STUDENTS FOR A PRODUCTIVE WORK LIFE

<table>
<thead>
<tr>
<th>ROUND 1 RESPONSES</th>
<th>YOUR RESPONSE FROM ROUND 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
<td>agree with 3 level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 82%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 18%</td>
<td></td>
</tr>
<tr>
<td>Comments From Round 1</td>
<td></td>
</tr>
<tr>
<td>&quot;this is the foundation of voc ed&quot;</td>
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<td>&quot;education should be more than just worklife prep; voc ed should recognize this + adapt&quot;</td>
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Section 1

WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

VOCATIONAL EDUCATION AS ONE OF THE PRINCIPLE GOALS OF THE REFORMED EDUCATIONAL SYSTEM

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Comments From Round 1

- "Voc Ed isn't a goal - it's a vehicle to get us to our goal"
- ". . . it is a means/approach rather than the end. The end or goal is preparation for a productive work life..."
- "connects majority of student to life"
- "knowledge of vocations, and the world of work should be an outcome of schooling. Schools should provide links with the world of work."
- "most reformationists would have rather ignored vocational education, but ultimately had to acknowledge something like it, it in fact, they didn't want to use the term."
- "While the statement reflects vocational educators' desire,...other educators and policy makers may not see it the same way. The goal of reform really is better student outcomes."
- "education ought to have both academic and employment goals"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

VOCATIONAL EDUCATION AS A SUBSET WITHIN THE EDUCATIONAL SYSTEM

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Comments From Round 1
- "It is an integral component of any comprehensive educational system".
- "vocational education should find expression (a) as supportive of general education (b) in a limited way, as work preparation."
- "Voc Ed is needed to have an Ed System. Voc Ed is element, contribution, to comp. educ."
- "options are the essential issue - not subsets"
- "Education must provide a series of options (or tracks for individuals and the economy. This must include the arts, sciences, social sciences, and the professional/technical track"
- "needs to be integrated into academic education"
- "need to go beyond the academic/voc edu argument"
- "For vocational education to play an important role in reform, it must be an equal partner in the educational system"
- "being a subset is one of the reasons voc ed has trouble today - it should be integral"

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

ALTERNATIVE ASSESSMENT PROGRAMS

ROUND 1 RESPONSES
Percentage of Panel Members Who:
Agree with the program, activity or direction - 85%
Disagree with the program, activity or direction - 15%

YOUR RESPONSE FROM ROUND 1
agree with level of certainty

Comments From Round 1
- "vocational education assessment is not accurately accomplished through standardized norm reference testing; alternative outcome based measures are needed."
- "students have varying learning styles and skill attainment levels"
- "portfolio assessment, demonstration or scenario assessment in addition to traditional cognitive means"
- "need to assess beyond what paper + pencil tests can measure"
- "...I think something other than traditional teacher grading is essential the answer is yes - absolutely"
- "doesn't sound like mainline voc ed."
- "I don't understand what this item has to do with voc.ed. or what is being referred to...I think all educ. progs. need alt. assessment programs for students + programs. I don't think voc. ed. has anything unique to offer in this area."
- "important for some students or programs, but not all"
- "vocational education has perhaps done more than any other educational endeavor to build educational experiences on valid student assessments"

ROUND 2
Your Current Position on this program, activity or direction:

Circle one: How certain are you of your position? (circle one)
Agree 1 2 3 4 5
Disagree least most

Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

SCHOOL CHOICE PROGRAMS (i.e., VOUCHERS)

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Comments From Round 1
- "We need equity among schools - competition won't solve our problems"
- "In some geographic areas school choice will provide options not otherwise available"
- "choice is a diversionary issue which if implemented may well lead to creaming"
- "will leave the have-nots behind. what we need are better schools all around."
- "concern for possible segregation by race, gender + equal opportunity"
- "public schools are a right of the people"
- "No - simply because of the word voucher -- however, the answer would have been the reverse if the question had been choice for students to select (within a structure) a choice of focus - ie professional/technical/science/arts - whatever"
- Voc. ed could be a major school choice for students. Consequently, vouchers + magnet Voc schools (career centers, JVSs) could become major alternatives for students at secondary + postsec. levels.

ROUND 2
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

APPRENTICESHIP PROGRAMS

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Comments From Round 1

- "This is an excellent way to provide workplace knowledge and transition from school to work"
- "If youth apprenticeship means giving students a chance to be in school and to learn on a job they will motivate many and give good skills"
- "Many of the principles + procedures that underlie apprenticeship programs are supported by new research in cognitive science. Thus, they are gaining recognition + are being implemented by academic educators to better provide for situated + contextual learning of abstract academic content"
- "Apprenticeships in various forms allow for applied learning - not a panacea. Not a way to curb youth unemployment as in Germany"
- "Work place learning + employer involvement"
- "Substantially more opportunities for learning need to occur - in an adult based setting - so students can learn 1st hand work ethics plus specific skills"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

ENTREPRENEURSHIP EDUCATION PROGRAMS

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Comments From Round 1
- "Entrepreneurship is essential workplace knowledge for small, independent business"
- "While vocational education can and does contribute to entrepreneurial education, that should not be its principle purpose. It should focus upon the masses and offer unique support to those who may be entrepreneurially inclined."
- "helpful to encourage start-up of businesses but not for many a real option"
- "Again, only one aspect or program alternative in quality voc. ed. Not essential to all education reform:
- "Learners need to understand what is required to be an entrepreneur - as one and/or what it takes to be one"
- "Our country will only survive if more people understand what makes the economy churn forward"
- "trendy"
- "an excellent option in current society"
- "Entrep. programs ultimately lead to the creation of new employment and thus they are important."

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

OUTCOME-BASED INSTRUCTION

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Comments From Round 1
- "Voc Ed must be outcome based - driven by standards of workplace. If it is not, the program is pointless."
- "Vocational education has always been performance driven. Other reform initiatives could learn from vocational education in this regard."
- "Focus on desired end, rather than process"
- "this program is broader than voc. ed. + its current importance is based on how it is being applied in academic programs. It is not a new program...It has been common in voc. ed. but not as common + not easy to implement in academic programs."
- "Cliche. Fad. Assumes education not to be purposive at it is. Not the case in vo-ed."
- "Voc ed has wealth of experience with this concept"
- "No clear definition of what is to be outcomes. Idea has merit but need to be defined clearly to merit my support"
- This should not be to the exclusion of some criteria commonly referred to as input based instruction -- but the instruction should be driven by clearly understood outputs:

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REVISING LOCAL GOVERNANCE STRUCTURES

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Comments From Round 1

- "while I believe there is a need to change the overall governance structure of education the focus would be placed at the wrong level to just say change local governance"
- "Schools belong to public. They need to have a say. (Some regions/state do need revision of local governance to eliminate politics in school decisions and policy making)"
- "Schools must begin to generate greater financial support at the local level"
- "More revision of 'thinking' rather than structure needed at this level."
- "Needs to be done to implement site-based mgmt. in educ."
- "important to instituting standards and working toward national goals"
- "a side issue"
- "Local governance must be the decision of the local taxpayer - community."
- "Certainly vocational education must be involved and is impacted upon by governance issues. If this includes the area of 'standards,' I would change my response to strongly agree."
- "...need regional, locally governed, locally tax supported voc ed school in all states"

ROUND 2
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REVISING STATE GOVERNANCE STRUCTURES

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Comments From Round 1
- "Voc Ed is buried in the bureaucracy now in most states"
- "This causes considerable tumult but does not necessarily cause change. Change comes from commitment + leadership"
- "Might be helpful but could just be moving furniture around"
- "This is a critical need in voc ed, because the traditional dominance of the SDVE must be broken to move more decision making to the local level. The State should become a service organ to local schools...a facilitator of local decisions NOT the major decision maker in voc. ed."
- "Too distant from main voc ed objectives"
- "The need to make education more closely allied with dept. of labor functions"
- "Need separate boards for Voc Ed"
- "The structure is there now in many states"
- "...more shifts in philosophy - e.g. being proactive about the efficacy of voced. Forging closer ties between programs and labor markets through information."

