A 1996 study of employers across the United States confirmed the valuable role that community colleges play in providing workforce training. To continue performing that role, community colleges must take into account emerging factors that will change the role of instruction. These factors include the characteristics of the continuum of learners served by the colleges, including emerging, existing, transitional, and entrepreneurial workforce learners. In addition, the knowledge revolution and related technological developments are changing the roles of business and educational institutions, allowing businesses to provide direct access to training. Moreover, technological advances have altered the nature of work, including the types of training needed and the types of jobs that exist.

Recommendations for responding to these factors include the following: (1) community colleges must restructure to eliminate organizational divisions among credit, non-credit, and entrepreneurial efforts and focus on the markets of learners served; (2) faculty and management should be retrained to serve workforce students along the continuum; (3) alternative delivery formats should be considered, focusing on specific market niches; (4) colleges should emphasize the relevance of their offerings and risk making bold changes; (5) competition should be examined and learned from, leaving open the possibility for partnerships; (6) products should be repackaged and re-marketed, incorporating previously separate classes together; and (7) colleges should collaborate both within and outside the college.
After the National Training Study: Considerations and Recommendations

Sherrie L. Kantor
National Council for Occupational Education

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After the National Training Study: Considerations and Recommendations

By Dr. Sherrie L. Kantor
Dean of Corporate and Continuing Education
Central Piedmont Community College
Charlotte, North Carolina

The National Study of Business' View of Workforce Training (published by AACC and designed and developed by NCOE, COMBASE, National Council of Continuing Education and Community Service and NETWORK), confirmed the value of the nation's community colleges as workforce training providers. The extent and areas of concentration are chronicled in the results. What is not chronicled are the implications for educational practitioners - the "so what" part. This article does that. It summarizes the "take aways" - the concepts that can be taken away and used by practitioners who must make meaning of it in their everyday world of instruction in community colleges. The summary is divided into two sections. First, the changing role of instruction will be discussed in the context of three factors:

a) the characteristics of the continuum of community college learners
b) the knowledge revolution and the new roles of business and education and
c) the changing nature of work as a result of the knowledge revolution.

(Please see Training Study on Page 3)
Second, eight recommendations are advanced that could help community colleges secure their role as an acknowledged leader in workforce training.

The Characteristics of the Continuum of Community College Learners

The first factor describes the majority of student segments in the community colleges. It serves: 1) the emerging workforce learner, 2) the existing workforce learner, 3) the transitional workforce learner, and 4) the entrepreneurial workforce learner. Together they form a workforce learning continuum that colleges can use to design their offerings. The avocational learner will not be addressed in this article.

The emerging workforce learners may be described as the “green peas.” They are the 18-22 year olds and others who are preparing for their first career. This future workforce is often called the “traditional” student. Higher education institutions, including the community colleges, have designed their systems and instruction around this segment for many years. It is only recently they have addressed the other three segments, especially the existing workforce.

The existing workforce learner is the full or part-time employee who needs education to remain competitive. Employee education is experiencing an explosive period of growth right now. While employers are worried about their future workforce, they must also keep their present one trained. Many are turning to community colleges to obtain customized workplace training that is often short-term, cutting edge, and specialized. Colleges have had to change their concepts of instruction to accommodate this rapidly growing market. Working with this existing workforce can be a golden opportunity to expose faculty and administrators to state-of-the-market training requirements and cutting edge technology. However, the unit with which most colleges have successfully served this segment (continuing education departments or business institutes) are often left at the edge of the institution. Therefore, the instructional gains realized do not often permeate or benefit the rest of the institution.

The transitional workforce learner describes those individuals who are transitioning into the workforce because they have been downsized, right-sized, or disenfranchised in some way. They require their education to be delivered in a manner that is results oriented. Sometimes, it means education about how to get the next job or select a different career. Other times, it means fast track training that is relevant and leads to immediate employment. This, too, has implications for the instructional unit of the college. Urgency and support systems are keys to success. Education in 15 weeks or two-year packages may not work. Not only do time frames need to be refashioned, but, so does the content. Choices about “need to know” and “nice to know” content have to be made if time and money are limited. If education is truly lifelong, there will be many more times this segment and all the others will return to be educated—be it at a community college, or one of its competitors.

