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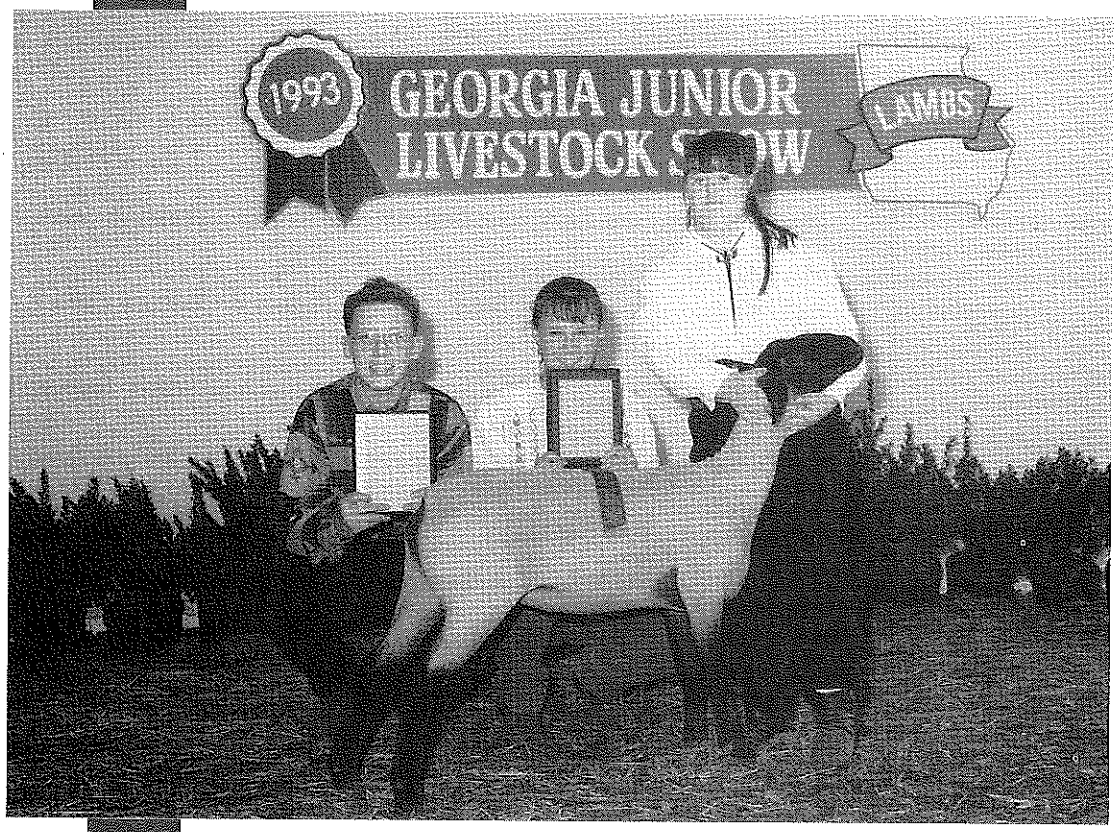

Teaching Academically Disadvantaged Students

Using Learning Centers
Special Programs
Instructional Strategies

THE
AGRICULTURAL EDUCATION
MAGAZINE

December, 1993 Volume 66 Number 6

Table of Contents

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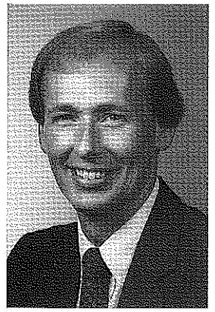
The Bottom Line



BY ED OSBORNE

Dr. Osborne is associate professor and program chair of agricultural education at the University of Illinois, Urbana-Champaign.

According to research, these students tend to be seated farther away from the teacher, are smiled at less, called on less, given less time to answer questions, treated more as a group than as individual students, receive less eye contact, and are asked fewer follow-up questions. Who are these students? They are the lower achievers in high school classrooms across America.