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REVISING THE FEDERAL GOVERNANCE STRUCTURE

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Comments From Round 1
- "We're not likely to change constitution - nor do I want to."
- "is a state responsibility by Fed Const. Fed Role is the issue"
- "need for a national workforce policy + a stronger U.S. Dept of Education"*
- "shift from focus on voc ed as social intervention... Be broader in orientation so as to give voed a more holistic image. Top down agenda setting should be reversed."
- "Need closer relations with Depts of Labor and Commerce"
- "While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."
- "States take their leads from the 'feds' particularly if the 'feds' leverage with money."
- "Labor and Education are at odds + need to come together but a governance change won't necessarily bring on the desired result."

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Program, activity or direction:

SITE-BASED MANAGEMENT PROGRAMS

ROUND 1 RESPONSES
Percentage of Panel Members Who:
Agree with the program, activity or direction - 85%
Disagree with the program, activity or direction - 15%

YOUR RESPONSE FROM ROUND 1
agree with level of certainty

Comments From Round 1
- "not opposed to site-based mgt - to the contrary - but to suggest it is a critical component just does not fly"
- "works best"
- "School building personnel need to be able to participate in the educational management of students + to affect policy + budget"
- "Allows for innovation - risk taking"
- "Because site based mgmt is more effective & it involves more of the concerned & effected parties in major decisions effecting the school."
- "As part of governance restructuring it can be important to reform"
- "whole trend of school reform is towards outcome-based ed. + then deregulation of structures - too often voc ed is too regulated"
- "Until the commitment + vision is created at the local level action will not occur"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

NATIONAL EDUCATION STANDARDS, AS CALLED FOR IN THE HIGH SKILLS OR LOW WAGES AND LEARNING A LIVING NATIONAL REPORTS

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Comments From Round 1
- "believe we must have standards to teach to - they must be industry driven"
- "Everything that SCANS calls for is inherently voc. ed."
- "Without standards there is not focus; standards give the direction + allow measurement of progress"
- "will be important as a measuring device to see if we are achieving goals and to see how we compare with other nations"
- "a way to avoid mediocrity."
- "Standards are crucial to all aspects of education."
- "Most such standards become too academic without appropriate flexibility"
- "The standards can be the focus of what 'needs to be' plus a way to mobilize and organize industry groupings to finally provide coherent definitions of what they need."
- "standards don't create people who meet them"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

CAREER GUIDANCE PROGRAMS
(Begining at the primary grade level)

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Comments From Round 1

- "Essential to career decision making"
- "Career decisions need a basis for support which is currently lacking. Students need information early to make quality decisions. National emphasis on this is needed"*
- "Of the few good pgms in country, voc ed is the initiator"
- "We must have guidance to help kids find direction"
- "Guidance has never received adequate support at any school level + I don’t see this changing in economically tight times"
- "I see career guidance as a post-secondary activity. Vocational immaturity of most children precludes it."
- "Students need good information and experience related to lifelong options for being a productive person."
- "This is not a voc. ed. responsibility but an institutional responsibility. However, not much has happened w/o voc. ed. money!"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

PREPARATION OF SPECIAL NEEDS STUDENTS (as defined in the Perkins Vocational and Applied Technology Education Act) FOR A PRODUCTIVE WORK LIFE

<table>
<thead>
<tr>
<th>ROUND 1 RESPONSES</th>
<th>YOUR RESPONSE FROM ROUND 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
<td>agree with level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 92%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 8%</td>
<td></td>
</tr>
</tbody>
</table>

Comments From Round 1
- "Important to targeted groups but not the driving force of school reform which is needed for the majority of students."
- "Voc ed has a disproportionately large number of such students and so can give lessons in how to help"
- "These kids need our help to get into the workplace"
- "Important, but not peculiar to voc ed. Voced becomes a convenient dumping ground - therapy - for students with other needs"
- "Reform efforts will have to include all students."
- "Voc Ed must contribute to helping all groups become employable"
- "For many individuals voc. ed. is the only hope for productivity & economic survival"
- "All our citizens must be productive"
- "simple sense of equity and because the 'at risk' population is approximately 25% of student population -- that is a lot."

<table>
<thead>
<tr>
<th>ROUND 2</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your Current Position on this program, activity or direction:</td>
<td>Agreement</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Agree</td>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

VOCATIONAL EDUCATION AS A CONTENT AREA OF EDUCATION

<table>
<thead>
<tr>
<th>ROUND 1 RESPONSES</th>
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<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
<td>agree with level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 82%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 18%</td>
<td></td>
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<tr>
<td>Comments From Round 1</td>
<td></td>
</tr>
<tr>
<td>- &quot;If market driven &amp; designed to accommodate market need, then it's content. If it's just 'another' subject for students to choose, then it's not content.&quot;</td>
<td></td>
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<tr>
<td>- &quot;Voc. Ed. must be substantial part of restructured curricula and refocused education.&quot;</td>
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<tr>
<td>- &quot;The current Clinton admin. &amp; many labor mkt. economists feel the U.S. needs to strengthen its possec V.E. system. At the high school level, V.E. will need to define a broader program distinct from adults &amp; postsec ed. if it is to survive let alone grow.&quot;</td>
<td></td>
</tr>
<tr>
<td>- &quot;Voc. Ed. is not content area but it's any content which related more to one job than to all of world of work&quot;</td>
<td></td>
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<tr>
<td>- &quot;There are specifics about V.E. It's not just a method.&quot;</td>
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<tr>
<td>- &quot;Essentially, the 79% of jobs that do not require a BA degree demand a content focus&quot;</td>
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</tbody>
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ROUND 2
Your Current Position on this program, activity or direction:

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

JOINT PARTICIPATION OF VOCATIONAL EDUCATORS AND OTHER EDUCATORS IN DETERMINING THE DIRECTION OF REFORM

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<tr>
<td>Percentage of Panel Members Who:</td>
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<tr>
<td>Agree with the program, activity or direction - 85%</td>
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<tr>
<td>Disagree with the program, activity or direction - 15%</td>
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</tbody>
</table>

Comments From Round 1
- "While I understand the angst and sense of 2nd class citizenship some voc ed folks have - how could anyone really argue against that everyone must be involved"
- "We need a comprehensive system of education that integrated purposes and outcomes rather than separates into parcels and areas"
- "Those involved contribute to decisions"
- "Coalition and cooperation is crucial to any reform success we have."
- "Voc ed cannot continue to exist at the margin of the educational mainstream. It must be proactive"
- "Voc ed must be viewed in the larger context of education. It is not only education for a tangible purpose, but a means of education for a high percentage of learners."
- "Voc ed is being ignored in school reform except for beginning discussions of Clinton’s youth apprenticeship proposal"
- "Voc. educators have never been called upon or highly involved in school reforms. In fact, V. E. rarely looks beyond its own programs to broader school goals + needs - it focuses inwardly; doesn’t need to act in collaboration with broader school reform + is rarely called upon to do so"