The entrepreneurial workforce learners can and should push community colleges’ instructional units very hard to make their education relevant. These are the people who are starting or already own their own business—the fastest growing business and job market segment in America. Whether the instruction is credit or noncredit is not as important to this group as the relevancy and immediacy of the instruction. The national study confirmed this.

While education has defined the learning market into four segments, business defines the learning market a bit differently. According to Davis and Botkin (authors of The Monster Under the Bed) the marketplace for learning is being redefined dramatically from K-12 to K-80, or lifelong learning, whose major segments are: 1) customers, 2) employees, and 3) students, in that order. No longer can education be exclusively “front ended” as we did in the agrarian society, for ages 7-14, or in the industrial society for ages 5-22. In the information economy, the rapid pace of...
technological change means that education must be updated throughout our working lives. Lifelong learning is the norm that is augmenting, and, in some cases, displacing school-based education.

Davis and Botkin predict that the student market (the traditional emerging workforce learner) will remain largely in the public sector and that school leaders will continue to try to reform the old system rather than embrace the new forms that will ultimately prevail.

Business has recognized the value of employee education for quite a while and this rapidly growing "shadow market of education" has only been recently discovered by educators. Motorola spends $120 million a year and Saturn requires one hundred hours per year of formal learning of management and union employees.

Meanwhile, Davis and Botkin predict that consumers will be the "newest and largest learning segment in the twenty first century made possible by user friendly advances in technology. As information technology becomes intrinsic to products and services learning becomes a by-product (and by-service) of the customers' world." In this scenario, customers become learners and businesses become educators. "In the years to come, businesses will add knowledge based features to their products increasing their economic value to the company and the customer."

The Knowledge Revolution and the New Roles of Business and Education

These technologies and new market perspectives have profound implications for community colleges. They will no longer have the corner on the market for learning and will need to examine themselves in the (second) context of the knowledge revolution and the new roles of business and education.

This knowledge revolution, brought on by technology, is one where learners can obtain education directly and bypass formal schools. For the three segments described earlier, the transitional, entrepreneurial, and existing workforce learner, this is especially attractive. They do not require the validation of a degree because they are not necessarily preparing for their first job like the emerging workforce learner. Providers of learning for these segments will proliferate and formal educational institutions will begin to experience competition for these three markets if they have not already. Business has already seen the economic value of the knowledge business and they are "putting data and information to productive use by creating knowledge-based products and services that make its customers smarter."

What will education do? It may want to consider organizing and harmonizing with information-age values that enlightened businesses are using such as: service, productivity, customization, networking, speed, flexibility and a global perspective.

If customers and suppliers can now get into the core of a business and learn how to obtain information, like they do when they self track a package with Federal Express, how can they get into an educational organization to obtain the course they desire electronically? Many colleges have already figured out the answer to this one, an example of how customers as learners are changing their expectations. To improve instructional practices further, schools will have to not only incorporate information age values, but, businesslike practices as well. Davis and Botkin suggest these practices and call them the "six R's: risks, results, rewards, relationships, research and rivalry (competition)."

The Changing Nature of Work

Understanding the continuum of learners in the market, and, the impact of the changing roles of business and education in the community colleges, are two of three factors worth examining when considering the future roles of community college instruction. However, the examination is incomplete without considering the third factor, the changing nature of work, that has come as a result of the knowledge revolution. The national AACC workforce training study maps out the training that employers said they needed most right now.

Therefore, the knowledge revolution has implications for changing the nature of work for employers, employees, and society beyond 1999. Educational institutions will need to consider these implications so they can plan for the future educational needs of their constituencies.

Jeremy Rifkin, in his book, *The End of Work* cites examples of the changing nature of work in several economic sectors. In the agriculture sector, he describes the migration from farming to "Pharming." One example is Escagenetics, a company in California that has isolated the genetic codes necessary to produce vanilla in bacteria in vats in a lab. This molecular farming, applying biotechnology, eliminates the soil, weather and farmer as we know it.

This begs the question: What ought to be in community colleges' instructional portfolios now and in the future? Are we properly preparing our continuum of learners knowing many of the jobs we train them for now will disappear?

In the world of manufacturing, one robot can now replace four jobs, and, if used 24 hours a day will pay for itself in one year. Rifkin predicts that blue collar jobs as we know them will pass from history by 2025. What are the implications for community college training programs in the future if this scenario has validity?

