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ABSTRACT

The focus of this paper is on major trends influencing articulation and transfer, with primary attention given to statewide influences in translating various features of experiential learning into formal credits. Eleven major trends affecting articulation/transfer are identified and discussed. These include (1) increasing control of public education by state governments; (2) interest and involvement of the federal government and national agencies; (3) diversified advanced placement allowances; (4) work experience applied toward university or community college degrees; (5) development of external degree programs associated with new or existing systems of postsecondary education, and degree programs offered by non-educational organizations; (6) alternative grading procedures; (7) expansion of multi-unit systems; (8) creation of upper-division or upper-level universities; (9) curricular diversity in all types of institutions; (10) improved computer technology applied to the process of articulation and transfer; and (11) greater attention to community college-high school articulation. The education profession is under pressure to establish uniform equal access and opportunity so as to allow students to pursue individual educational goals. Professional educators at the institutional level are best able to establish policies toward that end. (Author/JDS)

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ARTICULATION AND TRANSFER

by

Frederick C. Kintzer

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ARTICULATION AND TRANSFER

Frederick C. Kintzer

Every year around 600,000 college students apply for transfer to a different institution. Many encounter discouragement, endless delays, and frustration. Where policies are flexible and the transfer machinery operates smoothly, the experience is gratifying.

The term "articulation" represents the series of activities accompanying the move from one institution to another. The exchange of credits and courses, one of the mechanical processes in the total act, is called "transfer."

In recent years, state agencies, commissions, and legislatures have given increasing attention to articulation and transfer. According to the author's recent study, 39 states now have articulation guidelines or transfer policies. Other influences are also contributing to changing policies--the increasing pressure from the federal government, growth of upper division or upper level universities, and the increasing diversification of advanced placement allowances.

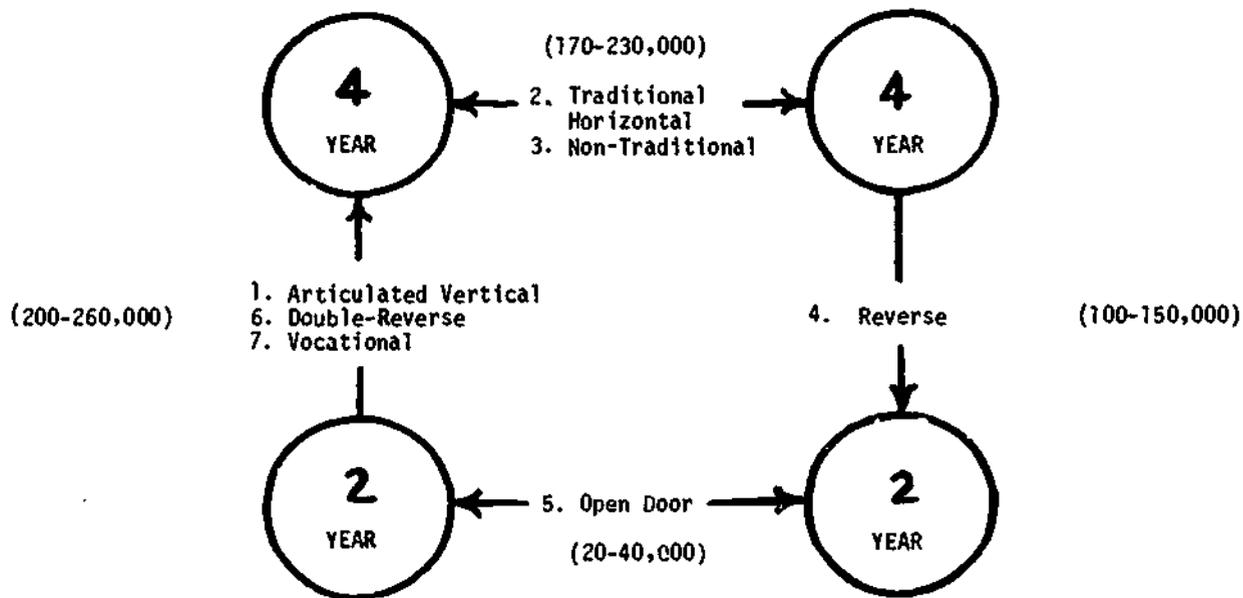
This paper focuses on major trends influencing articulation and transfer. Primary attention is given to statewide influences in translating various features of experiential learning into formal credits. Illustrative material is drawn from all parts of the nation, overseas programs of American institutions, and some foreign countries.

Which students tend to transfer? In addition to the traditional group which moves in regular grade sequence from secondary school through the two-year college to senior college and university, one must refer to the "reverse transfer or drop-down," the "stop-out or returning transfer," the "double reverse transfer," the "open-door transfer," the "intercollege-interuniversity transfer," and the "vocational-technical education major." The best view of transfer types is provided by Willingham. The following table which accompanied his working paper prepared for the December 1973 Airlie House Conference on College Transfer presents seven types of transfer students with

estimated numbers for each category. While the number of transfers continues to be an unrelenting pressure, the diversity of transfer types is of greater significance in hastening the development of flexible articulation guidelines. Willingham uses the phrase "non-traditional transfer" to describe the group that includes ". . . adults who may not have attended college for some years, students with unusual records including heavy representation of odd grades or credit awards, and transfers from innovative programs that do not conform with familiar lower division course work" (Willingham, 1974, p. 43).

Represented in this classification are many servicemen who are applying to the traditional colleges for advanced credit for their experiences in the Armed Services. By clamoring for formal entrance into established degree programs this group is exerting strong pressure for policy changes, such as expanding the Servicemen's Opportunity College (SOC) Program and translating the system of evaluating military courses and experiences into formal academic degree programs, a project of the Commission on Educational Credits of the American Council on Education. Credit by examination, early admission to college, work experience arrangements, external degree programs, alternative grading procedures, and the "University-without-Walls" concept are among the alternatives being developed and implemented to accommodate nontraditional students.

TABLE 7
SEVEN TYPES OF TRANSFER FLOW AMONG TWO- AND FOUR-YEAR INSTITUTIONS



Source: Willingham, 1974, p. 40.

Trend I

Increasing Control of Public Education by State Governments

Increasing involvement of the state government in public education appears to be inevitable. While this influence is not necessarily detrimental, when power becomes centralized in a single state unit with lessening influence from institutional representatives, policies tend to be written with fewer provisions for exceptional occurrences. Uniformity of guidelines for all public institutions invariably results in diminishing options for transfer students.

Cost effectiveness becomes a more vital consideration than educational factors, particularly as coordinating boards or agencies become advisors to legislators. One result of the reluctance of elected state officials to become involved in politically sensitive issues is the transference of power to state commissions, which can be made scapegoats on controversial issues. Increasingly, these organizations are assuming important decision making roles in state higher education hierarchies.

Curriculum development has become a state-dominated process. This is especially true in the two-year college and the high school. As state-mandated curricula increases, power shifts from the schools to the state. Decisions on what to offer, how, and where tend to be based more on state regulations than on value to students. Detailed approval requirements are invariably listed in state documents not only for occupational curricula leading to state licensing, but in academic subjects as well.

