DOCUMENT RESUME

ED 083 943 HE 004 819

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TITLE A Global Approach to Higher Education.
INSTITUTION International Council for Educational Development, New York, N.Y.
PUB DATE Apr 72
NOTE 23p.; Occasional Paper No. 3

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Educational Administration; Educational Innovation; Educational Planning; *Higher Education; *Interinstitutional Cooperation; *International Programs; *Post Secondary Education; *Universal Education

ABSTRACT

Various considerations for a global approach to higher education are discussed. Emphasis is placed on the certainty of further growth, new problems and deficiencies of existing systems, and the search for new structures. Although global or integrated planning of post-secondary education is stressed, it does not imply global control. Rather, mechanisms which can coordinate and orient effectively the various components of the structure in view of desirable goals without generating a manifest or latent control leading to uniformization rather than to flexibility and to an increased capacity for change and innovation are necessary. (MJM)

A GLOBAL APPROACH TO HIGHER EDUCATION

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Library of Congress Catalog No. 72-77599
Printed in U.S.A. April 1972

The New Preoccupation (1)

Future historians might possibly view the development of higher education during the period 1950 to 1970 as having been dominated by three major preoccupations: quantitative expansion, reform of individual institutions and/or of specific aspects of higher education, and reform of the higher education system as a whole. To some extent, these three preoccupations can be said to have appeared consecutively during this period. The fifties and early sixties were marked mainly by the "explosion of numbers"; the early sixties represented essentially a period of new institutional creations and of sometimes radical partial reforms (of teaching content and methods, of organization and governance in various institutions, among others); in the late sixties some decisive steps were taken toward a global planning approach to the system of higher education.

There is, of course, overlapping between the three stages. But it can probably be said, with some degree of simplification, that these are the three themes which appear one after another in discussions, headlines and policy deliberations concerning post-secondary education during the period 1950 to 1970.

It is the third theme—the reform of the higher education system

(1) This paper has been prepared principally on the basis of information gathered within the framework of the higher education program of the Organization for Economic Co-operation and Development. To a great extent it represents the author's preliminary synthesis and interpretation of the conceptual framework and main findings of this program, to which several members of the Organization as well as a number of national official or private bodies collaborating with the OECD Secretariat contributed. The paper takes also into consideration some of the comments formulated in the discussion of its first version submitted to the annual meeting of the Trustees of the International Council for Educational Development at Williamsburg, Virginia, April 18-21, 1971.

The following are the available published or unpublished OECD documents on which this paper mainly draws:

—*Development of Higher Education, 1950-1967, Statistical Survey*, Paris, 1970.

—*Development of Higher Education, 1950-1967, Analytical Report*, Paris, 1971.

—*Towards New Structures of Post-Secondary Education: A Preliminary Statement of Issues*, Paris, June 1971.

as a whole—which will be considered here. In many ways, it constitutes a response to the challenge and failures of the previous stages.

Numerous concrete examples of this new trend can be given: "Gesamthochschule" and "Gesamthochschulplanung" in Germany, the concept of University Centers in Denmark, state-wide planning in the United States. Even where no words have been invented, the issue is a burning one. Hence, discussions on the binary system and "transbinary mechanisms" in the United Kingdom, as well as arguments and philosophies behind the launching of new types of post-secondary institutions—District Colleges in Norway, University Institutes of Technology in France—reflect to a great extent the dominating preoccupation: the development of a multipurpose structure, the components of which should be linked in a more organic and sensible way than they have been in the past.

