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TRAINING IDEAS FROM ANTI-POVERTY
PROGRAM FOR USE OVERSEAS

By

Robert L. Hubbell

TENTH SESSION

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This is an educational exercise and does not necessarily represent the viewpoint of the Senior Seminar in Foreign Policy or of the Department of State.

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A Case Study

by

Robert L. Hubbell
Agency for International Development

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SUMMARY

Shortages of trained manpower are pervasive in under-developed areas. The United States too faces a serious challenge for training unemployed people for whom traditional education has failed. New approaches which are succeeding in the anti-poverty program here - new materials, new methods, new organization - offer real promise for overseas too.

Acknowledgment

Everyone whom I approached for information and opinions in connection with this case study was, without exception, cooperative and helpful. In all instances, they were taking time from crowded schedules for a matter of no direct concern to them, although a surprising number of people had overseas experience and the others were interested.

Appendix B attempts to list the names and titles of those interviewed. I find that my notes lack the names of at least a score of teachers and instructors whose classes I visited. In other cases, spelling or titles may be wrong. My apologies for these omissions and errors.

Special mention is due Emily C. Gorman of the Job Corps and Judah Drob of the Labor Department, who made arrangements for visits to projects of their agencies. Mr. Drob had a particularly broad knowledge of new training ideas which he reviewed with me, as did Charles Blaschke of the Institute of Politics and Planning. Mr. Peter Beach of the Job Corps accompanied me in Chicago.

My friends in the various agencies may think that I have given inadequate emphasis to their favorite activities. This case study presents a sampling for a special purpose and is not an evaluation of the totality of anti-poverty or manpower programs.

The judgments expressed are my own responsibility and do not necessarily reflect the position of the Agency for International Development nor of the people interviewed.

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TRAINING IDEAS FROM ANTI-POVERTY PROGRAM FOR USE OVERSEAS

I. THE PROBLEM OVERSEAS AND AT HOME

Shortages of trained manpower in underdeveloped countries include all degrees of skills up to the highest administrative ranks and they correlate directly with lack of economic development.

The United States too faces a serious challenge in training and education arising from poverty in the midst of general prosperity. Many of its poor are unskilled and functionally illiterate.

Part of our American problem has been created by unrealistic hiring standards. Members of minority groups must often be better trained than whites to get employment. Too many employers demand a high school diploma for jobs requiring less education.

Unrealistic standards also exist in underdeveloped countries. There, too, minorities meet prejudices. Civil service systems equate salaries with academic degrees. Professions refuse to recognize auxiliary occupations for partially trained personnel.

Although some apparent training needs are not real, genuine needs are still tremendous. Some 20% of Americans are functionally illiterate. Most of these people have been exposed to an educational system which failed them. Many dropped out of school or were expelled, but the Armed Forces and Job Corps encounter high school graduates who cannot read, write, or figure or even pick their name out of a typed list.

The problems in underdeveloped countries differ in size and degree. For example, a century may elapse in Pakistan before all schools are staffed by trained teachers. Many countries put more of their national income into education than do more developed countries and yet reach only part of their school-age children. People from static economies need faith that progress is possible and others need to learn behavior patterns sutiable for industry.

Thus, both at home and abroad, we need educational systems which are faster, cheaper, and more effective.

II. PROGRAMMED INSTRUCTION

The Job Corps seeks to transform poor young people by instilling new attitudes, providing marketable skills, and overcoming educational deficiencies. To do this, a new environment is provided in resident centers.

Half of the enrollees have uneducated parents; two thirds had been asked to quit school; one third failed the Army induction educational test. The average Corpsman spent 8.8 years in school but reads and figures at the fifth grade level. About one-fifth read below the third grade level.

Two kinds of centers for men were established. Conservation centers are for boys who are functionally illiterate or interested in conservation. Basic education, work habits, and rudimentary skill training are emphasized. Urban centers (located in former Army camps outside urban areas) train literate enrollees for urban occupations. Graduates of conservation centers may transfer to urban centers.

These distinctions blur in practice as enrollees go to centers with vacancies. For both types of center, enrollees arrive and depart at random times.

The Job Corps prepared a special curriculum for conservation centers because they are managed by employees of the Departments of Agriculture and Interior who are not professional teachers. (For urban centers, each contractor devised his own materials).

