Articulation can be understood as the processes and relationships involved in the vertical and lateral movement of students throughout a formal education system. Transfer, or the mechanics of credit, course, and curriculum exchange, is one process of articulation, while lifelong learning incorporates experiential learning and continuing education units into articulation policies and strategies. Short-cycle institutions, known variously as community colleges, polytechnic institutions, or institutes of technology, play a significant role in linking lower and higher education. These institutions are instrumental in the horizontal and vertical transfer of students, including regular academic transfers, stopouts, adults interested in lifelong learning or transferring credits from work experience, and underprepared students. Four types of transfer agreements exist between institutions: formal and legally based guidelines and policies, special statewide agreements on vocational-technical credit transfer, state system policies, and voluntary agreements among systems or individual institutions. Assessment procedures for experiential learning, including the use of student portfolios, have been developed, although procedures for exchanging such credits have been slow to develop due to the volume and diversity of such experiences. Although it is difficult to forecast the future of articulation, it is likely that programs will have to adapt to new student populations, the growth of business-sponsored training programs, new technologies, and declining funding. Contains 21 references. (HAA)
Articulation and Transfer: Critical Contributions to Lifelong Learning

Frederick C. Kintzer
ARTICULATION AND TRANSFER:
CRITICAL CONTRIBUTIONS TO LIFELONG LEARNING

by Frederick C. Kintzer

Strong systems and mechanisms for articulation and transfer are central to the full and complete development of lifelong learning. In many APEC economies, as well as others, there are a growing number of short-cycle institutions - educational organizations that have proven to be fundamental in their support for and development of articulation and transfer processes. As well as transfer credits for formal learning, there is a growing need for accrediting non-formal and experiential education. A variety of approaches have been developed in this regard, the most enduring have been documented by Willingham and Whitaker. Although the future is difficult to predict, it is likely that short-cycle institutions will continually modify courses for the growing numbers of adult re-entry students, industry will become increasingly involved in the delivery of postsecondary education credits, and technology will expedite non-traditional and non-sponsored education. Together, these influences will greatly affect the development and delivery of lifelong learning.

INTRODUCTION

As recognized in a growing number of economies, opportunities for the interchange of credits, courses and articulation services between secondary-level schools and postsecondary colleges and universities directly and positively enhance opportunities for lifelong learning. A potential influence in much of the world, the benefits of the articulation and transfer phenomenon are well documented in the United States and parts of Canada.

This paper will identify and explain what is meant by articulation, transfer, and lifelong learning, then address questions that include the following: What is the role of short-cycle institutions in the articulation and transfer process? Who is served by effective articulation and transfer processes? How can experiential learning be evaluated for credentialing purposes? What suggestions for implementation can be offered to policy makers and practitioners? What does the future suggest for articulation and transfer?
All these questions are addressed within the broader context of lifelong learning.

DEFINITIONS

Articulation is the totality of processes and relationships involved in the systematic movement of students vertically and laterally throughout a formal educational system. A variety of services to prospective and current students is included, such as, advisement at the secondary level, matriculation considerations while still attending secondary school, placement in college classes, counseling after enrollment, housing, and job placement. Transfer - the mechanics of credit, course, and curriculum exchange - is one of the articulation processes. Included are recognition of and credits for learning that includes experiential as well as other activities not specifically taken for credit. Cooperation and a student centred focus are essential if the entire operation is to succeed, along with the willingness of politicians and educators alike to support policy decisions favouring students. (See Kintzer, 1976, for discussions of these definitions).

Some definitions of lifelong learning emerged in the United States during the early 1970s, as the adult part-time learner became a major concern of many of the heretofore traditional universities. While not always motivated by altruistic concerns, universities quickly organized programs specifically for adults outside the main stream of postsecondary environment. In 1973, the Commission on Nontraditional Study published a philosophical comment which led to further refinement of the term, at least within the U.S. Perspectives such as: "more an attitude than a system," "puts the student first and the institution second," "encourages diversity of individual opportunity rather than uniform prescription," and "de-emphasizes time, space, and even course requirements [as well as credits]," became recognized as characteristics of lifelong learning. (Commission on Nontraditional Study, 1973, p. xv).