What an irony. Students who need special instruction and attention from teachers are often the last to get it. The reason is simple: these students are easy to ignore unless they are disruptive. Anyone who has taught a mixed class of 20+ sophomores knows that the challenges of teaching make it very difficult to engage those who need special help. Sometimes it's hard enough just teaching those who appear to want to learn.

For those of you who are junior high and high school teachers, the challenges associated with increased mainstreaming in recent years are all too familiar. Despite the frustrations associated with teaching such a diverse range of students (in terms of motivation and achievement level), that's exactly what teachers are hired to do. Our job is to teach each of our students to the best of our ability. And as a core of professionals, our job is to challenge all of our students to want to learn, develop learning skills, and use their talents and abilities in a positive way. Each teacher must share in this tremendous responsibility that society has given to us.

Academically disadvantaged students have been operationally defined as those who perform approximately two grade levels below placement in reading, writing, or math skills. These students typically exhibit short attention spans, low self-esteem, lack of motivation, poor attitudes, and a general lack of purpose or direction. These characteristics may be due to many, often complex, student circumstances.

Experience has shown that academically disadvantaged students often perform better in agriculture classes than in other school subjects. Those unfamiliar with our programs are quick to explain this accomplishment by criticizing the rigor of the program (a rather defensive tactic). But every course/program has its weaknesses, and perceptions of rigor are usually based upon the degree of abstraction in the subject matter. For many high school students rigor defined as such is not necessarily a good thing.

The unique strengths of agricultural education are what make it a successful learning strategy for regular and exceptional students alike. Secondary agriculture courses tend to be concrete vs. abstract, applied vs. theoretical, and relevant vs. irrelevant (in the students' eyes). Students enrolled in agriculture courses are more often active than passive as learners. In short, agriculture teachers make better use of the principles of teaching and learning that apply to all students. The nature of our subject matter, which is a natural integration and application of basic concepts, gives us definite content advantages. This is not to say that there are not outstanding teachers in other subject areas, for there certainly are. Interestingly, these outstanding teachers also find a way to make learning fun, relevant, active, applied, and concrete, in their subject areas.

Low-achieving students are not necessarily low-ability students. In fact, many low-achieving students are very capable of doing significantly better. A D student is not always a D student. Aren't we surprised to learn of former, low-achieving students who have become very successful after graduation? Ability and achievement are often not highly correlated; they are sometimes a function of the student's personal and environmental circumstances at a given time. Teachers can have a significant, positive influence on these circumstances.

Many agriculture teachers are concerned with having more than their fair share of special needs learners. Certainly this is a legitimate concern when agriculture classes have a much higher percentage of special needs learners than other classes in the school. But because of our unique strengths, we should expect a greater percentage of special needs learners in our classrooms. We know from experience that their chances of success are greater with us. Yet at the same time, agriculture teachers must continually enlighten counselors and administrators about one key point: the methods of learning in agriculture classes are appropriate and effective for all students, even though they are more necessary for special needs learners. A constant public relations program that sends

(continued on page 6)

Will We Serve the Academically Disadvantaged?

BY MAYNARD J. IVERSON

Dr. Iverson is associate professor of agricultural education at the University of Georgia, Athens.

Last spring I was asked by a senior in our program to participate in an interview for his class project on the subject, "Will agricultural education serve special needs students?" My immediate response was, "Yes, we will continue to do so, for historical, legal, and ethical reasons."

The Historical View

I went on to explain that, from its inception, agricultural education has been designed for all people as a comprehensive, community-based program. Our historical role has been to reach young people and adults who, regardless of their means, social standings, isolation, or abilities, want, need, and can benefit from instruction in agriculture. Subsequently, federal legislation expanded the program's role and provided earmarked finds for special needs students.

The Legislative Mandate

The landmark special education legislation was the 1975 Education for All Handicapped Children Act (Public Law 94-142). It established mainstreaming and prescribed what schools must do to serve the handicapped. More recently, the Perkins bill and its amendments concentrated mainly on serving the disadvantaged and handicapped. Schools are just now feeling the impact of the 1990 Americans With Disabilities Act, which strengthens previous regulations in all areas of society. This emphasis on handicapped in legislation will undoubtedly continue in the future. Thus, serving the handicapped in public schools is not a choice; it is the law.

