

NEW DESIGNS FOR CAREER AND TECHNICAL EDUCATION PROGRAMS AT THE SECONDARY AND POSTSECONDARY LEVELS IN THE UNITED STATES: CONTEXT, AUDIENCE, SIGNATURE, AND EXPECTATIONS

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Abstract: This paper will address new directions for career and technical (vocational) education in the United States at both the secondary and postsecondary levels of education. The work is a part of the program of work of the new National Center for Career and Technical Education and funded by the U.S. Department of Education. Focus will be on the context of career and technical education (i.e., assets, problems, opportunities, and aspirations), audiences to be served, signature (i.e., unique purpose), and desired learning expectations/outcomes. Special attention will be given to the changes needed in career and technical education in light of major educational reform initiatives at the secondary and postsecondary education levels in the United States. These reforms include new academic standards, integrating vocational and academic learning, more closely linking school and work-based learning, connecting secondary and postsecondary education programs, and new accountability requirements. The first part of the paper will focus on the New Designs for Career and Technical Education project and present a description of the design process and preliminary recommendations resulting from a review of research and best practices and deliberations by a National Design Group representing administrators, teachers, counselors, teacher educators, researchers, and business and industry. The second part of the paper will present an application of the design process and resulting recommendations to a specific career and technical education institution in the United States – Hennepin Technical College.

Part 1: New Designs for Career and Technical Education¹

The purpose of this project is to develop new designs for career and technical education at the secondary and postsecondary levels in the context of New Designs for the Comprehensive High School (Copa and Pease, 1992; Copa, 1999) and New Designs for the Two-Year Institution of Higher Education (Copa and Ammentorp, 1998). Both of the latter were products of the National Center for Research in Vocational Education at the University of California, Berkeley. These projects were focused on whole high school and community/technical college reform and incorporated the results of research and best practice including integration of academic and vocational education, articulation of secondary and postsecondary education, and coordination of school and work-based learning. With this foundation, it is now appropriate to draw out specific implications for the design of career and technical education in terms such as learning context, learning audience, learning signature, learning expectations, learning process, organization, staffing, partnerships, and learning environment. Both practitioners and researchers will be actively involved in the design process.

¹ This statement was drawn from the ongoing work of the project, New Designs for Career and Technical Education at the Secondary and Postsecondary Levels, which is a part of the program of work of the National Research Center for Career and Technical Education headquartered at the University of Minnesota and funded by the Office of Vocational and Adult Education in the U.S. Department of Education. This project is being directed at Oregon State University, a partner institution in the National Center. The Project Director is George H. Copa, Professor, School of Education, Oregon State University. Sharon Grossbach, President, Hennepin Technical College serves on the National Design Group for this project.

Rationale, Need, and Relevant Literature

The need for this project is clearly evident in the changing context for education and workforce development in the United States. The educational changes include the impact of: (1) new, high priority academic standards across the states for secondary education (U.S. Department of Education, 1992, 1995; U.S. General Accounting Office, 1993; Boesel & McFarland, 1994) (often resulting in a reduction of opportunity and enrollments in career and technical education and a changing role for career and technical education as a pedagogical method for teaching academics in addition to its role as a content area/subject matter field), (2) several years of sustained initiatives and funding for the integration of academic and career and technical education (Bottoms & Sharpe, no date) (often resulting in new forms of career and technical education and multiple and sometimes conflicting expectations for career and technical education), (3) several years of initiatives and funding for School-to-Work system improvement (Stern, Finkelstein, Stone, Latting, & Dornsife, 1995; Hartoonian & Van Scotter, 1996) (resulting in increase attention to work-based learning and linkages to school-based learning with implications for the learning process, organization, and staffing of career and technical education), (4) shifting focus of accountability in community and technical colleges to outcome-based learning with emphasis on the more general education skills (U.S. Department of Education, 1992, 1995; U.S. General Accounting Office, 1993; Boesel & McFarland, 1994) (resulting in concern about the role of, priority for, and organization of career and technical education in postsecondary education), (5) recognition of need for formal lifelong learning and value of transfer of learning (and credit) from high school to community college and community college to university (Hansen, 1994) (resulting in new partnerships in career and technical education), and (6) new vocational legislation (U.S. Congress, 1998) requires states to revisit the definition and meaning of career and technical education in the context of the changes noted above (resulting in widespread conversation and interest in strategies for program improvement and accountability).