Self-instruction materials were developed to meet the problems of inexperienced directors and of individual instruction schedules. The arithmetic materials are programmed instruction (PI). Reading materials consist of workbooks, cards with attached sound tapes, film strips, and leaflets with graded vocabularies.

Loosely speaking, "programmed instruction" refers to any self-instruction materials. Strictly speaking, the term refers to a course which has been tested, revised and retested until a guarantee can be made, such as that 90% will score 90 or better. Each student moves at his own pace. When he finishes the course, he has mastered the subject. No one fails.

PI is widely used in urban centers, Labor Department projects, community action centers, and industrially sponsored training. The Armed Forces have 1600 programmed courses, all in the public domain and many being sold by enterprising publishers. PI is found in between 10 and 20% of public schools. Approximately 600 courses are commercially available, ranging from telling time through creative problem solving. (See Appendix E for chart of some courses -- attached only to original copy).

Results achieved in the Job Corps are average gains of 1.5 grades in reading and 1.8 in math for every 10 months, compared to the public school norm of one grade each 10 months. Job Corps enrollees had gained only 0.6 of a grade level for each 10 months they had spent in school. The range among centers is wide -- from 0.4 to 4.0 levels in reading and from 0.2 to 5.0 levels in math. (Some centers in these averages did not use PI).

One firm, MIND Inc. sometimes gains 4 grade levels in 2½ months. In a program it conducted at Laurens, S.C. under Labor Department sponsorship, its achievements paralleled those of the Job Corps. MIND has more than 50 industrial customers, including education businesses such as IBM and Xerox.

Instead of trained teachers, MIND uses monitors who have a high school diploma, a facility for empathizing, and a knowledge of the material. Monitors receive one week of training. Their function is to provide workbooks and answer questions. Westinghouse Learning Corp., the contractor for the Capital Job Corps Center in Washington, also prefers to avoid trained teachers because they reproduce the school situation which connotes failure to trainees. This Center receives men and women from other centers who take special on-the-job training and prepare for high school equivalency tests.

MIND accompanies its use of PI with sound tapes, saying that they demand attention, encourage repetition, and add aural to visual learning. MIND also tries to create pleasant physical surroundings.

Contingency management is Westinghouse's special technique. It is based on the proposition that the likelihood of behavior recurring depends on its consequences. Moreover, for any pair of responses, the more probable one will reinforce the less probable one. Thus trainees who like math and dislike reading will learn a reading lesson better if they study it before a math lesson. Supposedly, any desired reward will work--10 minutes of leisure, candy, the privilege of sleeping late. The firm also uses its system at a community project in Washington where the trainees receive no clothing or medical care and have a poor attendance record, but still progress nearly as well as Center residents. Throughout the Job Corps, the rate of gain is fast up to the sixth grade level and then slows. At Capital, the rate continues beyond the sixth grade.

Any PI may be considered a form of contingency management, with the reward being immediate knowledge that the correct response was given. (If the response is wrong, only the student knows). The feedback is shortly reinforced by a progress check. In traditional education, students may not know their progress until the end of a term.

Applicability of PI is a subject of differing views. One view is that an entire school course should not be programmed but that PI should be reserved for short units for specific information that must be in sequence. PI relieves the teacher of classroom drill. Another view is that PI does not actually substitute for other items in such circumstances and is not reserved for those who need it. Furthermore, the self-scheduling advantages of PI may be lost in a class situation. (The Armed Forces generally limit PI to supplementary courses).

Some educators object that PI involves uniform learning without intuitive insights and is inconsistent with non-linear types of knowledge. Others argue that teachers are essential, even with PI. Conservation centers have generally hired teachers who use some supplemental materials.

Recognizing that all educational methods involve controversy, PI seems useful for underdeveloped countries with shortages of teachers. Some materials can be used without change. The graded reading would help where English is taught as a foreign language. (Incidentally, these 4-page leaflets are printed on cardboard, so that they will last for several years). Arithmetic booklets could be translated with a local flavor. Many manuals of the U.S. Armed Forces could be used in technical schools which teach in English. MIND is preparing a Spanish reading program and other PI may exist in various languages.

Education ministries which already have difficulties printing and distributing may hesitate to adopt PI because the number of booklets and pages greatly exceeds that of ordinary primary school textbooks (e.g. 14 booklets on multiplication alone). However, so many books may still cost less than training and paying more teachers.

