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TORSTEN HUSEN
T. NEVILLE POSTLETHWAITE

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CONTENTS

Honorary Editorial Advisory Board	vii
Editorial Board	ix
Alphabetical Entries	Volumes 1-9
Classified List of Entries	Volume 10
List of Contributors	Volume 10
Author Index	Volume 10
Subject Index	Volume 10
List of Major Education Journals	Volume 10



Tanzania: System of Education

The United Republic of Tanzania in East Africa comprises Tanganyika and the islands of Zanzibar and Pemba, which are situated about 40 kilometers off the coast north of the nation's capital, Dar es Salaam. Tanganyika, more often referred to as mainland Tanzania, lies south of Uganda and Kenya, east of Zaire, and north of Zambia, Malawi, and Mozambique. The country covers an area of 939,652 square kilometers (362,706 square miles).

The population of more than 130 ethnic groups was estimated at 19,868 million by mid-1982 and was growing at an annual rate of 3.2 percent (United States Central Intelligence Agency 1982 p. 229). The majority of Tanzanians are of Bantu origin, with the largest group being the Sukuma, numbering more than one million. Groups of Nilotic or related origin include the nomadic Masai and the Luo. Only 1 percent of the population consists of Asians, Arabs, and Europeans. Each ethnic group has its own language, while the national language is Swahili, a Bantu-based tongue with strong Arabic borrowings. In terms of religious affiliation, the population is 30 percent Christian, 30 percent Moslem, and 40 percent animist.

The distribution of the population is very uneven, varying from 1 person per square kilometer in the arid regions to 51 people per square kilometer in the cities, of which Dar es Salaam is the largest. In an effort toward decentralizing the urban population, the government headquarters are to be moved to Dodoma in the center of the country by the end of the 1980s (United States Department of State 1981 p. 3). The climate varies with altitude, ranging from tropical in Zanzibar and along the mainland coast to semitemperate in the highlands.

Such geographic and demographic conditions have posed problems for educational planners in delivering equal educational opportunities to all segments of the population, in providing instruction in a language understandable to all learners, and in suiting the contents of education to the varied environments in which students live.

1. Background

European exploration of Tanganyika began in the mid-nineteenth century, with Germany winning control over the area until the First World War, when the territory was awarded to the United Kingdom. Following the Second World War, Tanganyika became a United Nations trust territory, moving

gradually toward full independence, which was achieved in December 1961. When Zanzibar merged with Tanganyika in 1964, the nation was renamed the United Republic of Tanzania.

Since 1962, the government, under the leadership of its philosopher-educator President Julius K. Nyerere, has attempted to remodel the society's political-social structure toward attaining self-sufficiency, a policy focusing on development by the rural population under the motto "Education for self-reliance." Guidelines for the nation's future were set in the Arusha Declaration of 1967 by the country's sole political party, Tanganyika African National Union (TANU), establishing a socialist state in which all major means of production are nationalized, including land, buildings, industries, and financial institutions. In addition, collective Ujamaa villages have been established as the basic production units for rural life.

The country's economic foundation is in agriculture, forestry, and fishing, which employ about 90 percent of the labor force and which contributed 41 percent of the gross domestic product in 1980. The small industrial sector includes food processing and textiles, with tourism an important source of foreign exchange. While the government has sought to implement a development policy that gives favored treatment to underdeveloped regions, the plan has not been entirely successful. The already developed areas of Tanga-Arusha, the coastal regions, Morogoro Iringa-Mbeya, and Mwanza Bukoba continue to grow at a faster rate, economically and educationally.

During the period 1972 to 1976, the nation suffered the effect of a prolonged drought and rising inflation. The government's third five-year development plan in 1976 set a 6 percent annual growth target, but the goal could not be achieved because of the effects of the worldwide economic recession and internal problems. An austerity program was instituted in 1981, and economic conditions for the near future appear bleak (Europa 1982 p. 1525).

In sum, the government of Tanzania has distinguished itself among nations newly freed from colonialism for attempting significantly different alternatives to improve its socioeconomic condition, with the alternatives depending to a great extent on the success of educational innovations.

To understand the reasons leading to the adoption of the policy of education for self-reliance, it is important to review the development of education in Tanzania. As in nearly all other African nations, the first schools were established by Christian missionaries as early as the 1880s, when Germans took possession

of the region and began to rely on mission schools to train a few favored Africans for positions in the colonial service. In addition, mission education aimed at adapting villagers to their place as peasant producers in an underdeveloped capitalist system of exploitation. The schools remained entirely under mission control until 1913, when the colonial government began to furnish financial subsidies (Hinzen and Hundsdoerfer 1979 p. 98).

When the British took over Tanganyika after the First World War, the educational system remained the same, with mission schools offering classes of one to two years' duration for teaching literacy, numeracy, and a Christian catechism in the vernacular. However, most Africans strongly resisted formal schooling, since they considered the colonialists' education to be an intrusion into tribal and family affairs. Attempts to localize the curriculum and reorient it toward vocational needs were met with resistance.

Despite opposition, colonial authorities opened additional schools, but the result after 30 years of British rule was that less than 10 percent of school-age children were in school (Cameron and Dodd 1970 p. 104). When the country attained self-governance, its leaders determined that the inherited schools were inappropriate for a newly independent nation and that the educational system required a reevaluation in order to fit the needs of a socialist political-economic structure.