ROUND 2

Your Current Position on this program, activity or direction:

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<tr>
<td>Agree</td>
<td>1 2 3 4 5 least most</td>
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<td>Disagree</td>
<td></td>
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

ARTICULATION PROGRAMS

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<td>Agree with the program, activity or direction - 82%</td>
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<td>Disagree with the program, activity or direction - 18%</td>
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Comments From Round 1
- "Articulation only means a smooth transition - this is a given. There are not separate articulation programs - all should connect with something"
- "There should be a measure of curricular alignment between K-12 and postsecondary"
- "Tech-prep can show the way to real reform of high schools"
- "Need to eliminate duplication of programs + to expand skills of individuals in voc. programs"
- "Efficiency of learning and use of resources"
- "Career paths including foundation of occupational cluster requirements seem only too logical - one has to wonder why it is really only beginning to happen"
- "...it can help schools move toward more situated/contextual learning for all subjects + provide for multiple students intelligences."
- "Voc ed does not exist for & unto itself. It must be articulated both horizontally & vertically!"

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<td>Your Current Position on this program, activity or direction:</td>
<td>Agree</td>
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

SPECIFIC OCCUPATIONAL PREPARATION

### ROUND 1 RESPONSES

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<tr>
<td>Agree with the program, activity or direction - 62%</td>
<td>agree with level of certainty</td>
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<tr>
<td>Disagree with the program, activity or direction - 38%</td>
<td></td>
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</table>

Comments From Round 1

- "specific occupational training is very appropriate at some levels - but broader based occ. shells are needed at the foundation"
- "needed for some sec. students...should come at the end of general educ. + provide a transition from school-to-work"
- "only incidentally during k-12. Should be confined to post-secondary"
- "broader technical skills needed by workers today"
- "for some not all - there need to be viable options for all learners"
- "vocational ed in high schools has sometimes been too specific - need general skills today"
- "this is the one single characteristic that makes voc ed unique & different? People don't get jobs based upon 'principles of work,' 'occupational clusters,' or 'employment skills.' They get jobs as info specialists, plumbers, machinists and merchandising specialists."
- "But of course! The issue is when does the specific preparation trigger in. Again the patterns of the workplace should lead the decision - i.e. sec/crafts ed should begin at high school"

### ROUND 2

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<td>Agree</td>
<td>1 2 3 4 5 most</td>
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<tr>
<td>Disagree</td>
<td>least</td>
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Comments in support of your position:
**Section 2**

The following items were suggested by panel members in Round 1. In some cases, similar items were synthesized into the item presented here. The format for your responses is the same as in Round 1.

**WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?**

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<tbody>
<tr>
<td><strong>DROPOUT PREVENTION</strong></td>
<td></td>
<td>Agree: 1 2 3 4 5</td>
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<td></td>
<td></td>
<td>Disagree: least most</td>
</tr>
</tbody>
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Comments in support of your position:

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<tbody>
<tr>
<td><strong>SECONDARY/POSTSECONDARY DISTINCTION AND COORDINATION</strong></td>
<td></td>
<td>Agree: 1 2 3 4 5</td>
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<td></td>
<td></td>
<td>Disagree: least most</td>
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<tbody>
<tr>
<td>&quot;COMPREHENSIVE&quot; VOCATIONAL EDUCATION</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<td></td>
<td>Disagree</td>
<td>least  most</td>
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<tbody>
<tr>
<td>POSTSECONDARY VOCATIONAL EDUCATION AND THE EMPLOYMENT AND TRAINING SYSTEM</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td></td>
<td>Disagree</td>
<td>least  most</td>
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<tbody>
<tr>
<td>INCREASED ACADEMIC REQUIREMENTS/CREDENTIALS FOR VOCATIONAL TEACHERS</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least  most</td>
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Comments in support of your position:
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<tbody>
<tr>
<td>RE-THINK PROGRAM EVALUATION - USE PROACTIVE MEASURES</td>
<td>Agree</td>
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<td></td>
<td>Agree</td>
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<td></td>
<td>Disagree</td>
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<tbody>
<tr>
<td>FOCUS ON WORK RATHER THAN JOBS AT THE K - 12 LEVEL</td>
<td>Agree</td>
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<td></td>
<td>Agree</td>
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<td></td>
<td>Disagree</td>
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<tbody>
<tr>
<td>EMPLOYER AND UNION INVOLVEMENT</td>
<td>Agree</td>
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<td></td>
<td>Agree</td>
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<td></td>
<td>Disagree</td>
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<tbody>
<tr>
<td>REWARD AND INCENTIVE SYSTEM FOR TEACHERS AND ADMINISTRATORS</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<td></td>
<td>Disagree</td>
<td>least most</td>
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<tbody>
<tr>
<td>ALTERNATIVE TEACHER EDUCATION STRATEGIES</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td></td>
<td>Disagree</td>
<td>least most</td>
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<tbody>
<tr>
<td>INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td></td>
<td>Disagree</td>
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<tr>
<td>TECH PREP</td>
<td>How certain are you of your position? (circle one)</td>
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<tr>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td>CERTIFICATE OF INITIAL MASTERY</td>
<td>How certain are you of your position? (circle one)</td>
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<tr>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td>STATE-OF-ART FACILITIES</td>
<td>How certain are you of your position? (circle one)</td>
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<tr>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td>TEACHER INSERVICE</td>
<td>Agree</td>
<td>1 2 3 4 5 least most</td>
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<tr>
<td>RESEARCH</td>
<td>Agree</td>
<td>1 2 3 4 5 least most</td>
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<tr>
<td>COALITIONS</td>
<td>Agree</td>
<td>1 2 3 4 5 least most</td>
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<td></td>
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<tr>
<td>KNOWLEDGEABLE LEADERSHIP</td>
<td>Agree 1 2 3 4 5 least most</td>
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<td>Disagree</td>
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<tr>
<td>LOCAL, STATE AND FEDERAL FUNDING</td>
<td>Agree 1 2 3 4 5 least most</td>
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<tr>
<td>EXPERIENCE BASED LEARNING IN CONTEXT</td>
<td>Agree 1 2 3 4 5 least most</td>
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<td>Disagree</td>
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<tr>
<td>FOCUS ON LEARNERS - &quot;TALENT DEVELOPERS&quot;</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td>PURPOSE OF SCHOOL IS WORKPLACE ORIENTED</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td>SCHOOLING IS COMMUNITY-BASED</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
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<tr>
<td>LIFELONG LEARNING IS A PRIMARY GOAL OF EDUCATION</td>
<td>Agree</td>
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<td>ELIMINATION OF THE GENERAL EDUCATION TRACK</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td>least most</td>
</tr>
</tbody>
</table>

Comments in support of your position:
Section 3

Directions: Use the space provided to suggest additional items and to respond to the final question. You need only provide listings or bulleted thoughts; complete sentences are not necessary.