The Commission's positions, promoted in several publications, led to a definition that was adopted by the General Council of UNECSO in 1976. It placed the learner at the centre of the learning society.

The term 'lifelong education and learning' denotes an overall scheme aimed both at restructuring the existing education system, and at developing the entire educational potential outside the education system;
in such a scheme men and women are the agents of their own education. (UNESCO, 1976, p.2).

Later defining statements of lifelong learning included the provision of credit for experiential learning, and the rapidly growing non-credit programs offered in formal classrooms and laboratories as well as in nonformal settings were translated into policies and operational strategies of articulation and transfer. The development of continuing education units (CEUs) added flexibility and variation to lifelong learning. As a result, academic credits for professional upgrading could be earned, or even required, and non-academic activities, documented at any point in life, could be systematically translated into degree or certificate credits.

These more recent concepts strengthen the theme of this paper, that effective articulation and transfer contributes greatly to the global development of lifelong learning opportunities and potential. Further, an immediate effect resulting from the institutionalization of articulation and transfer, and a goal of educators and politicians alike, is to narrow the opportunity gap between educational "haves" and "have-nots."

SHORT-CYCLE HIGHER EDUCATION

The exchange of credits and courses for entry into advanced or higher education is now found, at least in policy form, in 30 to 40 nations where postcompulsory/postsecondary institutions known as "short-cycle colleges" have been created. These institutions link "lower" and "higher" education in both academic and nonacademic fields. Variously named "junior college," "community college," "polytechnic," "regional college," "institute of technology," "fachhochschule," "higher school," "uppersecondary," these institutions have non-university characteristics. Included are (1) an emphasis on work preparation, (2) an emphasis on teaching rather than pure research, (3) a high percentage of faculty employed part-time in industry, (4) a high percentage of part-time students, (5) an administrative structure similar to that found in secondary schools, and (6) lower costs per student and, hence, less expensive for governments to create and maintain.

Some short-cycle institutions have as one goal to develop formal and informal arrangements for exchanging credits, primarily academic credits, leading to the first tertiary degree – the baccalaureate. But in only a few countries has this objective been implemented on a broad scale. The potential for furthering lifelong learning, particularly through formal linkages, is increasingly recognized, but translating policy into uniform procedures on a
national scale is only slowly emerging, and only in a few nations have short-cycle colleges and training institutions been fully integrated and accepted for articulation purposes.

On the optimistic side, interest in developing a uniform system of course and credit exchange throughout postcompulsory education is moving ahead quite dramatically in several countries in widely separate geographic locations. In Great Britain, events in the last half decade have been remarkable, following two decades of planning. Established in 1969, the British Open University has offered an option— an alternate route to higher education—to thousands of adults. Similar experiences resulted from the open-entry matriculation system for non-advanced courses in the Colleges of Further Education (CFE). Now, under The Education Reform Act of 1988, operational changes have occurred, first expressed in policy heavily debated and in consultation with educators primarily from the United States and Canada. The CFEs and Sixth-Form Colleges were removed from local authorities and have been re-born as free-standing corporations. It is anticipated that the accent on greater attention to aims, objectives, and achievement will encourage “in-country” cooperative efforts and collaborations with American colleges. (See Graystone, 1994, for details).

Among Pacific Rim economies, Chinese Taipei has aggressively created formal linkages, especially between five-year junior colleges and regional teachers’ colleges. Substantial emphasis is given to computer technology in all types of short-cycle colleges, and entrance exams are required as well as later exams for university admission. Exam preparation for work certificates is a major function, and in larger institutions, such as the National Kaohsiung Institute of Technology (NKIT), non-credit programs directly support lifelong learning potential. Chinese Taipei also fosters a wide range of technical training programs delivered by industry with or without institutional collaborations.