2. Goals of Education and Education for Self-reliance

In 1967, after the country adopted the Arusha Declaration, the nation's president, Nyerere, criticized both the elitist intent and the lack of practicality of the colonial educational system. In a document entitled *Education for Self Reliance*, he called for the cultivation of socialist values and of self-reliance as the main educational goals. The principal components of education for self-reliance were those of making education relevant to rural life, changing students' negative attitudes toward agriculture and rural living, and eliminating the elitist bias of schooling. Nyerere proposed that the nation's educational system

must encourage the development of a proud, independent, and free citizenry which relies upon itself for its own development and which knows the advantages and the problems of cooperation. It must ensure that the educated know themselves to be an integral part of the nation and to recognize the responsibility to give greater service to the greater opportunities they have had. (Nyerere 1967 p. 25)

The year 1968 witnessed the first significant efforts to implement the new educational philosophy, and the second five-year national-development plan (1969-74) called upon the nation (Tanzania 1969 p. 148):

- (a) to achieve full self-sufficiency at all skills levels in the economy by 1980;
- (b) to give every Tanzanian child a basic primary education as soon as the financial circumstances of the government permit, which is presently planned to be achieved by 1989;
- (c) to provide additional or further education (secondary, technical, and university) only to the extent justified by the personnel requirement of the economy for development; further to support students by bursaries only in postsecondary courses which will produce specific skills needed for development.

Furthermore, each educational stage at both the primary- and secondary-school levels was to be planned as a terminal, complete preparation in itself for the pupil's future. After 1968, the entrance examination for standard 5 (grade 5) was abolished so that a child who entered standard 1 was assured of schooling for the full seven years of basic education (Hinzen and Hundsdoerfer 1979 p. 89).

An assessment of the progress of education appeared in 1974 as the Musoma Resolution, proposing that the universal primary-education target be moved forward from 1989 to 1977 and the school-entrance age be raised to 7 years so as to facilitate the child's entering the labor market upon completing primary school. The resolution also stressed diversification in secondary education through incorporating more practical studies in technical, agricultural, and commercial education.

The third five-year plan (1976-81) held to the course charted by both Nyerere's education for self-reliance and by the Musoma Resolution. But by this time, some measure of disappointment with the success of the educational effort was being expressed by the nation's leaders. By the early 1980s, the literacy rate had been raised to 70 percent, which was short of the 85 or 90 percent envisioned for 1980. Nyerere in 1977 had admitted that "I am becoming increasingly convinced that we in Tanzania either have not yet found the right educational policy, or have not yet succeeded in implementing it—or some combination of these two alternatives" (Nyerere in Hinzen and Hundsdoerfer 1979 p. 11).

3. Structure and Growth of Formal Education

The educational pyramid consists of a seven-year primary school (standards 1-7), four years of lower-secondary education (forms 1-4), a two-year pre-university course (forms 5-6), and tertiary education provided by the University of Dar es Salaam.

Primary schooling has expanded continuously since first introduced by the missionaries in the nineteenth century, with the greatest expansion in colonial times occurring just prior to the nation's achiev-

ing independence. Primary schools increased from 2,192 in 1954 to 3,238 in 1961, or by 48 percent, and the number of pupils by 76 percent (275,628 to 486,470) (Hinzen and Hundsdoerfer 1979 p. 88).

After independence, the government's interim economic development plan (1961-64) gave priority to the development of secondary and higher education aimed at training the human resources needed to take over the administrative positions formerly occupied by colonialists. The subsequent first five-year plan (1964-69) retained this emphasis so that it was not possible to achieve a rapid increase in primary-school enrollment. Nevertheless, the number of children attending public primary schools rose by 55 percent between 1962 and 1967 (from 486,470 to 753,114). Also, local authorities were encouraged to build more middle schools so that by 1968 over 40 percent of standard 4 pupils could find places in standard 5. In accordance with the country's policy of equal opportunities for schooling, these developments concentrated on districts which had less than 50 percent of classroom requirements for standards 1-4 and standard 5 (Hinzen and Hundsdoerfer 1979 p. 92).

The most significant educational progress since the introduction of the self-reliance policy and the abolition of school fees in 1972 has been in primary schooling. Between 1971 and 1975, enrollment increased by 76 percent (902,000 to 1,589,008), but the number of schools by only 7 percent (3,865 to 4,133). The growth in enrollment from 1971 to 1979 exceeded 256 percent (to 3,211,586), enabling 93 percent of the age group 7-14, as well as overaged pupils, to attend school (Omari and Sumra 1981 p. 180, Hinzen and Hundsdoerfer 1979 p. 93). It was estimated that over 95 percent of school-age children would receive at least seven years of education by the early 1980s (Europa 1982 p. 1526).

In colonial times, the authorities—first German, then British—blocked the expansion of secondary and higher education for Africans. In the 1930s, junior secondary education in Tanganyika was introduced because the colonial government needed Africans to fill middle-level positions in the administrative structure. But by 1945 only one school had a program up to standard 12, with an enrollment of six pupils. After 1950, the British began to expand secondary education and to enroll a limited number of girls. By 1961, a total of 16,691 students were in secondary schools compared with 9,883 in 1957.

Under the independent Tanzanian government's first two development plans, secondary education was given priority over primary schooling in order to meet the needs of the labor market, with the curriculum designed to give pupils first-hand work experience in the early stages of an evolving cooperative society.

An enrollment of 33,288 students in 141 secondary schools in 1972 increased to 50,200 by 1974 (46,300

in forms 1-4 and 3,900 in forms 5-6) and reached 68,300 by 1978 (64,400 in forms 1-4 and 3,900 in forms 5-6). The enrollment in forms 1-4 represented 4 percent of the age group 14-17 on mainland Tanzania (Europa 1982 p. 1533, Omari and Sumra 1981 p. 180).