Cost of PI can be problem if PI is devised especially for use abroad. Preparation costs run from $2000 to $6000 per student hour! After determination of specific behavorial objectives and analysis of existing courses, a programmed course is constructed by presenting all separate facts or skills in proper sequence with adequate explanations and drills to ensure learning but hopefully no extra steps to destroy interest. A draft is then field tested and revised until uniform results are obtained from each usage. Costs depend mostly upon the extent of testing and revising. An experienced programmer may construct a relatively satisfactory course the first time, especially if the customer is satisfied with 80% validity.

III. ON-THE-JOB TRAINING

The Labor Department says the best way to make people employable is "hire now-train later". On-the-job training (OJT) is preferred to school training because it involves less investment for facilities, more modern equipment, exposure to actual employment conditions, and instructors with more practical skill. Many Job Corps Centers share Labor's conviction that OJT is most effective and employ it when their location permits.

A study on "Resources for Southern Manpower Development" done for the Department of Labor by Oak Ridge Associated Universities pointed out that Federal funds for manpower development were so limited relative to needs that they must be used with extraordinary prudence to stimulate efforts by other agencies. The resulting project in Oak Ridge uses 9 different agencies for 5 program components. Here only the skill training components are described.

High skill training in welding, glassblowing, electronics, mechanical design drafting, machining, and physical testing of materials is the aim at Oak Ridge, unlike some anti-poverty projects which provide only enough skill for employment at beginners' wages. The average starting wage after 42 weeks training is $2.94 an hour, compared with $1.19 before training.

Skill training is done by Union Carbide craftsmen working under Carbide foremen and supervisors. Instructors shift in and out, depending on the topic. For security at an atomic plant, machines have been moved into a separate building. However, much of the reality of an industrial setting remains because of the staff, the sophisticated machines, and various practices such as punching time clocks, working from job sheets, recording the time for each job, and inspecting work. Supplementary classes are taught by University of Tennessee personnel.

OJT reinforces class training for 70 students who have already received 1000 hours of skill training in "area" vocational schools operated throughout Tennessee by the State Department of Vocational Education and who come to Oak Ridge for 14 weeks of training under actual working conditions. School administrators who observed for a week gained ideas for modifying school curricula. They decided to seek similar coupling arrangements with local industries. Hence, Oak Ridge expects to discontinue this component but to send consultants to schools and industrial administrators.

At the Chicago Center (Brunswick), each Corpswoman learns a paramedical skill during several weeks in a classroom-laboratory before going into a hospital. She uses the OJT to perfect the skill so that she will not become flustered in emergencies. At the hospital, a nurse from the Center supervises the trainees. This is done because the ten cooperating hospitals admit Corpswomen only as a courtesy and have their own 2-week training program for high school graduates.

Supervision for OJT is practiced by the Capital Center for its trainees in offices, factories, stores, garages and hospitals. The supervisor describes exactly the tasks or skills to be mastered in order to be employable in his establishment and submits a biweekly rating on each trainee's performance. A Work Evaluator from the Center inspects each OJT site on a random schedule twice monthly and meets weekly with each Corpsman.

This approach to OJT is not new but often it is not used. The type of apprenticeship in which trainees practice skills only when they happen to occur in the craftsman's work may still be found. Union Carbide learned years ago that it could reduce apprenticeship from 4 to 3 years with organized training.

Underdeveloped countries, which can afford even less than the United States to equip training shops and where skilled teachers are scarcer, might well put more emphasis on organizing skill training in existing industries instead of struggling to set up relatively ineffective schools.

IV. JOB ANALYSIS

Even when skill training does not use PI, it often uses much the same psychology of instruction. Starting in World War II, stress has been put on job analysis so that the steps in a job are taught in a sequence determined by their relative difficulty.

Teaching stations are a recent elaboration of this approach. A trainee moves from one place to another as he completes a task. Stations are used at the Atterbury Job Corps Center (Westinghouse) in Indiana and the pre-skill orientation center (Northern Systems) in Houston. Spatial proof of progress provides confidence which helps in mastery of the next step. More stations than trainees are required to allow individual rates of progression. Otherwise, one trainee cannot change until another is also ready to move. The number of vacant posts can be reduced if the sequence is not too rigid, as when trainees can move from lathes to either drills or routers.