Ethical Considerations

Legality aside, there is an ethical imperative to serve the handicapped. The English philosopher John Stuart Mill defined ethical behavior as "doing the most good for the most people." This definition is helpful, but it may appear to put serving the disadvantaged minority as an option, if we have our hands full with "regular" students. More information is needed. Professor Fred Ferre, in his book, The Philosophy of Technology, noted three principles of environmental ethics: (1) beneficence, or doing all the good you can in life; (2) non-maleficence, or avoiding doing harm in your actions; and (3) justice, or fairness in the distribution of the good things in life. All agricultural educators of good conscience will agree that it is our ethical obligation to serve the handicapped, to the best of our ability and as resources allow. This has been and will likely continue to be contemporary thinking in regard to serving the handicapped in agricultural education.

Our historical role has been to reach young people and adults who, regardless of their means, social standings, isolation, or abilities, want, need, and can benefit from instruction in agriculture.

The Current Dilemma

In today's context of increasing enrollments coupled with static or reduced resources, the necessity for equitable treatment of handicapped — including the mentally or academically disadvantaged — presents new challenges to agricultural educators. Increasingly, schools are being criticized for failing to educate large segments of our youth; at the same time teachers feel overwhelmed. A realistic view of teacher and program capabilities is needed. Clearly, it is time for dialogue within the profession on this subject. As a first step, our way of thinking about the problem should be examined in light of the harsh realities of today's world. Perhaps some new "rules to live by" could be generated which would help agricultural educators at all levels to better meet the challenge.

At the local level, teachers, administrators, special education personnel, advisory committees, and board members/legislators should be brought together to assess resources, determine capabilities and strategies, and implement appropriate actions.

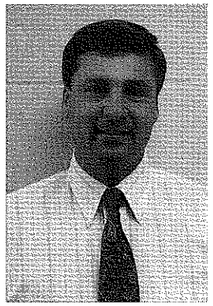
As a start toward this goal, I offer the following:

Guidelines for Success in Teaching the Academically Disadvantaged

1. Welcome those willing to try. As teachers of an elective course, we have an advantage over other curriculum areas — we can select those who want, need, and can benefit from instruction. Our comprehensive program can provide something for everyone, but effort must be made by those who would be served.

(continued on page 6)

Using Centers of Learning to Reach Academically Disadvantaged Students



BY PHILIP GENTRY

Mr. Gentry is an agriculture teacher at Macon County High School, Montezuma, GA.

Looking back on my first two years of teaching, I realize now that my first perceptions of high school agricultural education were totally mistaken. I believed that all students' thought processes were equal, that all students were just like me, and that all students would respond to me in the same way. I spent my first six months frustrated and telling myself that there had to be a better way to reach these students. I was especially concerned about my special needs students. At times they were confused and frustrated at trying to keep pace with other students. I wanted so much for these young people to learn and to reach a level of accomplishment so that they could feel good about themselves.

Centers of Learning: A Better Way

The answer came to me one night when I was discussing this problem with my wife, who is an experienced second grade teacher. She shared her method of teaching, which is called SIA (Special Instructional Assistance) in elementary education. This State Department of Education-sponsored program features student-paced learning centers. From studying this concept I devised a system of using cooperative learning with activity centers in agriculture.

Each activity center is explored by every group at given time periods. A "reward" center encourages students to stay on task and to complete their own work, as well as their group's work, as quickly as possible. I have set up seven activities that each group is responsible for completing. Groups may finish one activity and move on to the next when each person in the group has finished his or her work.