During budget lag periods, state funding becomes a crucial consideration. Community college curriculum committees are all too frequently informed that courses they recommend must qualify for state reimbursement.

Senior colleges and universities are also subject to state scrutiny of curriculum and instruction, but as a rule their course offerings and instructional styles are not as carefully controlled by law. This places community colleges in a disadvantageous position in

negotiating articulation agreements. They are again caught in the middle--this time between the state commission and the university.

In a system of higher education where state funding is of considerable proportions, it is to the state's advantage to have a cost saving plan of articulation. Legislators say, with a certain degree of logic, that they are entitled to information about the success of articulation and transfer since they are expected to authorize an intelligent budget for education. Although widely understood by educators, information on transfers is not usually well grasped by legislators.

Statewide articulation guidelines are necessary for several important reasons:

1. to enable schools to make policies pertaining to admission, size of campus, division enrollments, length of time students may have to complete degrees, etc.;
2. to protect educational communities against internal or external self-interest groups by furnishing the entire state picture in well publicized guideline statements; and
3. to establish institutional role responsibilities to meet the needs of state constituencies.

The appointment of a commission or agency, or reappointment of a subcommittee of the planning group to oversee and coordinate inter-institutional relationships would logically follow. Such a subcommittee could, for example, establish an interinstitutional forum for representative communication where over duplication of curricula and services could be aired and corrected, and cooperative efforts, such as student and faculty exchanges or computerized communication systems, might be planned. (Further suggestions may be found in Dressel and Faircy, 1972.)

A "third party" role of similar dimensions for state commissions was developed by delegates to the December 1973 College Transfer Conference held at the Airlie Conference Center in Warrenton, Virginia.

Sponsored by the Association Transfer Group and funded by that organization, the Carnegie Corporation of New York, the Exxon Foundation, and the Federal Interagency Committee on Education, 96 participants were invited from institutions, associations, and state and federal agencies involved with higher education. The "Third Party" recommendation from the delegate committees was clear and direct evidence of their thinking:

"Third Parties: Although unilateral action by an institution and coordination among institutions are essential, developing adequate transfer practices requires assistance from other parties at regional, state, national, and sometimes international levels. Such assistance includes: providing opportunities for interinstitutional negotiation, legitimizing new policies, developing assessment instruments, estimating demand, following up on results, exchanging information, and funding experiments" (Association Transfer Group, 1974, p. 2).

It is clear in this statement that assistance from state commissions or agencies is vital to developing and maintaining interinstitutional articulation and transfer relationships.

Statewide planning and coordination responsibilities were given considerable emphasis by the 1972 Higher Education Amendments. The "1202 Commissions" mandated in every state by this legislation are in some instances given the authority to develop and enforce articulation and transfer agreements. In states where educator groups are least effective, the possibility of commission control is strongest.

The most important recommendation by the Association Transfer Group was the idea of a single agency in each state to coordinate articulation. This, in fact, has been accomplished in practically every state, although in some this responsibility is one among multiple assignments. Other recommendations given below (except for item three that deals with identification of transfer problems) are couched in "third party" phraseology, e.g., to assemble representatives, assist institutions, and encourage intrastate cooperation.

To State Agencies

One Agency

By legislative or executive authority, establish and designate one agency at the state level to coordinate all matters relating to transfer.

Meetings

Assemble representatives of all postsecondary institutions involved in sending or receiving students, to meet on a regular basis for the purpose of resolving problems with respect to itinerant students.

Data

Establish procedures to collect data that will identify specific transfer problems and their locus.

Funding

Recommend procedures for allocating state funds and for awarding student financial aid to assure equitable opportunity for all full-time and part-time students continuing their education. Give particular attention to the higher costs of instruction for upper-division students, tuition equalization for transfer and native students, and the portability of financial aid between institutions.

Guidelines

Assist institutions to develop guidelines for solving problems of the itinerant student in an orderly, organized, and responsible manner, and provide for continuing machinery to implement the guidelines and to evaluate and correct procedures.

Incentives and Assessment

Encourage intrastate cooperation by suggesting specific goals that would represent progress, providing incentives and rewarding achievement of goals.

Information Network

Work with the Education Commission of the States (ECS) to develop an information network displaying statewide postsecondary educational resources for potential students, using a decentralized

counseling staff and sophisticated computer services (Association Transfer Group, 1974, pp. 3-4).

The final citation, "Information Network," referring to the Education Commission of the States (ECS) suggests the need for cooperative arrangements among and between states. Expansion of regional agencies including the Western Interstate Commission for Higher Education (WICHE), the Southern Regional Education Board (SREB), and the New England Board for Higher Education (NEBHE) continues the drift toward governmental control of education.

The federal government, the courts, and various national interest groups are more responsible for this trend than internal state organizations (Bender, 1975). Although Bender's comment referred to the total higher education scene, the point he makes on federal government influence, both direct through legislation and court decisions and subtle through grants and the stranglehold of bureaucratic machinery, is applicable to the future of articulation and transfer.

Trend II

Interest and Involvement of the Federal Government and National Agencies

The apprehension expressed with regard to state domination over articulation and transfer is also applicable to the federal government. While the federal government has been the single greatest new force affecting the course of development of higher education (Carnegie Commission on Higher Education, 1973), pressure has not as yet been extensively exerted in the area of articulation and transfer.

Those who now call for federal action feel that the Federal Government has the right to influence the direction of articulation particularly in those states receiving most extensive financial

support for higher education (Burt, 1972). Protagonists of this argument point to discrimination against out-of-state applicants through higher fee structures maintained by colleges and universities. Opponents feel that public colleges and universities regardless of some federal subsidy have overriding responsibility for first servicing the state, regional, and local citizenry, thereby justifying a higher out-of-state tuition.

The College Transfer Conference found an "other party" role for federal-level organizations equally vital as that for state-level groups. Except for the "first party" action recommendations presented under "Research on New Paths to Credit," other suggestions connote the role of a catalyst and support agent rather than one of leadership in the sense of control:

To Legislators and Federal Executive Agencies

Research on New Paths to Credit

Undertake or fund research on nontraditional education that focuses on: numbers of institutions and students involved in various categories of nontraditional educational experiences; identification of model approaches to the effective evaluation of competence-based, as compared with process-based, educational experiences; conversion of nontraditional experience into credit units or other academic "counters" with recognized equivalency for degree candidates; and alternative routes to degrees such as the credit bank and related external degree programs.

Information Systems

Support the development of repository systems (reference catalogs) of institutional programs and transfer policies, to serve itinerant students as a widely available and continually updated profile of such institutional characteristics.

Brokerage Services and Advisement Centers

Encourage the Education Commission of the States to draft model state or regional educational advisement centers or "brokerage

services". . . (Association Transfer Group, 1974, p. 4).

The College Transfer Conference delegates wisely reserved leadership type recommendations for national organizations. Among the most important considerations for national organizations is the information network idea. In one of the Conference working papers, Martorana, a well-known leader in higher education with a broad background in community college education, decried the general lack of useful data on the mobile student, and advocated a linkage--perhaps a record keeping linkage--connecting institutions (Martorana, 1974). The same notion was introduced in question form by Burt. He asked, "What is the possibility and desirability for establishing an orderly system for collection of national data concerning the undergraduate college transfer student and how could this be accomplished?" (1972, p. 108). Burt described the possible roles of various agencies of the Federal Government as well as the Research Division of the American Council on Education in planning a national data collection system.