At the same time, there are major changes being called for in workforce development in the United States including the need for: (1) new basic skills (Secretary's Commission on Achieving Necessary Skills, 1991, 1992, 1993), (2) broad employability skills (Secretary's Commission on Achieving Necessary Skills, 1991, 1992, 1993), (3) all aspects of the industries (U.S. Congress, 1998), and (4) national industry skill standards (Lee, Casello, May, Foster, Goodwin, & Meeham, no date; Hoachlander & Rahn, 1994; Oliveir, 1995; National Skill Standards Board, 1996). These challenge career and technical education to develop new designs for its learning expectations, learning processes, organization, and finance.

Objectives

The objectives of this project are to:

1. Draw out the implications for career and technical education of the design recommendations of New Designs for the Comprehensive High School and New Designs for the Two-Year Institution of Higher Education and its applications and recognition around the country (e.g., acknowledgement by accreditation agencies as innovative approach to planning institutional improvement, use by the American Institute of Architects as the criteria for selection of award winning K-12 and community/technical college designs, selection of schools applying the design principles as New American High Schools)
2. Conduct a comprehensive review of research and promising practices in career and technical education using a format that can be used by practitioners and easily updated.

3. Involve researchers and practitioners in the development and synthesis of new designs for secondary and postsecondary career and technical education (and the interface between secondary and postsecondary educational levels).
4. Describe new designs for career and technical education in terms of the design elements of learning signature, audience, expectations, processes, organization, partnerships, staffing and staff development, environment, finance, celebration, and accountability.
5. Disseminate and provide technical assistance on new designs for career and technical education.

During 2000, the above objectives will be accomplished for the design elements of Learning Context, Audience, Signature, Expectations, and Learning Process. During 2001 the project will focus on Learning Organization, Partnerships, Staffing, Technology, Environment, Celebration, Accountability, and Finance for career and technical education at the secondary and postsecondary levels.

The contributions of the project will provide new formats and structures for career and technical education in the United States grounded in whole school and college reform and the latest research and promising practices. These new designs will be important and central to the improvement of career and technical education in the United States.

Summary

This part of the paper has provided a description of the design process that is and will continue to be used to develop a new designs for career and technical education in the United States over the next three years. Preliminary recommendations will be provided for the first two of ten design elements – Learning Context and Learning Audience. We next turn to an application of the New Design process (the same elements and general process) which was made earlier to a specific career and technical institution – Hennepin Technical College located in the State of Minnesota. This application and others of the original research and development efforts on New Designs for the Comprehensive High School and New Designs for the Two-Year Institution of Higher Education formed the bases for the new national project, New Designs for Career and Technical Education, as describe above.

Part 2: Hennepin Technical College -- An Application of the Design Process and Resulting Recommendations

Hennepin Technical College is the largest two-year technical college in the Minnesota State Colleges and Universities system of 36 colleges and 53 campuses. Located in suburban Minneapolis, the college was founded in 1972. College programs and services are offered at two campuses and two other locations and hundreds of business and industry sites. Hennepin Technical College enrolls approximately 6,000 post-secondary students, 1,800 high school students, and over 10,000 customized training students annually. The College's revenue budget is \$35 million.

The mission of Hennepin Technical College is to provide quality technical education needed for employment in an ever-changing, global work environment. Hennepin Technical College fulfills its mission by offering Associate in Applied Science degrees, diplomas, and certificates in occupational fields that do not require a baccalaureate degree for entry. The College facilitates lifelong learning by offering programs which are specifically designed to expand the knowledge and skills needed by adult learners for job retention, enhancement, or advancement. The College offers flexible and non-traditional evening and weekend classes along with its daytime schedule.

New Designs Planning

During the 1996-1997 school year, a planning process was undertaken to coordinate and support the development of an overall design to continually improve Hennepin Technical College and strategically position it for the future. The planning process led by the President was done by a design group of 46 individuals who represented key college and community stakeholders. Participating in the group from the college were administrators, faculty, support staff, and students. In addition, over 20 community members served as members of the design group. Another 35 community members were interviewed individually or participated in focus groups. Organizations and groups, which were represented, included K-12 post-secondary schools, heads of business and industry, members of labor organizations, interested citizens, and representatives from community-based organizations. The design process addressed Hennepin Technical College's learning context, learning signature, learning outcomes, learning process, learning organization, learning partnerships, learning teams and team development, learning environment, learning finance, and learning celebration.