The service industry was the absorber of manufacturing jobs for forty years. Now, this sector has seen information technology...
replaced these jobs as well. Voice recognition robots have enabled AT&T to handle 50 percent more calls with 40 percent fewer operators. Banks eliminated 177,000 tellers from 1983-93. The retail workforce sector has just begun to see the effects of the technological revolution. Since electronic shopping, 419,000 jobs in retail have been lost. The impact on warehousing and transportation has also been felt. But, it is nothing like it will be as electronic transmission of products take hold. Blockbuster and IBM's 1993 joint venture, called New Leaf Entertainment, is one example. Soon each Blockbuster store will have a kiosk where customers order selections by touching a computer screen. The information is then transmitted back to the store within minutes and store machines copy the electronic information into recordings on CD or cassette. Now, there is a just-in-time, customized, customer focused product that is delivered on-site. This process signals the end of work for many warehouses, wholesalers, and truckers. As many jobs are being replaced by a few highly specialized ones, what are the implications for community colleges? Will they be able to rapidly develop training products that are state of the market, highly customized and even entertaining? Some have already considered collaborations with cable companies for delivery. For example, the Colorado Community Colleges have a partnership with Jones Cable Company as do the League for Innovation Colleges. At the same time, learning products on disks are now available from retail stores as is software. And, the Internet has come to play an increasingly larger role.

Furthermore, how will college-produced educational disks or cassettes compare with the Blockbuster ones? Or should they? The education and entertainment businesses may very well merge. Davis and Botkin call it "edutainment." Will Disney become community colleges' biggest competitor if it gets into the education business? Davis and Botkin have warned us of the economic value of education that business has already recognized.

**Recommendations**
Having considered the three factors above, eight recommendations for the role of instruction in community colleges are suggested.

**Recommendation Number One: Reform and Restructure**
Reform and restructure the college, especially the instruction's organizational structure. Most community colleges today are divided houses with credit organization on one side, and a noncredit, entrepreneurial organization on the other. They are structured around their funding (state or self support) rather than the markets of learners they serve. This causes confusion for the consumer and was cited as such in the national study. Several enlightened colleges have begun to reform and have restructured their markets in mind. Lane Community College in Oregon, is one, and Valencia Community College in Florida is another.

Central Piedmont Community College in North Carolina is a third example. It has begun to incubate "credit programs" in the Corporate and Continuing Education unit. Here, for example, the insurance and real estate programs plan and execute programs that are credit, occupational extension and noncredit for all four workforce learners across the continuum. The Dean reports that the entrepreneurial practices necessary to compete, promote, and develop viable programs are taught and coached to the full-time faculty and staff. One of these declining programs grew over 30 percent after "incubation" in the entrepreneurial corporate and continuing education unit. Exposure to sound marketing practices that are customer based and market driven, without compromising academic rigor, paid off. The programs grew and pass ratios soared on licensing tests—one of the benchmarks for success. It is recommended that the entrepreneurial units incubate the traditional rather than trying to make traditional units take on entrepreneurial practices.

**Recommendation Number Two: Retrain the Community College Workforce**
Faculty who are trained to teach all along the continuum of the four workforce learning segments enrich themselves and their teaching and become a more valuable and flexible employee. Currently, most faculty dispatched to industry are part-time industry professionals, and their wisdom and experience stays outside the institution. If full-time faculty are to expand their capacity to teach all along the continuum of learners and management is to manage the process along the continuum, both need retraining. Such training will enable colleges to compete and obtain (or maintain) their acknowledged leadership in workforce development. Many colleges merely tinker with their system and their staff, and do not always aim the staff and faculty training to serve sectors beyond the traditional or emerging workforce learner. If we are to train business and industry's workforce, present and future, as they reengineer and strive to compete, we can do no less for our own workforce.

**Recommendation Number Three: Reduce Brick and Mortar Growth and Consider Alternative Delivery Formats.**
The days of adding more and more college buildings to absorb growth are over. Community colleges now need to consider the alternative delivery formats not only with speed, but with "smarts." There is and will be stiff competition for the existing, transitional, and entrepreneurial workforce learners from business, industry and entertainment as well. Even the traditional...
student market, the 18-22 year old emerging workforce learner, will never reach the baby boom proportions of the past. Competition within higher education for them will be fierce. Therefore, a well planned venture into viable niches, using traditional and alternative formats, like Internet, computer based instruction, virtual reality, and alternative formats, like Internet, computer based instruction, virtual reality, and a plethora of others could have payoffs. Picking the right niches and partnering in this venture are the operative components. It is recommended colleges pick the areas in which they excel to niche and then develop alternative formats in those—if competitors have not already done so. Partnering with other colleges, businesses, or industries can help bring the financial resources to pay for it.