**WHAT ARE ADDITIONAL PROGRAMS, ACTIVITIES OR DIRECTIONS THAT SHOULD BE INCLUDED FOR THE PANEL’S CONSIDERATION IN THE NEXT INSTRUMENT?**

<table>
<thead>
<tr>
<th>Program, activity or direction: (Your Concern)</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
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</thead>
<tbody>
<tr>
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</table>

What is the reasoning behind your position?

How do you define this program, activity or direction?

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What is the reasoning behind your position?

How do you define this program, activity or direction?

THANK YOU!

Look for Round 3 next week.
APPENDIX I

Round 3 Cover Letter and Instrument
April 18, 1993

1~

Dear 2~:

Enclosed is the third and final round of this modified Delphi study; again the comments and ideas from Round 2 proved insightful. Round 3 combines the results of everyone’s thinking. Again, this instrument is structured in the same fashion as previous rounds. Summary information (percentages of agreement and disagreement, and representative comments) from Round 2 is included. Please review the summary information from Round 2 and consider moving into consensus with the group as you respond in Round 3. Additional new items suggested by panel members are included as in the last round. If you feel significant items are still missing, please provide them in Section 3. Your responses will continue to be held in confidence, and used only in the summary data for the study.

Many items received consensus in Round 2 and are therefore not included in Round 3. These items and the consensus position are:

- Apprenticeship programs - Agreement
- Entrepreneurship education programs - Agreement
- Preparation of special needs students (as defined in the Perkins Vocational and Applied Technology Education Act) for a productive work life - Agreement
- Joint participation of vocational educators and other educators in determining the direction of reform - Agreement
- Articulation programs - Agreement
- Postsecondary vocational education and the employment and training system - Agreement
- Alternative teacher education strategies - Agreement
- Teacher inservice - Agreement
- Knowledgeable leadership - Agreement
- Focus on learners - "talent developers" - Agreement
- Schooling is community-based - Agreement
- Lifelong learning is a primary goal of education - Agreement
- Elimination of the general education track - Agreement
In addition to the study items, I would like to have your comments and reflections on the Delphi process. The Delphi technique is finding wider application in educational fields, and your thoughts on this experience may help strengthen the use of this technique in the future.

Round 3 should be returned no later than **April 29** in the enclosed mailer. Should this date pose a problem for you, please contact me immediately at 1-800-848-4815. If you prefer, you may fax your responses to my attention at 614-292-1260.

Thanks again for your ideas and your help. If you would like a copy of the final summary of this study, please note this on the final page of Round 3 or enclose your business card. I do appreciate your participation in this study, and recognize the great amount of time and ink you have invested in the three rounds. The enclosed pen is sent in thanks, and in partial replacement of the ink you have sent me during the last six weeks.

Sincerely,

Larae Watkins
THE CONTRIBUTIONS OF VOCATIONAL EDUCATION TO EDUCATIONAL REFORM

a National Delphi Study

ROUND 3

Please return by April 29
INTRODUCTION

This instrument contains four sections. Section 1 asks you to review the Round 2 responses, and to consider your current position using the same format as Round 2. Section 2 respond to additional items suggested by panel members in Round 2. Section 3 gives you one final opportunity to add new items. Section 4 asks for your comments on the Delphi process. Remember, the overriding question is:

WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Sections 1 and 2

Directions: As you consider each program, activity or direction given, please:

1. circle whether you agree or disagree with the item as a critical component of the contribution of vocational education to the reform of education (see example).
2. circle the number which best corresponds with how certain you are of your position (using the following descriptions, see example), and
   least           somewhat            certain
   certain          certain            very            certain
   1                2                   3                4                   5
3. give comments in support of your position.

EXAMPLE

Program, activity or direction:
PREPARATION OF STUDENTS FOR A PRODUCTIVE WORK LIFE

<table>
<thead>
<tr>
<th>ROUND 2 RESPONSES</th>
<th>YOUR RESPONSE FROM ROUND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
<td>agree with 4 level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 82%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 18%</td>
<td></td>
</tr>
<tr>
<td>Comments From Round 2</td>
<td></td>
</tr>
<tr>
<td>- &quot;this is the foundation of voc ed&quot;</td>
<td></td>
</tr>
<tr>
<td>- &quot;education should be more than just workforce prep; voc ed should recognize this + adapt&quot;</td>
<td></td>
</tr>
</tbody>
</table>

ROUND 3

Your Current Position
on this program, activity or direction

<table>
<thead>
<tr>
<th>Circle one:</th>
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<tr>
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Comments in support of your position:

This is the Holy Ed
Section 1

WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

VOCATIONAL EDUCATION AS ONE OF THE PRINCIPLE GOALS OF THE REFORMED EDUCATIONAL SYSTEM

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<thead>
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<tbody>
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<td>Percentage of Panel Members Who:</td>
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<tr>
<td>Agree with the program, activity or direction - 73%</td>
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<td>Disagree with the program, activity or direction - 27%</td>
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</tr>
</tbody>
</table>

Comments From Round 2

- "agree very strongly that voc ed is a principle player in restructured education. True -- voc ed's goals are the same goals that should be included in a restructured school -- hence it is a vehicle to get students to intended outcomes."
- "...of course those who noted voc ed per se is not a goal are correct - student outcomes articulated by some reference to what students need to know as it relates to being prepared for the world of work should be the goal indeed a principle goal of educ reform"
- "voc ed isn't the goal, prep for work is. Voc ed. only focuses on less than baccalaureate-level work, schools focus on all of work, including professional-level work. Voc ed. certainly is NOT a major focus of school reforms - now or in the past; it has never been a major goal of reformers + never will be. Prep. for work life is the key + the goal + voc ed is ONE approach for some students."
- "The presence or absence of Voc Ed can be goal of reform and I believe it must be present in all education for reform to be effective."
- "The education system will be reformed only if it makes as its goal the inclusion of vocational education courses for all students regardless of their career goal."

| ROUND 3 |  |
|---------| |
| Your Current Position on this program, activity or direction: | |
| Circle one: | How certain are you of your position? (circle one) |
| Agree | 1 2 3 4 5 | least most |
| Disagree | |

Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

VOCATIONAL EDUCATION AS A SUBSET WITHIN THE EDUCATIONAL SYSTEM

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Comments From Round 2
- "Educ can't be comprehensive w/out voc ed. (goals)"
- "'subset' probably means different things to different panelists. However, the statement is very true. VE does not meet all goals of education but is does focus on several that are not present without voc ed. It must be integral -- not separate from other ed. Its purposes -- goals -- are an important part of restructured education."
- "contextualized learning is important for all students, work experience and career exposures are important for all -- so voc ed should not be a subset, only in sense that some students may go for further education and some may want job training"
- "voc. ed. is a component of the educ. system + of the employment & trng. system. To remain in the educ. system it must contribute to broad educ. objectives & goals & address specialized goals as well. Voc. ed. is becoming a special ed. program aimed at meeting needs of special populations & allowing academic ed. to continue to be an elitist program for a selected few."
- "Yes. As long as we are clear about what 'sub-set' means. What else are the other sub-sets? Voed has a general education aspect, then it has a job-specific one, the latter role increasing as one leaves the 12th grade."