Job sheets, orders or requisitions are another elaboration of the step process used at Oak Ridge and at Breckinridge Job Corps Center's (Graflex) automotive area. The trainee knows exactly what he is to accomplish. He also becomes accustomed to an administrative practice found in many establishments. These sheets may also be the basis of time records, cost accounts, or efficiency ratings.

Diplomas for skill training may also reflect job analysis. The Chicago Center lists and rates each task which the trainee has learned. Then the prospective employer knows exactly what he is getting as he could not know from a general nurses aide title. The "Pal Joey" project in Bedford Stuyvesant lists 125 tasks.

Restructuring jobs so that highly skilled people spend more of their time working near the top of their skills increases production, reduces operating costs, and opens up new employment opportunities for people with less education.

The Chicago Center may be creating an entire new vocabulary of paramedical occupational titles--ward clerks, admittance clerks, medical transcriptionists, pediatric aides, psychiatric aides, immunologists, EKG assistants, Xray/darkroom assistants, and physical therapy assistants. Since many hospitals have not reorganized their tasks, the Chicago Center teaches as many different skills as it can to each enrollee in order to increase her chances for employment and promotion. Litton has done so well training medical corpsmen at the Parks Job Corps Center in California that the Prime Minister of Guyana has asked whether it could do such training in his country.

Teachers aides, recreation aides, and counsellor aides are trained by a Job Corps Institute at the Clearfield Center (Thiokol) in Utah during 5 months to enrollees selected from other centers. Seventeen graduates have just been selected as Peace Corps Volunteers. About 25 graduates each have been hired by the Seattle and New York City school systems. Many others work for the Job Corps itself. The Corpsmen spend 8 weeks each in recreation and teacher training and are coached in counselling for 4 weeks. Their skills include record-keeping, bulletin board preparation, operation of projectors and other audio-visual aids, game leadership, and group dynamics (discussed later).

V. PERSONAL AND GROUP COUNSELLING.

The new dimension added recently to skill training is a better understanding of the "roundedness" of the problem. We are not dealing simply with an extension of a machine, but with an organism having problems of education, health, habits, and viewpoints.

Counselling was a pre-condition of success when Lockheed started hiring and training people who did not meet its previous employment standards. In California, the people had 4 weeks of pre-vocational orientation. Very few dropped out or were fired. In Georgia, with no pre-job training, 25 out of 90 were quickly lost.

At Oak Ridge, the interaction between Tennessee academicians and Carbide craftsmen has been good for both. Carbide normally discharges trainees for unexcused absences or other disciplinary infractions. The educators' reaction was to forgive and keep trying. Both sides modified their stance--discipline was strict enough to instil suitable work habits but discharges were avoided. One UT man said, "We found these people were neither employees as Carbide thought nor students as we thought but trainees". UT counselled and taught a communications course on how to write applications, be interviewed, and take tests. (Such courses are a standard part of Job Corps and Labor projects and may also include consumer economics, check writing and tax filing).

The Chicago Center found that it can provide sufficient skill training in 3 months but that more time is necessary for disadvantaged young women to acquire the habits needed to be fully acceptable employees. Therefore skill training is scheduled so that graduation does not occur until after 5 months. (The Center's assessment may have been pessimistic. During recent racial disturbances, all enrollees assisted in emergency treatment of injured, even though 70% of the enrollees are Negro and half of them live at home).

For the Job Corps to train women who continue to live at home is a new experiment. Absenteeism has been much higher because of such problems as a sick child or lack of an overcoat to wear when commuting. The Center is hiring field workers to help overcome such problems. It is also including non-residents in Center activities so that they benefit from association with their peers.

Group discussions are an effective way to influence standards of behavior on grooming, job discipline, promptness, amusements, sex, drugs, alcohol, buying on credit, etc. The group technique combines well with OJT as trainees share their work experiences.

The Clearfield Center uses group meetings for "professional" training of teacher and recreation aides in order to improve their personal effectiveness and to enhance their understanding of the dynamics of classes. For four days a week, the routine is a half day for OJT and a half day for conceptual education. Friday is spent in a group encouraging absolute honesty with each other so that each trainee sees himself as others see him.

Underdeveloped countries might consider whether exposure to human relations training would be the best "quickie" preparation for teachers. Several Clearfield counsellors believe that it would be a useful substitute for educational psychology courses now required in the vain hope that an intellectual understanding of the learning process increases personal skills.