Inevitability of Further Growth

In addition to well-known causes such as rising income of the population (and the high income elasticity of the demand for post-secondary education), scientific and technological progress, three important growth potentials can be identified in most industrialized countries as a result of a comprehensive statistical survey undertaken by OECD (2):

(a) In spite of the considerable growth rates of the late fifties and early sixties (some 10% per annum as an average for the OECD area as a whole, with 14% to 17% in five countries) (Table 1), *the proportion of the age group enrolled in higher education is still relatively low* in the majority of countries. Measured crudely, by relating the total number of students to an age group corresponding to the age span of the majority of students in the respective country, the average European ratio in 1968/69 was 10.5% (with a range of 4.4% to 16.9%) as against 3.8% (ranging from 1.0% to 5.2%) in 1950 (Table 2). The United States ratios for the same years were 35.0% and 16.8% respectively. If a more sophisticated indicator is used, it appears that in none of the European countries are more than 13% (and in most countries 5% to 7%) of people of a given single age enrolled in higher education, as against over 30% in the United States. This means that the demographic potential is far from being exhausted—even in the United States and a *fortiori* everywhere in Europe.

(2) *Development of Higher Education 1950-67, Statistical Survey and Analytical Report*, op. cit.

TABLE I

GROWTH OF ENROLLMENTS IN POST-SECONDARY EDUCATION

Country	Enrollments (1955 = 100)			Enrollment ratios (1955 = 100)		
	1960/61	1965/66	1968/69	1960/61	1965/66	1968/69
Austria	201	255	259	150	213	277
Belgium	136	219	260*	148	204	254*
Denmark	148	238	300*	143	178	202
Finland	141	241	350*	129	185	255*
France	132	243	327*	145	208	232
Germany	167	210	240*	132	189	205*
Greece	136	278	362	147	342	405*
Ireland	139	174	270*	159	174	217
Iceland	104	147	181	...	...	...
Italy	128	191	247*	134	212	244
Luxembourg	141	214	260	...	...	...
Netherlands	149	216	260*	142	165	173
Norway	168*	380*	458*	161*	281*	303*
Portugal	134	196	246	147	212	335*
Spain	125	216	265*	146	231	273*
Sweden	147	285	455	137	200	268*
Switzerland	142	214	240	122	147	158*
Turkey	180	266	370*	177	246	338*
United Kingdom	141	212	271	138	170	214*
Yugoslavia	202	266	331	210	317	397*
Canada	176	327	464*	168	233	346*
Japan	117	178	245*	114	169	199*
United States	135	208	260	123	149	166

* Estimate
Source: *Towards New Structures of Post-Secondary Education, op. cit.*

(b) The analysis shows that so far the factor which had the biggest direct impact on the quantitative expansion of higher education has been the *increase in numbers of secondary school graduates*. Growth at this level was considerable everywhere but, again, in most countries the proportion of the age group involved in secondary education has remained well below 50%, which implies another considerable potential for future expansion. Moreover, it can be shown that those entering university education were, in the majority of cases, almost exclusively

TABLE 2

APPROXIMATE ENROLLMENT RATES FOR ALL HIGHER EDUCATION

Country	Age groups	1950/51	1955/56	1960/61	1965/66	1968/69
Austria (1)	19-24	. . .	3.0	4.5	6.4	8.3
Belgium	18-23	4.0*	5.4	8.0	11.0	13.7*
Denmark	19-25	5.0	5.4	7.7	9.6	10.9
Finland	19-24	4.2	5.5	7.1	10.2	14.0*
France	18-23	4.8*	6.0	8.7	12.5	13.9
Germany	20-25	3.8	4.4	5.8	8.3	9.0**
Greece	18-24	. . .	1.9	2.8	6.5	7.65*
Ireland	18-22	3.9*	4.6*	7.3	8.0*	10.0*
Iceland	. . . .	. . .	. . .	. . .	. . .	. . .
Italy (2)	19-25	4.2	4.1	5.5	8.7	10.0
Luxembourg (3)	20-25	. . .	. . .	3.8	6.1	. . .
Netherlands	18-24	4.4	5.2	7.4	8.6	9.0
Norway	19-24	3.4*	3.1*	5.0*	8.7	9.4*
Portugal	18-24	1.4	1.7*	2.5	3.6	5.7**
Spain	18-24	. . .	2.6*	3.8	6.0	7.1*
Sweden	20-24	4.8	6.3	8.6	12.6	16.9**
Switzerland	20-25	4.5	4.5	5.5	6.6	7.1**
Turkey	18-23	1.0*	1.3*	2.3	3.2	4.4**
United Kingdom	18-22	5.2*	6.3*	8.7	10.7	13.5*
Yugoslavia	19-25	2.7	2.9	6.1	9.2	11.5**
Canada (4)	18-23	6.5*	8.1	13.6	18.9	28.0**
Japan	18-22	4.9	7.1	8.1	12.0	14.1
United States	18-23	16.8	21.1	25.9	31.4	35.0