In Japan, considerable research has been published on the potential of such linkages particularly by professors in the Research Institute for Higher Education at Hiroshima University. However, a nationwide policy has yet to appear. In addition, short-cycle colleges in Canada, the U.S. and Pacific Rim nations are developing a host of joint projects and partnerships in support of lifelong learning potential (Hatton, 1995).

Developments in another APEC economy, Singapore, exemplify departures from traditional principles of degree-giving. In the area of industry-institution collaborative training, applied projects, sometimes called “capstone” courses, integrate learning co-hosted by Singaporean polytechnics.
and private sector corporations. In a similar vein, Singapore's Precision Engineering Institute (PSI) uses a variety of cooperative projects with industry to fuel the human resource needs of the precision tooling industry. The school becomes the factory, and the needs of industry are considered central to all training. (See Hatton, 1995, pp. 147-166).

Though not an APEC economy, the case of Argentina is worth considering for the way in which it exemplifies the expansion of short-cycle higher education. For decades, postsecondary non-universities offered higher studies in technical training, teacher training, and the arts. However, in 1993 the Federal Education Act forced dramatic changes, shifting elementary and secondary education from the central government to the provincial governments, and supporting the development of nonuniversities named colegios universitarios by the Argentine National Congress. These postsecondary institutions are beginning to offer two- and three-year transferable academic programs, as well as vocational technical training. More importantly, all are required to have a linkage with at least one Argentine university. Five university colleges were opened by October 1995, and several have assumed the community college label. Decentralization and deregulation are key concepts in this strategy (Holcombe & Greene, 1996). The "collegiate function" or the "collegiate connection" are expressions currently used to introduce the linkage concept. However, the most comprehensive terms, "Articulation and transfer," are favored in this paper. (See Cohen & Brawer, 1987, for a thorough discussion and evaluation of the "collegiate function").

Several qualities of short-cycle institutions are persuasive factors supporting the notion that these colleges are the viable and highly important linkages supporting the growth of articulation/transfer and, hence, lifelong learning. Wherever found, they sponsor occupational education, and increasingly, academic and continuing education opportunities. Other assets include: flexibility and comparative ease of program development under practitioner-oriented professionals, convenience of location, scheduling more in tune with adult expectations, a flattened administrative profile suited for more rapid decision making, and a less expensive type of corporate unit for state or national governments to maintain. Private short-cycle colleges, however, are more costly to students than public institutions.

Some universities are changing, becoming more international and competitive, and moving closer to the societies they profess to serve. "Superuniversity" is a European term applied to universities which offer systematized and routine credit exchange. Programs initiated through the European Economic Community (EEC), including COMMETT - Community in Education and
Training for Technology, and ERASMUS - European Community Action Scheme for Mobility of University Students, have been designed as multinational credit exchange systems. These reflect, at least in part, recognition within the ECC of the critical relationship between education and economic development. At the same time, applied policy initiatives are increasingly based on principles fundamental to a new age of higher education, one where equalizing opportunities for access and accreditation, repairing outmoded curricula, and introducing new delivery systems are fundational.

Extending and deepening the acceptance and integration of short-cycle higher education should be of paramount concern for all APEC economies. Entrenched systems and old-style, powerful degree granting institutions remain the greatest barrier. Recent events in Australia, Argentina, Chinese Taipai, England, Mexico, and Singapore mark increasing dialogue among educators, legislators, industrialists, and community leaders. The United States, through public and private agencies including consortia of colleges and universities, is very active in national dialogues. Generally, principles are being translated into action policies, and while the results are not as yet perfected, community colleges and other short-cycle institutions are springing up in a host of countries. All this suggests a promising future for articulated short-cycle higher education worldwide.

THE STUDENTS

From the beginning of the junior college movement in the United States, the performance and persistence of students transferring vertically through state systems has been monitored and evaluated. Generally, results of this evaluation have been very positive. Community and junior colleges are also active as entrepreneurial partners in the horizontal transfer of students, marked by lateral movement within postsecondary institutions or systems and often marked by direct relationships within industry. Again, evaluation has suggested very positive results.

