AGRICULTURAL EDUCATION

Agricultural Education

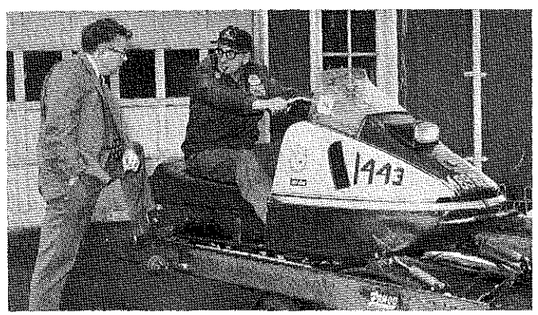
Volume 47 May 1975 Number 11

NVATA EXECUTIVE COMMITTEE—Members of the NVATA Executive Committee are shown here at the conclusion of the AVA Convention in New Orleans in December, 1974. Seated (left to right) are Sam Stenzel, Assistant to the Executive Secretary, Nebraska; Bill Harrison, Past President, Oklahoma; Luther Lalum, President, Montana; and James Wall, Executive Secretary, Nebraska. Standing are John Mundt, Idaho; Richard Weber, Louisiana; John Murray, Minnesota; Jim Guilinger, Illinois; H. I. Jones, Georgia; and Richard Strangeway, New York—all regional Vice Presidents. (Photo from NVATA)

Stories in Pictures by Jasper S. Lee

NVATA SPECIAL CITATIONS—Bill Harrison, President, NVATA, is shown at the AVA Convention awarding Special Citations to (left to right) Gordon Galbraith, Oregon; Cleo Collins, Oklahoma; and Paul Day, Minnesota. (Photo from NVATA)

VIP AWARDS—Julian Campbell, State Supervisor, Virginia, is shown presenting FFA VIP Awards to H. W. Sanders (center) and Walter Newman, (right) both pioneers in founding the FFA organization. Sanders and Newman, now retired, make their home in Blacksburg, Virginia. (Photo by Jasper S. Lee)



STUDYING THE COMMUNITY—Donald Cook, teacher, E. O. Smith High School, Storrs, Connecticut, is shown interviewing agribusinessman David Potts to collect employment data and provide information about vocational agriculture in the State. Potts is demonstrating a snowmobile. (Photo from Alfred Mannebach and University of Connecticut Photographic Laboratory)

NVATA HONORARY LIFE MEMBERSHIP AWARDS—NVATA President, Bill Harrison, (left) is shown presenting honorary life memberships in the NVATA (left to right) to Kenneth E. James, Illinois; C. D. Bennett, Foundation for American Agriculture, Washington, D.C.; and John Scott, Master, National Grange, Washington, D.C. (Photo from NVATA)

"COMPLIMENTARY
COPY FROM THE
EDITOR"

Theme—TEACHING THE DISADVANTAGED AND THE HANDICAPPED

The
Agricultural Education
Magazine

EDPRESS Vol. 47 May 1975 No. 11

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THEME—TEACHING THE DISADVANTAGED AND HANDICAPPED

This publication is the monthly professional journal of agricultural education. The journal is published by THE AGRICULTURAL EDUCATION MAGAZINE, INC., and is printed at the Lawhead Press, Inc., 900 East State Street, Athens, Ohio 45701.

SUBSCRIPTION PRICE: $5 per year. Foreign subscriptions $6. Student subscriptions in groups (one address), $2 for October-May. Single copies and back issues 50 cents. In submitting subscriptions, designate **new** or **renewal** and address including ZIP code. Send all subscriptions and requests for back issues to Harlan E. Ridenour, Business Manager, AGRICULTURAL EDUCATION MAGAZINE, Box 14343, Columbus, Ohio 43214.

Second-class postage paid at Athens, Ohio.

Send articles and pictures to the Editor or to the appropriate Special Editor.

COVER PHOTO:

Students grooming harness horses at the school stable at the Nassau County BOCES in New York State. Information on the program is included in this issue. (Photo from Robert Cicchetti)

Editorials

Guest Editorial . . . THE CASE FOR STUDENTS WITH SPECIAL NEEDS

Samuel M. Curtis
Teacher Education
Penn State University


Sam Curtis

A radio spot plugging for donations to the Black Colleges Fund states dramatically, "a mind is a terrible thing to waste." Indeed it is! Teachers of agriculture have a long tradition for accepting a student as he is and then challenging that person to know who he might become. The annals of the FFA abound with success stories of the student who succeeded against immeasurable odds. In our society, development of the human resources is a responsibility entrusted largely to the public schools. In our discipline, agricultural science is the vehicle by which this trust is accomplished. The vocational amendments of 1968 clearly put the "monkey on the back" of vocational education when it comes to the development of the human resource potential of students with special needs, i.e. the disadvantaged and handicapped. And though I believe the record of vocational education in agriculture is good for individual cases, enrollment records of special needs students on the national scale indicates that the total effort has been insufficient.

In addressing ourselves to the social and legal responsibilities of educators, certain possibilities and concerns must be considered. First, let us explore the concerns. One concern consistently raised is that emphasis on teaching students with special needs degrades the quality of instruction provided other students. Clearly, this concern arises from two sources. The first represents those educators with legitimate doubts; the second comes from those who need a reason not to do anything. To the latter, this excuse is sufficiently plausible to get them off the hook.

More important are the concerns of the first group. Many in this group have probably seen instances where resources have been diverted to the special needs student at the expense of the more advantaged. It does not have to be so. One of the first lessons learned when working with disadvantaged youth is that superior teaching methods must be used. Shoddy preparation and implementation fail miserably. Instruction in agriculture must deal with real occupations embodying real job potential. All students, advantaged and disadvantaged alike, benefit from superior teachers using appropriate methods. All students, regardless of their level of development, respond best when committed teachers relate instruction to real life. I am suggesting that emphasis on teaching students with special needs can result in improved programs for all learners. This is especially true when personalized programs allow students to progress as their capabilities develop.

Another proposition frequently expounded suggests that disadvantaged students must be separated from regular classes before any significant progress can be made. Some part of this proposition is derived from a misunderstanding of who the disadvantaged student is. Confused with disadvantaged youth are the mentally handicapped—both the educable and the trainable categories. Mentally handicapped students have real difficulty in coping with regular classes and usually must be provided separate, special programs. On the other hand, the disadvantaged student is not currently succeeding in regular class, but he can if provided certain incentives. Furthermore, in 1967 in *Hansen vs Hobson,* the U.S. Circuit Court in Washington, D.C. ruled that ability grouping of students was unconstitutional. Although this ruling has not been tested in other jurisdictions, I agree with it on social and moral grounds. It is also unnecessary. Adults of varying levels of education and capability respect and interact with each other in both social and business realms within our democratic society. The place to teach disadvantaged learners is side by side with their more advantaged counterpart. In addition, teachers who have been condemned to teach the "low track" in an homogeneous grouping system will almost unanimously reject the concept as unmanageable.

Possibilities abound. Each disadvantaged or handicapped person is a new possibility. Perhaps the most pathetic figure in our society is the young person unequipped and unable to earn a living. Uneducated, such a person is not capable of diagnosing his problems, much less finding solutions. Rejected and dejected, he frequently becomes a ward of the state via either the welfare or penal route. The social systems of the urban and rural ghettos tend to perpetuate the problems of every untrained individual.

Vocational education is one of the few agencies that has the impact potential to penetrate the vicious circle. For each disadvantaged or handicapped youth who learns and becomes employed in a socially acceptable occupation, the cycle is broken. That person becomes a contributing member to society. His new found self-respect and self-esteem allow him to become a participating, constructive member of his community. Certainly the social cost of not helping youth with special needs far outweighs the expense of enabling him to earn a living. However, special effort is required. Educators must make it happen. The unique history of vocational agriculture and its concern for students makes it appropriate that agriculture lead the way. Components of this effort include the teacher with empathy for special needs students. Instructional materials must be written to the reading level of disadvantaged youth. It is surprising how much of the disadvantagement disappears when the reading barrier is removed. Education in agriculture must include skills that are readily identifiable with paying jobs. The motivational impact on all students is enormous. Objectives must be performance based; quality teaching is

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(Curtis—from previous page)

demanded. The curriculum must be flexible enough so that student progress is not impeded by artificially constructed barriers. Cooperative education for all is imperative.

Finally, real satisfaction accrues to the teacher who intervenes on behalf of students headed for the human dump of our society and helps them become useful citizens. I have experienced both the exhilaration of that success and the gall of failure. From these experiences comes the conviction that success is possible when a concerted effort is made, and failure is inevitable if it is left to fate. ◆◆◆

Teachers of agriculture have a long tradition for accepting a student as he is and then challenging that person to know who he might become.

Guest Editorial . . .

SERVING DISADVANTAGED AND HANDICAPPED—NOT NEW

J. C. Barrett, Consultant
Special Programs Unit
Springfield, Illinois

J. C. Barrett

Under the provisions of the Vocational Education Amendments of 1968 (Public Law 90-576) which emphasizes the need for new programs and facilities to serve the handicapped and disadvantaged, I find that vocational agriculture programs in the high schools have had little adjustments to be made. Vo-Ag teachers have always taught the handicapped and disadvantaged in some cases without realizing it.

Identification or lack of identification is the main reason Vo-Ag teachers do not know that some of their students are handicapped or disadvantaged. Go to any ten Vo-Ag teachers and ask for their definitions of handicapped or disadvantaged students, and you will probably come away with ten different answers. Without going into specific characteristics as to what constitutes a handicapped or disadvantaged student, let me present two statements that will serve to identify this category of student:

1. The individual is not succeeding or cannot succeed in a regular vocational class without special help.
2. The individual's disability is a contributing factor to his lack of success in that particular class.

You are probably saying to yourself, that definition could fit a lot of students I have in my classes. Right! You have been dealing with handicapped and disadvantaged students and just felt this student needed a little more of your attention or you had to change the curriculum someway to help the student achieve in your class. You are the "wonder worker" in the eyes of other teachers in the school because you achieve success with "that" student.

Why has agriculture been traditionally the dumping grounds for some students? It is because the classes are easy or it is because you, the Vo-Ag teachers, are able to meet the needs of these students?

Recently, I asked a Vo-Ag teacher what criteria he uses to identify and what type of ancillary services he was providing for his handicapped and disadvantaged students. The instructor looked puzzled by the question. After describing some characteristics to him, he informed me that he did have those types of students, but he taught them the same as other students who have had the same difficulties. He used individualized instruction and changes in the curriculum and activities so the student could compete and stay up with the others in the class. He mentioned that he had a deaf student who brought an interpreter to class with him, and all he had to do was teach the interpreter before class so she understood enough to translate the information to him. So he really didn't feel the student was handicapped in *his* class, because the student was one of the class leaders.

Applying the age-old methods of teaching agriculture such as problem-solving, individualized instruction, adapting the curriculum to the students instead of trying to adapt the student to the curriculum is successful with the disadvantaged. Involvement in FFA to develop socialization skills and good self-concepts is another way Vo-Ag teachers have been meeting the needs of their students.

There are many specific types of handicaps that require special equipment, materials and guidances. In these cases, get help from special educators in your school system in meeting the needs of these students.