One of the most commonly reported problems is the assessment of nonclassroom learning with a number of educational agencies working in this area. The Southern Association of Colleges and Schools (SACS) and the Western Association of Schools and Colleges (WASC) have activated committees with the responsibility of establishing procedures for awarding degree credit for extra-institutional learning. Two national studies are underway. The Center for Research and Development in Higher Education at the University of California, Berkeley, is assessing various methods for extending postsecondary education:

1. external study of traditional degree curricula;
2. new curricula and degrees to extend postsecondary education;
3. new time dimensions for learning; and

4. forms that provide extensive credit for previous achievement and experience (Meyer, 1975, p. 9).

The other national study is the Cooperative Assessment of Experiential Learning (CAEL), sponsored by the Educational Testing Service and funded by the Carnegie Corporation. CAEL's overall objectives include improving methods of assessing work and life experience learning, to facilitate the development of nontraditional programs, and to insure the credibility of credentials earned through those programs. Ten task force institutions are currently involved: Antioch College (Ohio), San Francisco State University, Community College of Vermont, El Paso Community College (Texas), Empire State College (New York), Florida International University, Framingham State College (Massachusetts), Minnesota Metropolitan State College, New College (University of Alabama), and Thomas A. Edison College (New Jersey). For the most part, these institutions are already committed to innovative education. However, the 160 other member institutions serve as an assembly to review and utilize CAEL developed materials in establishing their own learning programs.

During its initial year of operation, CAEL developed guidelines in four priority areas:

1. Assessment of Interpersonal Skills--classifying occupational roles according to their working relationship with people, data, or other tangible measurement instruments and assessing their applicability to undergraduate programs.
2. Use of a Portfolio--designed a guide for students on how to compile a portfolio and criteria for faculty evaluation.
3. Assessment of Learning Outcomes of Work Experience--defining occupational competencies and how they apply to objectives in higher education.
4. Use of Expert Judgment to Assess Learning Outcomes--relying on an authoritative source rather than using objective measures in evaluating highly individualized learning (Educational Testing Service, 1975a, p. 1).

CAEL, it should be emphasized, does not intend to standardize procedures for assessing individual learning. Rather, the project's aim is to identify prototypes which would be applicable to a variety of student types and learning situations (Educational Testing Service, 1975b).

The American Council on Education's Office on Educational Credit has considerable experience in evaluating and translating military courses and experiences. Its most recent investigation of relating military occupational specialty skills to those acquired through apprenticeship training and formal course work has resulted in three categories of criteria.

1. Antecedent Data

An "antecedent" is any condition existing prior to teaching and learning which may relate to outcomes. The status of a student prior to his taking a course, e.g., his aptitude, previous education, and experience, is an important and complex antecedent. Other examples of antecedent conditions are facilities, equipment, and personnel necessary to the teaching of a course.

2. Transaction Data

"Transactions" are encounters of student with teacher, student with learning materials and resources, student with student, counselor with student, potential employer with teacher--all the succession of engagements that constitute the process of education. Examples are the presentation of film and other audio-visual media, a class discussion, the working of a laboratory problem, and the administration of a test.

3. Outcomes Data

"Outcomes" are those abilities, achievements, attitudes, and aspirations of a student resulting from an educational experience (Miller and Sullivan, 1974, p. xv).

These criteria are based on a congruence-contingency model developed by Stake (1967).

Other materials developed for the Guide to the Evaluation of Educational Experiences in the Armed Services include guidelines for determining semester credit hours:

1. One semester credit hour for each fifteen hours of classroom contact plus thirty hours of outside preparation or the equivalent; or
2. One semester credit hour for each thirty hours of laboratory work plus necessary outside preparation or its equivalent, normally expected to be fifteen hours; or
3. One semester credit hour for not less than forty-five hours of shop instruction (contact hours) or the equivalent (Miller and Sullivan, 1974, p. xvi).

Evaluators are asked to exercise professional judgment and consider only those portions of a course that can be equated with civilian post-secondary curricula (Commission on Educational Credit, 1975).

The office has also developed a series of four-course category definitions to utilize in making credit recommendations. Broad agreement among institutions contemplating joining a data bank predicated on a similar series of definitions would be a mandatory first step:

1. Vocational-Certificate. Vocational education course work may be identified in terms of total contact hours or semester credit hours. The primary objective of vocational education is to prepare the individual for employment on a prescribed job. Specialized course content and shop training are more procedural than analytical. Related courses are usually described as applied; that is, practical applications of the subject matter have been selected to illustrate the principles being presented. The purpose of this training is to develop the manual and cognitive skills required for successful job performance.
2. Technical-Associate Degree (including lower division-baccalaureate). The associate degree category includes not only courses designed for an occupational goal but also introductory-level course work transferable to a baccalaureate program. Occupationally-

oriented courses at this level prepare a student to function as a technician in a particular subject matter field. A hallmark of technical instruction is its analytical nature, requiring sophistication in language, mathematics, and science. Emphasis is on learning, through laboratory-based instruction, principles that have broad, judgmental application.

3. Upper Division-Baccalaureate Degree. Upper division collegiate courses generally encompass specialization that is theoretical or analytical beyond the introductory level. Successful performance by students normally requires prior collegiate study in the area of specialization.
4. Graduate Degree. Graduate courses tend to be heavily oriented toward independent study, original research, critical analysis, and the scholarly and professional application of the specialized knowledge within a discipline (Miller and Sullivan, 1974, p. xvi).

As state and federal governmental agencies engage in "first party" articulation and transfer activities, controls are inevitably exacted, thus weakening institutional authority and threatening interinstitutional relationships. On the other hand, the work of the national educational agencies, university centers, and private corporations tends to direct the locus of power toward institutions where it belongs.

Trend III

Diversified Advanced Placement Allowances

The diversification of advanced placement allowances is, after state governments, the next most significant of the trends influencing articulation and transfer. Credit for off-campus and prior learning experiences is currently awarded: (1) through an examination procedure, (2) for nonclassroom and work experiences, and (3) by an external degree program.

The College Entrance Examination Board's influence continues to be the most popular method of establishing advanced credit by examination. In 1973-74, more than 80,000 individuals took CLEP examinations sponsored by over 1,500 collegiate institutions as measurements of competencies generally required in the first collegiate year.

Christ-Janer (1972) describes a number of adaptations of this program employed by institutions in all parts of the country. Several of the more unusual efforts are the Florida Atlantic University's Faculty Scholars Program which allows university placement of high school graduates through CLEP examinations, the University of Nebraska's Bootstrap Program permitting military personnel advanced standing, widespread use of CLEP throughout the vast University of Texas system, and statewide developments in Utah. Commenting on the rapid growth of the CEEB program, Christ-Janer justifies its real and potential value:

"CLEP [he concludes] now provides a working concept, a tested set of tools, and has helped to create a new educational climate in which the full execution of credit by examination can be made a reality" (Christ-Janer, 1972, p. 171).