ROUND 3
Your Current Position on this program, activity or direction:

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Comments in support of your position:
**What programs, activities and directions are critical components of the contribution of vocational education to the reform of education?**

Program, activity or direction:

**ALTERNATIVE ASSESSMENT PROGRAMS**

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Comments From Round 2
- "...Voed has so many different looks to it...that we **must** have a multi-faceted approach to assessment"
- "need to assess beyond what paper + pencil tests measure. Variety of assessment procedures are needed."
- "It is correct to note that voc ed has made substantial contributions to build into the assessment of students education experiences on valid student assessments...If it means only voc ed should have alternative forms of assessment the answer is no -- it means we should have support for more alternative forms of assessment for all students the answer is yes."
- "What do you know and what can you do' -- are very important to school reform. **Good** voc ed assessment has always measured outcomes. This is what reformed education must measure"
- "Voc. Ed. is the forerunner...and can contribute much to an alternative assessment system for all education"

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

**SCHOOL CHOICE PROGRAMS (i.e., VOUCHERS)**

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Comments From Round 2
- "We need equity among schools - competition won't solve our problems"
- "choice is a diversionary issue which if implemented may well lead to creaming"
- "will leave the have-nots behind. what we need are better schools all around."
- "concern for possible segregation by race, gender + equal opportunity"
- "public schools are a right of the people"
- "No - simply because of the word voucher -- however, the answer would have been the reverse if the question had been choice for students to select (within a structure) a choice of focus - ie professional/technical/science/arts - whatever"
- "vouchers or similar programs can do harm to public education"
- "Vouchers are not a way to get schools reformed effectively"
- "Choice is not the answer (nor the problem!)
- "Public schools are consistent with our democratic form of governance and need to provide for all students."

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**ROUND 3**

Your Current Position on this program, activity or direction:

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Comments in support of your position:
## Round 2 Responses

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Comments From Round 2

- "OBE would be acceptable if outcomes were broadly based. Believe most still think of in terms of specific job skills and I don't find that acceptable. May need a clear definition."
- "The input criterion needs to remain (perhaps with a fresh look) but not to have outcomes driven by needs of the workplace - makes the program pointless."
- "Voc ed is outcome based -- all of education should be."
- "An absolute must. It has proven its merit over the years."
- "Separately learning to know from learning to do is not the best approach. Doing and knowing is demonstrated through OBE instruction."
- "Outcome-based instruction is easier to implement in voc. ed. than academic areas because most voc. ed. is training (not educ.) & outcome-based instruction needs to be instruction that is aimed at relatively short-term, clearly defined objectives like those associated with training."

## Round 3

**Your Current Position on this program, activity or direction:**

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REVISING LOCAL GOVERNANCE STRUCTURES

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<tr>
<td>Agree with the program, activity or direction - 50%</td>
<td></td>
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<tr>
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</table>

Comments From Round 2
- "need to expand authority of adv. councils - need real life inputs on world of work."
- "Change is inevitable...If local school district revises its local governance structure, vocational education must be an integral part of that restructuring."
- "don't see how revision of governance structure will make any difference in reform."
- "Governance is not the issue...The real issue is connecting education with the next step in a students life -- changing day to day instruction. You can change governance a thousand ways and not effect teaching -- that's where the real issue should be focussed."
- "The more interesting question is to think through what the impact will be on local governance systems when there are 'outcome standards' developed by industry."
- "Revising local voc. ed governance structures to more toward site-based mgmt. is important."
- "Schools belong to public. They need to have a say"

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REVISING STATE GOVERNANCE STRUCTURES

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<tr>
<td>Disagree with the program, activity or direction - 40%</td>
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Comments From Round 2

- "If we come up with an agreed on purpose of education that puts workplace education as an important outcome, local restructuring will also require revising state governance structures"
- "This is a critical need in voc. ed. because the traditional dominance of the SDVE must be broken to move more decision making to the local level. The State should become a service organ to local schools...a facilitator of local decisions NOT the major decision maker in voc. ed."
- "The comments from Round 1 reflect a lack of a common vision regarding what are the essential functions that can most effectively be prepared at this level of government - as well as the local level by the way - perhaps what is needed is a process to try + gain agreement about what functions can best be carried out by each level of government"
- "This is the same as local governance issue -- it is just 'moving furniture around'"
- "Same comment applies to state governance...Vocational education needs to work more closely and in tandem with Depts of Labor + Commerce"

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REVISITING THE FEDERAL GOVERNANCE STRUCTURE

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<tr>
<td>Agree with the program, activity or direction - 45%</td>
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<tr>
<td>Disagree with the program, activity or direction - 55%</td>
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</table>

Comments From Round 2
- "Dept of Labor + Ed need to be in a partnership to insure connected programs + more efficient use of dollars"
- "is a state responsibility by Fed Const. Fed Role is the issue"
- "Federal governance, via its various departments should work more closely together, not necessarily by restructuring but by philosophy and policy"
- "We don't need structure revision. We do need a policy on job education."
- "We need national policy"
- "Revising governance structure for what purpose?"
- "While changing the structure on the state & local level can be critical, since education is primarily a state responsibility, I don't see as important a role for restructuring the federal level governance system. Reforms can take place without it."
- "What needs to be changed at the Federal level is the 'philosophy' of voed. The current Perkins for example, conceives of voed as social rather than educational policy."
- "Labor and Education are at odds + need to come together but a governance change won't necessarily bring on the desired result."

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

**SITE-BASED MANAGEMENT PROGRAMS**

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Comments From Round 2

- "School building personnel need to be able to participate in the educational management of students + to affect policy + budget"
- "Because site based mgmt is more effective & it involves more of the concerned & effected parties in major decisions effecting the school."
- "Not opposed but still need to be convinced this is a unique contribution of voc ed to the reform of ed in general"
- "If we don't move many decisions to the 'front line' -- the teachers, principals, building level - we will not ever reform schools"
- "Voc. Ed can contribute greatly to directly involving local, small businesses as well as larger businesses in apprenticeship-type training when site management programs are implemented"
- "Empowerment of front line work force is critical for quality processes"

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

NATIONAL EDUCATION STANDARDS, AS CALLED FOR IN THE HIGH SKILLS OR LOW WAGES AND LEARNING A LIVING NATIONAL REPORTS

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Comments From Round 2
- "To be competitive in the global ed. market - must set world class standards and require schools to teach to them"
- "A must if mobility of students to where jobs exist is deemed an important goal of vocational education"
- "one of the most crucial aspects of voc. educ. reform today"
- "If we cannot identify standards we have no specific outcomes to strive for. National standards are essential."
- "There must be a baseline"
- "nat'l stds can play an important function in reform but they aren't peculiar to voc. ed; nor should they be."
- "Standards are a responsibility of the state"

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

CAREER GUIDANCE PROGRAMS
(Beginning at the primary grade level)

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Comments From Round 2
- "Guidance is essential in developing school to work transition programs. Students must become aware of options early to develop a 4 year plan to be adequately prepared"
- "Career decisions ought to be postponed. For one thing, schools do not have good information about labor markets. For another, jobs and careers have become moving targets"
- "Essential to career decision making"
- "Students need good information and experience related to lifelong options for being a productive person."
- "Guidance has never received adequate support at any school level + I don't see this changing in economically tight times"
- "Agree...several institutions have some part of the action - eg Employment Services - lack of assigning responsibilities to assure kids get info may be part of the problem."
- "Essential. It's a critical component to the reform of education"
- "The earlier students learn about careers, character building, skill building and the work ethic, the greater their chances for understanding the contributions of all education, including vocational education in their decision-making"
- "This is not a voc. ed. responsibility but an institutional responsibility. However, not much has happened w/o voc. ed. money!"
- "students must be prepared to make a significant program choice at 16 or at the end of the Cert. of Initial Mastery, therefore career ed is required from K - 12"