Here are a number of specific techniques or principles you may incorporate in your planning:

1. Use your imagination in planning course activities. Be innovative.
2. Plan for daily success for each student, keeping long-range goals to a minimum.
3. Subject matter should be geared toward success with each student.
4. Plan for individualized attention, showing concern for the student and his work.
5. Keep vocabulary on the students' communication level.
6. Use learning experiences that are relevant and have immediate value to the students.
7. Have student input when planning the learning activities.
8. Maintain discipline, always be fair and most important, be consistent.
9. Do not be afraid to be human in front of your students.

Teaching is not easy; it is hard work which requires studying your students and their needs, then caring enough to be innovative in order to meet their needs. ◆◆◆

Teaching the Disadvantaged and Handicapped

By William Woehler
BOCES, Nassau County
New York

Wm. Woehler

The Board of Cooperative Educational Services (BOCES) of Nassau County, among other major activities, conducts one of the finest and most comprehensive occupational education programs for the handicapped in the nation. BOCES special education pupils include the learning disabled, emotionally disturbed, trainable mentally retarded, cerebral palsied, visually impaired, hearing impaired and multi-handicapped.

To meet their many needs, BOCES offers many different educational environments. The major thrust of the program is to develop in each pupil the maximum degree of independence and self-esteem.

The faculty, accordingly, seeks in every way to foster positive change—to motivate children to learn and succeed. The curriculum is tailored to fit individual needs and abilities. In addition, experiences are provided that introduce students to the world of work and the techniques of problem solving.

Effecting behavorial and attitudinal changes is the toughest task facing the teacher of handicapped students. Fortunately the teacher has at his command a battery of supportive personnel who are ready, willing, and qualified to assist him in his quest to teach the handicapped student. Our team includes the psychologist, social worker, nurse, and placement counselor.

Much education is imparted to our students through role modeling what we do, how we act, and how we appear. Smoking in rooms or offices open to student view becomes incongruous to the student who is denied this privilege. An instructor who habitually arrives late does little to strengthen punctuality in the student. Allowing minor student nonconformance may increase personal popularity, but it also increases the problems of the conscientious teacher and definitely undermines the total school effort.

Competition is an asset to the learning process when competition is among students of comparable ability.

The philosophy of trying to develop within each individual all that he is capable of becoming should be practiced, remembering that teachers do not teach subjects. Rather, we guide the learning of individuals.

Some of the attitudes, behaviors, and work habits which should be developed and fostered in students are: relationships with others, dependability, self control, motivation, judgment, initiative, courtesy, concentration, tolerance, adaptability, loyalty, consistency of work behavior, and cooperation.

Academic subjects should reflect relevency to the total program, but the emphasis should be placed on hands-on learning experiences. Experience has shown that the handicapped student responds remarkably well to activities in agricultural programs. Students seem to get a great deal of satisfaction from working with plants and flowers. The reward of growing things seems to inspire confidence and a special joy in the students.

Communication

Teacher-student communication is of prime importance and must be established before any learning can take place. There are many avenues of communication—verbal, hearing, sight, touch—that have to be brought into play in order to set the stage for student-teacher understanding.

The disruptive student is seeking attention and will continue to act up until his emotional needs have been satisfied. The feeling of someone caring can work wonders for a student who has been turned off by society.

Home Visits

The teacher's role in working with the handicapped does not stop at the classroom door. Much progress can be made by visiting the student's home environment and becoming knowledgeable about the student's family and social life. Many times the underlying causes of a student's problem can be identified by such visits. This requires dedication, involvement, and commitment on the part of the teacher, but the investment of time and effort will reap many dividends.

Competitions, Contests, Exhibits and Shows

Don't underestimate students' abilities during performance tests. Given equal opportunities and with proper preparation, students often display talents and creativity, which seem to be nurtured particularly in the area of floral arranging. Students have performed exceedingly well during shows and exhibits both in dedication and overall performance. Competition is an asset to the learning process when competing with students of comparable ability.

Peer Relationship and the Buddy System

The value of belonging, of being wanted and of participating in group activities, cannot be overstressed. Many times students learn more easily from each other. Pair a student who needs a brother or buddy image with a peer that is admired.

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(Woehler—from page 245)

Recognition and Praise

Recognition of accomplishments should be freely given. Punishment should be dealt out sparingly, should fit the infraction, and should be tempered with a measure of leniency. However, it is imperative that if punishment is indicated, it should be administered immediately following the incident, without time lapse and in a secluded area away from peer ridicule.

Structured Discipline

Structured discipline should be practiced and should begin the moment the teacher and students meet on the first day of school. The pattern must be set. Students must be given and learn the rules. It is important to start with hard and fast rules; they can be tempered later when the situation warrants. Pupils profit from a class as long as they seek to learn and do not interfere with the learning of others.

Recreation

There is great value in providing *supervised* recreational activities such as sports, music, art, and social get-togethers during the normal school day. Club activities, such as provided in an FFA chapter, cannot be overemphasized and should be part of the daily curriculum.

Some Techniques Which Have Worked

—Teachers must be alert to any changes in students' attitudes and actions.
—The students' respect and trust has to be earned and is not to be taken for granted.
—The ideal teacher/student ratio is considered to be 1:10. However, in a team teaching situation this could be changed to 2:25. Experience has indicated that team teaching lends itself particularly well to teaching this population.
—The teacher must establish his control from the outset so that there is no question as to who is in charge.
—Discipline should be practiced on a daily basis and should emphasize such areas as promptness, safety, assignments, conduct, and organizing the classroom before dismissal.
—Adequate time should be provided for the clean-up of tools and equipment and all students should participate without exception.
—A handshake as the students enter the class; the teacher greets each one by name.
—Personalized comment by the teacher that gives recognition to the individuality of each student.
—Repetition of the process when the students leave at the end of the day.
—Any unpleasantries that may have arisen during the day are not carried out of the classroom, and each day is started with a clean slate.

Some Actions to Avoid

—Do not lose self-control even if physical restraints must be used when a student is in danger of hurting himself or others.
—Don't postpone problem solving.
—If a student presents a legitimate problem to the teacher he must act immediately to help find a solution. Don't delegate the responsibility to someone else.
—If a problem entails leaving the classroom, be sure the class is covered by another qualified person.
—Never play hot or cold, and at all times be tuned into and respect the students' feelings.
—Never back a student into a situation from which there is no escape. Always have an opening so he can gracefully save face.
—Don't betray student confidences.

Summary

The most important element is motivation. The teacher must be enthusiastic and imaginative. A meaningful relationship seems to develop between the student and the plants he has brought into being. Curiosity, concern, and hope are aroused in the student who has accepted the responsibility for giving a plant the essentials of life.

Working with the soil and following the cycles of the plant world upon which man is so dependent, bring an involvement and awareness of everything around us. Students who are turned off academically, but who have had an opportunity to express their latent artistic abilities by being exposed to experiences in working with live and/or dried floral materials, invariably bring home coveted awards from shows, exhibits, and contests. The satisfaction derived by both the student and the teacher is immeasurable, and the time spent in extra-curricular activities is well worth the rewards reaped. Students who are enrolled in agricultural programs gain profoundly from such a curriculum. It appears to provide a tangible link between the student and his environment.

There is no question that the various components of the agricultural umbrella will continue to play a significant role in teaching the disadvantaged and handicapped. ◆◆◆

Themes For Future Issues

June —	**Women in Agricultural Education**	**October —**	**International Agricultural Education**
July —	**The FFA**		
August —	**Serving Out-of-School Groups**	**November —**	**Cooperative Education in Agriculture**
September —	**Guidance, Counseling and Placement**	**December —**	**Agricultural Mechanics**

Working with the Handicapped

Robert Cicchetti
BOCES, Nassau County
New York

One of the most important challenges to public education is meaningful occupational education for individuals with mental and physical handicaps. The handicapped individual who is prepared to enter our work force, whether it is with total independence and capability or under some form of sheltered structure, is an asset and a positive force in a society, rather than a social and economic liability.

Although business and industry have recently shown an increasing willingness to hire health-handicapped people, various obstacles still face these potential workers as they seek employment. Some are not hired because their handicap is physically discernible, while others are rejected because they have been categorized as mentally or emotionally incapable of working effectively in a situation of natural employment. But beyond the possible prejudices of employers, many of the health handicapped must deal with their own learning disabilities. Because of these cognitive, effective and psychomotor disabilities, the individual's job competency and his employability are reduced.

The Board of Cooperative Educational Services, Nassau County has accepted the challenge to expand occupational education programs and services for disadvantaged and handicapped persons at all education levels.

Since its very inception, the BOCES of Nassau County has dedicated itself to educational quality and equality for the youth and adults it serves. In the past few years, major steps have been taken toward providing handicapped students with the education and training that will prepare them to participate more actively in our society with maximum independence.

To facilitate wiser, more realistic agricultural occupation choices, certain social and technical skills need to be instilled in our youngsters. Many of the handicapped youngsters we get into our program are lacking these fundamental behavioral, attitudinal, and technical skills. For reasons of brevity, I will call these skills "survival skills." Following are examples of some survival skills:

—Social responsibility to co-workers.
—Reliability to employer.
—Skills needed for productivity.
—Good work habits.

Other factors to concentrate on are those that will encourage good grooming and build self-esteem.

It is difficult enough to get "regular" students accustomed to the routines of school and work; but when you get a handicapped youngster who has not been exposed to many of the "survival" skills, you have a rough row to hoe.

Before we start to work with the handicapped, they should be introduced to real-life experience programs. If they are to spend time in an agricultural environment, they should be exposed to an exploration of outdoor agricultural occupations. This exposure to agricultural occupations *must* be designed for educationally disabled youth.

The exploratory program should be designed to give youngsters hands-on experience in outdoor agricultural occupations. Examples of these outdoor agricultural occupations are: nursery operations, landscape operations, animal care, conservation, field production, and outdoor mechanical equipment usage, and maintenance. The daily activities of such a program center on live experiences, including caring for small animals, riding tractors, cleaning simple equipment, making simple flower arrangements, planting trees, trimming shrubs, etc. All this should be complemented by field trips to the many agriculturally oriented facilities in and around your own locality.

While this exploratory program is going on, it is suggested that you reinforce the previously mentioned survival skills with real experiences. This real experience is the vehicle by which you can expose your youngsters to the survival skills. Even after a handicapped student has had this exposure, some additional special attention in your program may have to be given.

Grooming harness horses at the Nassau County school stable.

When coordinating student involvement with occupationally oriented special education teachers, you, the teacher, can become aware of the needs as well as the capabilities of the handicapped as they relate to job performance.

While teaching in a specific agricultural area, the teacher's own understanding of his individual students will also enable him to adopt appropriate methods for reinforcing the survival skills. These survival skills cannot be taught and practiced in a vacuum. This system could be used as an individualized instructional core for an occupational awareness experience which will permit handicapped students to gain firsthand experiences of the world of agricultural work.

A student who acquires many of these survival skills can then be considered at least partially prepared for those agricultural programs he may subsequently choose. These survival skills, combined with prevocational agriculture and the vocational agricultural programs, can allow the handicapped student to successfully compete with the "normal" student. ◆◆◆

Agri-Development: Program for Rural Disadvantaged Adults

Cletus Fontaine
Consultant, Agriculture Education
Madison, Wisconsin

Cletus Fontaine

Farming profit margins, per unit of output, are continually narrowing; the cost-price squeeze leaves little room for management errors. A few poor decisions can change a profit into a loss. This cost-price squeeze, combined with demands for higher living standards, places a real pressure on the ability of farmers to get the maximum possible net income from their farm business. It puts a high value on the farmer's knowledge of his business and his capacity to make and carry out decisions which result in higher incomes.