Most centers are constructed around a single topic. Each activity in the center is designed to last approximately 40 minutes (out of a 55 minute period). The reason for this is to give students time to discuss the topic in their group. Each class is divided into working groups. Students may be allowed to help organize their groups, but the teacher should make the final decision on the composition of the groups. When grouping students, several factors need to be considered:

1. Group size
2. Student levels of learning
3. Student social skills
4. Opportunity for each student to talk
5. The nature of the activities
6. The strengths and weaknesses of each student
7. Language (I keep my Spanish-speaking students together.)
8. Male-female ratio
9. Ethnic background
10. Girlfriend/boyfriend relationships (I keep them apart!)

When arranging the classroom, provide an environment that supports and encourages cooperation. Arrange seating so that students in each group can be close to one another. Place each center far enough away from other centers to avoid talking between groups. Allow space for the teacher to circulate between centers. The distribution of material is done by the instructor. When students (as a group) finish the work material of one center, they may move on to another center.

The garden is a popular project learning center in the Ag Department at Macon County High School. In the background is the animal science project barn that will house chickens and rabbits when completed.

There are numerous possibilities for learning centers. The seven centers that I use are as follows:

Computer — Students gather around the computer to learn basic functions through tutorials. Students also run programs on careers.

Reading — Students are asked to read, discuss, and be tested on various articles taken from agricultural publications.

Vocabulary — Students are assigned agricultural terms to look up and define. I use The Agricultural Dictionary (by Herren and Donahue, 1991, Delmar Publishers) →

and accompanying workbook. Groups must then use the terms in sentences to enhance their meaning and use.

Report — A broad topic relating to the general topic being studied in the classroom is selected by each group. The group researches this topic using encyclopedias, Extension bulletins, or magazine articles. Each group must turn in a two-page report.

Problem Solving — The group is given a community problem (e.g., "the local landfill is full"). The group must use the scientific method to come up with solutions to this problem.

Project — All classes have a major project that lasts throughout the year. For example, two agriscience classes have spring and fall gardens. A horticulture class raises greenhouse plants. Each group in another class has a 700 sq. ft. garden plot or one table in the greenhouse.

Game — In a quiet area in the classroom, when all group members finish their work, they may play checkers, Scrabble, or Trivial Pursuit.

Over the course of the year, I've had to make many changes; through trial and error, the program has evolved to that described above. However, as with any new program, there are both many advantages and disadvantages. The advantages are numerous:

- Once set up, class management is easier.
- Interest is stimulated.
- Competition among groups raises performance of all students.
- Students learn to work together.
- Basic skills (reading, writing, math) are used.
- Centers promote "positive interdependence" — The success of the group depends on all members.
- There is individual accountability.
- Social skills are reinforced.
- Self-esteem is increased.
- Motivation is higher.
- Students learn respect for different points of view.
- Metacognition (knowing what you don't know and learning how to find it) occurs.
- Students experience greater enjoyment of school.

The disadvantages are as follows:

- Some noise occurs.
- Individuals get behind (often due to absences).
- Advanced students may be held back by their group.
- Class interruptions (pep rallies, etc.) can cause problems.
- Some groups are slow and may get behind.
- Some students may dislike their group.
- Occasionally a group will finish work very fast and spend too much time on games or disrupting other groups.

Are centers worth doing? I believe that they are, primarily because the concept is student-based learning. I do not believe, however, that this will work in every class. But for classrooms with large groups of both special needs students and high achievers, the program works well. Students learn to teach each other and to become responsible for each other. This type of classroom structure allows students to move around and engage in activities that they enjoy. I like the concept because it gives teachers an opportunity to implement a curriculum that makes sense of their world. I recommend that you try it! ■

Will We Serve the . . .

(continued from page 4)

2. Provide climate for learning. We must establish a stimulating, applied-academic atmosphere, including discipline and assistance for those who have difficulty with subject matter. We should set high standards, but allow options for extra credit and alternatives to cognitive exams, such as performance testing. We should also implement measures such as pairing academically disadvantaged students with advanced students (tutoring), which helps both parties. The disadvantaged student gains peer assistance and encouragement; the advanced student receives a lifetime lesson in the value of service to the less fortunate.