VI. LINKING BASIC EDUCATION WITH SKILL TRAINING

Most anti-poverty trainees are active, learn by doing rather than verbalizing, live in the present and need quick success, understand concrete problems rather than abstract concepts. This is also the style for many others for whom traditional education is not a satisfactory way to get the academic training which is an essential accompaniment to a skill. A technique for such people in addition to PI is to link skill and academic training closely so that the former provides motivation for learning.

Linkage is being tried at Breckinridge which is organized into an area for each major cluster of occupations. Each area has its own remedial, basic, and general education departments. In each area, the boys live together so that their conversation reinforces classes. Breckinridge has not completely achieved its goal. Some reading books for different areas have only superficial changes in vocabulary. Some math teachers do not explain how a process will be used on the job. For some areas, classrooms are so far from shops that academic and skill teachers seldom see each other. Dividing teachers by areas has occasionally caused vacancies in one area and redundancy in another. At Clearfield, the geographic arrangements are better but the skill and academic teachers have trouble keeping in phase because students master one side faster than the other.

The ultimate linkage seemed to be at Oak Ridge, where Carbide persuaded UT math and reading instructors to scrap their outlines and to relate each class on a daily basis to the problems in the skill shop. In return, UT persuaded Carbide instructors to change their "theory" classes from 2 hours once a week to 30 minutes each day.

The Chicago Center concluded that linkage could be carried too far. Girls rebelled when they encountered hospitals and illness all day. Newspapers are now used as reading "textbooks". As used, the papers are still fairly closely related to the girls' special interests of consumer economics, fashion, Medicare, community action, etc.

VII. USE OF INDUSTRIAL CONTRACTORS

When the anti-poverty program began, some industries were looking for new business after cutbacks in aerospace and defense contracts. Service activities, including education, offered a growing field. The success of business managers in devising and operating complicated defense and space systems and in training their personnel brought a conviction that they could manage anything - even training dropouts. John Rubel of Litton proposed that industries run Job Corps Centers.

Meanwhile, the Office of Education and the Department of Labor were contracting with profit-making enterprises to develop teaching aids and to train manpower--tasks usually performed by government or non-profit organizations. The Administration was motivated partly by concerns which earlier led the Agency for International Development to use contractors--a desire to avoid a growing bureaucracy and a hope that contractors would bring public support.

A whole new education industry has grown from joint ventures of electronics firms such as Xerox, General Electric, IBM, RCA, and Raytheon with mass communication companies such as Time, Newsweek, CBS, and Cowles Communications and with educational publishers. These businesses sell software, hardware, and also services. (See Appendix F--attached only to original copy). Competing with educational businesses are other firms such as Litton, Thiokol, Northern Utilities, General Precision, Brunswick, and AVCO which have Job Corps contracts and confidently announce their willingness to undertake all phases of economic development.

In comparison with universities, the Job Corps found that industries showed more imagination and detailed cost estimates. Later, Shriver testified that university-run centers were more prone to disciplinary crises resulting from idleness, bad food, and other breakdown in organization. Job Corps officers say that universities were less amenable to accepting directions (arguing academic freedom) and to removing ineffective staff (arguing faculty tenure). Some former educators in industry stated that it has recruiting advantages because it is not circumscribed by accrediting rules. Moreover, industry oriented its staffs on the cultural background of Job Corps enrollees while extension courses were the only staff training offered by universities. Business argue that, with a permitted profit margin of 4 to 5%, they can perform more cheaply than non-profit institutions which have inefficient overhead.

Education officials abroad may insist on prestigious academic institutions. This attitude can be circumvented where the relationship to hardware makes the software acceptable as in a contract in Vietnam for Westinghouse to train police in the use of communications equipment. Westinghouse is hoping for similar acceptability in El Salvador for a contract it is seeking for educational TV.

The Job Corps learned that, while it hired industry to manage, it too must ride herd. Although contracts permitted new instructional materials and techniques, industrial contractors have come up with little that is new. "Systems analysis" has not been fully used. Some contractors complain that they were not given their heads by bureaucrats. One non-government observer commented that some contractors hoped to develop marketable new educational products but found that education is basically services and lost enthusiasm.

Nevertheless, A.I.D. can bring itself a wider choice of contractors by considering industry as well as schools for educational and training projects. And if industry really uses its best personnel and its systems analysis, it may do a better job.