Vocational education institutions, recognizing the need to assist farmers in upgrading their management skills and problem solving competencies, have developed programs to meet these needs. You have heard about these programs: farm training, production agriculture, farm business management, young farmer, adult farmer, farm operator technology, etc.

But, too often recruitment efforts for these programs have been geared to the better farmer. He is an adoptor, one who recognizes the value of education. He attends classes regularly. He also attends extension and other service organization meetings.

The Wisconsin Farm Training Program is structured to be five years in duration. The truth of the matter is, students completing these five years don't want to graduate; which we believe speaks well for the program. The student enrolled in the Farm Training program will have received 20 to 24 hours of classroom instruction and 13 hours of on-farm instruction annually. The program is designed for the young farm operator who is becoming established in farming. Generally, he has a high debt load and a substantial investment in the operation with a net worth of over $50,000.

There is, however, another segment of rural America which is more difficult to reach, or recruit. If your state is comparable to Wisconsin, 15 to 20 percent, or more, of the rural farm population can be considered economically disadvantaged. This is the farm family whose income is at the poverty level, or less. We, in Agricultural Education, have forgotten, or haven't given enough thought, about what we might do for our rural disadvantaged adult farmers.

It is easier to do something for the "good" farmer who would probably make it anyway than it is to do something for the educationally deprived.

Let's face reality — poverty stricken, special needs, public assistance or welfare cases, socially maladjusted, these are the terms that apply to this group. Maybe we should call them educationally deprived people, attempting to farm. These are people who, for one reason or another, do not avail themselves of available educational opportunity. Maybe they don't know it exists and, if they do, they won't ask for it. You know the ones I am talking about — they're trying to farm but not making any headway, using yesterday's farming practices, working a farm with buildings that leave much to be desired, with farm machinery that isn't housed. Poor crop production is evidenced, balanced rations are not fed, and this is reflected in their livestock or milk production.

This family wants to farm but needs educational help, and there is a way to help the family. Three vocational districts in Wisconsin have initiated a program entitled "Agri-Development" to reach these families. Federal funds for the disadvantaged provide 45 percent of the program costs, with the VTAE Districts picking up the other 55 percent. Program costs per student enrolled may be three to four times higher than those in the regular farm training program.

I can't describe the feelings I sensed while visiting a couple of these students, or educationally-deprived farmers, some time ago. The enthusiasm of the farmer students and the remarks they make — "I wouldn't be on this farm if it weren't for Byron." "I worked 14 hours a day, 7 days a week and never had anything to show for it, now I see crops grow." They were anxious to show me their accomplishments — a diversion ditch to drain water away from the farmstead area; an improved, or first-time liming and fertilizer practice, with a healthy crop of alfalfa to show for it. Another had constructed a drainage ditch for manure effluent disposition away from the lake, one was starting vetch as a hay crop on a sandy soil, another was starting a farm garden. Both farmer students were on a dairy herd improvement program, a soils testing program and keeping farm records. Both attended the classroom instructional sessions. Soil Conservation Service, University Extension, Production Credit Association are now in their vocabulary. They weren't before.

OBJECTIVES

The primary objective of the Agri-Development program is to elevate the student's level of competency to a level that provides him with the confidence needed to enroll in the regular farm training program. You start this student in a remedial program initially, and enroll him in the regular program when he is ready. He is reluctant to get into a regular program because of his discomfort when talking to his peers.

Secondary objectives of the Agri-Development program are to:

1. Elevate the family net income.
2. Assist the family in making independtnt decisions.
3. Improve efficiency of the overall farming operation.
4. Promote and maintain the family farm.
5. Establish recommended farm management practices.

INSTRUCTION

Although flexibility is maintained to meet the needs of the student, the program concentrates on classroom instruction, coupled with organized on-farm instruction on a one-to-one or small-group basis.

An instructor, assisted by one technician or para-professional for each 15 students, provides 30 to 50 hours of classroom and 72 to 96 hours of individual or small-group instruction for each family yearly.

Although one instructor and four para-professionals have been serving sixty students in programs developed thus far, it appears that an instructor may be able to work with five or six technicians and serve 75 to 90 students.

The para-professional is an individual with satisfactory farm experience who has the knowledge, personality and desire to provide close supervision and technical assistance to the family in the adoption of recommended practices, maintaining farm records and assisting with the individual problems. He must possess the ability to help each family develop its own decision-making competencies so it will not become dependent on the para-professional or the instructor.

The course content is determined by the needs of the group, advisory committee recommendations, and the local survey results. The final decision on program content is the responsibility of the instructor, with administrative approval.

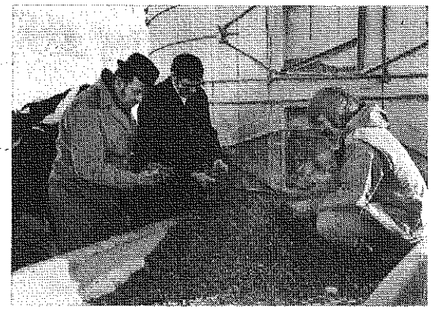
Instructional methods include a combination of discussion, demonstrations, including various types of audio-visual aids, resource people, study of bulletins, periodicals and books, including pertinent experimental data, and exchange of ideas and experiences under the direction of the instructor. Instruction is on a year-round basis and may be carried out by the instructor and the para-professional jointly or individually. The instructor coordinates all instruction and is responsible for the para-professional's educational needs as necessary.

Available educational programs are used to support the organized instruction, such as extension service, credit institutions, farm organization meetings, agricultural service organization meetings, social services, and so on.

STUDENTS

Students selected for the program have similar characteristics and meet the following criteria:

1. Participants are normally under 40 years of age.
2. Family income is primarily from farming.
3. The adjusted gross income from the IRS form 1040 is $4,000, or less, for a family of four and adjusted by $750 for each additional dependent.



Technician Pfaff and Instructor Dobbs, inspect the forage from the silo with trainee Lee, an enrollee in the Agridevelopment Program at Western Wisconsin Technical Institute. Duane Lee has been in the Program since last July when he and his wife Jeanne, rented a 200 acre farm. Mr. Lee has 55 Holstein and Guernsey cows.

4. Participant may be a renter or owner, but must be in a position to make management decisions.
5. Participant has the potential of being self-sufficient from existing resources.
6. Participant agrees to follow plans to reach the goals determined cooperatively with the instructor.
7. Participant agrees to attend the scheduled instructional meetings.
8. Husband and wife are enrolled.
9. Enrollment is on a voluntary basis.

OUTCOMES

The success of the program is determined by the number of students that enroll in existing programs, after being involved in the Agri-Development program. The primary objective is reached when the student demonstrates the ability to utilize existing educational programs. There is no specified program length, but hopefully the student will graduate before two years of agri-development participation. It may be that some will graduate after six months, 12 months, or 18 months of participation.

It is easier to do something for the "good" farmer who would probably make it anyway than it is to do something for the educationally deprived. That's the challenge! Rural America is the backbone of this nation. Every family remaining on the farm is one less family in the city to add to urban problems. The one we save may never be a top-notch farmer, but he will be self-sufficient and off the welfare roll.

MAINSTREAMING DISADVANTAGED AND HANDICAPPED STUDENTS

Frank Bobbitt
Teacher Education
Michigan State University


Frank Bobbitt

Vocational Agriculture since its inception has more or less adhered to the philosophy of individual development as the core purpose of the program. Indeed, the justification for public support of vocational education in agriculture has been to develop the individual's capacity to maximize his potential. This is a fairly obvious goal it appears, however, over the years other purposes have arisen. Sometimes the new purposes tend to sublimate the individual development objective. During the 60's and 70's we have seen a rise in the opinion that vocational education programs meet manpower demands. Evaluation of program has been based on whether or not students have been placed in the occupations for which they have been trained.

Some individuals in their eagerness to promote vocational education have advocated vocational education as a means for lowering the unemployment rate. This is good headline catching rhetric but has time after time been shown to be a falsehood. Unemployment is a function of the labor market. If there are lack of jobs no amount of training is going to help make jobs. What in reality is being talked about when vocational education is said to affect unemployment is the effect that vocational education has on certain individuals. Training gives these individuals an opportunity to work which was unavailable before training. The insistence that students be placed in the occupation for which they are trained rather than training an individual to maximize his abilities is the issue. The objective of vocational education in agriculture should be the development of the capacity to maximize one's ability to participate in the labor force. The old, time honored emphasis that vocational agriculture has placed on developing students, not just being preoccupied with filling slots in business and industry must be given renewed emphasis. If indeed it can be accepted that the purpose of vocational education is to develop the potential of students, then work with the disadvantaged and handicapped becomes not something extra to do, but something essential to the basic program of vocational education. What group of students need more help in maximizing their potentials than the disadvantaged and handicapped? What greater reason for existance can vocational programs have than to assist those with the greatest need?

In a recent survey of jobs in one rural county in Michigan, it was found that 90% of job openings during a three-month period required no special education for job entry. At the entry level, jobs are very simple and easily taught to most employees. However, if an individual wants to progress beyond those simple low paying entry level jobs he must either possess or acquire skills. It appears that one of the chief roles of vocational agriculture is to assist those that are least likely to obtain and advance in jobs to prepare themselves through training. It is also true that even though a large percent of entry level jobs do not require training for employment, those with most education and training are the first choice of employees. Thus another reason for more vocational agriculture programs which assist the less qualified in competing in the labor market.

During the 1960's following the 1963 Vocational Education Act and the 1968 Amendments, emphasis was placed on development of special programs in which the disadvantaged and handicapped were grouped. It was of course soon discovered that the disadvantaged or handicapped can not be homogenously grouped, because their needs are as diverse or more diverse within these groups as is the larger student population. In recognition of the failure of special programs for the disadvantaged, special segregated programs have been attacked at every level of government. There are now state and Federal laws in some instances prohibiting the segregation of these students. Vocational educators in agriculture certainly should not feel that laws must be developed in order to do what has always been a major responsibility, i.e., to teach those who need instruction and to give priority to those who most need instruction.

Mainstreaming is taking the disadvantaged or handicapped into regular programs and developing an instruction system that will meet their needs. This requires continued use of individualized instruction as a medium for transmitting knowledge. Currently some in the educational community are embracing the concept of competency based education. One concept that competency based education emphasizes is the concept of mastery learning. Time is considered a variable and content is a constant. Rather than having the class learn everything at the same rate, individuals are charged with responsibility for obtaining certain minimum levels of understanding. Allowances are made for different rates of development. This is an old practice in vocational agriculture in manipulative skill development. However, it has not been so widely applied to more academic classroom type situations. Thus, to more effectively assist the disadvantaged and handicapped, this may be an area of instruction that needs improvement.

Vocational education in agriculture, as well as other vocational subjects, has been considered by some to be a dump-

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J. H. Daniels

Handicapped and the Law

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and

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Robert Walker

Defend the poor and fatherless: do justice to the afflicted and needy. (Psalms 82:3)

Concern for the disadvantaged and handicapped has been with us for a long time, but the impact of their plight has not fully come to light even in recent times. Today we as educators and citizens should be waking up to the fact that the disabled are far too often deprived of three basic rights—right to an education, right to treatment, and right to job opportunities.