**ROUND 3**
Your Current Position on this program, activity or direction:

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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

VOCATIONAL EDUCATION AS A CONTENT AREA OF EDUCATION

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Comments From Round 2
- "Integrated contextual area...Vocational Ed. will look differently"
- "Voc. Ed. is comprised of many content areas just as, for example, "Language" is comprised of English, French, German, Spanish etc."
- "not really content as I see it! It applies content from many areas."
- "Yes...But, we should get away from the notion of distinct differences - Ag, Home Ec, Business, etc. These are all clusters where students specialize their skills and knowledge in the context of the bigger whole of education - AVA has missed that distinction. We need strong foundations in Math Science, Communications + technology which are further developed through concentrated study in a content area - content areas though don't stand alone"
- "The current Clinton admin. & many labor mkt. economists feel the U.S. needs to strengthen its postsec V.E. system. At the high school level, V.E. will need to define a broader program distinct from adults & postsec ed. if it is to survive let alone grow."
- "There are specifics about V. E. It's not just a method."
- "Yes. But we have to agree on what we mean by vo ed."

ROUND 3
Your Current Position
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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

**SPECIFIC OCCUPATIONAL PREPARATION**

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Comments From Round 2

- "not in which school"
- "for some not all - there need to be viable options for all learners"
- specific occupational training is very appropriate at some levels - but broader based occ. shells are needed at the foundation"
- "needed for some sec. students...should come at the end of general educ. + provide a transition from school-to-work"
- "only incidentally during k-12. Should be confined to post-secondary"
- "broader technical skills needed by workers today"
- "Agree - the question is when specialization begins. Broad foundations are imperative."
- "This is needed at post secondary level but not at lower grades"
- "While broad-based occupational education is necessary, specific occupational preparation at the high school level is expected by employers in some vocational preparation areas"
- "for those going to work job readiness is a voc ed responsibility (still largest group)"
- "Particularly critical to join JTPA and CC to secondary initiatives to have better articulated programs"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

**DROUGHT PREVENTION**

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Comments From Round 2
- "voc ed contributes to the prevention by providing relevancy and early experience of success"
- "Voc ed is an excellent deterrent to dropouts -- must begin early enough to catch potential dropouts."
- "While I disagree dropout prevention is a critical component of voc ed, I believe voc ed does reduce dropouts."
- "gives kids motivation to stay in school"
- "If viewed as an opportunity to show what the applied learning opportunities can do to help a larger group of students"
- "This is one of the most important & unique potential contributions of sec. level voc. ed. As a goal, it helps to establish the place of voc ed in the schools - Can't be ignored"
- "We need to make lifelong learners of all who enroll in our schools"
- "Dropout problems usually have societal roots. Curricular solutions mask the problem"
- "Early career goal identification + plan of study would prevent heroic dropout programs being necessary"

**ROUND 3**
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

SECONDARY/POSTSECONDARY DISTINCTION AND COORDINATION

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Comments From Round 2
- "using competency based instruction allows for improved articulation making this distinction unnecessary"
- "same as articulation"
- "We need educational programs for all learners, the distinction is unimportant"
- "These 2 levels of programs must become distinct with distinctly different goals + objectives. The can't have one set of goals + objectives for all levels of programs -- secondary through adult. Moreover, voc. ed. needs to start earlier (in middle schools) + be related to subsequent levels of the program. Sec. level voc. ed. should be education (not trng) + be broad-based for all students; posisec prosgs. should be training + specialized prep. for immediate employment."
- "too artificial. Would prefer to say the direction/critical components need to be to develop agreement regarding what the general base of knowledge needs to be before individuals move into occupational preparation phase of ed/then by occupation clusters and in concert with the employer community develop the consensus on the graduated levels of knowledge required to move from entry to specialist"
- "not sure what this means;" "don't understand"
- "Link between grades 11 + 12 & 13 + 14 is vital"
- "Coordination + articulation contribute to the reform. However, the secondary postsecondary distinction is not new"

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Comments in support of your position:
**WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?**

Program, activity or direction:

**"COMPREHENSIVE" VOCATIONAL EDUCATION**

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Comments From Round 2

- "need to define is comprehensive an array of options or some inclusive, broad opening for all or most"
- "unsure what panel member intended by inclusion of this element since comprehensive vocational existed (+ still exists) before the reform of education movement" 
- "what does 'comprehensive' mean that voc ed does not...If this means 'generic' voc ed -- the answer is NO"
- "need to drop 5 traditional service areas as secondary school level + offer a 'comprehensive' voc. ed. experience focused on: (a) the study of work in society, (b) study of work as careers, & (c) study of specialized skills + knowledge for work. Focus on 3 distinct goals + focus on work not jobs. Draw more heavily on community + workplace resources than now through apprenticeship + coop experiences."
- "Topic needs to be defined before I feel comfortable in responding"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

INCREASED ACADEMIC REQUIREMENTS/CREDENTIALS FOR VOCATIONAL TEACHERS

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Comments From Round 2
- "we need to focus on maintaining existing programs"
- "vo ed teachers need to be on par with mainstream teachers. This area of reform is as important as any"
- "All teachers need to be academically competent. They also need to have occupational competence."
- "this is only really a concern for T & I teachers @ secondary school level"
- "Not convinced that academic credentials are the real issue"
- "modern technology demands this"
- "It is essential that staff be reviewed on an ongoing basis -- all teachers, not only vocational teachers, in concert with national professional standards being established"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE
CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

RE-THINK PROGRAM EVALUATION - USE PROACTIVE MEASURES

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Comments From Round 2
- "what are proactive measures? What does it mean to rethink program evaluation?"
- "This is what Perkins II requires"
- "not sure what is meant by this nor at which level of evaluation is of concern. different audiences need different types of evaluation information"
- "Don't think it is very influential on change. Don't know how it's any different from the concern for outcome-based instruction"
- "Follow-up studies are probably not the best way to provide data if program responsiveness is the goal. Other methods need to be found."
- "more immediate evaluations + benchmarking is needed"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

FOCUS ON WORK RATHER THAN JOBS AT THE K - 12 LEVEL

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Comments From Round 2
- "we need to promote the work/school connection earlier than currently being done"
- "Some need jobs focus before grade 13"
- "Preparation for work is general ed.; all students need it; sequence/program should move from general to specialized, from earlier grades to later grades"
- "Too artificial...if one were to say ist focus on gaining agreement about common body of knowledge required prior to developing choices for occupation focus then would agree"
- "general work skills + exposure + not specific job training"
- "This sounds like generic voc ed -- while I tend to agree we must keep all work related education connected to industry. If this implies something else, we will never reform schools -- need standards"
- "Employability is even better concept"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