VIII. COOPERATIVE USE OF EXISTING ORGANIZATIONS

The Oak Ridge Training and Technology project is notable for the varieties of training, the cooperation of many agencies, and its multiplier effect. The prime contractor is Oak Ridge Associated Universities (ORAU), a non-profit corporation composed of 41 Southern universities which started as an institute for nuclear studies but has broadened. It arranges for graduate students from many campuses and has contracts with the Atomic Energy Commission, National Aeronautics and Space Agency, National Science Foundation, and National Institutes of Health. ORAU might be a useful prime contractor for A.I.D. when it seeks a consortium of schools similar to those formed by Educational Services Inc. to advise engineering faculties in India and Afghanistan.

ORAU mobilized nine organizations. It contracted simultaneously with the Department of Labor for skill training (described earlier) and with the U.S. Office of Education for teacher training and educational research. The Atomic Energy Commission, whose plant is used for skill training, also agreed. ORAU made subsidiary contracts with Union Carbide Corporation, which manages the AEC plant, and with the University of Tennessee. It also made agreements with the Oak Ridge High School, the Division of Vocational Education of the State of Tennessee and worked in cooperation with the Bureau of Employment Security and the International Association of Machinists.

For pre-service teacher training, 60 students at a time from the University receive college credit of 3 academic quarters for courses in professional methodology, technical courses taught by Carbide engineers, and practice teaching in the high skill classes. At the same time, some Carbide instructors enroll in UT methodology courses. This program will now be financed by UT.

In-service teacher training occurs in 8-week institutes of shop work and related course planning for 100 teachers. Such refresher training is now being arranged elsewhere in Tennessee and ORAU is starting an institute for regional voc ed supervisors from other states, who will establish programs.

Educational research by graduate students of UT gives ORAU a free staff for constant evaluation of an experimentation with its techniques. Such evaluation is something that underdeveloped countries badly need.

One research study concerned qualifications of trainees. Instead of confining recruitment to trainees especially suited for high skill training, it was planned that 25% of the trainees would have lesser qualifications. Selection was made after the General Aptitude Test Battery (GATB) was administered by BES and after interviews by ORAU. More than 50% of the trainees finally selected did not meet the original criterion of work experience. And although all had high school certificates, these often meant little. Moreover, many would have failed Union Carbide's requirements of 100 on an IQ test and 85 on the Bennett mechanical aptitude test.

At the end, most of the experimental group had done as well as the others. Special tutors were obtained from the local high school's adult education program at no cost to the project. Generally, instructors did not know which trainees fell short of the selection criteria, so that they treated all equally. Inspiration received from other trainees (the peer effect) was important. Finally, research by UT has convinced ORAU that none of the selection tests had predictive value--they measured present knowledge or skill rather than aptitude. The Bennett test relates to high school general science.

After this experience, Union Carbide engaged an ORAU professor to review its hiring standards. For next year, the ORAU contract being negotiated with the Labor Department will specify that 75% of the trainees will not meet the criteria (although high school level math and science must be learned before completion). The most reliable selection device is an interview which reveals how anxious the applicant is for training--motivation is a key factor for success.

While the exact pattern would vary with the area, industry, and school, the cooperative approach demonstrated in Oak Ridge offers promise for use overseas for various combinations of skill training, teacher training, and educational research. One aspect of this cooperation may be difficult in countries accustomed to a hierarchical administration. Although ORAU has authority to issue orders, it must create a team of Carbide, UT and other personnel by inspiration and persuasion. This approach is especially necessary with the labor union. ORAU makes good use of an advisory council with representatives of all agencies.

IX. CONCLUSION

A.I.D. can adopt certain training materials; contract with industrial firms to prepare programmed instruction and other materials or to staff technical assistance teams; stimulate wider and better use of on-the-job training, job restructuring, and counselling; and promote cooperative projects of various local institutions comparable to the Oak Ridge project.

A common thread of this paper has been that something different from traditional education is vital. The American approach of requiring school attendance through age 16, of trying to shove everyone through high school, and then of demanding a high school diploma for employment eligibility has brought tragedy. Let us not duplicate it abroad!

APPENDIX A

Places Visited:

Washington, D.C.

Department of State, Agency for International Development.
Office of Economic Opportunity, Job Corps
U.S. Department of Labor, Manpower Administration
Capital Job Corps Center for Men and Women
The Institute for Politics and Planning
Rand, Inc.
Xerox
MIND, Inc.
Westinghouse Learning, Inc.