The National Citizens Advisory Committee on Vocational Rehabilitation has stated that: "The American public is not sufficiently aware of the plight of its handicapped citizens nor of what rehabilitation programs can accomplish for them."

Where do those of us in Agricultural Education stand? Are we living up to our legal and moral obligations as public servants in terms of doing what is expected of us for the handicapped? The fact often is that educators are generally unaware of the problems and needs of the handicapped, what is required of us by law, and ways to rehabilitate and educate those with special needs. What is the scope of this problem? According to a report given by the President's Panel on Mental Retardation in 1962, nearly 5.5 million American citizens are mentally retarded. Today that figure is closer to 6 million. At least 40 percent of these people are school age. There are almost a million blind people in the United States and between a million and a million and a half epileptics. Every year 100,000 babies are born with defects and many of them will have to use crutches, braces, or wheelchairs most or all of their lives. This is a problem confronting a large number of people, many of whom have the potential of becoming happy, productive, tax-paying citizens. Educators can and must play the key role in helping them achieve this potential.

If a student in a wheelchair wants to take farm mechanics, and if he should require special attention such as a ramp, for entrance, into the shop, by law this should be provided for that student. All too often it is easier for us to pass the buck and prevent the handicapped student from taking the course. This is, of course, violating both the spirit and the letter of the law.

Two Important Court Rulings

The right to due process of law as provided by the fourteenth amendment of the United States Constitution declares that no state may deprive any person of life, liberty or property, without due process of law. In Parc vs. Commonwealth of Pennsylvania, C. A. No. 71-41, a case regarding the right to an education for the mentally retarded, the court ordered extensive due process procedures that provided in part that before a child can be expelled, transferred, or excluded from a public education program, that child or his parents has a right to a fair hearing, a right to receive notice of the hearing, and the right to have counsel present at the hearing. At present, most state laws allow for exclusion of children from public education who do not meet intellectual, social, behavioral or physical requirements for existing education programs.

As a result of these exclusion clauses, a substantial number of handicapped children have been denied an education.

In Lari Case vs. State of California, C. A. No. 1016 (California Superior Court), a child was terminated from a multi-handicapped unit of the California School for the Deaf after being diagnosed as autistic, deaf and possibly mentally retarded.

Mayer vs. Nebraska makes clear that the fourteenth amendment obligates the states to guarantee to their citizens the right to learn to acquire useful knowledge; since such a right necessarily requires training in the minimal skills required to acquire knowledge, it follows that due process also requires the states to discharge the obligation of providing a minimum education.

The courts have clearly recognized the rights of the handicapped and disadvantaged to an education. Also they have clearly recognized that proper consideration must be given before a child is suspended or excluded from a public education.

Of course it goes without saying, that there are cases when children should be prevented from taking certain courses because of a handicapped condition that could jeopardize the child or other children's safety, but the fact remains that when administrator, counselor, or teacher indiscriminately steer handicapped children away from certain courses, they are often doing these children a grave injustice as well as violating the law.

- All people have the basic right to an education, treatment, and job opportunities.
- All people have the right to due process of law as provided under the fourteenth amendment of the United States Constitution.
- Each state must spend 25% of its 1968 Vocational Education Act Amendment funds for the handicapped and disadvantaged. ◆◆◆

(See references on page 263)

TEACHING VOCATIONAL AGRICULTURE ON THE PAGAGO INDIAN RESERVATION

Harley A. Cox
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Sells, Arizona

The teaching of vocational agriculture on the Papago Indian Reservation is a very challenging and rewarding occupation. When teaching the Papago High School students and adults, the best learning takes place with technical information given in situations where it can be directly applied in a hands-on learning situation. Therefore, a very modern and updated land-livestock laboratory has been implemented on the campus of the Baboquivari (pronounced: Bob-a-kēvore) High School for the vocational agriculture department.

The youth on the Papago Indian Reservation can not be considered disadvantaged or handicapped. But, there are very distinct differences of attitudes, culture and values among the youth and adult Indians on the reservation, from that of the Anglo society. When teaching persons on the reservation, one must understand and respect the Papago culture and value systems.

Many facilities of the vocational agriculture program make up a unique land-livestock laboratory and classroom teaching center where high school students and adults can come to learn. The following is a list of the unique facilities that are used at the two-man department of vocational agriculture:

1) 100′x32′ hydroponic greenhouse
2) 20′x15′ propagation house
3) 100′x50′ agriculture mechanics shop
4) 20-acre land-livestock laboratory

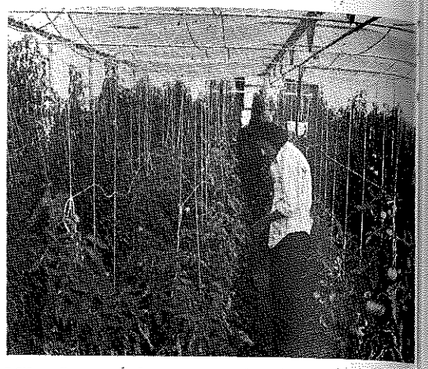
Each one of these facilities mentioned above is used in the teaching curriculum at the Baboquivari Vocational Agriculture Department.

Most school districts are not in a financial situation to give a vocational agriculture department every needed facility on the first year of existence. Therefore a *spatial model* should be part of the long range plan. Both present or existing facilities and planned items should be included. Once the long range plans have been approved by the school board, the vocational agriculture teacher can work with the superintendent and/or the principal to achieve implementation of the items on the school campus or near it. The facilities should be based on the community's needs, and a priority should be placed on the items needed most.

The hydroponic greenhouse is used to grow tomatoes for wholesale markets on the Papago Reservation. Three classes use it to learn and practice techniques in plant growth, plant development, plant diseases, insect control, and marketing and record keeping. Tomatoes and other hydrophonically grown vegetables are sold to the trading posts, school cafeteria, and individuals. Also nutrient experiments are conducted in the hydroponic learning center.

At the propagating house, seeds are germinated, steps and methods of grafting are studied; along with budding methods practiced and making cuttings. This house has a time clock simulator to the hydroponic greenhouse and has a watering system for over 800 gallon containers. Steel tables with a fogging and misting system are also in the propagating house in another section.

The agriculture mechanics shop is used by three high school classes and the adults in the community for a college credited course each semester during the regular school year. Instruction in wood construction, arc and oxygen-acetylene welding and cutting, basic electric and wiring, plumbing, small gas engines repair, and MIG welding are taught to high school students in the shop related classes. The adult, college class is basic welding and fabrication in the evenings. After receiving instruction in these areas, the students then use the information to construct and fabricate useful projects for themselves, the community, or the school.



Mike Juan tends tomatoes in the school greenhouse of the Papago Indian Reservation.

Some of the projects made recently have been a pipe irrigation trailer, stock racks for trucks, horse trailers, tack boxes, a storage shed wired for electrical tools and lights, and a swine module.

A land-livestock laboratory is an area of the school grounds where the students care for livestock and practice pasture management on a sprinkler irrigated pasture. The livestock consist of six (6) registered Angus cows and a Charolais bull. The heifer calves born on the land-livestock lab are given to students to take home and raise. When the heifers mature the students will have them bred by a commercial range bull and the first calf will be returned to the school vocational agriculture department.

One Yorkshire sow is also kept on the land-livestock laboratory. The students care for the sow at farrowing times and learn management principles when raising the piglets. After weaning, the pigs are put in an elevated swine feeding pen for sanitation reasons and raised to market weights. Students purchase shares in the feeder pigs and then

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Vocational Horticulture at the Ohio School for the Deaf

L. H. Newcomb

Jim Heilman

L. H. Newcomb and Jim Heilman
Ohio State University *Ohio School for the Deaf*

The Ohio School for the Deaf has developed a unique horticulture program under the direction of Mr. Jim Heilman. The program serves grades three through twelve and a variety of functions as well. When Mr. Heilman initiated the program and met his first classes, working with deaf students was a completely new experience. As he developed an instructional program for the students he also had to develop his ability to sign to his students. There were many difficulties at first but the program is now firmly established.

Nature and Purposes of the Program

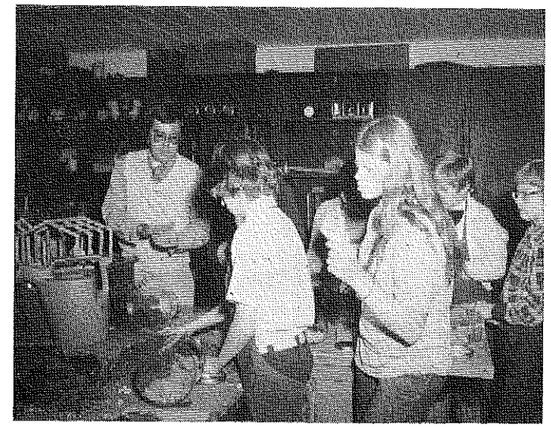
This program, for students with impaired hearing, is designed around a career education paradigm with the purposes inherent in such a design. Students in grades 3-5 develop vocabulary and learn some basic horticulture skills. This is important in developing the foundation for vocational training. The regular classroom teacher of these young students accompany them to the horticulture facilities consisting of a small greenhouse, classroom space, head house, and a large land laboratory including a mini-park. The reason for the regular teachers presence is to allow her to know first hand what the students are studying so she can relate to their horticulture experiences in developing vocabulary. Horticulture experiences also serve as a basis for mathematical computations. Classroom teachers associated with the horticulture program have been very impressed with the effectiveness of the class. Not only has the program served a career exploration function but it has also been quite instrumental in helping students broaden their cultural experiences, bringing with it greater vocabulary and association with the environment around them.

Orientation comes at grades 6 and 7. Here students are introduced to basic subject matter and are acquainted with occupational opportunities in horticulture. These students produce greenhouse crops and are introduced to tools and equipment used in the trade.

At the high school level students learn specific skills and management practices used in the horticulture industry. Greenhouse management, groundskeeping, and flower arranging are the areas of instruction. These students are also involved quite heavily with major activities in the land laboratory and they seek summer placement in industry.

Programs Accommodate Partially Sighted

Beginning in January 1974, the program was also opened to high school students who were partially sighted. These students are in the same class with the deaf students and learn sign language as well as horticulture. The partially sighted students who are currently enrolled have a tremendous desire to succeed in horticulture. After only six months instruction, one of the partially sighted students was placed in a Cincinnati horticulture firm for summer employment.



Jim Heilman using sign language to teach deaf students to make terrariums at Ohio School for the Deaf.

Successes of the Program

A program's success can be measured in many ways. Some indications of this program's success follow:

1. Students enjoy the program and find a new sense of personal importance.
2. The discussions in horticulture continue into other classrooms at the school.
3. Students are developing salable skills.
4. The teacher is excited about the program and anxious to expand it.
5. Horticulture now permeates the students dormitories and their other classrooms.
6. Advanced students are beginning to find jobs and success. ◆◆◆

Curricular Interests of Disadvantaged and Non-Disadvantaged

James Albracht
Teacher Education
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James Albracht

Recently a project was funded to provide teacher aides for two school systems in Kansas. The project was funded by the Department of Education, Division of Vocational Education. One of the goals of the project was to study the curricular interests of the disadvantaged students in the two school systems. The teacher aides were qualified vocational agriculture teachers who aided experienced teachers of vocational agriculture in both a rural and a rural-urban school setting.