**Recommendation Number Four:** Emphasize Relevance

The time, the place, the format, and, especially the content developed, must be state of the market and relevant to the described diverse learners. Dr. Tom Leitzel, Dean of Central Piedmont Community College, has been working with the occupational faculty to unpack the credit occupational curriculum into smaller modules using IPSI software. The intent is to gain the flexibility to enable faculty to reformat courses into new and smaller time frames, places and content situations. This “unpacking” helps the college to sell parts of a curriculum, when the whole is neither needed or desired. It also makes it easier to “pack” the curriculum into a variety of time frames and formats.

**Recommendation Number Five:** Risk!

To revolutionize and not merely tinker with the existing instructional system requires risk. Consider the fact that the discrete units that create, supply, and distribute or deliver knowledge are merging. This phenomenon suggests colleges create, sell, produce, market and joint venture the knowledge it normally only “dispenses.” It requires new training structures and systems to make it happen. The revenue produced may offset other institutional demands. It will require bold steps to get into this kind of business. Furthermore, it will require risk and that has not been the nature of higher education and its workforce. The national study confirmed that current systems (e.g., business, facilities, registration) are problematic to both the businesses served and the practitioners serving them.

**Recommendation Number Six:** Benchmark the Competition

Too often educators look at other educational institutions to judge themselves. They should also examine how other competitors like businesses are training. The large accounting firms, for example, have added training to their portfolio when consulting for customers. The scenario can be viewed as competition and a threat or an opportunity for a partnership. Consider examining what the local independent training consultants (the suppliers and distributors) are doing with respect to training. Many of them have added consultative selling to their portfolio of business services, like the St. Louis Community College’s Business and Industry Department. Competition from “edutainment” is also worth examining and learning from. Determine what else competes for your customers’ educational time and money.

**Recommendation Number Seven:** Repackage and Remarket Products

For example, one course, like phlebotomy, can be packaged with nutrition and nurse aid training to form a patient care technician certificate. Mary Kotsokalis, Director of Central Piedmont Community College’s Health Care programs, surveyed the market and recombined classes (with proper agency approval) to develop this new hybrid. The classes have been full and the demand high for this kind of worker. Employers are part of the input and attend graduations that are combined with a job fair. The result is often instant employment.

When the colleges environmentally scan frequently, and inventory and update their portfolio of offerings, the possibilities for remarketing and repackaging are high. In many cases, it is a matter of seizing opportunity—carpe diem! And, it often takes more ingenuity than money.

**Recommendation Number Eight:** Collaborate and Joint Venture

Do not forget to collaborate inside the college. The National Workforce Study indicated one of the biggest barriers to the colleges’ progress with business and industry was the internal competition and attitude. College business offices, facilities and other units have often set up systems based on the traditional student. Acknowledgment of the broader continuum of learners is necessary and begins with the college’s leadership. It should be followed with the appropriate education, training and the support required to change outdated systems and harmful attitudes.

Consider collaborating outside the college with businesses in the college’s region to open training centers as chronicled in the national study. Joint venture with instructional designers, suppliers, other colleges, and, other appropriate partners to develop new products and delivery systems, be they on Internet, or “nets” not even dreamt about yet.

Several of the above recommendations are fairly radical and they are meant to be. Changing technology, the competition, the nature of work and the diverse workforce learners cannot wait for community colleges to “tinker” or be timid in the way they change their approach to education for all their constituencies. These times call for bold steps as outlined in the recommendations. The colleges that are able to take them will be the ones that will be survivors and players in the knowledge revolution. They will secure their role as one of the nations workforce training leaders.

**End Notes:**

3. Davis & Botkin, p.16.
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Organization/Address: NATIONAL COUNCIL OCCUP. EDUCATION (NCOE)

Telephone: 303-836-6571

E-Mail Address: skantor@puno.com

Date: Sept 16

Printed Name/Position/Title: Sherrie L. Kantor, Dean, Central Piedmont Community College, Vice President, National Council Occup. Educ. (NCOE)

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