3. Find talent and develop it. In agricultural education we have another advantage over other disciplines in the form of our laboratories, FFA, and SAEP activities. An outstanding teacher in Georgia has often said, "give me a race horse and I'll win the race . . ." Let's find out the interests, talents, and potentials of every student, and then put them in the right "harness" for high achievement!

(continued on page 18)

The Bottom Line

(continued from page 3)

this message should eventually result in an enrollment pattern that has an acceptable balance of regular and special needs learners. Formal policies may be needed to help ensure this balance.

As agricultural educators, effectively teaching special needs learners is one of our many talents. These students need us, we can help them, and society expects the schools to help them, like all students, to learn, grow, and be productive citizens. In a time when elitism and selectivity in schools and society are dangerously high, we should instead do what we do best — welcome all types of students into our classes and use our unique strengths to make a difference in their individual lives. ■

Georgia's Special Lamb Project Adoption Program

BY GARY FARMER

Mr. Farmer is assistant supervisor for agricultural education, Georgia Department of Education, Athens.

Exploring the subject of working with disadvantaged and handicapped students in agricultural education is like preaching to the choir. All experienced teachers of agriculture have had the opportunity to work with students of varying levels of intelligence and capabilities, but not all have challenged their disadvantaged students to take advantage of the opportunities for learning that are part of a stimulating supervised agricultural experience project. Success stories, like the one that follows, should serve to inspire each one of us to expand our traditional programs and reap the joy that comes from working with these special young people.

A Unique Program to Meet a Special Need

To meet the needs of disadvantaged and handicapped students, in 1989 youth leaders from Georgia started "The Special Lamb Project Adoption Program." This program consists of bringing pairs of students together to show market lambs. One of the students in each pair is an individual who has the desire to help and to serve as a mentor/coach; the other is mentally or physically disadvantaged. This program is implemented under the supervision of parents and the students' youth leader, whether it be the county Extension agent or agriculture teacher. Each market lamb in the project is donated by an individual sheep producer from Georgia for this intended purpose. Lambs are jointly cared for by both students; however, the handicapped students, depending upon their limitations, provide as much care for the animal as possible. The market lambs are eligible for all local and area junior livestock shows, along with a special class at the state show consisting of just these lamb projects. The handicapped students participate in exhibiting the animal under the direction and assistance of the student "coach." If needed, the student coach helps pose and brace the animal for consideration by the judge. The placing of each lamb is determined by joint scores received from judging the student's record book and the quality of the animal. As with all shows, a winner is selected; however, at this show, both exhibitors receive an engraved plaque along with a picture of both students and their lamb project. Although the students receive the recognition, the audience of parents, other spectators, exhibitors, and officials is uplifted by this unique approach for involving two students with distinctly different capabilities working together toward a common goal and reward. Maggie, a student coach, recently remarked, "Of all my experiences, none have affected me as much as the opportunity to work with a mentally handicapped student through the Special Lamb Project. The time I spent with her will be something I will remember forever." This project has been recognized by state officials as being one of the most innovative youth activities in Georgia.

Traditionally, agriculture teachers have received more than their share of students with learning difficulties. Many reasons have been given by administrators, counselors, and other teachers for this preference. Some are: "Johnny (or Jenny) isn't very smart and would do better in agriculture than in an academic class"; "Agriculture is a 'crip' course; everyone passes it"; "Agriculture is cows, plows, and sows; anyone can handle that." These and other reasons are given for why we get the academically challenged "little Johnnys (or Jennies)" in agriculture classes. However, we should be challenged to accept these students into our classrooms with a vision of helping them reach their potential. We should take pride in having been given this very special responsibility. After all, wouldn't we want our own child, even if handicapped, to have the opportunity to be enrolled in a quality program of agricultural education? Of course we would! Thus, addressing this very special population of students can be seen as a "parental" duty, as well as a challenging and rewarding experience.