The disadvantaged students were identified as having academic, intellectual, social, cultural learning handicaps. Assistance in identifying the disadvantaged students was received by the administrative and counseling staffs of each school.

The rural and rural-urban school settings provided an opportunity to study the differences in the curricular interests between rural and city youth. The rural class was defined as one composed largely of students with farm or production agricultural backgrounds, and coming from a community where income is mainly from the surrounding agricultural area. The rural-urban class used in the study was composed equally of students with farm backgrounds, as well as students with city or non-production agricultural backgrounds. The principal income for this community came from non-production agricultural sources.

In the rural setting, the class selected for the study was at the freshman level, Introduction to Agriculture, and consisted of twenty-three freshmen male students. Eight of the twenty-three students were classified as disadvantaged.

In the rural-urban setting the class selected for assessment purposes was the Animal Science class which was an "open level" class for grades 10-12. There were four male seniors, one female senior, eight male juniors, two male sophomores, and three female sophomores in the class. Nine of the eighteen students in the class were classified as being disadvantaged.

The purpose of the curricular interest survey was to discover (1) differences of interests of disadvantaged students versus non-disadvantaged students, and (2) the differences of interests of rural students versus rural-urban students. The survey of fourteen curricular areas was administered to the students in the form of an interview schedule and checklist developed by the author.

TABLE I

WEIGHTED AVERAGE INTEREST SCORES FOR SELECTED VOCATIONAL AGRICULTURE ACTIVITIES AS EXPRESSED BY DISADVANTAGED AND NON-DISADVANTAGED RURAL AND RURAL-URBAN STUDENTS

	Rural		Rural-Urban	
	Disadv.	Non-Disadv.	Disadv.	Non-Disadv.
Working out of doors	9.50	10.00	9.11	8.20
Working with your hands	7.50	8.46	8.60	8.00
Working with agricultural machinery and motors	6.00	7.85	3.30	5.60
Working with welders and shop equipment	6.00	7.54	2.44	5.20
Repairing electric motors and equipment	4.00	4.77	3.78	4.00
Working with lawns	4.00	5.38	6.89	3.20
Working with trees and shrubs	3.00	4.46	5.50	5.20
Beautifying the landscape	4.50	4.77	7.78	4.00
Keeping records and accounts	3.00	5.08	5.50	3.20
Meeting with and speaking with others	6.00	5.38	8.20	6.80
Selecting and showing livestock	3.50	7.85	5.10	7.20
Selecting and raising crops	2.50	6.00	2.89	5.00
Managing a farm business	3.00	7.54	2.89	6.00
Working in an agricultural business	5.00	7.23	6.44	8.00

Importance Scale: "much" interest, 10 points; "some" interest, 6 points; "little" interest, 2 points

(Albracht—from page 254)

A Likert type scale was used to evaluate student responses. Each response of the students in each of the two classes was given a value of 10 points for "much interest," 6 points for "some interest" and 2 points for "little interest." After the value of each student response had been tabulated, an average weighted score was determined for each activity on the curricular interest survey for both the disadvantaged and non-disadvantaged students, as given in Table I.

The following scale was used to determine the degree of interest for each of the curricular activities; 0-3.33, little interest; 3.34-6.66, some interest; and 6.67-10.0, much interest.

It was found that both the disadvantaged and the non-disadvantaged groups expressed "much" interest in "working out of doors" and in "working with your hands." The disadvantaged in the rural area did not express "much" interest for any of the other 12 curricular activities. The disadvantaged in the rural-urban setting expressed "much" interest in working with lawns, beauty for the landscape, and meeting and speaking with others.

The rural non-disadvantaged had "much" interest in "working with welders and shop equipment," "selecting and showing livestock," "managing a farm business," and "working in an agricultural business." The non-disadvantaged students in the rural-urban setting expressed "some" interest for the remaining seven curricular activities.

The only activity where the interest of the disadvantaged at both the rural and rural-urban settings exceeded the interest of the non-disadvantaged was for "meeting with and speaking with others."

There were differences in the curricular interests of disadvantaged and non-disadvantaged students in both the rural and the rural-urban settings. The non-disadvantaged students in both settings were more interested in the traditional production agricultural curricular areas such as ag mechanics, record keeping, animal science, crop science, and farm management. The non-disadvantaged students were also more interested in working in an agricultural business.

All students had the most interest in "working out of doors" and "working with your hands." The disadvantaged students in both settings expressed "little" interest in "selecting and raising crops," and in "managing a farm business." The disadvantaged students in the rural setting also expressed "little" interest in "working with trees and shrubs" and in "keeping records and accounts." The disadvantaged students in the rural-urban setting also expressed "little" interest in the activities "working with agricultural machinery and motors," working with "welders and shop equipment," "selecting and raising crops," and "managing a farm business." However, since the rural-urban class was an animal science class, this is not surprising.

Both groups of students expressed "some" or much interest in the other curricular activities. The non-disadvantaged students in both the rural and the rural-urban setting expressed "some" or "much" interest for each of the 14 curricular activities. The interests of non-disadvantaged students exceeded those of the disadvantaged students for 13 of the 14 curricular activities in the rural setting. The interests of the disadvantaged and non-disadvantaged students in the rural-urban setting were evenly divided with each group exceeding the other for 7 of the 14 activities.

The vocational agriculture instructor should be cognizant of the interests of his students, and should be encouraged to survey his students in order to determine their interests. The instructor should also remember that agricultural students are very interested in working out of doors and working with their hands. It is well for them to also remember that disadvantaged students have a greater interest than non-disadvantaged students in "meeting with and speaking with others." ◆◆◆

(Bobbitt—from page 250)

ing grounds for students that could not make it in supposedly more legitimate classes. Obviously in a true dumping ground situation problems may arise as students may be put into a vocational agriculture class who do not have an interest in agriculture. These students should be counseled into areas of real interest. However, in some cases it will be approriate to design instruction to develop interest in agriculture where interest did not exist before. The concept of being a dumping ground for those who cannot compete successfully in the rest of the school should be viewed as an opportunity to help the student that needs training most, rather than degradation of the program area.

Vocational agriculture should openly recruit disadvantaged and handicapped students who have an interest in agriculture. It is not enough to just open the doors for everybody. Those who need training the most should receive top priority and be sought out and assisted if vocational education in agriculture is to meet the true needs of our society. ◆◆◆

(Cox—from page 252)

receive the correct percentage of the net profit if market prices are favorable at the selling time.

The University of Arizona, Department of Arid Land Studies, has developed a water harvesting area on the land-livestock laboratory to catch water during rainy seasons. The water is collected off of an asphalt-plastic-asphalt-chip covered area of 1½ acres. This water is stored and used during the dry periods on a Jojoba plantation and a home vegetable garden plots for the students.

With all of the excellent facilities developed at the vocational agriculture department of the Baboquivari High School of the Indian Oasis School District #40, students as well as adults study and apply information following the philosophy of "Learning by Doing."

Psychosocial Environmental Influences on Programs for Low Income Urban Youth

J. John Harris III
and
*Susan E. Perkins**

Each individual is uniquely influenced by the forces at work within an environment. It is essential, therefore, in the understanding of any one person to appreciate the culture from which he comes, and to give weight to the coercive forces with which he must deal.

From this environmental-psychological framework, an examination will be made of the adjustment and identity development of minority youth living in urban, low-income communities. Poverty is the one most basic element in this setting, pervading everything from institutions to individuals. Lack of money in a community creates an atmosphere of low morale and low self-esteem. More practically, the low tax base results in deteriorating physical conditions, poor police protection, poor sanitation service, and poorer quality of education. There is a lower quality of life in almost every physical aspect. With little money and many negative experiences, community members are not able to exert effective political pressure in order to make changes. They are powerful only in their numbers, and do not organize easily. Only when there is an outside force or a common outrage is there action (Alinsky, 1971).

The isolation of the poor allows for development of a sub-culture of slang, dress, and dance; however, the alienation that is bred by this lack of power and involvement in the more broadly based social order allows for other powers to enter the community, superimposing their leadership on the inhabitants. These "aliens" work to benefit themselves, making large profits while victimizing the poor. Landlords raise rents and ignore requests for repairs, merchants sell goods at high prices and extend long term credit at high rates, keeping the buyer interminably indebted. Social agencies judge performance on quantity of service, at the expense of quality, and act to protect jobs for the middle class social workers. Erikson (1966) has suggested that these elements of oppression are perpetuated by the oppressor because they work to help him feel superior. The individual belonging to an oppressed and exploited minority group is apt to accept the negative images held up to him by the majority culture.

Society balks at the idea that youth want to be taken seriously and given significant work to do; it is in despair that the future holds anything important for them that young men begin to hang around and do nothing at all. Because the society does not provide for anything worthwhile, youth invent ways to prove themselves. However, this activity is superficial and the result is a raising of the challenge that must be met, generally leading to more daring, anti-social behavior (Goodman, 1957).

Working to counteract this destructive behavior is the most consistently enduring primary social institution—the family. While one-parent households may not represent the majority of the low-income Negro families at any one time (Herzog, 1968), it has been hypothesized elsewhere that a great number of families are transitional (Rainwater, 1966). This implies that a family will be headed by one parent, even if temporarily, at some time during its existence.

Families are highly mobile due to changes in their family status and their financial condition. They may move, in search of better job opportunities, away from the extended family and friends who help support the nuclear group through hard times and reinforce social norms and values. Such high transience works against the social pressures and protections which support more stable groups.

Friends are hard to keep in this kind of moving, manipulative society. At a time when upper-class youth are developing close relationships, discovering the opposite sex, and learning to express trust and affection, lower class youth are dealing with all of this, plus the probability that close relationships will be broken up if they or their friends leave or move, become pregnant and/or get married. Girls retain many of the defenses against trust and closeness with boyfriends. Kenneth Clark explains further . . . "illegitimacy in the ghetto cannot be understood or dealt with in terms of punitive hostility . . . Such approaches obscure . . . the desperate yearning of the young for acceptance and identity, the need to be meaningful to someone else even for a moment . . ." (Erikson, op. cit.).

Role diffusion or "delayed identity crystallization" may be caused by the inconsistency between the actual and ideal identity. "Delayed identity" is characterized by "the case of the boy who delays 'growing up' because it involves the unconscious danger of replacing his father. The youngster may feel unable to actualize his capacities; he feels unused and unrealized. The roles which seem available do not engage his true talents or do not gratify his need-linked capacities. . . . the youngster may sense where his dispositions lie but feel pressure to achieve an occupational or social identity which cannot utilize them" (Douvan and Adelson, 1966).

Jobs and guaranteed income by themselves are two possible answers to

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Teaching the Culturally Different

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The challenge of teaching the disadvantaged can range from deeply frustrating to highly satisfying. To be successful, one must learn to accept the student for what he is. Consider that his social, ethnic, or economic status has limited or directed his development in channels other than those generally accepted by us.

In many cases he must be exposed to new standards, new philosophies, and introduced to a whole new way of life. We must realize that our standards are not necessarily his standards. Our goals are certainly not his goals. In some social or ethnic groups, achieving beyond the level of the group may be undesirable and cause an individual to be placed in "bad light" with his peers.

We must recognize the fact that the hardest people to motivate are those who are content with their present status. So we must create in them a desire for that which we have to offer. We must help them to see what benefits will accrue to them by accepting change.

In many cases we are dealing with people who have had initiative destroyed by a 100 years of government direction and welfare. We face the challenge of infusing within him a desire for self-determination and personal growth and development.