While the spectacular success of the College Level Examination Program is partially due to superior advertising, the quality of the General Examination tests has attracted broad support from institutions and consortia, as well as employers. Subject examinations measure expected outcomes of specific college courses. Although acceptance policies differ considerably among institutions, many accept the recommendations established by the Commission on Accreditation of Service Experience (CASE, recently replaced by the Commission on Educational Credit). Development of local norms is encouraged to supply realistic regional situations. A number of large city public libraries are now also using the CLEP system for collegiate degree credit in their adult education programs.

CLEP is only one of the many ways credits may now be earned

for out-of-class or off-campus experiences. According to reports on the nontraditional study movement, conducted in 1972 at the Berkeley Center for Research and Development in Higher Education in cooperation with the Commission on Nontraditional Study, 89 percent of the 1,185 responding institutions use at least one of these standardized tests:

- Advanced Placement Program tests,
- College-Level Examination Program (CLEP) tests,
- USAFI Subject Standardized Tests,
- CEEB or ACT Achievement tests,
- Cooperative Testing Service (ETS)
or Cooperative Foreign Language Tests,
- Testing Programs in the professions, and
- College Proficiency Examination Program
(CPEP) of New York State (Ruyle and
Geiselman, 1974, p. 64).

Almost two-thirds reported the use of ACT and CLEP. In terms of transfer credit, about three-fourths of the senior institutions accepted APP scores and not quite two-thirds accepted CLEP tests taken elsewhere.

Heavy use is also made of special examinations prepared and administered within institutions. About three-fourths of those using tests grant credit for institutional proficiency or equivalency examinations, special departmental tests, end-of-course tests without course enrollment, and oral examinations or interviews. The first-named is employed by fully half and the second by almost half of the reporting schools (Ruyle and Geiselman, 1974).

This glimpse of the Berkeley Center's comprehensive studies demonstrates the widespread interest in translating nontraditional educational opportunities. However, college credit is still rarely granted for work experience before college or by examination for specific courses, and time and space flexibilities do not frequently characterize the programs.

While the Berkeley Center studies indicate at least one non-traditional program in every state, only scattered opportunities

are available in thinly populated states. It is in these areas of the country where cooperative institutional planning bolstered by statewide agency coordination is badly needed.

Such planning is obviously further advanced in states where transfer potential populations demand expanded opportunities. The state of New York is far advanced in providing credit earning alternatives; master planning by the Board of Regents' staff was a significant reason for New York's present leadership position. For example, a baccalaureate college, community college, and high school--on a tri-level basis--have developed a cooperative program that allows the student to take advanced placement courses in high school that will be accepted for credit in the colleges. A regional learning service in an eleven-county area has been established to encourage the development of cooperative programs between schools and colleges. An external high school diploma will be offered and the necessary resources and counseling for its achievement provided. A private university has developed cooperative academic arrangements with business, industrial, professional associations, and governmental agencies, which allows academic credit for knowledge and skills acquired through on-the-job training, inplant courses and programs, and military educational experiences.

Nondegree credit for off-campus experiences is also an active program in some states. Continuing Education Units (CEU's), developed by the National Task Force on the Continuing Education Unit, are credits earned from workshops, conferences, et. al., which are available to adults. Although not recommended for formal credit, these can become a part of one's total education record.

A military agency called the Defense Activity for Non-Traditional Education Support (DANTES) is another example of an organization serving as a brokerage for a special clientele. DANTES maintains records of service personnel who have taken USAFI, CLEP, and GED

examinations and makes them available to institutions. Since July 1, 1974, this organization has been offering these tests at a nominal charge (Miller and Sullivan, 1974).

Trend IV

Work Experience Applied Toward University- or Community College- Awarded Degrees

Although cooperative (work experience) education began at the turn of the century it has grown at only a moderate rate. The help of funding agencies in the late 1960's gave impetus to the development and accreditation of these programs in community colleges and senior institutions. Transferring such credit from two- to four-year colleges is less frequently practiced. Credit transfer is most easily accomplished when the negotiating institutions already have cooperative education programs, and the directors share common philosophies. Location of the institutions can also be advantageous. Chase (1971) refers to a few colleges which utilize the same employers, so that the receiving senior college can continue transfer students on the same jobs and in similar work study schedules. These arrangements allow the transfer student an advantage equal to that of his "local" competitor--the opportunity to remain three or more years with the same employer.

Other projects include cooperative arrangements between colleges and the Armed Services, private industry, and with unions in the form of apprenticeship programs. All of these efforts are concerned with the transfer of credits earned in work experience education per se. Such interinstitutional arrangements, however, usually grant block credit on an elective or nonadditive basis. When the credit is prenegotiated as a degree requirement preferred elective, the transfer units are then meaningful to the student.

Trend V

Development of External Degree Programs Associated with New or Existing Systems of Postsecondary Education, and Degree Programs Offered by Non-Educational Organizations

Developed partially because of pressure from groups unserved by traditional institutions, the external degree concept, including programs by industry and governmental agencies began to take shape in the late 1960's. Providing options to traditional university models also offers promising solutions to other higher education problems such as student revolts accompanied by high drop-out rates, general distrust of academic traditions, and the worsening budget crisis.

An important development was a nontraditional degree program proposed by the College Entrance Examination Board and the Educational Testing Service, which included a degree to be offered by a national commission called "The National University." Mounting interest led to the establishment of the Commission on Non-Traditional Study in 1971.

A year later, six major models of nontraditional external degree programs were outlined by Valley (1972) in his essay prepared for the Commission. A word about the programs and institutions advocating the plan should point out the potential for change in the traditional practice of articulation and transfer policy.

The Administrative-Facilitation Model is considered the simplest and most common, since an established institution or organization creates a unit to serve a new clientele, but under its pre-existing degree program. The School of General Studies at Columbia University and Australian universities (some of which allow a considerable amount of correspondence study) are examples.

The overseas program of the Los Angeles Community College District is a clear illustration of the administrative facilitation model. In July 1975, the district became the prime contractor with

the federal government to offer community college courses to military personnel who can now earn Associate in Arts degrees or Career Education Certificates in exactly the same manner as in any other of the Los Angeles District colleges. The only admission requirement is the capability to benefit from a course of study.

Transferability of units is also regularized. A maximum of 48 semester units may be transferred into the overseas division from other colleges or universities (Los Angeles Community Colleges Overseas, 1975). Since work provided is considered to be equal in quality throughout the district, overseas credits earned in academic classes are accepted by senior institutions according to districtwide, university articulation agreements. LACC Overseas participates in the Servicemen's Opportunity College (SOC) Program, which includes a high degree of transfer credit flexibility.

Universities and colleges are no longer the only organizations providing postsecondary education. Baccalaureate degrees are now offered by some of the nation's largest corporations, including IBM, General Electric, and AT&T. Proprietary profit-making corporations claim over two million students. The University of Massachusetts recently announced acceptance of a master's degree program in management proposed by Arthur D. Little Corporation, the prominent worldwide consulting firm (Wilms, 1974).