(1) Austrian students only.
(2) 1951, 1956, 1961 and 1966.
(3) 1960 and 1966.
(4) 1951, 1956, 1961 and 1965.
* Estimate of enrollments.
** Estimate of age group.
Source: *Towards New Structures of Post-Secondary Education*, op. cit.

graduates of general (academic) secondary education. The trend is clearly against maintaining this privileged position for one type of secondary education and many countries have introduced, in the past few years, various reforms allowing access to the university for graduates from a wider range of secondary schools. So far these reforms have not had any major quantitative impact but as the objective of the democratization and

generalization of secondary education, which lies behind these objectives, is increasingly realized, the growth potential here will remain the determinant factor in shaping the future expansion of higher education. Similarly, "second routes" to higher education, although open theoretically in several instances, have, with the exception of two or three countries, also been quantitatively negligible. Once they become really effective, together with the growing demand for adult education and manpower retraining schemes, the pressure of numbers on institutions of higher education cannot but increase very substantially.

(c) Finally, considerable growth potential derives from the existing *inequalities of educational opportunity*. Thus, for example, female participation in higher education increased considerably almost everywhere during the period 1950 to 1967, the average participation rates having gone up from 22.4% to 29.3%. But there is still, in the great majority of countries, a wide gap between male and female enrollment ratios, the latter representing in most cases one-third to one-half of the former. It is unlikely that the recent trend toward diminishing such inequalities of access by sex will be reversed in the near future, and this means additional candidates for entry into post-secondary institutions. A similar and potentially even more powerful source will result from increased efforts to reduce the observed disparities in the participation of different socio-economic, ethnic and regional groups in higher education. (Students from the lower social strata do not represent more than 26% of university enrollments even in the best cases, and in many European countries the percentage is still around 10, while these strata constitute up to 50% of the population.)

These considerations concerning the existence of important growth potentials are corroborated by a number of recently published national projections; they all show a distinct trend toward further expansion albeit, sometimes, at a rhythm that is expected to be slower for the seventies than for the preceding decade. Projections were, of course, never very precise, but practically all those made in the fifties and sixties represented underestimations.

What shape the future growth curve will take is open to question, but it seems important to draw attention to some of the findings arising from the study of expansion patterns of higher education in OECD countries in the period 1950 to 1967. This study reveals little correlation between actual growth rates and most of the factors usually expected to influence growth. There is, for example, no apparent relation between the level of national income and the rate

of expansion of higher education; both Greece and Sweden are among countries with the highest rates and Switzerland and Spain among those with the lowest. Nor is the rate of expansion determined by the levels already achieved so that a certain flattening of the curve could be expected once a given point is reached. Even less can it be assumed that the enrollment growth rates follow actual rates of economic growth. Moreover, no correlation can be established between the rate of expansion of enrollments and the level of the scientific and technological development of the country, nor even between trends in enrollment growth rates and those in public expenditure on higher education. Perhaps even of greater significance is the limited role played by the demographic factor, which in the majority of countries contributed to not more than 20% of the expansion of higher education and in several cases was even nil (the age group having diminished).

The independence of growth of enrollments in higher education vis-à-vis economic or other social variables has been paralleled by a more or less similar degree of resistance to variables in educational policy as such. Thus, for example, no significant correlation can be established between enrollment growth rates and the degree of selectivity of the higher education system. Systems reputed as highly selective have often had the same or even higher rates of increase than those which give automatic access to every secondary school graduate. Similarly, the existence, absence, or the level of student fees seems to have little or no relation to the rate of expansion of the system as a whole; and there is no evidence either that the introduction of student grant schemes had any significant effect on the overall rate of growth.