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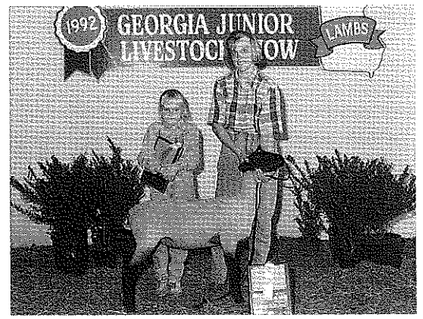

Both special student and student coach/mentor get a ribbon, plaque and picture. to commemorate their participation in the show. (Photo by Gary Farmer, Georgia Dept. of Education)

Teacher Expectations

BY LARRY POWERS

Dr. Powers is an associate professor of agricultural education at North Carolina A&T State University, Greensboro.

Teaching the academically disadvantaged, along with the so-called "normal student" is a well-established part of the American public education system. Historically, teachers of the physically and academically disadvantaged student basically exercised two options with respect to teaching strategies and preparation: (1) special needs students were grouped along with other students and permitted to do the best that they could without any assistance or help, or (2) they were isolated from the other students and given some type of label that conveniently positioned the school to provide little or no educational opportunity for the student.

The contemporary position concerning the teaching of special needs children is well established in our system of jurisprudence. Laws such as PL 94-142 specifically address the legal rights of special students to a "free and appropriate" education with respect to the ability and capabilities of the student — a free and appropriate education that is not a privilege but a right. According to Cratty (1980), children with special learning needs have been attending our schools for a long time and make up approximately 3 to 20% of the student population, depending upon the criteria used for evaluation. Cratty also indicated that students with learning disabilities are 70 to 90% male. Public law 94-192 mandates that public schools must place special needs students in the "least restrictive" environment possible, based upon the individual needs of each student. Public schools operationalize this provision of the law by "mainstreaming." Mainstreaming simply refers to the placement of special needs students into the general population of students to attend classes and participate in the educational/school environment as deemed appropriate for the student. Therefore, the probability is high that most or all teachers in the public school setting will have academically disadvantaged students in their class at one time or another. Given these odds, it is necessary for the teacher to be knowledgeable about "appropriate practice" when teaching academically disadvantaged students.

In business, successful firms always greet their customers in a cheerful, positive, sincere way. Teachers must greet their students the same way.

Research indicates that a student's perception of the teacher's attitude concerning his/her ability or academic potential may tremendously influence the teacher's ability to successfully teach the student. Teachers, through their behaviors and interactions with students, communicate to the student their attitudes concerning the student's ability. The teacher may or may not be aware of the perceptions that students have developed concerning teacher's attitudes. The major focus of this article is on teacher expectations of the academically disadvantaged student and how the teacher may work with or respond to the student in a way that creates a positive learning environment.

Teacher Expectations and Student Performance

Teacher behavior and student performance is an area where considerable research has been conducted. The literature seems to be somewhat unclear. However, much of the research indicates that teacher expectations of the student, if communicated to the student, can influence student academic performance. Dembo (1988) stated:

> students in the same classroom have different patterns of interactions with their teacher. In some instances, these differences affect teacher expectations (i.e., belief about students' present and future achievement and behavior). These expectations can lead to self-fulfilling prophecies, a process in which teacher expectations determine the ways students are treated (p. 190).

However, the expectations that a particular teacher may have for a particular student ONLY become a factor if teacher expectations are communicated to the student. Whether covertly or overtly communicated, they will have an impact on student performance and behavior. The most harmful situation for students is to perceive that their teachers have low academic expectations of them. According to Dembo (1988), the variables most closely associated with teacher perceptions of low achievers are race, social class, and personality.