Bell and Howell Corporation, among other industries, has expanded its associate and baccalaureate degree programs to accommodate employees in home study courses. Open admission is practiced in these home study schools as well as in the degree programs, requiring in the latter only a high school diploma or GED certification. Home study students may transfer readily into the resident school six-quarter technician programs. The Bell and Howell effort is unusual in its design since relatively strong credence is given to general education. Baccalaureate degrees offered in electronics engineering

technology at seven or more institutes contain English, communication, and humanities courses amounting to one-tenth of the total degree units and another tenth in economics, management, and other business administration specializations (Doherty, 1973).

The Independent Studies Adult Degree Program of the University of South Florida is an illustration of The Modes-of-Learning Model where a university develops a special program to serve a nontraditional clientele. Independent study, internships, the use of a variety of media, as well as credit for "regular courses" characterize this approach. There is often no time limit for completion of degree work, since studies are individually determined. Other examples include the British Open University, the University-without-Walls sponsored by the Union for Experimenting Colleges and Universities headquartered at Antioch, Ohio, the Open Access Study Plan developed by the Atlantic Institute of Education in Eastern Canada, and the National Urban Studies Program sponsored by the Federal Department of Housing and Urban Development which was also referred to as a "University-without-Walls" (Wachs, 1972).

The latter project, originally planned to meet the educational needs of government employees, has since expanded to include overseas military personnel and special programs for various groups offered by participating colleges and universities. The University of Oklahoma program is the oldest (1964) and the most traditional. Others such as the Central Michigan University model are more flexible academically.

Flexibility on the part of the program manager or coordinator appears to be the key to these "Universities-without-Walls." Interested institutions are encouraged to adopt a highly flexible format perhaps including formal seminars with on-the-job apprentice training and work experience. Cooperating universities are further encouraged to develop systems of credit-by-examination and to allow credit for life experiences. The HUD model and similar programs are serving a catalytic role in furthering the cause of

nontraditional education.

Under The Examination Model the sponsoring organization, such as the University of London or the Regents External Baccalaureate Degree Program of the State University of New York, provides examinations to externally located students under the same specifications as its own campus students. Candidates prepare through institutions offering approved courses and by correspondence.

External degree programs developed by the Regents of the State University of New York are among the most significant in terms of scope, breadth of allowances, and usage. Credit toward a Regents External Degree is considered upon completion of:

1. college courses from regionally accredited institutions of higher learning taken either on campus or through correspondence;
2. proficiency examinations;
3. military service school courses; and
4. special assessment of knowledge gained from experience, independent study, or other nontraditional approaches to education (The University of the State of New York, 1973, pp. 9-10).

These criteria correspond to the rationale for nontraditional learning developed by the American Council on Education and now used as a guide by the Office on Educational Credit. This rationale includes knowledge and competencies gained from: (1) life experiences not associated with formal schooling, employment, military service, etc., (2) educational institutions, including the military and employment, and (3) experiences involving innovational methodology, such as field experiences, and professional or nonprofessional tutoring (Miller, 1974).

An institution or agency which evaluates candidates' total experiences and prescribes further requirements that can be satisfied by a variety of means conforms to The Validation Model. The International University for Independent Study developed by the Academy for Educational Development is an example. Heavy use is

made of CLEP, Advanced Placement Examinations, New York College Proficiency Examinations, and completed military courses.

The Syracuse Regional Learning Service, while not a degree-awarding institution or agency, is an adaptation of the validation model. The center, as envisioned by Bailey and Macy (1974), would serve in an entrepreneurial capacity by providing an assessment of prior experiences and suggesting where the individual might receive formal credit.

The Credits Model, an institution or agency which awards degrees based on nontraditional education experiences, has no American counterpart. A partial equivalent, however, exists in the work of the Commission on Accreditation of Service Experiences (CASE) of the American Council on Education. Recently renamed the Commission on Educational Credit, the newly constituted body continues the responsibilities of CASE in evaluating formal military training programs, formulating recommendations on the use of CLEP, and administering the General Education Development (GED) Testing Service. Through its Guide to the Evaluation of Educational Experiences in the Armed Services (Miller and Sullivan, 1974), the commission continues to provide colleges, agencies, and private employers with information on military courses with suggested credit values. Assessment of military learning is made by course evaluators from educational, professional, and industrial organizations. The credits model is accurately represented by activities of the British Council for National Academic Awards established in 1964 to administer and to award full degrees, including graduate degrees.

In The Complex-Systems Model, a regular degree-granting university may expand its degree pattern by combining one or more of the foregoing types to accommodate a new group. Empire State College, a much publicized institution without a campus which is sponsored by the State University of New York, is perhaps the best known example. Credit for employment, research, community service, or formal work taken on SUNY campuses is available.

Aquinas College in Grand Rapids, Michigan, offers an associate or baccalaureate degree for adults in which life experiences can be translated into academic credits. Named "Individually Designed Education for Adults" (IDEA), the program allows students to receive full credit for showing competency in whatever life experience is significant to them (Trivett, 1975).

The University of California Extended University Program is a statewide plan to serve a new group within the existing degree granting framework. Inaugurated in 1972 as a three-year pilot project, the Extended University, unlike the University Extension Division is fully integrated with the academic university system. All degree programs are offered by regular academic departments or units of the nine campuses, and regular ladder rank faculty are employed as teachers. The "new group" of students defined as "qualified, part-time, older, working Californians," are considered fully matriculated students enrolled on a part-time basis in a particular bachelor's or master's degree program (University of California, Office of the President, 1975). During the 1974-75 year, over 1600 Extended University students enrolled in 23 programs on seven of the nine campuses and at 33 off-campus locations. Many courses are multidisciplinary and multicampus by design. Experimentation with new or modified teaching methods is encouraged, including computer assisted instruction, independent study, and television.

Traditional admissions criteria are used in virtually all of the programs. However, a system for evaluating nontraditional learning experiences has been developed for the Bachelor of Social Ecology offered by the Irvine Campus.

The Extended University has initiated California's first intersegmental learning center as a cooperative venture with the State University and Colleges System. The Ventura Learning Center serves as an off-campus degree program headquarters as well as a counseling center in conjunction with the Ventura County Community

College District. Multimedia instruction is employed for classroom and individual study.

Financing is, again, the most difficult problem. State funding for the Extended University for 1975-76 was not approved by the Governor, leaving the University Board of Regents to find other monies to keep alive this valuable resource.

Another representative of a statewide model is the "open university" planned in 1973 by the University of Wisconsin System. More recently named the Regents Statewide University, its primary goal is to provide college-level study and baccalaureate degrees for part-time adults. In taking advantage of existing educational units in the state, the Regents Statewide University would offer a competency-based program in life studies (emphasizing competencies in nonwork life roles), an advisor network of community-based educational counselors, a research and development unit, and a staff development program. The unit-designed external degrees will be field or professionally oriented.