This seemingly "unrelated" or arbitrary nature of higher education growth patterns hides probably more complex relationships which available figures and existing statistical or analytical techniques do not yet identify. However, so far, most industrialized countries were and are facing an expansion which has a high degree of "internal dynamics", "spontaneity" and autonomy. Such an expansion is obviously considerably more difficult to control or orient than one where the factors and interrelationships are well known.

New Problems and Deficiencies of Existing Systems

The nature of most of the problems which higher education has to face today are radically different from those encountered in the

past stages of its development. These new problems have been defined in a recent OECD document as follows (3):

"(a) society expects higher education to fulfill a much *larger and varied number of functions* than those assigned to it in the past; its value and goal structure is, therefore, expected to be different from the value and goal structure of the traditional higher education systems;

(b) the demand for higher education has led not only to a massive expansion of enrollments, but also to a change *in the clientele* of higher education, i.e. to a considerably increased variety and greater heterogeneity of aptitudes, abilities, motivations and expectations of students with regard to their future education, professional careers and life in general;

(c) the role of higher education as a *key factor of production* in terms of economic theory becomes progressively more important than the role of capital, in the same way as in the 19th century the latter replaced land;

(d) higher education, by the sheer mass of the resources it requires in budgetary and personnel terms, is assuming a *political weight* incommensurate with its traditional role."

In most countries, and especially in Europe, the prevailing structures of higher education do not and cannot respond to these problems simply because they still, more or less, reflect an elitist concept of higher education, the main characteristic of which seems to be its insufficient diversification. Practically this means that they offer only a small number of possibilities of access (usually through a single specific type of secondary school), only one or a small number of patterns of study (with respect to duration, types of attendance, kinds of degrees awarded), and a relatively small and rather rigidly fixed number of fields of study.

This homogeneity is obviously in contradiction with the wide range of abilities and motivations of the extended student population which the expansion of the past years brought about, as well as with the considerably increased diversity of skills and qualifications required by modern economies.

In practice all systems have, of course, developed a certain degree of differentiation. New institutions providing post-secondary education in new fields, with different access conditions and/or of different duration than in universities, were set up everywhere, either by

(3) *Towards New Structures of Post-Secondary Education*, op. cit., pp. 27-28.

upgrading former secondary level schools or by the creation of new institutions. But almost everywhere this differentiation led to a split in the system into two more or less isolated parts—the "noble" (university) and the "less noble" (nonuniversity) sectors of higher education—and to new inefficiencies and rigidities. A few examples will illustrate some of the consequences of this split and the resulting inefficiencies and rigidities:

(a) None of the systems really ensure or sufficiently develop *equality of opportunity*. In spite of the rapid quantitative expansion of the last 15 years, students from lower classes as well as students from other underprivileged groups (in particular ethnic or regional) of the population continue to be heavily underrepresented in total enrollments. In countries where universities are rather selective—e.g. in the United States and the United Kingdom—the less-favored groups, to the extent that they have increased their participation rates, have done so mainly by entering institutions with less stringent admission requirements or created especially to cater to them. This, however, has strengthened the institutional dichotomy, producing lower-class establishments on the one side and upper-class ones on the other. The drawbacks of this situation are at least partly attenuated in systems which allow transfer of students from one sector to another, as is the case between the U.S. community colleges and universities or four-year colleges. However, this is so to a very limited extent only in most of the European systems. And even in the United States, the student bodies in universities on the one hand and in junior and community colleges on the other reflect clearly a differentiation by social origin. Upper classes are more represented in the former and lower classes in the latter.