The Design Group formulated the following design criteria to guide the development of the design specifications for each of the elements that follow in the design process:

- Improving focus on and responsiveness to learners
- Increasing the number and new forms of partnerships
- Improving access to services
- Maintaining and improving dedication and quality of a diverse faculty and staff
- Enhancing public opinion and awareness of HTC
- Identifying and making appropriate investments in core programs/skills
- Improving funding for technical and related training
- Improving flexibility to deal with changing context
- Improving attention to accountability for learning and the institution.

Creating a Change Oriented Culture

"Succeeding at comprehensive changes entails more than thinking and discussing; it requires action" (Eckel, Green, Hill & Mallon, 1999). Eckel et. al. continue by suggesting that for an institution to succeed with change widespread institutional participation must occur. A wide range of people must see themselves benefiting and change must make sense on campus. The New Designs change initiative at Hennepin Technical College has been successful because it has tapped the human resources of the whole college. Collaborative efforts and leadership have produced results.

The implementation of the New Designs began immediately following the release of the design team report in August 1997 at an all-staff workshop. The plan was launched as part of a college learning celebration. Faculty and staff were encouraged to get involved, take risks, and think "outside the box." In 1997 Hennepin Technical College changed its organizational structure to reflect the learning team concept that evolved from the New Designs process. The academic affairs structure formed into learning teams, a more interconnected arrangement with faculty as leaders. The process has taken time, support, and education. The leadership is emerging from all levels and examples of "New Designs" actions are occurring constantly. During the three years HTC has been implementing New Designs the College has become more focused on student learning, strengthened shared values and trust, and invited active involvement in College leadership by all employees.

Summary of Progress

In January and February, 2000 Joyce Simon, Consultant, conducted New Designs workshops that were attended by a total of 85 participants. The sessions were held on both campuses. One of the purposes of the workshops was to review employee perspectives of New Designs and profile root and is growing. It is action, not theory. It has become part of the daily life of the College and the people who work here.” (Simon, 2000). Simon also observed that in workshops she conducted 2 years ago she heard fears expressed about what New Designs was “going to do.” Now she was finding more of a fear that it would go away and that staff indeed wanted to continue New Designs. Simon concluded from her study that she has observed a remarkable transformation and feels the New Designs approach is here to stay and may become the hallmark for HTC. Her report summarizes the following strengths:

1. The learning teams seem to be working well. Whether groups meet often or infrequently, it seems to be just right for the team members.
2. The president’s leadership has been key to making New Designs work. In many organizations, the philosophy is espoused but trust and effort are lacking. Not here.
3. Competition between departments or programs is giving way to cooperation.
4. Team members appreciate having more autonomy. They appreciate being a part of the decision making on team expenditures.
5. The staff throughout HTC system is friendly, helpful, and supportive to colleagues new and old.
6. Key awards (staff recognition) are viewed positively as a means to recognize colleagues.
7. There have been and continue to be technology improvements.
8. Overall morale has improved and is positive.
9. Budget and finance issues are better understood and information is more available than ever before.
10. Staff remains focused on the needs of the students. (Simon, 2000)

The culture at HTC since New Designs has shifted to one of strong trust among all groups of employees. This is especially evidence between administration and faculty. As a result more creative approaches to program offerings have occurred. Risk taking and entrepreneurship is encouraged. Improved technology and more team-work has improved communication within the College and to the external community as well. Training and assistance with technology has also enhanced the work of individual employees.

On Going Opportunities

New Designs has taught the College to listen carefully to internal and external customers. As a result of listening to the needs of internal customers the College is moving ahead to create new tools to continue to implement New Designs thinking. The following guides will be available in August, 2000:

- **New Designs Guide for Better Communications:** the tools available at HTC and the best way to use them.
- **New Designs Guide to Marketing:** update on current and planned marketing activities, who’s who and what’s what in HTC marketing.

- **New Designs Guide on Teams:** how to organize and operate a successful team
- **New Designs Guide for Daily Use:** old versus new thinking
- **New Designs Guide for Action:** stirring up results from your ideas.
- **New Designs Guide for Team Participation:** how can I be involved in helping
- HTC reach its potential.

Just as there is no definitive end point to the change process on campus (Eckel, Green, Hill, & Mallon, 1999) this report of New Designs has no conclusion. The challenge now is to sustain the momentum, to keep New Designs fresh and vibrant and to continue to discover the powers and possibilities of continuing the implementations (Simon, 2000).

Hennepin Technical College has moved to new levels of transformational change in the past three years. This change exhibits the dimensions of both depth and pervasiveness. It has touched the college in deep and meaningful ways (Eckel, Green, Hill, & Mallon, 1999).

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