The slow expansion of secondary schools, especially since 1974, is due to the government's policy of limiting the growth of this sector of the educational system. Form 1 enrollment in public schools was limited by the second five-year plan to no more than a 30 percent increase per year, but this figure has been exceeded through growth in private-school enrollments.

By the opening of the 1980s, primary education was terminal for more than 93 percent of school children, who sometimes entered the primary grades between ages 8 and 10 and finished between ages 14 and 17 to enter the world of work. Thus, education at the secondary level has continued to be for a privileged few who are expected to bear weighty responsibilities to the community (Omari and Sumra 1981 p. 200).

During the colonial period, Tanganyika had no higher learning institutions. However, a few of the country's Africans attended Makerere College in Uganda, the Royal Technical College in Kenya, and overseas institutions, mainly in the United Kingdom. By 1959, there were only 70 Tanganyikan Africans with university degrees, 20 of them teachers.

At present, the nation's highest center of learning is the University of Dar es Salaam, established in 1970. The faculties of arts, commerce, law, medicine, engineering, and science are located in the city of Dar es Salaam, while the faculty of agriculture is 193 kilometers away at Morogoro. The university also operates a department of education for the preservice training of graduate secondary-school teachers. Enrollment at the university continues to grow rapidly, advancing from 2,200 degree and diploma students in 1976 to 2,800 by 1978.

Before the Musoma Resolution in 1974, admission to the university was based mainly on academic achievement as measured by national examinations at the end of form 6. However, since the Resolution, admission has been based on the quality of applicants' working experience over at least two years, including recommendations by their employers and political-party leaders.

Besides its general educational system, Tanzania provides opportunities for technical and vocational studies. In the past, both the German and British colonial authorities introduced what they called "education for adaptation," a type of rural vocational training said to be the most relevant type of education for Africans, since the vast majority of them were agricultural producers. This policy was implemented in 1952 in the form of an agricultural syllabus for rural primary and middle schools. However, because

of strong resistance from Africans, the program was withdrawn in 1959. Africans objected to the plan because it appeared to them to represent a perpetuation of the colonial social-class structure, dividing rural youth from urban students who were prepared for academic subjects (Hinzen and Hundsdoerfer 1979 p. 84).

In the early 1980s, the nation's educational enterprise offers a wide range of vocational and technical possibilities, both formal and nonformal, including two-year postprimary technical programs, folk development colleges with courses lasting from three to nine months, two-year commercial colleges, three-year technical and commercial colleges, and one- to two-year accountancy-management institutes (Omari and Sumra 1981 p. 180).

Following the Musoma Resolution, there was an expansion of postprimary craft centers offering a two-year program of occupational skills required by the expansion of the newly regrouped "planned" Ujamaa villages. These postprimary technical sections, launched in 1975, expanded to 275 by 1982 with an enrollment around 10,000, a growth that was expected to reach 340 schools and 17,000 students by 1985.

Four secondary technical schools with a total enrollment exceeding 2,500 provide a program consisting of 40 percent theory and 60 percent practical application in elementary civil, electrical, and mechanical engineering. Additional secondary training for 4,500 students is provided by such organizations as the National Vocational Training Division of the Ministry of Labour and Social Welfare, the Tanganyika African Parents Association, and the Mission Trade Schools. Also, training in middle- and lower-level management, accountancy, and commercial studies is furnished in a variety of institutions which cater for the specialized staffing needs of ministries, Ujamaa villages, and cooperative societies.

Considerable progress has also been achieved in adult education, which has been viewed since the establishment of the Republic as an important instrument for creating a socialist society with adults participating in the development effort. Adult education has been directed not only at producing a literate populace but also at developing better parents and citizens by improving living conditions and raising production. For example, a program of population education involved 98,000 teachers who explained population problems and ways of resolving them. Seminars, distance education, and mass-education campaigns with such slogans as "food is life" have been conducted, and 47 folk development colleges have provided postliteracy training and short-term courses in agriculture, mechanics, and basic crafts. From the beginning, instruction has been provided by regular teachers, selected primary and secondary pupils, and other volunteers, using whatever local

facilities are available, including schoolrooms after regular class hours.

4. Administration and Finance

The Ministry of National Education, in cooperation with such bodies as the National Advisory Committee on Education and the Ministry of Manpower Development, is the organizing force behind educational development. Until 1969, the Ministry of Education was concerned only with formal schooling, a condition that led to a sharp distinction between formal and nonformal education. Then, in 1969, significant steps were taken toward integrating formal and nonformal efforts, with adult education transferred from the Ministry of Rural Development and Regional Administration to the Ministry of Education, the move signified by the renaming of that body as the Ministry of National Education (Hinzen and Hundsdoerfer 1979 p. 58).

The Institute of Education, closely linked to the ministry, is heavily involved in curriculum development and in writing and testing materials for primary, secondary, and teacher education. The Institute for Adult Education is engaged in research and planning for adults and for the administration of mass radio study, group campaigns, and correspondence courses.

The Ministry of National Education is represented at the regional, district, divisional, and ward levels through its officers and coordinators. The ministry's district officers are responsible for both organizing and coordinating educational programs in their areas.

In the field of educational research, the ministry cooperates closely with the University of Dar es Salaam and the Tanzanian Library Service, with the library service's goal of establishing in the near future libraries from the national to the ward level throughout the country.

The finance of education is undertaken chiefly by the government, with schooling free of charge at all levels. Most schools receive state aid, except for those organized by missions and other voluntary agencies. Villagers are encouraged to build their own schools with government assistance and to operate their own literacy classes (Europa 1982 p. 1526). The proportion of the Tanzanian gross national product spent on public education has increased over the years, rising from 4.5 percent in 1970 to 6.4 percent in 1979 (UNESCO 1981).