(b) None of the existing systems seems to respond adequately to the requirements of modern societies for a wide and sufficiently diversified range of *qualified manpower*. Historically, the nonuniversity sector grew up in order to provide qualifications and skills for which university education was of too high (and too theoretical) a level and secondary education of insufficient level. Difficulties arise from two developments. On the one hand, in most countries the nonuniversity sector probably did not grow rapidly enough, particularly in certain new fields of study; this resulted in a rather paradoxical situation, especially in continental Europe where nonuniversity institutions are, in general, more selective than universities. On the other hand, the social prestige of the nonuniversity institutions did not increase sufficiently (with the exception of two or three countries) to relieve the pressure of demand from universities. This was probably due to a combination of too great a salary differential between

university and nonuniversity graduates, of status considerations attached by the majority of students to traditional university education (where, in addition, admission might be easier), and of the "blind alleys" nature of the nonuniversity establishments as perceived by students and their parents. As a result, most of the higher education systems, although expanding up to twice as rapidly as the respective economic systems, were rarely able to provide the appropriate mix of qualifications with respect to both levels and fields of study.

(c) Almost all higher education systems are facing great *financial difficulties*. It may be that these are more of a political than a technical nature and that the proportions of GNP and the public budget allocated to education (and, within, to higher education) can still be considerably increased, as they have been in the past, provided that society (through its legislative and executive machinery) insists on an increase. The fact remains, however, that the two trends witnessed almost everywhere during the last 15 to 20 years—rising enrollments and rising unit costs—leading in Europe to an average annual increase of expenditure on higher education of some 10 to 15 percent, cannot continue indefinitely, and that better utilization of available resources is now urgently required. However, the disarticulation of the present systems as developed by historical chance, usually as an uncoordinated response to formal and informal pressures of all kinds, makes this better use of resources very difficult. Common use of equipment, full utilization of buildings, sharing of teachers, three- or four-term (12-month) academic years, and other measures can provide savings, but they would have to be undertaken on a much larger scale in order to have any real impact; especially they would have to be applied between institutions of different types and levels where pooling and coordination, up to now, have been almost nonexistent despite their complementary function and, often, their geographic proximity. More recent research has shown that even if all these conditions were fulfilled, these savings, though real, would be of a limited nature only and would not prevent the continuing rise of unit costs. Substantial economies of resources can be achieved only through more profound structural reforms such as the shortening of the length of studies, an interpenetration of formal education and work experience, a greater effectiveness of short-cycle higher education. But again, these measures cannot be implemented in a disarticulated and rigid system in which the value structure of elitist higher education prevails.

(d) None of the existing systems seems able to ensure *flexibility and the necessary capacity for change*. Innovations have been

introduced during the last years in all systems through the creation of new universities and through reforms of specific aspects of higher education such as teaching methods, the degree structure, or the decision-making procedures in one or several institutions. But almost nowhere have these partial innovations affected the system as a whole; at best they have remained isolated; more often they were absorbed and neutralized by the traditional system. This resistance to the diffusion of innovation is due to many factors, but there can be no doubt that the existing structures, which limit mobility of finance and mobility of students and teachers, also limit the receptivity to innovation. The "noble" institutions have an almost natural tendency to ignore or neglect innovations introduced by or through the "less noble" establishments and the latter, even when innovating at the outset, tend to imitate the prestigious (in most cases traditional) institutions, and thus to discard their initial innovative character.

These and other deficiencies apply, of course, in varying degrees to different countries, but hardly any is exempt from their impact. Even in the United States, where enrollments have reached by far the highest level, and where quantitatively mass higher education is a reality, important structural reforms are necessary. Indeed, it may come as a surprise to realize that higher education of a country with a 45% enrollment ratio often faces the same problems and difficulties as countries with 10% ratios. Clearly, growth alone, indispensable and unavoidable as it may be, is only one of the aspects and conditions of mass higher education. It remains true, nevertheless, that in many ways the United States (and a few other countries) have a system which facilitates the advent of mass higher education structures. In fact, elements of such structures have probably existed in the United States since the end of the 19th century: diversification of curriculum, service function of university (land-grant colleges), mobility of students. It could possibly be argued that these elements contributed to the relatively high enrollment ratios already reached in the United States many years ago (in 1968 no European country had ratios existing in America in 1950). The question can thus be posed whether the present difficulties encountered by U.S. higher education are a corollary of a new stage—a passage from mass to universal higher education (4)—or whether these difficulties simply result from an imperfect and/or only partial assimilation of mass higher education requirements and of a persistence of some of the components of an elitist structure.