Specialists studying the articulation and transfer phenomenon have identified a typology of at least a dozen varieties of transfer students in the United States. A few examples follow:

* **regulars** (vertical and horizontal transfer), including intercollege/interuniversity and intrastate;

* **stopouts** (those who leave for a time);
* dropouts (those who return to two-year colleges, following at least some university attendance, usually with the goal of improving grades or qualifying for further study);

* double reverse transfers (those who make a second application to a senior institution after returning to the community college);

* and vocational-technical majors (some of whom might have started in the academic track).

As pressure mounts for continuous (lifelong) education, it is reasonable to believe that other economies will be confronted with similar types of transfer aspirants, each of whom has specific needs. Stopouts, for example, represent a rapidly growing adult group whose needs vary according to skill base, state of the economy, stage of life, family issues, and so on. This group is often most heavily involved in noncredit continuing education, but will quickly look for credit when their economic interests interrelate with accreditation. To require duplication in learning, as compared with providing effective articulation, is unproductive and costly.

Other types of transfer students competing for accommodation in the U.S. system include those who are transferring credits from work experience or from the military and other quasi-educational and nonacademic courses, the poorly prepared, the underserved, and finally, those who are physically or psychologically disadvantaged. Added to those complex and interrelated types are the international transfer students for whom only cursory attention is generally shown and even then only because for many institutions they represent a significant revenue stream. As a result, commercial "credit-counters" in the U.S. are reaping a financial harvest as institutional and accrediting agency policy lags. Most significant is the fact that this typology will expand greatly as educational opportunities increase for those who are currently not served by post-compulsory opportunities.

**TYPES OF INTRAINSTITUTIONAL AGREEMENTS**

Junior colleges, initially appearing in the U.S. midwest as extensions of high schools, then spread westward to California under the same auspices. Formal arrangements were negotiated first in regions where the number of applicants demanded action, and particularly in California where the Universi-
ity of California supported the notion of developing formal relationships with junior colleges. The following typology and discussion of the four interrelated classifications of transfer and articulation agreements should be helpful to policy makers who are presently studying potential strategies that support the exchange of credits between non-universities and universities for continuous uninterrupted formal education.

**Formal and Legally Based Guidelines and Policies.** Legal or quasi-legal articulation status is based on legal code, education statutes, or a state-sanctioned master plan. In this context, general education is virtually always recognized as "transfer tender." Emphasis is placed on completion of a two-year college degree prior to transfer eligibility. Approximately eight states are placed in this category, including Florida ("Formal Agreement Plan," ) and Illinois ("Legally-based Plan").

**Special Statewide Agreements on Vocational-Technical Credit Transfer.** In this example, vocational-technical credits and courses are transferred on blocks toward baccalaureate degrees. This is most reliable and easiest to achieve where major universities in a state or region offer first-level degrees in vocational subjects to their own students. Approximately five states have or have had special financial grants that give particular attention to vocational-technical credit transfer, including Michigan ("Mandated Policies for Community Colleges and Universities") and North Carolina ("Health Articulation Project"). As one would suspect, all of these examples have well developed academic credit/course transfer.

**State System Policies.** In this instance, policies are usually concentrated on the transfer process, less on articulation services. A high degree of state control is exerted where this style is found. Approximately 25 states are involved, including New Jersey ("Full-Faith-and-Credit Policy") and Oklahoma ("Statewide Higher Education System Plan").

**Voluntary Agreements Among Systems or Individual Institutions.** Characterized chiefly by their voluntary nature, processes and arrangements are informal and cooperatively negotiated often through faculty disciplines, and almost always with comparatively little state control. Approximately 20 states are active in this style, including Washington ("Intercollege Relations Commission," ) and California ("Intersegmental Articulation Committee Action"). (See Kintzer & Wattenbarger, 1985, for detailed explanations and discussion).