Competencies for the Bachelor of Life Studies degree are represented by six areas:

1. InterPersonal relationship competencies--group problem solving, team planning, parent-child relationships, etc.;
2. Civic and community competencies--citizenship roles, state government awareness, local government concerns, etc.;
3. Self-development competencies--examination of values, attitudes and beliefs, recreational activities and cultural involvement, etc.;
4. Understanding cultures, nations and ethnicity--comparative social change, international relations, native American culture, etc.;
5. Understanding environmental relationships--environmental degradation, ecosystems, pollution physical resources, technologies, etc.; and
6. Understanding the world of work--culture of work and of class, industrial and labor relations.

production, consumer behavior, etc. (University of Wisconsin System, 1973, p. 28).

While temporarily slowed by curtailments in statewide funding, the University of Wisconsin System may designate one university as the "Regents Statewide University for Open Education" (University of Wisconsin System, 1973 and 1974).

Many educators believe that the greatest effect of the external degree will be its influence on the internal degree. A similar judgment could be made concerning its predictable effect on articulation and transfer practices, particularly when a nonpunitive grading system is employed. At present, the best a transfer applicant can hope for is permission to take equivalency examinations. The pressure of large numbers of people requesting advanced standing in traditional universities, especially those petitioning for credit for isolated courses taken without a degree declaration, will constitute strong motivation for greater flexibility and simplification in transfer acceptance practices.

Trend VI

Alternative Grading Procedures

Alternative grading procedures resulting primarily from the academic unrest of the 1960's are now commonplace in American higher education. Pass/no pass, the most common nomenclature for the new grading system, is now more frequently used in conjunction with a letter grade system than as the only pattern. An AACRAO-sponsored study of almost 1,700 institutions showed in over 1,330 responses that only two percent used an alternative grading system, while half continued a commitment to letter grading, and approximately 46 percent supported both traditional and nontraditional systems (American Association of Collegiate Registrars and Admissions Officers, 1971).

Although nonpunitive grading options have been adopted by many institutions, the degree of usage is limited and often considered

temporary or experimental. At the same time, these practices are not reported to be popular among college and university students. Lack of reciprocity in transferring pass-fail classes from school to school is one of the primary reasons for student reticence. This is particularly true of graduate schools which accept only a limited number of pass-fail options, if any, since in many respects they remain especially tradition-ridden in terms of student evaluation.

According to evaluation experts, criterion-referenced testing is the heart of nontraditional study. Since criterion-referenced measurement is based on task performance at a predetermined competency level, it is pertinent to the individualized character of non-traditional learning. Strict adherence to levels of comparison rather than to individual degrees of accomplishment continues to meet with strong student and faculty resistance. The individuality of nontraditional programs demands explicit evaluation criteria. (See Cohen, 1969 and Warren, 1974.)

Until both sending and receiving institutions shift from arbitrarily-established goals to a competency orientation, non-traditional programs will have difficulty developing on a sound and lasting basis. Only then will transfer of such credits cease to be a hit-or-miss situation.

Trend VII

Expansion of Multiunit Systems

Rapid expansion of multiunit systems of higher education characterized the past decade. While somewhat curtailed at present by lagging capital for construction and static enrollments, the trend toward larger and larger clusters of institutions united, more or less, under a single administration continues. Since 1960, California alone has formalized an enormously complex system of centrally governed state universities and colleges and eight comprehensive campuses of the University of California. In addition,

the community college system created a record number of multiunit districts and new colleges in a decade and a half, to a current total of 20 districts comprising 49 separate institutions.

Although this governance pattern is found in a wide variety of settings, its expansion is most rapid in the dense urban centers of the country. The major problems of multiunit systems are similar to those of big city government--problems of communication, diminishing local autonomy, and centralized decision making.

A report published several years ago in The Chronicle of Higher Education prepared by a federally initiated panel described the multiunit organizational style as a pressure that has ". . . accelerated the trend to homogeneity, diminished the sense of campus identity and solidarity, eroded the role of the president, encouraged the rise of system-wide interest groups, and set the stage for the politicizing of the university" ("Proposals for Higher Education By Federally Initiated Panel," 1971, p. 6).

Difficulties inherent in this style tend to complicate smooth articulation and transfer. Poor communication between the central office staff and the unit leadership, as well as unit faculties, often results in ill-defined responsibility for articulation. Conflicts in interest are generated when system policy impinges on the individuality of units.

Similar difficulties confront accrediting agencies and articulation committees. Like accreditation, the process of articulation is most effectively applied to institutions rather than systems. Just as regional or state accrediting agencies concentrate on individual campuses within systems, so should articulation committees or commissions focus on the local units. While broad district or system policy should outline the extent and limitations of general articulation agreements, the primacy of institutions must prevail to avoid confusion and delay in making decisions on transfer cases.

Interinstitutional relationships are particularly important in

major field articulation so long as campus faculties retain the privilege of specifying their own requirements. The concept of faculty responsibility for developing major field curricula is deeply engrained. Since such decisions remain with the faculty, they should necessarily be heavily involved in policy determination.

For example, negotiation on major field (upper division) requirements is between UCLA departmental representatives and similar groups at Los Angeles City College, not between the administrative staffs of the University of California system and the Los Angeles Community College District. In matters of general education (lower division) and many major prerequisites, the system staffs are much more visible. The formation of guidelines for course and credit transfer through a centralized representative agency is primarily an institutional matter.

The development of the cluster college concept has complicated the articulation and transfer process. Common elements associated with multiunit systems support the contention that transfers are an institutional responsibility, not the mission of the central administration whose work should be focused on developing and coordinating guidelines of district-wide or university-wide significance. Internal clusters of institutions within multiunit systems confuse the articulation process through unit individuality and decentralized responsibility. For example, Evergreen College, one of the recent additions to the community college "cluster family," is actually a new college within an established multiunit district--San Jose Community College District, California. Again, the cluster concept is contained within the one campus of the district. Each of four centers offers both occupational and academic curricula, including general education. Rather than an administrative realignment, the change is focused on curriculum and instruction. According to the superintendent:

"Instructors of varying disciplines and occupations are housed together, work together, get to know and understand one another, and consequently have

as their major focus institutional rather than departmental goals. The design of the cluster is sufficiently flexible to permit change and modification in both structure and program with relative ease.

The concept also facilitates movement away from compartmentalized knowledge and toward interrelated knowledge. This is more apt to occur when instructors of various disciplines communicate with one another rather than with instructors teaching the same course" (Harper, 1975, p. 4).

Receiving institutions will predictably be concerned that the interest in integration of ideas will result in the mixing of academic and career courses, and that programs will be launched quickly without full communication.

A decade earlier, the Santa Cruz campus of the University of California opened as a series of undergraduate liberal arts residential colleges. Designed to be the center of undergraduate life and the focus of faculty attention, the colleges (now numbering eight) from the beginning have held to articulation and transfer procedures differing considerably from the other university campuses. In the spirit of a cluster arrangement, Santa Cruz maintains a nonpunitive grading system which, in itself, requires a different articulation understanding. Greater flexibility is also maintained in the acceptance of community college general education courses.

To facilitate the development of the Santa Cruz campus, as well as the San Diego and Irvine campuses, university-wide articulation and transfer guidelines were developed to allow a greater degree of campus autonomy.