Whatever the answer to the last question, the main thesis of the present paper is that "most countries ... in an intermediary and

(4) See Martin Trow, "Reflexions on the Transition from Mass to Higher Education", in *Daedalus*, Winter 1970.

critical period, in between elitist and mass higher education, the former having to be abandoned under the pressure of numbers and of a series of new problems, the latter requiring structures and content which have not yet been developed and only partly identified." (5)

The Search for New Structures

The process of identifying and developing new structures of post-secondary education can and will clearly not follow any single theoretical model. Existing structures and specific national circumstances will always heavily influence the search for new solutions of the above-mentioned problems and deficiencies. But it seems that in all cases two types of almost contradictory requirements have to be faced. On the one hand a greater diversification of the system, on the other its better articulation. Diversification implies principally an increased variety of educational offerings in terms of patterns and durations of study (short-cycle and long-cycle higher education, part-time, full-time and sandwich courses), location of educational establishments, of methods of teaching, of organizational forms. A better articulated system, on the other hand, means essentially a system which facilitates flows of students, teachers and financial resources between the various forms and levels of education and between the different institutions and sectors of the post-secondary system. In practice this requirement postulates effective coordination of the various components of the system in the light of their mutual complementarity.

It is highly probable that this two-fold principle of articulation and diversity cannot easily be implemented by fragmented and partial reforms; it postulates almost by definition a global approach. And clearly, this is what must have been in the mind of those who originated the various schemes mentioned at the outset of this paper and what, in general, lies behind the trend which has dominated policy discussions about higher education since the late sixties.

In an earlier version of the present paper, and also in some past work on this subject within the framework of OECD, the two-fold requirement of articulation and diversity has been defined as one of "unity and diversity." Soon, however, it appeared that the term "unity" might be misleading, mainly because it tends to imply uniformization and centralization, two phenomena which clearly represent negative aspects of developments in higher education (6). To a

(5) *Towards New Structures of Post-Secondary Education*, *op. cit.*, p. 28.

(6) Recently, this danger was stressed in a document prepared by an independent task force under the auspices of the U.S. Office of Education, chaired by Frank Newman ("Report on Higher Education", Washington, March 1971). The authors speak of "homogenization" of American higher education and of the growth of bureaucracy.

certain extent this could even be said about the central postulate of this paper which advocates a systems approach to higher education. In reality it seems important to distinguish between the three levels at which this concept can be applied: the level of analysis, the level of planning, and the level of control (7). Our analysis leads us clearly to consider as indispensable the first two, but to reject the third. It is important to study higher education in its globality, i.e. to analyze the interrelationships of all its components. We believe it equally indispensable to project and plan reforms taking into account all complementarities and linkages between the variety of existing and emerging institutions. But this systems approach should in no way imply a unity of control over the system. It may be that in this respect, on the contrary, a "nonsystem" will represent the only guarantee of a successful diversification of higher education.

The term "articulation" was therefore preferred to "unity" (or even "integration") and, awaiting a better expression, the global approach advocated here is possibly best reflected in the words "coordinated differentiation".

This global approach to higher education has, of course, many aspects and implications, of which only three will be briefly mentioned here: the link between secondary and post-secondary education; the link between post-secondary education and employment; the importance of appropriate overall planning and coordinating mechanisms.

(a) *The link between secondary and post-secondary education*

It is quite clear that problems arising from this linkage are crucial to the development of both secondary and higher education. From the quantitative point of view it can be said that mass secondary education represents, to a great extent, a pre-condition of mass post-secondary education. In this respect it seems that most of the European countries are lagging far behind the already existing mass systems, in particular those in the United States, Canada, Japan and the U.S.S.R.

Development of mass secondary education implies, however, much more than enlarging the numbers of students to present U.S., Canadian or Japanese levels. The nature of the link between higher and secondary education is, indeed, quite different in mass and in elitist systems. In a somewhat simplified way it can be said that in Europe, historically and functionally, general secondary education was developed in order to serve preexisting universities, whereas in Canada and the United States (as well as in the U.S.S.R.) the higher

(7) We owe this distinction to Clark Kerr, Chairman of the Carnegie Commission on Higher Education.

education system is an organic continuation of the previously developed secondary school system.