**CREDIT FOR EXPERIENTIAL LEARNING**

Learning acquired from a broad spectrum of nonacademic and nontechnical
experiences is the most difficult and complex to express in policy, to establish procedures for, and to negotiate an articulation/transfer compact. Two types of evaluation for nontraditional credit attract broad interest. The first and most common, credit by examination - the "easy way" to measure learning progress - has dominated the world scene. By way of example, qualifying throughout the British Commonwealth of Nations by means of highly formal and rigid examinations has for decades been widely accepted as the most practical system in this context. The second type, credit awarded for experiences that are not supervised by a college or university, is comparatively rare.

Background

In the early 1960s, the Regents of the State University of New York (SUNY) launched the College Proficiency Examination Program (CPEP) as the nation's first statewide credit-by-examination program. Most of these tests in this program, which are available in a variety of academic disciplines and technologies are a part of the Regents External Degree Program (REDP). Thousands of credits based on these standardized tests have been awarded across the U.S. by colleges and universities. By 1970, entire degrees were being awarded by the Regents without regard to study method, age, or residence. Foreign countries were annually represented. (Nolan, 1979, pp. 71-75). The Regents External Degree and Empire State College became, and remain, the nation's largest nontraditional programs.

Special assessment, which involves the validation of nonsponsored experience, including oral performance and portfolio examination of artistic, musical, and literary accomplishment, began later in the decade. Individual institutions across the country promulgated such programs, including Empire State College (New York), Ramapo College (New Jersey), Evergreen State College (Washington), Webster College (Missouri), Goddard College (Vermont), and Marylhurst Education Center (Oregon).

The movement that focused on recognizing "experiential learning" or "prior learning" appeared nationally in the early 1970s alongside the creation of the Commission on Nontraditional Study. The Commission, under the sponsorship of the College Entrance Examination Board and the Educational Testing Service, and supported by a grant from the Carnegie Corporation, became the administrative vehicle for prior learning assessment (PLA). In mid-1973, a research unit known as the Cooperative Assessment of Experiential Learning (CAEL) was created for the purpose of further developing the concept, as well as for creating guidelines and principles that could be adapted to local
circumstances. This allowed many adult learners to pursue educational objectives and accreditation without having to duplicate experiences through study in formal classrooms. At that stage, it became much easier for postsecondary institutions to develop and implement their own specific plans for realistically serving adults who for a wide variety of personal reasons, tended to drop in and out of regular attendance.


Current Scene

Assessment procedures detailed by Whitaker, require extensive student participation in building portfolios of accomplishments, comprehensive counseling, and intricate faculty evaluation. Portfolio submissions similar to the collection and analysis of creative works in the performing arts, particularly music, are frequently mandated, and external evaluators are often included as members of assessment teams. Some institutions conduct planning seminars for students applying for credits that have been earned experientially.

Institutions dedicated to accrediting experiential learning lean heavily on the continuing activities of CAEL, now named the Council for Adults and Experiential Learning, and the work of the American Council on Education’s Center for Adult Learning and Educational Credentials. One of the functions of the Center is to determine credit equivalencies for various types of extra-institutional learning - another term also found in the literature on learning attained outside the sponsorship of legally authorized and accredited postsecondary institutions. The ACE Center’s three key programs that focus on this issue are: the Military Evaluations Program, the Program on Noncollegiate-Sponsored Instruction (PONSI), and the Credit by Examination Program, where individuals bank credits earned in industry-sponsored settings. A national external degree program is now being developed.

Prior learning assessment, as mentioned earlier, flourished in single institutions during the 1970s and 1980s, but procedures for exchanging such credits intrainstitutionally were slow to develop. Factors contributing to
the difficulty of negotiating exchanges included: (1) the volume of the itinerant postsecondary population, (2) diversity of the new clientele, (3) the almost limitless potential of experience-based learning, (4) the resistance to change that characterizes higher education systems, and (5) the expense of creating and maintaining PLA programs.