Do not expect change to come overnight. Expect many reversals in what otherwise appears to be progress. Have infinite patience and an all abiding faith.

EMPATHY

Perhaps the most important factor in teaching the disadvantaged and in affecting their lives is to learn to emphathize with them. To do this, we have to visualize the role that traditions and cultural teaching, generations old, has played in molding the lives of the people. These deep-seated beliefs and traditions cannot be changed nor modified until more desirable alternatives can be offered. To accept proposed changes may bring responsibilities in which they are not comfortable. We must accept the fact that we have to take them where they are and then begin to motivate and build self-confidence which will bring changes for a new way of life.

There is much to be said for some of their accepted traditions. Pressures, as we know them, are reduced to a minimum. So we must use the best of both worlds to prepare the individual for a position in a competitive society.

TEACH WAY OF LIFE

To teach the disadvantaged, we have to be concerned with more than subject matter. In most cases it involves teaching of a new, or at least a different, way of life. In many cases there has been little or no exposure to agriculture, much less to farming, as a way of life. There is little appreciation for values and concepts that come from a lifetime on the farm. So we must teach values and concepts in addition to subject material. This is best done by giving them an exposure to as many facets of agriculture as is possible. This can be by field trips, movies, and by actual experience in a school farm or laboratory situation.

Club work such as F.F.A. or Rodeo Club participation will further help as they learn to work together in situations they naturaly enjoy. Such programs also do a lot in helping to develop self-confidence and responsibility.

MAKE INSTRUCTION APPLICABLE

As there are cultural and language limitations, instruction in the classroom must be kept simple and as practical as possible. Use of visual aids and demonstrations should be maximized to convey ideas by sight as well as by sound. A visual presentation can overcome the language limitations. The old adage "a picture is worth a thousand words" is especially true when you are dealing with someone who may never have seen such a thing before.

Instruction should be geared as much as possible to allow a follow-up application of what is taught. There should be adequate facilities in a shop, field laboratory, or school farm to allow such an application. It is difficult to teach swimming without a swimming pool.

Instruction should be concise and to the point. I have found the core curriculum to be especially useful. Test scores of students who follow the core curricuum are significantly higher than those realized by any other approach. Students quickly comprehend the lesson outlines, and the learning process is speeded up. They do not have to spend so much time trying to sort out relevant information. In many units the material is covered in less time than allocated, which alows more time for application.

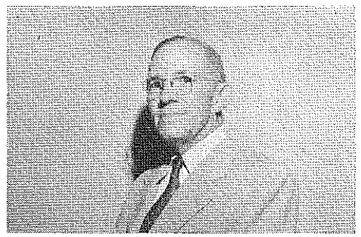
Patience and understanding are prime requisites for effective instruc-

(Concluded on page 259)

Clifford Hansen

Clifford Hansen has had experience with Navajo Indians as manager of Navajo Farm Training Enterprise for 10.5 years and as ag teacher of Navajo students at Shiprock High School the past 8 years. He has worked with Navajos for the past 21 years.

Leader in Agricultural Education:



CARSIE HAMMONDS
1894-1970

*by Harold Binkley**

It was a great day for agricultural education in January 1924 when Carsie Hammonds moved by train from Bremen, Kentucky to Lexington to become a supervising teacher (then critic teacher) in agricultural education. He returned to Bremen in June, after the roads dried up, to drive his Model T Ford to Lexington.

Dr. Hammonds joined the giants and pioneers of the early days, Brunner, Hamlin, Nichols, Stewart and Sutherland to forge the forward thrust that developed agricultural education into the great force it is today.

He was born in Ono in Russell County, Kentucky. He married Ina Blalock Dohoney. They had three children and four grandchildren. Dr. Hammonds was a member of the Calvary Baptist Church in Lexington, where he served as a deacon and taught the Business Men's Bible Class from 1940-64.

Leader and Philosopher

Carsie Hammonds "stood tall" among men in the field of agricultural education. His excellent judgment, sense of fairness, and high professional attitude earned for him the highest respect of students, teachers, colleagues in general education, fellow staff members, national leaders in the field of agricultural education, and all who knew him.

His contributions to the philosophy of agricultural education, psychology of learning, improvement of teaching, and his writings and speeches have made significant contributions to the field of agricultural education. His sound counsel and advice to individuals over the years helped hundreds of students, teachers, and fellow workers.

His personality was sparked with wit, warmness, enthusiasm, and a genuine concern for the dignity and development of each individual. He thought truth, lived truth, and taught truth. He knew the dignity of labor and that work deepens one's nature. He knew that before anyone can become great, he must rule by serving—this he did.

Professional and Scholar

Dr. Hammonds was active in public education for 51 years. He was known internationally as one of the outstanding scholars and thinkers in his field.

He began teaching in a rural elementary school in Russell County, Kentucky, in 1913. He was principal of Russell Springs High School; he taught vocational agriculture at Wingo, Kentucky and then moved to Bremen High School where he was principal and teacher of agriculture.

At the University of Kentucky, he became professor and Head of the Department of Agricultural Education in 1925, and Chairman of the Division of Vocational Education in 1947. He served as Acting Dean of the College of Education in 1952-53.

Dr. Hammond's record of accomplishments are extensive. He served as editor of *The Agricultural Education Magazine* and contributing editor of the *AVA Journal*. He authored or co-authored 14 books, wrote more than 20 articles for professional magazines, spoke at more than 100 high school commencements, 19 annual state conferences for workers in vocational agriculture outside of Kentucky, at 39 annual State conferences in Kentucky, and he spoke many times at the Central, North Atlantic, and Southern Agricultural Education Regional Conferences.

Dr. Hammonds is listed in *Who's Who in America*. He was a member of Alpha Zeta, Phi Delta Kappa, Kappa Delta Pi, Gamma Sigma Delta, AVA and affiliates, NEA and affiliates, and the Masonic Order.

The Teacher

Hammonds was a master teacher, making effective use of *the principles of learning* in teaching both in and out of the classroom.

He realized early in his work at the University that educational psychology taught at the lower division level had no application in student teaching in the senior year. As a result, he initiated a 20 hour block of educational psychology right in the middle of the courses dealing with methods in teaching. In addition, he organized and implemented a one semester professional block of 18 semester hours to prepare teachers of agriculture. The block consisted of 3 hours of methods in teaching, 3 hours dealing with experience programs, 3 hours of adult work in agriculture and nine hours of student teaching. For the 9 hour block dealing with methods, students met on campus each morning from 8 to 11, and were in nearby student teaching centers each afternoon. Thus the method of getting *theory* and practice experienced together: *Theory* in the morning and supervised *practice* in the afternoon, with the educational psychology block right in the middle of the methods courses. This system, implemented by Hammonds 25 years ago, is still most effective today.

He served as consultant and lectured on the improvement of college teaching for 13 southern colleges of agriculture, represented the University of Kentucky as consultant to the American Association of Colleges for Teacher Education to study "Improvement of Instruction," and gave faculty lectures and served as consultant on "Improvement of College Teaching" at Murray State University. At the University of Kentucky, he conducted seminars on improving college teaching for the faculty of both the College of Education and the College of Agriculture and Home Economics. He lectured and served as consultant on "Improvement of Teaching," for the Negro Educators in Agricultural Education at their National Conference.

This reflection on Carsie Hammonds would not be complete without his favorite lines from *The Touch of the Master's Hand:*

It was battered and scarred, and the auctioneer
Thought it scarcely worth the while,
To waste much time on the old violin,
But he held it up with a smile.

"What am I bid for this old violin?
Who will start the bidding for me?
A dollar, a dollar, who'll make it two?
Two dollars, and who'll make it three?

"Three dollars once, three dollars twice,
Going for three," but no;
From the back of the room a gray haired man
Came forward and took up the bow.

Then wiping the dust from the old violin,
And tightening up all the strings,
He played a melody pure and sweet,
As sweet as the angels sing.

The music ceased and again the auctioneer
With a voice that was quiet and low
Said, "What am I bid for the old violin?"
And he held it up with the bow.

"A thousand dollars, and who'll make it two?
Two thousand, and who'll make it three?
Three thousand once, three thousand twice,
Going, and gone, said he.

The people cheered, but some of them said,
"We do not quite understand,
What changed its worth?" Came the reply,
"The touch of the master's hand."

◆◆◆

Harold Binkley

**Harold Binkley is Chairman of tht Department of Vocational Education of the College of Education of the University of Kentucky.*

(Hansen—from page 257)

tion. Instructions may have to be repeated many times in several different ways before comprehension is realized.

As one third of my high school enrollment is girls, they are involved in all the activities that are expected of the boys. For the most part, their performance will equal or excel that of the boys. In many areas they show greater initiative and interest.

Steps in making instruction applicable can be enumerated as follows:

—Keep instructions and terminology simple. Rephrase in several different ways to insure comprehension. Get feedback to be sure the message is understood.

—Pace instruction so the individual will feel acceptably comfortable with the change required, then take him on to new levels of achievement. If you push too hard, the student will simply drop out to avoid that which he feels he is not capable of doing. Self-confidence must be built with small successes.

—Start where they are and not where you expect them to be. Evaluate in terms of the individual's capacity for growth.

—Teach concepts by involvement and application.

—Vary methods and materials to help maintain interest.

—Invite acceptance and stimulate interest by telling the *why* of instructions or work assignments.

—Supervise study on an individual basis to insure effective use of time, and allow for individual differences in understanding.

—Be especially careful with criticism. With someone who lacks self-confidence, this can quickly kill initiative.

—Help them realize self-determination. Many have no idea of their own capacity to perform. If you have traveled through life at "half throttle," it will be difficult to visualize your capacity beyond that level.

USE AN ADVISORY COMMITTEE

An advisory committee representing common interests in the community can be a big help in many ways in teaching the disadvantaged. The committee can give counsel on appropriate materials to include in the course of study. It can serve as a liaison between the agriculture program and people in the community. It can serve to help get things accomplished in the community when relationships must be established that could not be done in any other way. If representatives of the disadvantaged are included on the advisory committee, they can provide a valuable input into programs that will help make them more effectively geared to the needs of the individuals.

SUMMARY

To be successful in teaching the disadvantaged, you must gain their confidence by having a genuine interest in each individual. They can quickly detect insincerity. Be friendly and pleasant. Follow through on action started. Be honest, consistent, and patient. Be willing to go the second mile in their behalf. Respect their beliefs and wishes. Do not try to force yourself or instructions on them. Above all, "Do unto others as you would have them do unto you." ◆◆◆

SCHOOL-OPERATED FACTORY FOR THE DISADVANTAGED

Chester Gauper
Ag Instructor
Grand Rapids, Mich.

Some people feel that America has changed in its goals and value judgments. "The goal of education is to create people who can create new things," so said John Dewey.

Although the end product of education should be to want more education, today's children usually want out. Severe regimentation may prepare our youth for a mechanical world that may be over; we may win the struggle but lose the child. The chief wonder of education is that it does not ruin everybody involved—teacher, student and educator. We may be warehousing the student under the disguise of education, and this routine dulls the mind; consequently, our main problem may be boredom.

Many years ago, schools started to trap students into a structured and regimented classroom with no regard to their interests, skills, and limitations. This practice has resulted in slowing down the high achiever and at the same time frustrating the non-academic person. When will this status quo regimentation be changed and replaced by a more realistic attitude?