Reforms going on in Europe to facilitate admission to universities for graduates from all types of secondary schools are clearly a step toward mass secondary education in which universities have to cater not only to those for whom they have themselves generated an appropriate form of schooling (often since the age of ten), but for everybody with twelve years of school attendance (and sometimes less).

Curriculum and structural consequences of this trend are far-reaching both for secondary and higher education, especially when such a status equalization of all existing kinds of secondary schools is both formally and informally achieved and when the next step is reached, namely comprehensive secondary education. This seems to be implied, for example, in the proposed German and Swedish reforms. The problem becomes even more important when considering the concept of recurrent education, which should allow and facilitate alternation of periods of education and periods of work—starting often with work after the termination of secondary or of compulsory education. This will inevitably require that all secondary schools offer an appropriate combination of practical and academic training and that higher education institutions will be ready to receive students both with and without any job experience.

This close link between higher and secondary education in an emerging mass system leads inevitably to a new, more comprehensive concept of *post-compulsory education*, including upper secondary education, nonuniversity and university-type higher education, and covering the age range (in most of Europe) from 16 to 24 years and beyond. In other words, it could be argued that the principle of articulation and diversity advocated for all education after 18 years of age should include also what today is still considered as upper secondary education.

(b) *Education and employment*

It can be shown that the relationship between education and employment in a mass higher education system is much more diffuse than in traditional higher education. In the latter, as a rule, each level and type of education corresponded rather closely to specific types of job and profession, while in mass higher education a particular degree implies flows into a substantially greater variety of employments.

To a certain extent this is already true in the United States, where "college educated" people are found in large numbers of occupations, from top managers to secretary-typists and skilled workers.

Partly, of course, this results from the sheer supply of degree holders, but partly it also represents a shift in the perception of goals of higher education, the extra-employment objectives of which become more important than before (8). Obviously, in such a situation the fear of "over-production of graduates" becomes pointless, even if the present spread of "graduate unemployment" seems to give it some new relevance. In fact, this fear was always rather dubious. The United States, with a GNP per capita which is about twice that of the more advanced European countries, absorbs every year four to five times as many graduates per 1000 inhabitants as Europe. Japan, with a GNP per capita about half that of the most advanced European countries, provides employment to almost three times as many graduates.

The main problem, especially in Europe, is that such a perception of the relationship between higher education and employment is far from being generally accepted, either by employers or students. The resistance to employ "overqualified" personnel may be more widespread than the refusal to give jobs to those without the normally required degree. On the other hand, most of the students—and often even the very radical ones—consider it a fundamental weakness when the system cannot guarantee and provide them with specific types and levels of jobs corresponding to their particular field and level of study. Thus both groups—as well as planners and policymakers—approach emerging mass higher education and its diffuse links with employment with a value structure belonging to elitist higher education.

But the type of relationship between education and employment is not only a question of an appropriate utilization of graduates. In fact, the whole problem of relations between education and work is involved, and is well expressed in a recent report of the Carnegie Commission on Higher Education:

> "That service and other employment opportunities be created for students between high school and college and at stop-out points in college through national, state and municipal youth programs, through short-term jobs with private and public employers, and through apprenticeship programs in the student's field of interest; and that students be actively encouraged to participate.
>
> "We believe not only that all colleges should encourage prospective and continuing students to obtain service and work

(8) The U.S. situation is of course not exempt from criticism. Thus, for example, the already mentioned "Report on Higher Education" states: "It is time to halt the enormous and growing power which colleges and universities have as sorting and screening institutions. One necessary course of action is to reduce the reliance on educational credentials as admission tickets to careers."

experience, but also that some colleges may wish to require it before admission or at some point during matriculation and could, in fact, in appropriate instances, grant credit for it toward completion of degree requirements."