Nevertheless, the pressure for launching such a program is mounting in many nations. How can governments perfect approaches for assessment of educational accomplishment that will insure accurate and appropriate issuance of certificates, diplomas, and degrees? In fact, the creation of government-sponsored nontraditional institutions or centres such as “Everyman’s University” in Tel Aviv and the “Open University” in Sri Lanka suggests that organizations specifically favouring adult learners can be developed and are in place in many geographically-distant countries. In particular, distance education institutions, such as the Open Learning Agency on Canada’s west coast, may, perhaps, be the solution for the all to common situation where traditional higher education systems have failed to entrench a learn-centred service perspective.

Special reference is made regarding reorganization in Japan. The formal system of higher education includes two segments: universities (long-cycle) and junior colleges, technical institutes, and special training schools (short-cycle colleges). Similarly, the nonformal segment specializing in adult education, is divided into two segments: grand schools, universities of the air, and specialized technical schools; and junior colleges, correspondence education, and college preparatory schools sponsored by short-cycle institutions. For a variety of reasons, potential for extending lifelong learning, including credit systems, is rooted in the first grouping of nonformal institutions. (Abe, 1989). It will be interesting and instructive to see how this develops.

J. W. Peltason, former President of the American Council of Education (ACE), must have been speaking to governments around the world when he reminded us that “the postsecondary community [in the United States] needs to move forward in modifying the present credit and credential system to accommodate learning attained in a variety of settings and under a variety of sponsorships, and at the same time to maintain academic standards.” (Miller and Mills, 1978, xii). At this time, nearly two decades after Peltason’s comments, techniques for planning and assessing experiential or prior learning are valid and indeed reliable. Most can be used quite reliably by other economies.
IMPLEMENTATION

In this section of the paper observations and suggestions are offered to practitioners and policy makers. First, attention will be given to planning and assessing experiential or prior learning, and second to building national higher education systems for the new century.

Planning and Assessing

The Planning Stage and the Need for Broad Involvement. When developing policies and systems for recognizing experiential or prior learning, it is critical to involve all constituents affected by success or failure - educators, politicians, business and industry, as well as students, for whom policy changes are being sought. This notion may appear self evident; however, full involvement in the haste of planning, is not always observed.

Involving "doubters" in the process can bring striking and immediate success. Such was the case when in the mid-1970s credit transfer was under negotiation in Norway between the newly opened regional or district college system and the university system. A prominent university professor who had expressed misgivings was asked to chair the planning council, and as a result success came faster. A similar situation occurred in the U.S. state of Arizona when representatives of the entire education community, secondary and higher education representatives, were creating a statewide transfer guidebook. The university leader, representing one of the more difficult disciplines to deal with, agreed to chair the committee. This placed the university in a leadership role, and prospects for agreement were enhanced. It's worth noting that in both cases the requirement for a credit transfer system had been mandated.

Assessment Details. The first step in assessing prior learning experience is the documentation stage. However, as mentioned earlier, portfolio seminars are often sponsored by institutions can be very helpful in steering students along the right path and for clarifying expectations and obligations. Credit is awarded for what is determined to be college-level learning with the appropriate balance of theory and practice, as determined by the faculty.

The next step, identification, is where the faculty review the portfolio presented by the applicant in order to identify potentially creditable learning. As noted earlier, the learning must be college-level as determined by the faculty.

The third step, articulation, is a joint activity where the faculty member along with the student identify the amount and type of credit being
considered in relation to the academic, personal, and professional goals as outlined by the applicant. One of the major challenges associated with this stage is evaluating the relevancy of the specified learning applicable to the regular academic program. Complexities of this step is determining the relevancy of the specified learning to the regular academic program.

Both steps four and five, measurement and evaluation, are faculty responsibilities, first to identify the level of competence achieved and then to determine credit equivalencies.

The final step, transcription, is an administrative process whereby an appropriate record is prepared. These often differ from standard record keeping procedures since transcriptions of PLA and experiential learning often include brief explanations of the learning. (See Whitaker, 1989, for more detailed insights).