Ogden, Utah

Clearfield Job Corps Center for Men
Weber Basin Civil Conservation Center

Chicago, Illinois

Job Corps Art Exhibit, Brunswick Building
Chicago Job Corps Center for Women
St. Francis Xavier Hospital
Lutheran Hospital

Morganfield, Kentucky

Breckinridge Job Corps Center for Men

Oak Ridge, Tennessee

Oak Ridge Associated Universities
Training and Technology, Y-12 Plant (Union Carbide)

APPENDIX B

People Interviewed:

Agency for International Development

Kenneth S. Levick, Associate Assistant Administrator for Technical Assistance.
Albert D. White, Director, Development Planning, NESA
Richard J. Ward, Chief, Planning Division, NESA
Richard G. Birnberg, Chief, Program Division NESA

Job Corps Headquarters

Dr. Joseph Murphy, Associate Director, Plans and Programs
Emily C. Gorman, Deputy Associate Director, Plans and Programs
Dr. John M. Kennedy, Deputy Director, Men's Urban Centers
Robert Shrake, Deputy Director, Civilian Conservation Centers
Richard Devlin, Chief Special Projects
Peter Beach, Project Manager, Special Job Corps Centers
Dr. William Darnell, Chief, Plans and Evaluations
William LaPlante, Curriculum Office

U.S. Department of Labor

Judah Drob, Chief, Program Utilization
Ross Shearer, Program Evaluation

Capital Job Corps Center

John Burns, Director (Under Westinghouse Learning,Inc.)
Carole Pusin, Instructor

The Institute for Politics and Planning

Arthur W. Barber, President
Charles L. Blaschke, Public Management

Rand, Inc.

Thomas K. Gannon, Jr.

Xerox

John Dixon

MIND, Inc.

Peter Wastie

Westinghouse Learning, Inc.

Louis Miller
Thomas Boswell

APPENDIX B

People Interviewed:(Cont)

Clearfield Job Corps Center for Men

John Jurgason, Project Manager (for Job Corps)
Charles J. Moxley, Project Director (for Thiokol)
Robert Manquardt, Vice President for Economic Development Operations, Thiokol Chemical Corp.
Donald B. Morse, Manager Staff Training
John White, Director of Curriculum
Joseph Salomon, Director of Vocational Education

Weber Basin Civilian Conservation Center

Paul Evans, Deputy Director (for Department of Interior)
Ronad G. Robertson, Counsellor
William Walker, Head Teacher
Richard Loveland, Math Teacher
Karene Walker, Math Teacher
Margaret Evansen, Reading Teacher

Chicago Job Corps Center for Women

Victor J. Scodius, Director (for Brunswick, Inc).
Joanne Polk, Community Relations
Jo Ann Schwimp, Chief, Basic Education
Barbara Selke, Chief Vocational Education
Ronald Magarick, Chief, Physical Education and Recreation

Lutheran Hospital

Elizabeth Guy, Director In-Service Training

St. Francis Xavier Hospital

Sophia Nicolaos, Supervisor OJT

Breckinridge Job Corps Center for Men

Philip Clark , Project Manager (for Job Corps)
John R. Smingler, Center Director (for Graflex, Inc.)
William Wright, Deputy Director
Elizabeth Nixon, Administrative Assistant
Daniel Layer, Curriculum Manager
Thomas Hale, Associate Director for Training
Eldon Green, Supervisor, Auto Repair Skill Training
Robert Sneed, Supervisor, Basic Education
Robert Lemke, Supervisor, Remedial Education
Mary Margaret Moxley, Remedial Reading Teacher

Training and Technology

Dr. Wendell J. Russell, Director (for Oak Ridge Associated Universities)
Joseph T. Boulet, Administrative Officer (for ORAU)
Thomas Allen, Training Director (for Union Carbide)
D. L. Phillips, Sr., Engineer (for Union Carbide)
Richard E. Dew, Superviser Machinists Training (for Union Carbide)
John Fritts, Recruitment Officer
A. B. Reed, Assistant Recruitment Officer

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People Interviewed: (Cont)

Training and Technology (cont)

John Simpson, Placement Officer
Dr. Gerald K. Laborde, Counsellor (for University of Tennessee)
Dr. Donald E. Maurer, Teacher Training (for University of Tennessee)
Dr. John Hamil, Jr., Curriculum Development (for Univeristy of Tennessee)

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