EMPLOYER AND UNION INVOLVEMENT

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Comments From Round 2
- "Hopefully, a greater understanding of this area by students occurs through work-site training and preparation"
- "not really needed for reform"
- "Totally agree. But all employees are not unionized. Suggest you include labor + management. This may or may not involve unions."
- "I see some employer involvement in voc ed but not uniformly, little union involvement."
- "The question is involvement in what - work site learning for credit? curriculum development and approval? assessment of skill + knowledge? what?"
- "Does this refer to business-industry collaboration? If so, I don't see it as critically important to reform"
- "It's a part of public being involved"
- "Especially in school to work transition programs"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

REWARD AND INCENTIVE SYSTEM FOR TEACHERS AND ADMINISTRATORS

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Comments From Round 2

- "on what basis?"
- "A means to attract quality people and elevate profession"
- "Don't think this has ever amounted to much of an influence on/for change"
- "I don't see much of this"
- "Depends on what the system is. I agree to performance rewards + merit pay. This has a lot of variables."
- "This has always been important for morale and advancement."
- "Through increased percentage of successful program completers being employed or going on to higher education"

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Program, activity or direction:

INTEGRATION OF VOCATIONAL AND ACADEMIC EDUCATION

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Comments From Round 2
- "Provides new approaches to thinking about education by voce and academic subject teachers"
- "necessary for effectiveness of teaching and for competent craftsman"
- "This is the greatest issue for voc ed in school reform initiatives. No one seems to agree on what integration means."
- "a great strength if done properly"
- "Since I prefer to move to the Certificate of Initial Mastery approach - thereby making this idea perhaps obsolete, my position is weak. However, my friends have convinced me we need to improve all forms of instruction | curriculum and this is a good way to push forward"
- "I think this refers to the sam thing as articulation -- e.d. horizontal integration = integration' vertical integration = articulation"
- "We need a single system which shares common purposes."
- "This is conceptually weak. Assumes that voed does not already possess 'academic' attributes."
- "A must to prepare our students for global competition"

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Program, activity or direction:

TECH PREP

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Comments From Round 2

- "fad"
- "a means to a more comprehensive system"
- "an alternative voc. program option that should move voc. ed. toward more broad-based, generalizable preparation for work"
- "This was a good way to generate a new funding stream that would force folks to com together to create an articulation process and give attention to the non BA world - but there is a danger of trying to make it more than it is."
- "Best thing going in school reform! Let's make sure 'Tech Prep' does not become another idea that failed. States should set standards to assure rigor, integration etc."
- "Program whose time has come! A cutting edge development"
- "Provides great opportunity for educators to plan and work together at secondary and postsecondary levels"

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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

CERTIFICATE OF INITIAL MASTERY

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<td>Percentage of Panel Members Who:</td>
<td>agree with level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 90%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 10%</td>
<td></td>
</tr>
</tbody>
</table>

Comments From Round 2
- "This has always been an area of crucial for voc. education."
- "This is a good idea but scares a lot of people. It will be very difficult to break the American dream of a high school diploma at age 18 after 12 years of school."
- "Competency certificates in voc. ed. provide good experimentation for c. of i. m."
- "If it is possible to develop agreement on what people need to know at the basic level - then options/choices etc can then open up for all students"
- "Related to school choice/vouchers, voc. ed. can be viewed as an alternative instructional approach to achieve initial mastery of basic skills for students who have difficulty with academic instruction. The broad objective of initial mastery of fundamental skills remains the same for all students, but the instructional approach to achieve mastery can vary for different learners."
- "Tends to imply single focused, job preparation as the goal"

<table>
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<th>ROUND 3</th>
<th>Circle one:</th>
<th>How certain are you of your position? (circle one)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your Current Position on this program, activity or direction:</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
</tr>
</tbody>
</table>

Comments in support of your position:
**STATE-OF-ART FACILITIES**

<table>
<thead>
<tr>
<th>Round 2 RESPONSES</th>
<th>YOUR RESPONSE FROM Round 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
<td>agree with level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 60%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 40%</td>
<td></td>
</tr>
</tbody>
</table>

**Comments From Round 2**
- "what does this solve?"
- "or at least access to workplace facilities of high quality"
- "don't think it's critical"
- "It's hard to be opposed to good facilities, but isn't it more important to ask the question where can the student be exposed to the state of art equipment + then arrange for a portion of the education to occur in those facilities -- many of which will be the workplace"
- "Very important"
- "makes for effective teaching and learning and high morale"
- "given the cost to maintain ever-changing equipment and facilities, not all of voc ed contributes this to educational reform"

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<tr>
<td>Your Current Position on this program, activity or direction:</td>
<td></td>
</tr>
<tr>
<td>Agreement</td>
<td>1 2 3 4 5 least most</td>
</tr>
<tr>
<td>Disagreement</td>
<td></td>
</tr>
</tbody>
</table>

Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

RESEARCH

<table>
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<td>Disagree with the program, activity or direction - 10%</td>
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Comments From Round 2
- "ongoing contribution through voc. ed."
- "The base for all our decisions"
- "We need relevant research than can be applied. too much of what's going on is related to the 'publish or perish' requirement of Higher Ed faculty – the application, transfer of knowledge is not here"
- "More is always needed but the question is how to focus on what needs and audiences"
- "Is necessary for progress to occur. Must be strengthened + funded at higher levels to make any real difference"
- "We need to know what changes are occurring plus related data"
- "We don't know enough about many facets of vocationalism -- e.g. the sociology, psychology of work."

ROUND 3
Your Current Position on this program, activity or direction:

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<th>Circle one:</th>
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

COALITIONS

<table>
<thead>
<tr>
<th>Round 2 RESPONSES</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
<td>agree with level of certainty</td>
</tr>
<tr>
<td>Agree with the program, activity or direction - 100%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - %</td>
<td></td>
</tr>
</tbody>
</table>

Comments From Round 2
- "Reform + restructure need to involve the broad range of constituents. We need their assistance."
- "Too broad, don't know what is meant"
- "Too vague to be of value"
- "Some good employer-school coalitions in voc ed"
- "Its hard to disagree with this. But more explanation needed -- who are the coalition partners"
- "Our best chance to be efficient and effective"
- "Voc ed can point the way based on its successful past in this area, including community based organizations and agencies as well as with business and labor"
- "With whom for what purpose"

ROUND 3
Your Current Position on this program, activity or direction:

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<td>Disagree</td>
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

LOCAL, STATE AND FEDERAL FUNDING

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<tbody>
<tr>
<td>Percentage of Panel Members Who:</td>
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</tr>
<tr>
<td>Agree with the program, activity or direction - 73%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 27%</td>
<td></td>
</tr>
</tbody>
</table>

Comments From Round 2
- "It's a given we must have support for any reform to take place"
- "Of course"
- "Voc ed is underfunded"
- "There will never be enough plus given the clear variations in systems are funded what will be gained by trying to seek one best model?"
- "We're in this together"
- "Already exists"

ROUND 3
Your Current Position on this program, activity or direction:

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<tr>
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<td>1 2 3 4 5 least most</td>
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<tr>
<td>Disagree</td>
<td></td>
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

EXPERIENCE BASED LEARNING IN CONTEXT

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</tr>
<tr>
<td>Disagree with the program, activity or direction - %</td>
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Comments From Round 2
- "Ambiguous. Isn't that the very essence of voc ed?"
- "It fits the philosophy of the pragmatists + aligns with the cognitive scientists"
- "Cognitive science results show the merits of contextual + situated ing. + provide much theoretical support for what voc. ed. has been doing. It also supports apprenticeship + coop program approaches, student voc. organization, + workplace learning of all types."
- "How is 'in context' different than experience based?"
- "when done correctly"
- "Isn't this what voc ed is?"
- "Voc Ed has to its credit a history of experience based learning in context"