BUILDING NATIONAL HIGHER EDUCATION SYSTEMS

The re-development of higher education to enhance and support lifelong learning suggests a model that includes: (1) the development of concept statements; (2) the issuance of general guidelines; (3) the testing of policies; and (4) the implementation of well defined regulations and procedures. A close look at recent changes taking place in Hungary and the Czech and Slovak Federal Republics details a model which can be instructive for many APEC countries.

Prior in the passage of legislation in 1991 and 1992, these economies issued exhaustive concept statements that included the historiography of higher education coupled with descriptive lists and detailed characteristics associated with the current system. These included the lack of access, the need to extend services to larger sectors of the populations, the lack of curricular practicality, and too much centralization and regulation. General guidelines of beliefs or goals were also included or, in some cases, appended. These were based on educational theory and societal characteristics.

Next, policy statements identified specific approaches to the issues and problems raised in the original concept papers. What should the new institutions be like? How should the projected non-university system differ from the universities? How should these two systems relate to compulsory education?

Procedures and regulations are currently under preparation, and these will establish the rules/directions for implementing policies, going so far as to include a day-by-day decision making schedule. While the four levels of planning are not as uniform nor as exacting as the model may suggest, all the elements are found in the broad application.
In a developmental context, the U.S. Fulbright Scholar Awards, and particularly the senior research scholar program, has been a useful tool for many nations throughout the world to investigate higher education including articulation and transfer. Many economies are eligible to obtain research scholars and, through joint financial support, analyze specific issues, systems and approaches to higher education. In this context, external observers are often able to document, validate and make recommendations that may be problematic for i-country experts. Clearly, articulation and transfer fall in this category.

Finally, lifelong learning materials service centres are being developed in some, usually large and well endowed, universities. These are cooperative ventures incorporating the talents of faculty, behavioral scientists, learning specialists, and media and information agents. A variety of courses and course materials are packaged, the primary goal being to create a diverse series of high quality learning materials employing various educational technologies and delivery systems. These are then made available to students in order to "top up" or fill gaps that in turn support the notion of learner-driven and easily accessible, seamless lifelong learning systems. Although relatively little research has been completed in this area, activities such as these are intuitively strong when all the potential benefits are considered.

One of the most visible and successful organizations is found in New Hampshire, where 25 years ago the Trustees of the University System established the School of Continuing Studies. Now recognized as the College of Lifelong Learning, CLL is composed of a network of 10 regional centers. Utilizing resources of the entire University System, the Concord-based College enrolls about 7000 adult learners in some 50 locations. Four undergraduate degree programs are available, along with credit for prior learning, self-designed courses and noncredit courses are featured. The possibilities are endless.

THE FUTURE

Prognosticating is risky in an arena as dynamic as articulation and transfer. However, the following trends can be an aid to forecasting as well as a guide for policy considerations.

There will be increased emphasis on the modification of transfer courses by short-cycle and senior colleges/universities to attract and accommodate re-entry adults, the less prepared and less talented, and international applicants, especially in the U.S., immigrant foreign students.
There will be explosive growth in education and training programs sponsored by industry with or without the permission or cooperation of the higher education system and often in competition with traditional systems, particularly those that continue to offer educational opportunities solely according to institutional imperatives.

There will also be increased use of technology to foster and expedite sponsored and nonsponsored experiential learning and other experimental efforts, as well as to track the results of these activities.

The lingering second place reputation of short-cycle institutions may continue to attract inadequate funding for these institutions, the ones most likely to support lifelong learning activities, programs and policies.

Providing learning experiences the world over is a recurrent obligation. Education cannot be a one-time chance; there must be a lifetime of opportunities. As economies increasingly come to accept and believe in the economic benefits of a lifelong learning culture, policies must be developed and implemented that support institutions which have been demonstrably most able to support the phenomena. That is the biggest challenge facing politicians and policy makers.

By definition, the terms, articulation and transfer connote predictability because they identify complex processes that are affected by the attitudes of both planners and implementers. However, there appears to be sufficient evidence to predict a very optimistic future.

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