5. Curricula and Teaching Materials

Since 1968, curricula and teaching materials have been designed to suit the plan for nationalizing education and promoting the goal of self-reliance. Social studies, history, geography, and civics materials are intended to motivate pupils politically and to instill pride in their past, present, and future. Rural-living

skills, agriculture, crafts, health education, and home economics courses have been introduced at all levels of the educational system in order to integrate school and community in pursuing the country's socio-economic goals.

The language of instruction throughout the primary schools is Swahili, with the study of Swahili a compulsory subject in secondary education. A passing score in Swahili at the close of form 4 is necessary for a pupil to receive a form 4 certificate.

6. Evaluation and Certification

In 1971, the Ministry of National Education provided guidelines for what were termed new methods of evaluating students' progress, as the government sought to learn how well the educational goals of the social revolution were being achieved. The plan, which has been recommended but is still not universally applied by teachers, provides for three evaluation components.

First is the assessment of students' daily progress through exercises, tests, and projects. The emphasis on frequent tests and projects has been aimed at encouraging consistent daily study habits by pupils rather than having pupils motivated to study diligently only prior to the administration of infrequent national examinations. The ministry proposed that each subject in the curriculum carry marks that would be computed at the end of each of the year's two terms and then averaged at the close of the school year. The average grade for every subject is also calculated at the end of the secondary cycle's lower level (forms 1 to 4) and upper level (forms 5 and 6). The average of a pupil's daily marks counts for one-third of the overall evaluation of the pupil's progress.

The second approach consists of national examinations at the end of the seven-year primary school (the Primary Leaving Examination) and after forms 4 (for the National School Certificate) and 6 (the National Higher School Certificate). Prior to 1971 secondary-school examinations originated outside of Tanzania. Then, to gain more internal control over the examination system, the government in 1971 instituted its own national examinations, counting them as one-third of the total evaluation of a student's performance.

The third component of the evaluation scheme consists of records of students' attitudes, devotion to duty, and general behavior. The ministry has recommended that students be informed at the outset of their schooling of the importance of good behavior throughout life and that students be told that the assessment of their behavior in class, at play, on the farm or work site, and in dormitories will carry the same weight as their academic performance.

The ultimate assessment of a pupil's success is based on the entire record of the years spent in

school. The three aspects of the evaluation scheme are given equal weight in the process of selecting students for further study, training, or employment. A student earning a very low mark in any of the three categories is considered ineligible for further training and probably would not be awarded a certificate.

7. Supply of Teachers

The history of the teacher-supply program can be divided into colonial and postindependence phases. The colonial governments did not develop Tanganyikan education as the indigenous people would have wished, but colonial authorities did seek to improve the quality of teachers in ways that would maintain the educational system. For example, in order to control the quality of teachers trained for African schools, the British colonial government set up its African Teachers Examinations Board, which prepared training syllabi and the examinations taken by prospective teachers. Government-sponsored teacher training was organized along racial lines, with candidates trained to instruct children from specific ethnic groups. Missionary organizations also established training institutions to supply teachers for primary schools. By 1945, there were 1,100 student teachers in Tanganyika. However, no facilities were available to prepare secondary-school instructors, who had to be trained in neighboring Uganda until after independence.

Following the establishment of the Republic, teacher education was directed along a new course which matched the political and social goals set by the nation's leaders. Teachers for all levels of the educational hierarchy were to be dedicated to the Ujamaa concept of Tanzanian socialism, to the true welfare of their pupils, and to improving their own general education. In the case of primary-school teacher training, the curriculum areas to be covered included: national service with an emphasis on military training and nation building, Ujamaa political education, school organization, educational psychology, adult education, youth leadership, academic subjects, and teaching methodology.

The nation's primary-school teachers bring varied levels of preparation to their jobs. Some certificated teachers have completed the seven-year primary school plus teacher education. Others have finished the lower four-year cycle of secondary schooling plus teacher training. Diploma teachers, with six years of secondary schooling plus one year of teacher training, teach academic or vocational subjects in secondary schools. University-trained teachers also staff secondary schools, while outstanding ones are retained as instructors in the university. Special education teachers who work with the handicapped are prepared overseas.

With the introduction of the universal primary-education policy, the numbers of children entering

school far exceeded the capacity of the teacher-training system so that emergency measures were taken to staff primary classes. One approach has been that of reducing the length of teacher education by one year. Furthermore, the degree program for university-trained teachers has been compressed to permit candidates to follow education courses in parallel with their academic studies. Untrained teachers have also been employed, and are encouraged to attend institutions to acquire some training while they are in service. They are also urged to take correspondence courses, follow lessons broadcast over the radio, and learn from more experienced teachers.

As a means of raising teaching standards, inservice programs are offered in the form of workshops and seminars for classroom teachers. The nation's Institute of Education conducts such classes as well as developing curricula.

8. Future Problems and Prospects

In the coming years, Tanzania's educational planners face problems of finance, the level of teacher preparation, and methods of instruction in practical subjects.

The nation's continuing economic difficulties, which caused authorities to cut back on their national-development plan during the late 1970s, continue to retard progress in education. Inadequate facilities, a shortage of proper textbooks, and low teacher salaries that result from economic problems exert a negative influence on schooling.

The shortage of teachers occasioned by the introduction of universal primary education has resulted in a downgrading of teacher preparation. As a consequence, the quality of instruction in primary and secondary schools suffers. Thus, improvement in both the length and quality of teacher training, as well as increased inservice education, will be needed if the standard of schooling children receive is to be upgraded.