Furthermore, it is clear that the expectations that a teacher may have are not created in a vacuum. The student plays a major role in teacher development of student achievement expectations. The research indicates that high achievers tend to be seated at the front of the class, complete their assignments on time, interact with the teacher positively, and be more cooperative. Considering this statement, it is easy to see how students exhibiting these behaviors may cause the teacher to develop a high level of expectation. The danger in this scenario is that the teacher may not establish realistic goals and instructional strategies for teaching the perceived low achievers. If teachers' perceptions about the so-called "low achievers" are incorrect, they may neglect or overlook academically talented or gifted students because they do not respond or behave in a certain manner. The question becomes, "How should teachers respond to students concerning the development of teacher expectations?"

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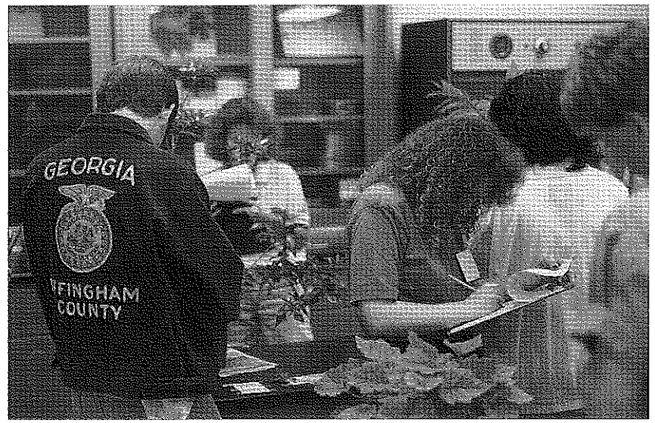

Plant identification is a major part of the FFA Floriculture contest. Academically disadvantaged students can do very well in this event. (Photo by F.B. Flanders, UGA)

Teacher Response to Academically Disadvantaged Students

After reading the above narrative one may be inclined to believe that the teacher should not develop or communicate any type of expectation for the student, or develop and communicate only positive expectations. The literature indicates that neither of these approaches is correct. All students are individuals and should be treated as such. The basic response to the development of teacher expectations lies in the teachers' ability to understand each individual student that they may teach. Teachers should respond by doing the following:

1. Study the cumulative records of all their students. Since student records are confidential by law, each teacher should follow predetermined guidelines for studying student records.
2. Carefully review results of standardized tests. If teachers do not have the proper expertise to adequately interpret the results, they should seek out persons with such expertise.
3. Regularly monitor student academic performance in each class and make the necessary instructional adjustments.
4. Be supportive and encourage students to perform to the best of their ability academically. Students are tremendously encouraged when the teacher models academic excellence. Academically mediocre teachers may create more problems than they solve. Students should not be "stroked" for something they know was not done very well.
5. Establish realistic expectations of each student based upon accurate evaluation. A basic tenet of the American education system is that student are individuals, and therefore, are different and have different needs. However, this does not suggest that the teacher should use these differences to discriminate among students based upon perceived academic potential.
6. Once goals are set, students should be moved along at a brisk pace according to their ability.

Summary

Teacher behavior plays an important role in the teaching-learning environment. Research indicates that if students' interpretations of teacher expectations are low, they may have a very harmful impact upon student academic performance. The communication between student and teacher is a two-way interaction — the student plays a role in the expectation that the teacher may develop whether communicated to the student or not.

Teachers are very highly trained individuals, thus, it is important for teachers to be aware of their interactions and communications with students. Teachers should use their experience and education to develop the most conducive learning environment for all students. Teachers should not establish predetermined judgements about students with respect to their academic ability or potential. Teachers should not permit their prejudice toward a student's race, social class, or personality to determine their expectations of students. Ornstein (1988) indicated that the term "prejudice" literally means "to prejudge." Each student should be treated as an individual, and every effort should be made toward developing students to their fullest potential.

Teachers are also human, with feelings, needs, and desires like those of students. However, teachers are in a position of power and authority over students and should use their training and experience to help all students grow and develop intellectually.

(continued on page 15)

Providing Instruction for Special Populations

BY LARRY R. JEWELL

Dr. Jewell is an associate professor of agricultural education at North Carolina State University, Raleigh.