Experimentation is closely associated with the cluster concept. Johnston College, opened as the first cluster college of the University of Redlands, is a clear example. Recognized for unorthodox procedures with all college consensus decision making, faculty-student learning contracts, and a written evaluation system, the college faced articulation problems similar to UC Santa Cruz as a sending rather

than a receiving institution. Students applying for admission to professional schools, especially medicine and law, will undoubtedly experience difficulties resulting from the conservative posture of graduate professional education. As a partial accommodation, Johnston College students are allowed to elect grades, a pass-fail system, or written faculty evaluation. Those destined for the "high professions" would be advised to choose the letter grade option (Watkins, 1975).

Whether a single or multiunit organization, larger and larger numbers of students are beginning their lower division work in two-year colleges. This in turn could lead to the expansion of upper division universities. These developments suggest the increasing importance of the relationship of two- and four-year college curricula.

Trend VIII

Creation of Upper Division or Upper Level Universities

Upper division or upper level universities represent, at least potentially, an organizational solution to the transfer problems between the community college and the university. Limited to the final half of the baccalaureate and often including the master's degree, these institutions theoretically eliminate some articulation and transfer problems, notably preassociate in arts degree articulation. In areas where this administrative style is developing, community colleges carry 100 percent of beginning collegiate students, sending on only those completing associate degrees. While this presents a comfortable answer on-paper, the major field problems of when to begin it and the dividing line between general and specialized education are still unsolved.

Rigidity of the early upper level universities, in Florida for example, in terms of majors offered, was a primary reason for very small enrollments. Vocational interests of community college transfer applicants were apparently underestimated. Practically no occupational majors were provided, and as a consequence, there

were initially small enrollments for the first group of Post-World War II upper level institutions.

This was admittedly the situation at Florida Atlantic University which opened in 1964 with approximately one-third of the anticipated enrollment (Wimberly, 1970). A consistent growth pattern was, however, established with the development of new applied baccalaureate curricula, special recruitment procedures, scholarship programs, and other corrective measures. Twelve years later, Florida Atlantic is thriving with a total enrollment of approximately 7,200.

Most recently established upper level institutions have profited from these experiences. Minnesota Metropolitan State College circumvented similar difficulties by instituting close student advisement and maintaining maximum flexibility. Students once admitted are immediately assigned to a small orientation group, and on a mutual interest choice basis, are provided a permanent counselor-advisor. Educational contracts specifying an entire baccalaureate program or subcontracts covering only a portion of the degree are student initiated and developed. The student is encouraged to think of both off-campus leisure time activities and work as learning situations. Community resource people may be recruited as guidance professionals. Similar flexibility continues through performance assessment examinations which are also student initiated. If the narrative evaluation is not successful, the student continues on an in-progress basis (Sweet, 1970).

While not without problems inherent in its highly flexible approaches, Minnesota Metropolitan State College and others like it with dispersed faculties and without central campuses, are organized to meet the demands of the growing group of nontraditional students. Instant popularity with that special clientele is assured as long as the senior institution continues its flexible stance.

Time sequencing of a higher education system as a two-plus-two pattern is being attempted in the Canadian province of Quebec. A new level of education between high school and university was

established in 1967 primarily as a result of the Royal Commission Report, popularly referred to as the Parent Report named after its chairman, Alphonse-Marie Parent. All secondary school (grade 11) graduates who desire further education must first enroll in a College of General and Vocational Education called CEGEP. These comprehensive colleges offer two years of general studies leading to the university degree and three years of professional and technical education leading directly to work. They also provide adult education and are specifically charged with making available regional and province-wide retraining and continuing education opportunities. With the creation of the CEGEPs, universities in Quebec automatically became upper division and graduate institutions.

The new organizational pattern is, again, not problem free. Shifting in the two-track CEGEP program from vocational to academic, rigidity of prerequisites in certain university majors, and the current lack of facilities continue to cause difficulties.

An upper level university which honors only the academic preparation offered by nearby community colleges will serve only a portion of the transfer applicants.

Trend IX

Curricular Diversity in All Types of Institutions

Increasing curricular diversity primarily in occupational course options at both the associate and baccalaureate degree levels opens opportunities in semiprofessional areas and extends the range and depth of others. Articulation is obviously less difficult where baccalaureate degrees are developed to build on basic course work provided by community colleges and technical institutes. The continuation of vocational-technical curricula which demand more than two collegiate years of training is occurring in a host of states. Examples of such cooperative effort are found in Colorado (where blocks of 90 hours may transfer), in Delaware

(consortium on occupational teacher education), in North Carolina, New York, Ohio (the Associate of Individualized Study degree), in Oklahoma, Oregon, Texas (most recently in Law Enforcement), in Virginia and Wisconsin (where as in several other states, associate in applied or technical arts degree work is specifically tied to baccalaureates).

Special mention should be made of the "Arizona Higher Education Course Equivalency Guide" developed in 1974 by the Higher Education Coordinating Council, a volunteer, cooperative group of institutional representatives. Contained in the "Guide" are separate course equivalencies for all public two- and four-year colleges in the state for approximately 400 curricula, the majority of which are classified as occupational. Since the senior institutions in Arizona (although to a lesser extent, the University) offer a number of occupational-subject baccalaureates, credit transfer in such curricula is relatively diversified. A computerized version of the document will undoubtedly replace the printed edition with the growth of institutions and curricula.

Wider understanding of process, mutual respect for institutional missions, and a general direction for articulation and transfer have been important by-products of the statewide venture in Arizona.

Expansion and diversification of curriculum in sending institutions unfortunately complete the process of direct and simple course and credit acceptance. Unless accompanied by close watch and consistent communication, new courses initiated by community colleges, particularly occupational and interdisciplinary types, are suspect. Their presence in a community college catalog without thorough justification can mean the loss of reputation and diminished opportunities for transfer students. Communication between the segments of a higher education system is the key to lasting success.

Trend X

Improved Computer Technology Applied to the Processes of Articulation and Transfer

As indicated in Trend II, technological advancement with the capabilities of current electronic television, radio, or cathode ray tubes, and certain high volume telephonic devices may further revolutionize articulation and transfer processes, especially admission decisions and guidance counseling. An expanded use of computerized systems such as the SIGI (System of Integrative Guidance and Information) developed by the Educational Testing Service could improve secondary and postsecondary articulation in a variety of ways. For example:

1. Computerized record keeping of student data would greatly improve communication in terms of information depth, accuracy, and timing.
2. School catalogs could be computerized for easy access. Increasing the accessibility of community college and technical institute catalogs, for example, would broaden the transfer potential of occupational curricula.
3. Computerizing a standardized grade reporting form could hasten acceptance.
4. Services, particularly counseling and advising, would be immeasurably strengthened with computerized institutional catalogs, information bulletins, and other materials.

Technology today is sufficient to correct the communication lag in exchanging information on various articulation activities and to account for irregularities now associated with nontraditional education. General acceptance of certain basic definitions is necessary, however, before organizational decisions can be considered. While it is technically possible to program variations in institutional

curricula for immediate exchange, the resulting knowledge would not reduce the enormous complexity of the material so easily and quickly distributed. Certain aspects of the articulation process could be improved, such as counseling, advising, and placement. But admissions, curricular articulation, and other services and practices related in particular to the nontraditional student would probably not be helped.