The introduction of practical topics, as in agriculture and in commercial and technical fields, requires the preparation of teachers with the special skills needed to offer efficient instruction in these subjects. More Tanzanian teachers require both methods of instruction and techniques of evaluation for guiding pupils' progress in the practical studies that are assigned such a strong role in the Tanzanian vision of a village-centered, socialist society.

Finally, the nation's leaders must continue to struggle with the matter of how to guide people's ambitions, attitudes, and talents so as to realize the ideals set for Tanzanian socialism. Will apt youths be content to return to village life following their schooling? Will teachers be satisfied to have their pupils prepared to leave school at the end of the primary grades with an education for village life, or will teachers continue to prepare the majority of their

students for secondary education? Will the schools be able to match their output of workers to the evolving personnel needs of the society? These questions reflect key issues that demand the attention of the nation's educators over the coming decades.

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Teacher-centered and Learner-centered Instruction

A fact that evades many educators and learners is that nobody can learn for anyone else. However, others can help learners to initiate and develop coping skills, abilities, facts, and principles to use in their everyday lives. That realization, if fully comprehended, leads to these questions: What behaviors, values, and principles can educators utilize to enhance the probabilities of learners achieving more information, abilities, and coping skills? What behaviors and values expressed vis-à-vis learners tend to impede their learning and development?

Some answers to these queries have been proffered by distinguished and pioneering thinkers including Dewey, Lewin, Rogers, Illich, Weiner, and associates. This article will draw upon their views as it examines teacher-centered and learner-centered instruction.

What follows will be sketches of the philosophy and theory of certain key contemporary psychologists, educators, and researchers regarding teacher-cen-

tered and learner-centered instruction. The time line will run from the turn of the century to 1980, encompassing scholars listed above.

1. *Philosophy and Theory of Dewey*

Perhaps the most far-reaching, earliest, yet astonishingly current analysis of education was made by Dewey at the turn of the century. This is set forth in such classics as *Democracy and Education* and *Experience and Education*. The latter (Dewey 1963) was an exceptionally succinct, straightforward, and comprehensive statement of this theory and philosophy. It made it eminently clear that education and instruction can be viewed either as a leading out of potential and competence from the learners, or as an externally controlled molding that overrides the learners' aims and interests that are replaced by ideas and goals prescribed by others. Dewey used the label "traditional" for the format that is dubbed "teacher-centered" and "new" for the "learner-centered" procedure. In his view, traditional education aimed mainly at transmitting societal and cultural values, attitudes, and ideas less for use in the here and now and more for utilization in the unpredictable future.

In the traditional or teacher-centered mode, Dewey pointed out that the standards, content, and methods are determined by educators not learners. Participation by students in deciding on processes and purposes is minimal. The major aim seems to be to ensure mastery of what is in books and in the educators' minds mostly through verbal communication.

Dewey stated that the learner-oriented processes ensured the students' analysis of their experiences and encouraged learners to become more self-directed and self-responsible. Instead of processing facts from books and teacher talk, learning emerges from the learners' processing of their direct experiences. Skills are not acquired by drill and rote memorization but by activities that the learners, with the aid of educators, employ to serve their interests and needs. As a result, current dilemmas and tasks are met and dealt with rather than anticipated demands and problems in the future. Educators, Dewey reminded us, have to help individuals to capitalize on the demands of current happenings. It is an article of faith with Dewey that valuable educative outcomes emerge from ongoing day-to-day activities. He does not overlook, however, the fact that the past can make a substantial contribution to the job of dealing with the present effectively and equipping people for tomorrow's responsibilities.

1.1 *Principle of Continuity*

Although Dewey deprecated exclusive dependence in education on information from those who have preceded us, it would be folly, he said, to ignore the

facts, insights, and principles gleaned from the past. He urged instructors who base their teaching on learners' first-hand and vicarious experiences to draw on the tested wisdom that has been accumulated. This necessitates giving considerable opportunities for meaningful dialogue between learners and learners, and learners and mentors, accompanied by thoughtful analysis and interpretation of the findings of our forerunners. He emphasized that the self-same process has to be used by students in deriving benefits, meaning, and principles from their own activity and experience. As regards a culture's accumulated wisdom and knowledge, Dewey insisted that mere transmission of facts is not a major end of education but a means to the attainments and development of human beings.

Dewey seemed, from an examination of his writings, philosophy, and theory, downright prescient. He was anticipatory in taking out insurance, so to speak, against people's imagining that activity and experience per se were educative, regardless of their quality. He cautioned against this misperception by pointing out that when one contends that true education derives from undergoing and analyzing experience this "... does not mean that all experiences are genuinely or equally educative ..." (p. 25). In fact some experiences may be miseducative. Only activities that lead on to richer and wider ones and have continuity with prior and upcoming events lead on to learning and growth. Any benefits derived from learning situations are a function of the quality of the experience.

The principle of continuity, Dewey explained, has to do with the pervasive connectedness of events since every experience draws on past events and modifies those encountered later.

1.2 *Principle of Interaction*

It was Dewey's view that educators have to cultivate the ability to put themselves into the learners' shoes, and take the phenomenological view. There has to be an awareness of the interplay between the external conditions (environment) and the internal conditions that consist of the learners' needs, purposes, and capacities. On the basis of this interaction of internal and external factors arises the educator's responsibility to: (a) identify some of the environmental conditions they can bring about to enhance the probabilities of growth and learning; and (b) appreciate as fully as possible some of the unique perceptions, purposes, and concerns of each learner.