And later, the same report provides a very clear definition of the thinking behind the desired new interpenetration of education and work. This definition is, in fact, rather close to the idea of recurrent education as formulated in some European countries, particularly in Sweden:

"Society would gain if work and study were mixed throughout a lifetime, thus reducing the sense of sharply compartmentalized roles of isolated students v. workers and of youth v. isolated age. The sense of isolation would be reduced if more students were also workers and if more workers could also be students; if the ages mixed on the job and in the classroom in a more normally structured type of community; if all members of the community valued both study and work and had a better chance to understand the flow of life from youth to age. Society would be more integrated across the lines that now separate students and workers vouth and age." (9)

(c) *The planning mechanisms*

Integrated planning of post-secondary education is, as already mentioned, a natural consequence, if not a precondition, of the global approach advocated in the present paper. What institutional and administrative form this planning should take will depend on the respective national context, but a certain number of elements indispensable to a more effective planning process can already be identified. They derive mainly from the practical experience of a number of committees, groups, or bodies which sprang up in different countries during the past ten to fifteen years, and especially since about 1965.

The first of these elements is rather obvious: the planning bodies must consider the whole post-secondary system, including its relation to secondary education and employment, not only certain of its segments in isolation (such as universities, technical education, teacher training). If such segments should still have their own planning boards, they must be coordinated under a central board with a system-wide jurisdiction (e.g. U 68 Committee in Sweden, Ottossen Committee in Norway, California Master Plan).

The planning boards or agencies should have an effective link to the existing power structure and thus to the policy and decision-

(9) Carnegie Commission on Higher Education, *Less Time, More Options: Education Beyond the High School*, New York: McGraw-Hill, January 1971.

making process in order to ensure the implementation of the established plans. Most often this will be the case if these boards receive an appropriate statutory basis and have a membership representing the various segments of the post-secondary system (including students, teachers and administrators) and also outside bodies such as industry, trade unions, professions and public life. If all of these cannot be included because the board has only a few members, some consultation procedures must be foreseen in order to guarantee the necessary contacts and wide participation in the planning process.

The planning boards must base their work in investigations and enquiries which will often imply a considerable research activity entering into all aspects of post-secondary education: economic, sociological, pedagogical, etc. Indispensable, in any case, is the need to link the plan to the most advanced available "knowledge base" concerned with the educational process and organization.

At the same time, this base must be applied to the specific measures which appear as effective tools of articulation of the system and as a possible important contribution to some of the main objectives of mass higher education (such as equality of opportunity) and to the solution of some of its constraints (such as the lack, real or apparent, of resources).

Following are a few examples of these measures which, clearly, must cover more than just quantitative projections of enrollments, staff and expenditure, and more than mere organizational and structural arrangements:

(i) establishing a credit system which allows for transferability from one institution or segment of higher education to another, from one field and level of study to another; creating appropriate links between formal study and work experience;

(ii) increasing the possibility for changing study careers (e.g. from theoretical to vocationally oriented studies and vice versa);

(iii) sharing of teachers among institutions of different types and orientations and, in general, reducing salary and working condition differences of teachers in various categories of institutions in the system;

(iv) sharing of equipment and pooling of other resources among different institutions;

(v) establishing similar working and living conditions for students of different types of institutions (e.g. identical scholarships and student welfare schemes);

(vi) location policies taking into account the complementarity of the different types of post-secondary education.

Finally, the educational planning process must be operated in such a way as to produce not only a product but also information on how to improve the product. That, in other words, means the setting up of an evaluation mechanism as an integral part of the planning mechanism.

Global or integrated planning of post-secondary education, it must be stressed, should not imply global control. This might actually be the most difficult practical problem in the development of new structures of post-secondary education: how to establish mechanisms which can coordinate and orient effectively the various components of the structure in view of desirable goals without thereby generating a manifest or latent control leading to uniformization rather than to flexibility and to an increased capacity for change and innovation.

INTERNATIONAL COUNCIL FOR EDUCATIONAL DEVELOPMENT

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The main support for ICED to date has come from the Ford Foundation, the International Bank for Reconstruction and Development, Unicef, the Carnegie Corporation of New York, and the Clark Foundation.