ROUND 3
Your Current Position on this program, activity or direction:

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<tr>
<td>Agree</td>
<td>1 2 3 4 5 least most Disagree</td>
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Comments in support of your position:
WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

Program, activity or direction:

PURPOSE OF SCHOOL IS WORKPLACE ORIENTED

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</tr>
<tr>
<td>Agree with the program, activity or direction - 80%</td>
<td></td>
</tr>
<tr>
<td>Disagree with the program, activity or direction - 20%</td>
<td></td>
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</table>

Comments From Round 2
- "Yes but let's be broader about it — is that the purpose of school or a focus of education?"
- "One of the purposes of schooling is to help students understand what is required to be a productive citizen"
- One (1) purpose of school (K - 12) is workplace preparation. The primary purpose of Sch. + voc. ed. at postsec level may be workplace prep."
- "Students are in process of moving into the workplace."
- "Narrow view of schooling"
- "All students will eventually work - the variables is the amount of education."

ROUND 3
Your Current Position on this program, activity or direction:

Circle one: How certain are you of your position? (circle one)

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
least | most     |

Comments in support of your position:
Section 2

The following items were suggested by panel members in Round 2. In some cases, similar items were synthesized into the item presented here. The format for your responses is the same as in Round 2.

**WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?**

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<tr>
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<th>How certain are you of your position? (circle one)</th>
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<tbody>
<tr>
<td><strong>CITIZEN/COMMUNITY ADVISORY COMMITTEES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;a must for programs to be relevant, up-to-date and tied to the work world...3-12 people who advise with respect to the educ. programs;&quot; &quot;schools are isolated&quot;</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
</tr>
<tr>
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<tbody>
<tr>
<td><strong>TECHNOLOGY EDUCATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Technology Ed. as a systems educational program...for all students K - 12&quot;</td>
<td>Agree</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>least</td>
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WHAT PROGRAMS, ACTIVITIES AND DIRECTIONS ARE CRITICAL COMPONENTS OF THE CONTRIBUTION OF VOCATIONAL EDUCATION TO THE REFORM OF EDUCATION?

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<th>How certain are you of your position? (circle one)</th>
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</thead>
<tbody>
<tr>
<td>SYSTEMIC CHANGE</td>
<td></td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>&quot;Systemic change in academic and voc. ed is critical&quot;</td>
<td>Agree</td>
<td>least</td>
</tr>
<tr>
<td></td>
<td>Disagree</td>
<td>most</td>
</tr>
</tbody>
</table>

Comments in support of your position:

Program, activity or direction:

VALUE OF VOCATIONAL TRAINING

"Cannot move forward without a cultural value in place"

|                                | Circle one: | How certain are you of your position? (circle one) |
|                                |             | 1 2 3 4 5                                    |
|                                | Agree       | least                                       |
|                                | Disagree    | most                                        |

Comments in support of your position:
**Program, activity or direction:**

**PRE-SERVICE PREPARATION OF EDUCATORS**

"Changing college and university teacher education programs..." "Before there can be reform, there must be pre-service as well as inservice preparation of future teachers and administrators in techniques of integration, standard setting, varied forms of assessment, tech-prep, competency and outcome based education and site based management"

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</tr>
<tr>
<td>Disagree</td>
<td>least most</td>
</tr>
</tbody>
</table>

Comments in support of your position:

---

**Program, activity or direction:**

**IMPLEMENT WAIVER PROGRAMS AT ALL LEVELS**

"School reform is stifled because of existing rules and policies that restrict piloting of new ideas"

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<td>Disagree</td>
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</table>

Comments in support of your position:
Section 3

Directions: Use the space provided to suggest additional items and to respond to the final question. You need only provide listings or bulleted thoughts; complete sentences are not necessary.

WHAT ARE ADDITIONAL PROGRAMS, ACTIVITIES OR DIRECTIONS THAT SHOULD BE INCLUDED FOR THE PANEL'S CONSIDERATION IN THE NEXT INSTRUMENT?

<table>
<thead>
<tr>
<th>Program, activity or direction: (Your Concern)</th>
<th>Circle one:</th>
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</thead>
<tbody>
<tr>
<td></td>
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What is the reasoning behind your position?

How do you define this program, activity or direction?

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What is the reasoning behind your position?

How do you define this program, activity or direction?
Section 4

Delphi studies are being used with more frequency to gain insight into educational issues. Having just completed three rounds of a Delphi, what comments do you have about the process? What advantages do you see to this process? What would you suggest being changed to facilitate the process from a panelist's point of view?

THANK YOU!
(No More Rounds)

If you would like a copy of the summary of research once this study is completed, please circle YES.

YES, I would like to receive the final summary of this study.
APPENDIX J

Panelists Comments on the Delphi Process
COMMENTS ON THE DELPHI PROCESS

Advantages
- Avoids meeting
- Chance to share viewpoints

Disadvantages
- Lengthy questionnaire

It provided a good opportunity to explore my views + definitions related to vocabulary. Thanks for the little gifts - Nice touch -

-A good process for consensus building
-The weakness of each participant's viewing the subject from a different level of understanding or perspective could invalidate accuracy of response
-Frequently, throughout comments made, respondents stated their lack of clarity about the statement (but we responded anyway). This supports my position stated above.
-A good way to collect independent thoughts not necessarily influenced by the group

Delphi is an excellent approach. It is time consuming and you need to allow time and give very clear instructions. Meanings need to be clear. I've enjoyed the process and wish you well in your study.

Process seems highly subjective, drawing from current practices, experiences and opinions.
While the Delphi process may be an acceptable way to access what is (or what seems to be) it doesn't seem to be very forward focused. (futuristic) It could result in "a pooling of ignorance," "a consensus of what seems to be," or the collective opinion of "what ought to be" but how do we get to the issue of what it really should be?
For me this process was extremely time consuming and tedious.
Good luck!

This process was interesting. Not sure that you are getting a consensus. Believe this process allows good input process and a useful research tool.
Have a student using Delphi approach although different.
Advantage is that encourage people to re-think position when see others’ views
Disadvantage is pressure to conform views with others

Appears to be a good process. By 3rd round things are redundant.
Nice job Larae - Congratulations - you’re almost through!!!

Too long
Give options for reasoning
But, in general, this is more valuable than most surveys.

It has been some time since I have participated in a Delphi study and I do not
remember if I had the same frustration in past studies. I found this to be
increasingly frustrating. The topics were too cryptic, leading to substantial
confusion - as noted by the comments. I’m not sure what utility will result in the
study. One possible improvement may be to not use "buzz words" as the key
descriptors but use one or 2 sentences to explain what the concept is.

The task appeared to be overwhelming always was moved to the bottom of the
stack. Would it be possible to obtain this info in a more succinct format?

More complete statements
Some integration of statements
More time to respond
Thanks for the opport. -- good luck!!

While this has taken some time; it has been a super project. You should be very
proud!! I look forward to reading your results (but, especially look forward to
hearing your observations!) (i.e. who are the ‘frontier thinkers’ in Vo Ed)

Many thanks for asking me. Rather creative approach. Not perfect, but a very
good start.