The trouble with traditional education, in Dewey's view, was the almost exclusive attention given to external factors such as the teacher's purposes and the basic physical environment of books, lighting, and the like with minimal attention to the needs and feelings of the students. The psychic and physical needs of the learners have been viewed as givens that are comparable for all persons. These are to be

addressed and molded to the expectations and norms of society and educators.

The two guiding principles of continuity and interaction are intimately interwoven in Dewey's theory. Since continuity involves relating current experience with prior learning and foreseeing their probable utility in future learning, the issue of transfer of learning is implicit in the model. Interaction encompasses the integration by the learner, with the help of mentor or peers, of his/her affective and cognitive needs with the environmental variables that include the behaviors of peers and teachers, instructional artifacts, and teaching facilities.

As one rereads and analyzes Dewey's formulations one is surprised and impressed by his astonishing perspicacity and farsightedness. The timeliness and relevance of his educational philosophy and theory for current educational malaise is obvious.

He foreshadowed Lewin's $B = f(P \times E)$ equation, that behavior is a function of interaction between person and environment. He underscored the importance of incidental or peripheral learning or, as he called it, collateral learning. He anticipated our awareness of the impact of verbal and nonverbal behaviors on the social-emotional climate of learning and problem-solving settings as well as on communication and interpersonal relationships in all situations. He anticipated Bruner's aphorism regarding the feasibility of teaching young learners in an intellectually honest way, using complex concepts and ideas so that they can master them at their level of maturity. This is by no means an exhaustive list of indicators of Dewey's prescience in educational theory, research, and practice. Sarason (1981) commends Dewey's foresightedness concerning the proper focus of psychology on the social order and human welfare. Dewey in his 1899 presidential address to the American Psychological Association had expressed concern about the asocial direction psychology was taking. Sarason says Dewey saw clearly that psychology cannot be independent of, or ignore, the social order.

Dewey cast far-reaching beams of enlightenment on the behavioral and social sciences.

2. Pedagogy of the Oppressed

The potency of a pedagogy that drew the content of education from the problems and opportunities of day-to-day experience was extolled by Dewey. Freire (1973) born, educated, and teaching in Latin America urged, even more passionately, that educational content be drawn from the everyday life experiences of the learners. Freire's students were illiterate and oppressed peasants first in Brazil and then in Chile. It was with and for them that he formulated his "pedagogy of the oppressed". Thus Freire's educational philosophy and methods were developed in the context of human and social degradation visited

on an economically and politically disadvantaged segment of the Third World in Latin America.

On the strength of his implementation of his values and methodology with groups of peasants, Freire envisioned the possibility of groups and individuals improving their self-image and their socioeconomic and political lot. As with all learners, a key need in working with these disadvantaged people was a cadre of instructors who respected, trusted, and cared for them and who, in helping them learn, themselves learned. Through thoughtful dialogue with the teachers and their peers the learners began to comprehend their condition and its causes. They were helped to analyze and appreciate the inequity of their situation. Beyond this they were helped to realize that they could plan, initiate, and consummate actions that not only reduced their sense of powerlessness but also mitigated their deprivations.

Freire spelled out the ethics, strategies, and values of his pedagogy. Basically it did not manipulate and control the students but involved them fully in the process. Coupled with this was the goal to help the learners, through sharing and analyzing their experiences and thinking with peers and mentors, to realize some of their purposes through tapping their individual and group potential.

2.1 "Banking" Education

Freire, like Dewey, deplored the superordinate-subordinate relationship that frequently exists between the teacher and students in many educative settings. In such settings, Freire charged, learning is hindered by "narration sickness" wherein the instructor monopolizes, as the research has indicated, three-quarters of the talk time. It seems to indicate that most educators believe that sharing their perceptions and ideas with the learners will benefit them. In many cases, Freire stated, reality is presented as static, unchangeable, and dissociated from the students' experience. This occurs because the educator's task is perceived as being one of filling the students with others' facts and beliefs. These "deposits" disbursed by the teacher are to be taken in by learners, filed, and stored. Under this dispensation the deposits are to be accounted for and brought forth on signal. Freire labeled this "banking education."

The deposits of information are often viewed as gifts from those who strive to project an image of considerable knowledgeability enabling them to dispense intellectual largesse to the unfortunate. The changing of this banking model is possible and achievable, Freire contended, when all parties to the learning-teaching situation are enabled to be "... simultaneously teachers and students . . ." (p. 59).

Banking education is implemented when the instructor (a) talks most of the time and the learners listen; (b) chooses and enforces his or her choices; and (c) chooses the content and the students adapt to it. Freire lists seven more items similar to the

preceding. His list parallels to some extent a list of 10 assumptions, (Rogers 1969), guiding graduate education. Instructional regimens based on these kinds of practices and values are seen by Freire as lessening the students' creative and critical powers and preventing them from perceiving the world accurately and seeing it as alterable. Worst of all, from Freire's standpoint, it deprives learners of achieving conscientization, ("*conscientização*").

2.2 Conscientization

"Awareness" and "realization" are words that catch the import of Freire's term; it means realization of the social, political, and economic contradictions in the world and the initiating action individually or with peers to change matters. Along with this goes an awareness of one's beliefs, purposes, and potential in bringing about change. Conscientization is conceived by Freire as a process and an attitude that aids persons to develop appreciation for autonomy and self-responsibility. The process and its context aid students to unveil—Freire's verb—the repressive conditions that militate against development of self-responsibility and self-affirmation. In short, conscientization, as Freire delineates it, helps people to better understand themselves and their potential and to initiate action against society's shortcomings and ills.