Experts in the educational application of computer systems widely support the expansion of well coordinated data banks. At the same time, however, they stress the importance of a continuing dialogue between professional educators and experts in automation. Bushnell and Allen, for example, conclude that "Only through such a dialogue can the educational applications of technology be motivated not by what is merely efficient and ethically neutral but by what is meaningful and good" (1967, p. 238).

Information on the mobile student is, without doubt, a priority need. The development of a nationwide information linkage has merit as a technique to bridge the information gap. In a growing number of transfer applicant cases, particularly in those requesting acceptance of nonclassroom learning experiences, the traditional transcript is simply inadequate to record the diversity of learning experiences now officially available, and to account for other components not part of the present system, such as nonpunitive grading nomenclature, flexible time sequences, and irregular enrollment periods. Information in enough detail to satisfy potential employers is in great demand.

Complex and versatile computer networks are maintained in several states. The PLATO network system of the University of Illinois links schools and colleges. A multimedia communication network developed by the Indiana Higher Education Telecommunications System serves higher education in the state with educational and public service programs. A credit bank is available in New York to individuals wishing to consolidate educational units. Sponsored by the Regents of

the University of the State of New York, this system is proving to be of value in employment applications as well as educational situations.

These examples indicate the giant strides recently taken by communication technology and suggest that record manageability, long an embarrassment in higher education is successfully operating for specific purposes such as library systems at regional centers across the country.

Only a few need be mentioned to glimpse the potential technology for serving the itinerant student. These include the Western Data Processing Center at UCLA, the New England Education Data System, the Phoenix General Electric Center, the MEDLARS system created by the National Library of Medicine and other university information learning resource centers, the extensive network of schools linked through Project TALENT, and the educational consortium, INTER-COM, organized about ten years ago by the University of Michigan.

The development of the federally-sponsored system of ERIC Clearinghouses which feed a constant flow of microfiche abstracts into the master data bank is the most graphic illustration of an operating plan available to serve all classifications of transfer students through a nationally-coordinated retrieval system.

Trend XI

Greater Attention to Community College-High School Articulation

Improvements in articulation relationships between community colleges and high schools are widespread. Examples of relatively new concurrent enrollment programs can be found in such widely separated states as Hawaii, Illinois, New York, and North Carolina. In Florida 10,000 high school students took advantage of acceleration opportunities provided through a wide variety of programs including dual enrollment and advanced placement by examination, and job entry. Similarly, California's joint enrollment plan based on 1965 legislation also permitted up to 15 percent of the state's eleventh-

and twelfth-year students to take one or more classes in the nearby community college. Both institutions, according to law, collect state attendance money. The detail of the financial arrangement varies from state to state.

The strong ties between high schools and junior colleges automatically established with the unified district system tended to disappear as independent college districts developed. In many areas, smooth curricular, counseling-advising, and admissions articulation of the district schools relationship were replaced by impersonal policies. This shift, accompanied by a change in attitude often status oriented, weakened the relationship.

Improvements resulting partially from a recognition of student need should be recognized. Community college and university ombudsmen are becoming quite common, and in states where these or similar groups such as admissions or student personnel officers are most closely organized, communication with high schools is best. Those in search of ideas to enhance this relationship should research organizations in the following states:

1. California--the work of college relations officers in all three segments of the public higher education system;
2. Florida, Hawaii, and Illinois--activities of state ombudsmen organizations;
3. Georgia--activities of PROBE, a subgroup of the Georgia Educational Articulation Committee that sponsors counselor workshops and regional educational fairs primarily for high school students;
4. Iowa's outreach component called "transfer student straight talk" and Maryland's transfer booklet series, both works of university articulation officers;
5. Michigan and Washington--liaison committees on high school, college relations;
6. New York--11 county area cooperation programs between high schools and community colleges;

7. North Carolina--statewide activities between the elementary-secondary and technical institute-community college systems; and
8. Oregon--a master list of departmental "transfer troubleshooters" or chief advisors furnished high schools and community colleges by the university system (Kintzer, 1972, pp. 1-3).

Other community college efforts to extend communication with high schools have been reviewed. The "articulation aides" training program at Miami-Dade Community College (Florida) was reported by Smith (1970), approaches to improve "articulation downward" were described by Lewis (1970), and the career program articulation Plan developed in Los Angeles was outlined by Simonds (1971). These suggest that there are almost as many techniques in articulation and transfer as there are high schools, community colleges, and technical institutes.

One of the most enterprising statewide plans for secondary-post-secondary articulation is developing in Wisconsin between the high school and vocational, technical, and adult education districts. Recommendations of a joint committee issued late in 1974 emphasize the importance of departmental action involving all instructors at both types of institutions in articulation activities. This includes communication networks, inservice workshops, joint curriculum development projects, and the sharing of resource materials. Initially designed to promote unity of vocational agriculture education, recommended strategies are being applied to a variety of vocational-technical fields.

North Carolina is one of the few states which allocates state funds for community college-technical institute articulation activities. In order to qualify, programs must be coordinated with local public school officials. Examples include subject articulation, joint plant utilization and sharing of equipment and material, and improvement of public relations at both institutional types. The availability of state money is a strong motivator in launching

cooperative articulation.

Who should begin the articulation process, high schools or colleges? Joint efforts are necessary. Committee membership would obviously be contingent on the particular process. Admissions officers consult with faculty in dealing with credit transfer, subject matter specialists deal with curricular articulation, and counselors work out orientation programs. Intersegmental meetings at regular intervals between high school and community college districts are vital to the continuation of communication.

Epilogue

As higher education systems, both public and private, determine to improve articulation and transfer relationships, the fundamental question is: What policy and procedural changes are necessary to better accommodate the needs of students who wish to transfer from one institution to another? Other questions must also be addressed:

1. What policy and procedural adjustments are required to place the transfer student on an equitable basis with the native student?
2. What are the roles of state government and regional, state, and federal agencies in achieving such equitability?
3. What are the roles of specialized associations and organizations?
4. What responsibilities should be retained by the institutions?
5. What techniques can be adopted by both sending and receiving institutions to assure the itinerant student full information concerning the articulation and transfer process, and help him in understanding the environment in which he hopes to be studying?

6. How can competencies other than academic ability be realistically measured, evaluated, and translated into credit systems?
7. What alternate routes to degrees and certificates are worthy of serious consideration?
8. How can improvements in interinstitutional and interstate cooperation be accomplished?

The education profession is under heavy pressure to establish uniform equal access and opportunity to allow students to pursue individual goals in higher education. The transfer ranks high on the list of student types least adequately accommodated. The point of view taken here is that professional educators employed by institutions are best able to determine how to make such improvements. While statewide guidelines and state agencies are necessary for direction and continuity, authority for policy determination and implementation should remain with institutions. An articulation agreement should be developed as a joint venture involving wide participation of educators and noneducators in good faith, cooperation among planners of the pact, and ultimately the understanding and support of those who work directly with students.

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