Superintendent Joe Burich gave impetus to an idea already smoldering when he welcomed the teachers back in 1972 after their summer vacation with the challenge to push the walls of their classrooms out; then and only then would they be searching for the greatest amount of good for the greatest number of students.

Today, February 15, 1975, we have pushed out the walls of a projects classroom:

—To a distance of one mile with nature trail signs naming many of the native plants as to common name, family, and scientific name.

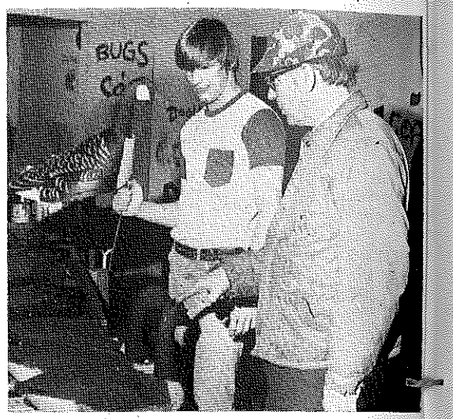
—To a distance of two miles to a maple tree forest leased from United States Steel where a class of high school students can tap the hard maple trees to produce maple syrup during a 2-hour class period.

—To a distance of six miles to an abandoned Army radar base owned by a neighboring school district where 26 students selected a job from the list of 24 stations needed to produce a saleable plastic duck decoy. The production procedure can produce 25 decoys in a 2-hour period.

—To a variety of distances to county land administered by the Itasca County Land Commissioner in an outdoor classroom concerned with collecting and processing balsam boughs, princess pine, and cedar boughs into Christmas wreaths for the market.

—To a distance of 20 miles to a wild rice paddy owned by a member of the neighboring school district's Veteran's Farm Management Training Act program, where wild rice will be grown, harvested and processed, or reseeded into local lakes for wild fowl habitat improvement.

The plan that is proposed has desirable characteristics that will allow a vocationally minded boy or girl to spend part of a school day in a craft class producing something meaningful and creative. The products produced could further involve the group into sales, advertising, radio, bookkeeping, packaging and production-line procedures. Eventually perhaps even research teams might discover new ideas and new products to produce. There is nothing like success to beget success. As the student develops the duck decoy from the aluminum mold with the correct amount of expandable plastic to the finished product, he uses 25 operational skills, each one necessary for a saleable product. Another project



Chester Gauper, instructor, and the author, points out a detail for correction to Kirt Daken.

with promise is bee-keeping, taking advantage of the hundreds of acres of sweet clover on the mining dumps.

At times during the year we can become extremely interested in maple syrup. There must be 10,000 maple trees within ten miles of Grand Rapids and each one is worth from fifty cents to a dollar in maple syrup each year.

Let's try balsam boughs in the fall. We might even make wreaths. If you would prefer a little variety in color, try a bleach with alcohol and use a dye to change the color.

If wild rice is to be the glamour crop of the 70's, it would not be impossible to have a project to collect, package, and distribute a very fine product.

You can easily say, "Let well enough alone." But, the people we are thinking of are either on drugs or pushing drugs, or have already dropped out of school. Let's go find them and bring them back to a creative program. Another

(Concluded on next page)

Suggestions for Teaching Disadvantaged and Handicapped

Willie J. Walls
Consultant in Agricultural Education
Raleigh, North Carolina

Willie Walls

Teaching the disadvantaged and handicapped has been a challenge to educators for many years. There have always been some dedicated, innovative teachers who attempted to structure their programs to meet the needs of all of the students they taught. The United States Congress discovered that not cnough emphasis and attention were being given to educating the disadvantaged and handicapped, therefore, an amendment was made to the 1963 Vocational Education Act which mandated that each state would utilize not less than 10 percent of its Federal funds from Part "B" of the Vocational Educational Act for the handicapped and 15 percent for the disadvantaged. Even though vocational education programs have, to a limited degree, always been geared to helping the disadvantaged and handicapped students, these programs, nevertheless, were not designed to meet many specific identified needs of these disadvantaged and handicapped students.

Before prescribing a specific treatment for a given disease or condition, the disease or condition must be diagnosed. In order to provide certain needed services to the disadvantaged and handicapped students, a well organized method of identifying and classifying these persons must be implemented. A committee must be formed to follow an accepted plan of identifying them. This committee should consist of the school principal, teachers, guidance counselors, school health personnel, attendance officers and/or others who have sufficient knowledge of the students under consideration. Students may be considered disadvantaged if they are socio-economic, culturally or educationally deprived. The criteria used to classify students in any or all of the above categories must contain appropriate items which clearly define individuals who are educationally deprived. Students may be considered handicapped if they are trainable mentally retarded, educable mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, crippled, and/or possess other similar health problems.

When the students have been correctly identified and their specific needs determined by accepted procedures, then and only then can an effective program be designed to meet their specific needs.

We should keep in mind that there is no "cure all" kind of program which has been designed to meet all of

(Continued on next page)

Three students, Russell McWilliams, Marlowe Bonham, and Kirt Daken take their place in the production line at a facility used by a Grand Rapids, Minnesota school district.

boy reads on a fourth grade level, yet he is competing in the tenth grade. These boys have all asked for a more creative and meaningful program that is both interesting and practical. Let's help the boy pulling on one bootstrap by pulling on the other one.

For the most part, supervisors and administrators judge teacher's personalities and practices by such things as neatness, punctuality, record keeping, discipline and classroom management. However, none of this represents direct evidence of students learning; teachers must be involved in decision making. Change in schools usually begins at the top, but dictation breeds dissatisfaction. Ordering teachers to implement new methods may bring about an artificial appearance of change; however, offering teachers an opportunity to have a part in school programs is a more permanent method of bringing about actual change. ◆◆◆

(Walls—from previous page)
the needs of all of the disadvantaged and handicapped students in a given school system. There are some guidelines which I feel should prove to be helpful to teachers as they attempt to structure their individual programs for the disadvantaged and handicapped. There should be a cooperative effort on the part of all of the school personnel in a given school if the program for the disadvantaged and handicapped is to be successful there.

Without attempting to classify the activities listed below which may be used in supportive service program in a modified or adjusted program, or a new or unique program, the following techniques may be utilized in a program for the disadvantaged and handicapped:

—Special counseling, tutorial, psychological and diagnostic services may be rendered.
—Reduced class size to allow for more individualized instruction.
—Use of conference periods for work with the disadvantaged and handicapped students.
—Use of specific equipment, materials and visuals and demonstrations.
—Work with students on weekends and after school on a one to one basis.
—Field trips, tours, etc.

Regardless of how well designed a program is, the teachers of the disadvantaged and handicapped need to possess identifiable characteristics and specific qualifications which will enable them to work effectively with the disadvantaged and handicapped students.

Some of the identifiable characteristics and qualifications needed by individuals working with the disadvantaged and handicapped are as follows:

—Thorough, first-hand knowledge of the environment in which the disadvantaged and handicapped live, the values they hold, and their perceptions of school, community, work and self.
—Competence in the subject matter of the fields being taught.
—Ability to create a positive, non-threatening learning environment.
—Ability to properly and effectively diagnose the special learning characteristics of the disadvantaged and handicapped.
—Ability to organize, develop, and implement specific and varied learning experiences based on a thorough diagnosis and pre-assessment of individual students with special needs.
—Ability to help students develop positive self-concepts.
—Ability to effect adaptive learning experiences necessary for independent living.
—Ability to develop specific skills in the areas of value clarification, job performance, basic computation and communication necessary for success in the world of work.
—Ability to manage an individualized instruction classroom situation designed for special needs students.
—Ability to modify and adapt a variety of instructional media and materials for use with special needs students.
—Ability to promote extra-curricular activities such as the various occupational education youth club organizations.
—An understanding of the basic concepts of guidance (personal, group and vocational).
—Ability to communicate and cooperate with special needs students, teachers, parents, counselors, prospective employers, general public, etc.
—Ability to assist students in developing the skills, knowledge, and attitudes necessary to become an independent, self-directed learner and worker.
—Ability to evaluate the educational and attitudinal progress of special needs students.

Teachers of the disadvantaged and handicapped students should always keep in mind that they are working with individuals with special identified needs. The curriculum for these individuals should contain material both occupational and academic in nature to insure that the student's specific personal, social and educational needs are met.

Some key points to be considered in planning the program are as follows:

—Train for the acquisition of basic employability characteristics.
—Provide the academic teachers with information about the needs in academic skills as they relate to the specific vocational training area.
—Where possible, combine training in the school with on-the-job training.
—Be prepared to repeat segments of instruction, particularly for those students who possess learning handcaps.
—Make provision for individualized instruction.
—Utilize demonstration lessons and manipulative endeavor in the case of handicapped students with learning disabilities.
—Make certain to treat all aspects of a learning situation; never take for granted the occurrence of incidental learning.
—Place great emphasis upon safety procedures and caution in the use of tools and equipment.
—Make copious use of the prevocational evaluation and the vocational counselor's support.

A summary of helpful tips and hints for those who work with and teach the disadvantaged and handicapped indicate that they should:

—Seek student participation in planning the learning activities.
—Encourage appreciation for the abilities of other individuals.
—Seek student participation in establishing desirable standards of conduct.
—Provide opportunities for exploration and the expressions of ideas.
—Encourage students to discover, define, solve and interpret personal and social problems.
—Strive to maintain learning situations in which students will succeed and experience personal satisfaction.
—Utilize real visual objects and other concrete and lifelike teaching aids whenever practical in the instructional program.
—Keep in mind that daily assignments involving specific meaningful tasks are the most effective.

(Concluded on next page)

—Attempt to gain the student's confidence.
—Include parents in the program.
—Maintain an awareness of the importance of eye-contact and body language which might underscore what you are saying.
—Keep in mind job placement in the community as a factor in motivating the disadvantaged student.
—See the students as individuals and make an effort to understand their personal problems.
—Take advantage of opportunities to talk informally with students outside of the classroom about matters other than schoolwork.
—Arrange field trips into the business and industrial community to give youngsters a chance to see the work areas, and encourage personal interviews by the students concerning job duties.

Teaching the disadvantaged and handicapped may well be one of the greatest satisfactions a teacher can receive during his teaching career, especially if he or she has a genuine interest in helping those less fortunate than he or she who may have been neglected in the past. ◆◆◆

(Daniels—from page 251)

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(Harris—from page 256)
the problem. Kenneth Clark advocates a more complex solution which must include guarantees of self-respect and self-worth. He is quoted as saying, "I think the way welfare is administered, it seems to be calculated to dehumanize people to make them see themselves as not worthy . . ." (Billingsley, 1968). Decreasing the dependency status of the poor and increasing their involvement in their socio-political, as well as economic community, would begin building more constructive models toward which the youth could strive and a more positive environment in which all could live. ◆◆◆

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BOOK REVIEWS

FARM ACCOUNTING AND BUSINESS ANALYSIS by Sidney C. James and Everett Stoneberg, Ames, Iowa: The Iowa State Press, 1974, 270 pp. $7.95.

Today's farmers and ranchers are modern businessmen and they need good records which can be systematically analyzed in order to make management decisions which can directly influence net profit.

This reference uses a logical approach that should be very helpful to teachers in teaching record keeping and analysis. It includes examples of different types of records and discusses how these records apply in the successful operation of a farm business.