If educators want to enable students to be inquirers and thinkers regarding themselves and the environment, they need to view learners as partners in the instructional procedures and themselves as co-learners in the learning process. Under the traditional teacher-oriented regimen, Freire claimed that learners have been exposed to "schooling" and conditioning that equips them to fit themselves to the world and to conform. As conformists and adapters they have little ability or urge to press for change or to question things as they are. The conscientization process, on the other hand, impels the learners to examine and inquire about themselves, their situation, and their environment. They thereby begin to comprehend their responsibilities for initiating moves not only in their own but in others' interests.

It is through communication in its encompassing sense of a two-way traffic of information, ideas, and feedback between peers and with the instructor that liberating education occurs. Such communication, Freire contended, can bring about humanizing, lasting, and utilizable learning. Such communication leads to conscientization.

2.3 Necrophilic Education

Gibran (1966) eloquently reminded one that teachers cannot learn for the learners, cannot confer their understandings and values on them, and cannot transfer their wisdom to them. But teachers can create learning conditions that enable students to process what they are encountering and with the help

of caring mentors, derive personal meaning, and knowledge. Freire deplored the static, other-controlled, normative educational system and labeled it "necrophilic." He saw it as restricting experimentation and creativity by replacing first-hand experience with others' beliefs and notions. The result, he claimed, is schooling that domesticates and emasculates individuals and renders them more susceptible to indoctrination and external control. Over against this, Freire placed instructional strategies that lead on to liberation and praxis, namely, "... the action and reflection of men upon their world in order to transform it ..." (p. 66).

2.4 Problem-posing Education

Freire recommended abandoning "banking education" and replacing it with "problem-posing" education. In problem-posing pedagogy, learners and teachers conjointly address issues of moment to them while sharing, turn and turn about, the roles and functions of both learner and teacher. Whereas "... banking education anesthetizes and inhibits creative power, problem-posing education involves a constant unveiling of reality ..." (p. 68).

Students who consistently confront problems drawn from experience and that are related to their aims and interest will be cognitively and affectively challenged but not psychologically threatened by personally significant issues.

Learner-oriented instruction and education aims at specifying the parameters of reality. Teacher-centered instruction tends to mask reality by restricting learner-learner and learner-teacher dialogue. The problem-posing model capitalizes on interpersonal interaction in order to enhance skills in communication and critical thinking. Dewey's (1963) philosophy of education anticipated Freire's. He urged that free, self-directed activity for learners be encouraged and that externally enforced controls be delimited; that learning be through first-hand experience and not be sought exclusively from textbooks and teachers; that all educational activities be beamed at capitalizing on present opportunities and challenges and not be focused on anticipated future events and problems.

Speaking, as it were, for the southern and developing segment of the globe, Freire, in unison with Dewey speaking for the northern and technologically developed segment, proposed that education be directed toward humanization of people, advancement of human well-being, and the development of critical discrimination and ability to reason. Learner-centered or problem-posing education is carried on neither for nor about the learners but *with* them.

In order to identify the content of education Freire urged:

It is to the reality which mediates men, and to the perception of that reality held by educators and people, that we must go . . . (p. 86)

In a similar vein Dewey wrote:

... education in order to accomplish its ends both for the individual learner and for society must be based upon experience—which is always the actual life experience of some individual . . . (p. 89)

Learners in the view of Dewey and Freire have to participate fully in selecting the issues to examine, analyze, and initiate action on. Educative processes and content emerge primarily with them. Spinoff issues appear and are shared with others, then findings, interpretations, and implications for action developed. The culmination is action intended to resolve problems, assuage needs, and serve the aims of individuals and society.

Dewey spoke not only for himself but for Freire too when he expressed unbounded confidence in the potential of education grounded in "... directed development of the possibilities inherent in ordinary experiences . . ." (p. 89).

3. *Convivial Tools and Manipulative Institutions*

Educators and educational institutions, Illich contended, have laid claim to being the major channels or vehicles for worthwhile education. This claim slights the home, peers, and community as potent educative milieux—not to mention the learning opportunities arising from life experiences.

While emphasizing the dehumanizing effects of industrialization and technology, Illich (1971, 1973) delineated the manner and the institutions that contribute to the dehumanizing of human beings and their lives. He exemplified this by reference to the field of medicine which, in his opinion, instead of bringing health and freedom from disease to more people had rendered its services less available. This, he explained, was a function of the profession's making physicians' service a monopolistic domain accessible primarily by the well-to-do. Illich asserted that the same kind of situation pertains to education. It too is a closed guild that caters to, and serves more fully, the privileged.

He cited China as having responded to the domination of the field of medicine by specialists and physicians through preparing and sanctioning services rendered by "barefoot doctors." These paraprofessionals were prepared by means of short courses, work in laboratories, and apprenticeships with medical personnel to equip them to give basic medical services to the public. In addition, they offer preventative health services such as environmental sanitation, immunization, primary medical care, gynecological assistance, as well as birth control and abortion education.

3.1 *Conviviality*

In industry, medicine, and education, Illich (1973) counseled, society must be reoriented in their atti-

tudes and perceptions so that the facilities of those institutions would be made more accessible to, and manageable by, either individuals or primary groups. Tools and equipment used in the reoriented settings would be "convivial" in the sense that they would convey a sense of autonomy to people and lead to joyfulness and more satisfying interpersonal relations.

The term "convivial" is descriptive of the tools or agencies utilized and "conviviality" is applied to the productive and gratifying atmosphere that surrounds the activities and interactions between human beings and with the environment. These outcomes and benefits emerge when people are involved in self-selected and self-directed undertakings. The spontaneous and people-oriented activities and interactions are contrasted with the usual reactions of persons to the traditional, compulsory attendance school setting. Traditional institutions ensure that society's requirements are met so that qualifications, status, and rewards can be readily determined and dispensed.

Illich construed conviviality "... to be individual freedom realized in personal interdependence . . ." (p. 11). He argued for the full use and enjoyment of the one resource at the disposal of each human being: personal energy under personal control. This required arrangements that ensure the full participation of each individual in the planning and conduct of endeavors related to their and society's well-being and interests. The endeavors involve institutions such as industry, education, transportation, medical services, and social services. When a convivial climate arises it would be a function of social arrangements "... that guarantee for each member the most ample and free access to the tools of the community . . ." (p. 12).

Three values would undergird this kind of society; they are survival, justice, and self-defined work. These values would result from the elimination of enforced education, enforced labor, and compelled consumption.

Insofar as education is concerned, conviviality would entail the recognition of the uniqueness and worth of each person and appreciation that learning occurs in the events, environments, and activities of each person. Learning occurs within the context of significant groups such as family, neighborhood, peer, ethnic, geographic, and recreational units.

3.2 *Manipulative Education*

Comenius is credited or blamed by Illich (1971) for the delimited view of education as 7 to 12 grades of compulsory attendance in classrooms accompanied by assembly-line exposure to predetermined facts and activities. Comenius, Illich implied, had aims that paralleled those of the alchemists who hoped to change base metals into precious ones. Comenius

hoped that through 12 levels of school the dross of young learners could be converted to gold.

Education, instead of being an exciting and challenging undertaking, has been heavily tainted and continues to be tainted, Illich believed, by a Pavlovian conditioning outlook. The result is that the wonder, adventure, and delight in learning is lost. A large proportion of the products of our schools—kindergarten through graduate school—have been inoculated by their schooling against learning.

In a similar vein, Illich saw machines and technology as highly damaging to human beings and society. Illich explained that he was not urging rejection of all machines. He does, however, object to tools and facilities that are not controllable by the effort and energy of one person or a few individuals. Hand tools such as hammers, pocket knives and awls, looms, pedal-driven sewing machines, and bicycles are all deemed to be convivial tools. He emphasized that it was a mistake to imagine that all large tools would be eliminated in a society imbued with conviviality. Rather, there should be a balance between the enormous human-dominating tools and agencies, and the enhancing and humanizing tools and facilities that foster self-esteem in people and an atmosphere of conviviality.

3.3 Hidden Curriculum and Myths in Manipulative Education

It should be obvious that education as presently structured is not perceived by Illich as a convivial institution. Schools and education are lumped with mental hospitals, nursing homes, law enforcement, and modern warfare as decidedly nonconvivial. They are viewed by him as coercive and dehumanizing agencies that dominate societies worldwide. In addition, schools communicate a hidden agenda of social attitudes and perceptions. These congeal to the point where people believe that the way institutions operate is correct and the manner in which human beings behave is a function of human nature. Incidentally, Illich did not employ these descriptions only in reference to agencies and people in Latin America and the rest of the Third World, but also to people and institutions in the developed world.

Illich stated that manipulative schools purvey, besides a hidden curriculum, a number of educational and societal "myths." These include the notions that (a) the most valuable learning comes from instruction; (b) grading and ranking people measures everything of importance; and (c) increasing productivity and consumption of goods and services yields more benefits to all.

The ills of our society and world, Illich believed, are the product of a number of complex and interacting factors. However, he maintained that a large measure of the responsibility for ecological damage, danger of war, poverty, and the energy crisis lies with the educators, schools, and the regimented type of

education they offer, hence he urged deschooling society.

In calling for deschooling, Illich (1971) was not inviting a start to that process. Rather, he expressed the belief that it was already underway. There seems to be some truth in the assertion in view of the dissatisfaction being expressed and new departures—alternative schools, parents using home-based instruction, and religious denominational schools—being tried. However, the movement seems to be regressive in that there is frequently a call to return to the basics (see *Back to Basics Movement*), in pressing for more "discipline" and greater conformity to "abiding" truths. This seems hardly a liberating or humanizing bent.

The format for a humanizing and liberating educational system would, Illich contended, encompass networks or webs of people who would provide instructional resources that would be available to each potential learner on a voluntary basis. As such it would be quite different to the funnel model of traditional schooling where information and beliefs are poured into learners perceived as empty vessels devoid of ideas and information.

A learner-centered style of instruction as envisioned by Illich would afford opportunities and procedures that enabled learners to pursue freely, in consultation with mentors who trust and respect them—ideas, concepts, skills, and values.

Three functions of the reconstructed, learner-oriented system that Illich (1971) proposed would be to

... provide all who want to learn with access to available resources at any time in their lives; empower all who want to share what they know to find those who want to learn it from them; and, finally, furnish all who want to present an issue to the public with the opportunity to make their challenge known. (p. 108)

To implement this model he identified four convivial webs that the learners control and that are used to address their needs and goals: (a) reference services to provide information on facilities and processes; (b) skills exchanges to serve as clearinghouses for sharing and learning a skill; (c) peer-matching to link people according to mutual interests; and (d) reference service to educators at large comprising directories of professional and nonprofessional educators and their specialties. Illich feared that if the kind of educational processes he has suggested are not promptly implemented, a system will emerge where freedom of choice and self-directed people would be supplanted by puppet-like creatures manipulated by authority figures and decision makers.

4. Learner-centered Education

The concept of learner-centered education (Rogers 1969) derives from client-centered therapy (Rogers