The "Workbook for Farm Accounting and Business Analysis" which is designed to accompany the textbook contains many practical problems for students to study and practice. It should do an excellent job of providing application of the keeping and use of farm records and develop student understanding in this area.

This text and accompanying workbook should be especially appropriate for junior-senior high school students enrolled in farm management programs at the high school level and for farm management students enrolled in post high school programs in technical schools or community colleges. Teachers who are conducting farm business management programs for young and adult farmers would also find this to be a good supplemental reference.

John T. Starling
Ohio State University

PRINCIPLES OF POST-SECONDARY VOCATIONAL EDUCATION by Angelo C. Gillie, Sr. Columbus, Ohio: Charles E. Merrill Publishing Co., 1974, $10.95

This book is designed to cover post-secondary education with emphasis on middle level workers and their role in society. The book has 16 chapters that address themselves to these three major segments of the book.

The first part provides an overview of vocational education and how vocational education fits into the total educational institution. The second section of the book discusses the principles of post-secondary vocational education. The third section of the book discusses future aspects of post-secondary vocational education.

The book is written for graduate students, faculty and administrators in post-secondary institutions and for laymen interested in this topic.

The foundation of the book is that community colleges and area vocational schools must come together if maximum benefits are to be realized. A secondary theme of the book is the emphasis on the overall format of vocational programs.

The book is clearly written and easy to read. Each chapter is divided into major headings and subheadings. A summary of each chapter is provided, and each chapter has a bibliography.

This is an excellent book and it should be read and studied by all vocational educators, especially those whose interests lie in post-secondary programs.

William B. Richardson
Purdue University
West Lafayette, Indiana

THE SUGAR CANE, by A. C. Barnes. New York, New York: Halsted Press, A Division of John Wiley & Sons, 1973, 2nd Edition, 572 pp. $28.50

The book gives a comprehensive and resourceful survey of the sugar cane industry of the world. The main theme of the book centers on agriculture. Very basic agronomic areas such as soils, irrigation, crop production, cover crops, and fertilizers are authoritatively covered. The author stresses how research helped improve the industry.

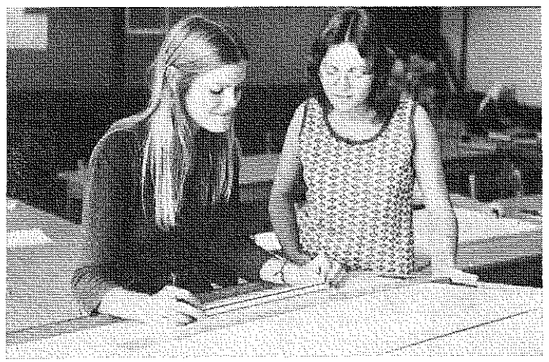
The history and world distribution of sugar cane are discussed. A thoroughly involved breakdown of the organization and control of the entire sugar cane industry should be of interest to any person (agriculturist or consumer).

This new 2nd edition gives elaborate discussion to spray equipment, mechanized harvest equipment, and chemical usage. Two helpful sections are the glossary and conversion pages for metric measures.

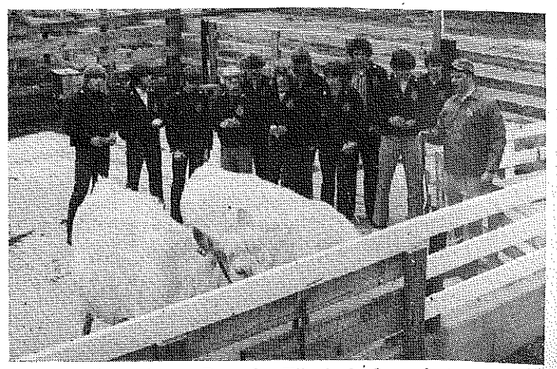
The author has served as Sugar Consultant to South African Cane Growers Association & Swaziland Cane Growers Association. He was formerly Director of Agriculture in Jamaica; General Manager, West Indies Sugar Co., Ltd.; and Director of Research, Sugar Manufacturers Association (of Jamaica) Ltd.

This reader believes that anyone involved in cane industry should have this book. Its ease of reading makes it an enjoyable reading text for any teacher or interested reader. This book should be in the library of vocational agriculture teachers in sugar cane growing areas.

Alfred R. Clarke
Grand Strand Career Center
Myrtle Beach, S.C.

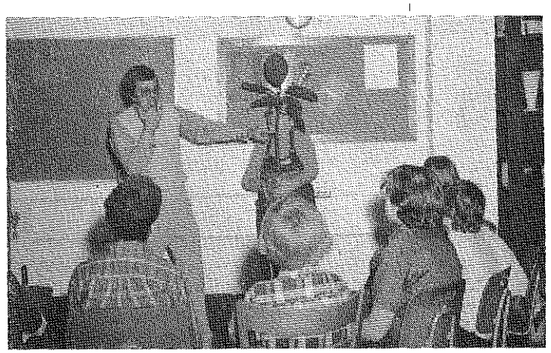


LEARNING BY DOING—Students enrolled in horticulture at Miami (Florida) Agricultural School are shown drawing a landscape plan. (Photo from H. Quentin Duff, Miami Agricultural School)



FFA Alumni member at Roanoke, Illinois, is shown instructing students in livestock judging on his farm. (Photo from Daniel Reuwee, National FFA Center)

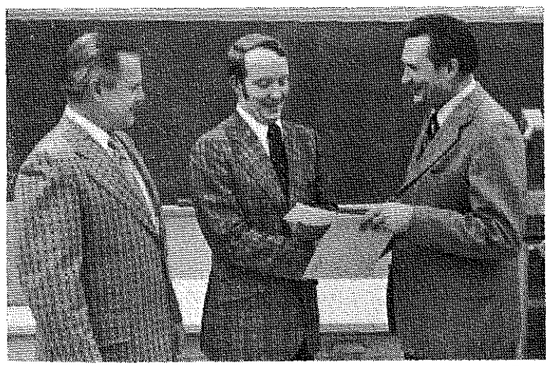
FFA ALUMNI MEMBERS ASSIST WITH INSTRUCTION—An



HORTICULTURE FOR DEAF STUDENTS—Jim Heilman, teacher at The Ohio School for the Deaf, is shown instructing fifth grade students in the cultural requirements of a rubber plant. (Photo from Larry H. Erpelding, The Ohio State University)

Stories in Pictures

by Jasper S. Lee



EXCELLENCE IN TEACHING—Larry E. Miller, Assistant Professor of Agricultural Education at Virginia Polytechnic Institute and State University, is shown receiving a citation for excellence in teaching from Carl Hereford, Dean of the College of Education at VPI & SU. Dewey Adams, Director of the Division of Vocational-Technical Education at VPI & SU, is observing the presentation. (Photo by Jasper S. Lee, Virginia)

SUPERVISING TEACHER HONORED—Harlan Veal (center), Jessamine County (Kentucky) Public Schools, is shown being presented with an engraved silver tray commemorating 25 years as a supervising teacher for the University of Kentucky Agricultural Teacher Education Program. With Veal are Jim Wilds (left), former co-teacher with Veal, and Charles Byers, Head Teacher Educator at the University of Kentucky. (Photo by M. J. Iverson, University of Kentucky)

Agricultural Education

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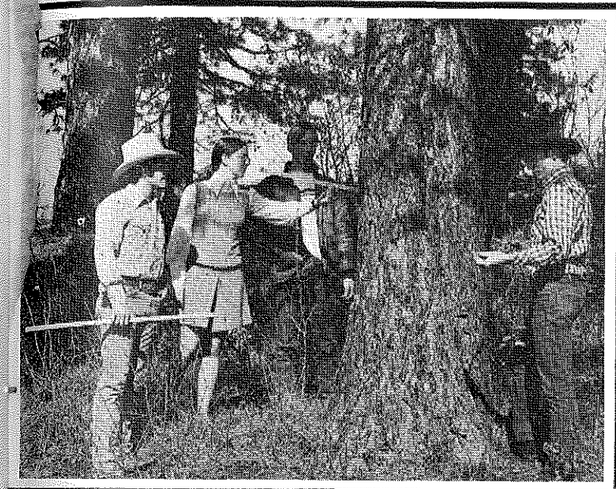

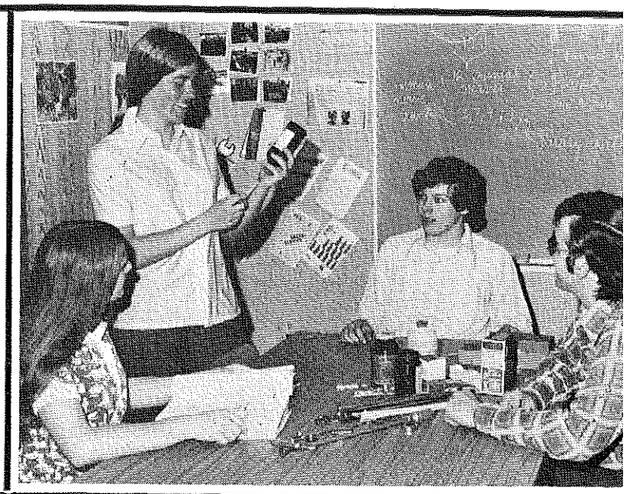

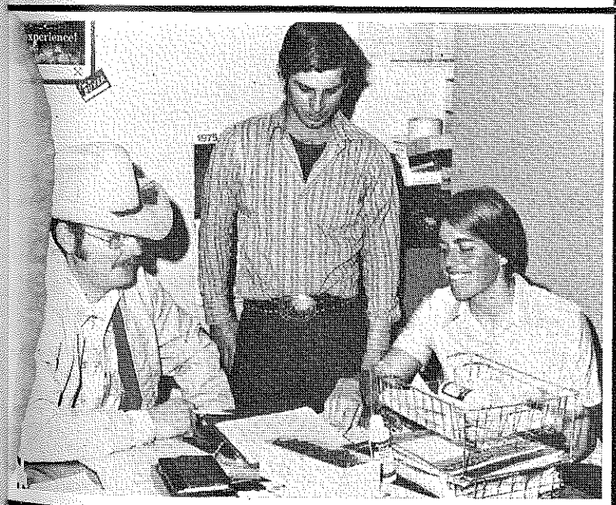

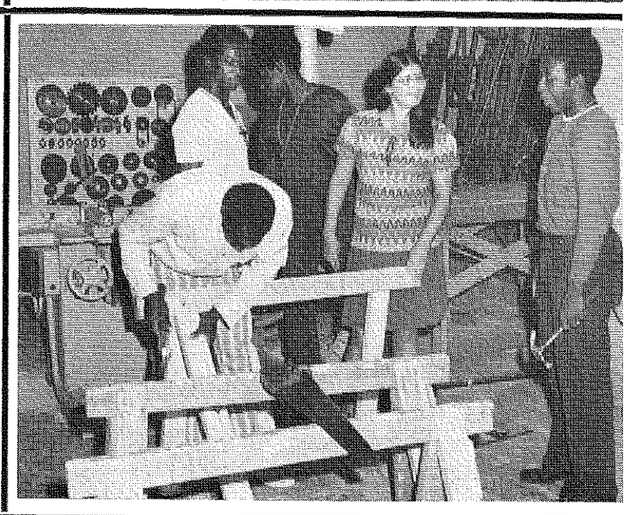

Theme—WOMEN IN AGRICULTURAL EDUCATION