Agricultural education has a lengthy history of helping students with special needs. However, with increased pressures from all facets of society to raise educational standards, the attitudes of many teachers, including those in agriculture, have changed. Many vocational teachers feel as though they are caught in a "Catch 22" situation. With pressures on school administrators to increase the rigor of their high school curricula, vocational teachers often indicate that their programs have become "dumping grounds" for students who can't succeed in more rigorous academic courses. Statistics validate the fact that today, nearly one-third of our population can be classified as economically, culturally, racially, or ethnically disadvantaged (Clark, 1988). In 1991-92, the percentage of vocational education students in North Carolina who were categorized by vocational program as either disadvantaged, handicapped, or limited English proficient (LEP) was as follows: Agricultural Education - 46.8%; Business and Office Education - 55%; Technology Education - 42.6%; Marketing Education - 36.6%; Health Occupations Education - 32.2%; and Trade and Industrial Education 42.5% (North Carolina Department of Public Instruction, 1992). These percentages support the charges that some vocational programs, including agricultural education, appear to be serving a larger percentage of disadvantaged students than are found in the general school population.

Legislation for Students With Special Needs

Historically, vocational education has provided for students with special needs (i.e., disadvantaged or handicapped). The Smith-Hughes Act of 1917 actually established the precedent for funding vocational education programs for the handicapped, but it was not until the Vocational Education Act of 1963 that the term "special vocational needs" became widely used (Switzer, 1969). The Carl D. Perkins Vocational Education Act of 1984 superseded the previous legislation but maintained the basic philosophy and sense of urgency for assuring access to quality vocational education programs, especially for individuals who are disadvantaged and handicapped (Scanlon and Baggett, 1985).

Section 118 of the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 mandates the following:

1. Individuals who are members of special populations will be provided with equal access to recruitment, enrollment, and placement activities;

2. Individuals who are members of special populations will be provided with equal access to the full range of vocational education programs available to individuals who are not members of special populations, including occupationally specific courses of study, cooperative education, apprenticeship programs, and, to the extent practical, comprehensive career guidance and counseling services, and shall not be discriminated against on the basis of their status as members of special population;

3. Vocational programs and activities for individuals with handicaps will be provided in the least restrictive environment and will, whenever appropriate, be included as a component of the individualized education program (American Vocational Association, 1992a, pp. 74-75).

Plant identification in the FFA Nursery/Landscaping contest gives students of varied abilities the opportunity to enjoy the competition and be successful. (Photo by F.B. Flanders, UGA)

One of the major differences between the Carl D. Perkins Vocational Education Act of 1984 and the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 is that while a school system shall give priority for assistance to sites or program areas that serve the highest concentrations of individuals who are members of special populations, → it may use those federal funds to serve students who are not members of special populations (American Vocational Association, 1992b). Funds made available by the federal act may be used for activities such as: upgrading of curriculum; purchasing equipment, including instructional aids; providing inservice training of both vocational instructors and academic instructors working with vocational education students for integrating academic and vocational education; providing guidance and counseling; providing remedial courses; adapting equipment; implementing tech-prep programs; providing supplementary services designed to meet the needs of special populations; employing special populations coordinators; providing apprentice programs; implementing programs that are strongly tied to economic development efforts in the State; providing programs which train adults and students for all aspects of the occupation, in which job openings are projected or available; establishing comprehensive mentor programs in institutions of higher education offering comprehensive programs in teacher preparation; or for providing education and training through arrangements with →

Teaching Techniques for Working With Academically Disadvantaged Students

1. Collect and analyze all available information relating to the individual.
2. Help the student establish short-term and long range goals that are realistic.
3. Focus on learner abilities such as artistic, mechanical, or other natural abilities.
4. Challenge the learner's interests and abilities.
5. Do not label disadvantaged learners as low achievers because of their different learning style(s).
6. Identify the level of the learner and develop an open system of individualized instruction.
7. Involve students in the planning process.
8. Make goals clear to learners.
9. Modify teaching techniques to the style and rate of learning of each learner. Use practical experience and explanations rather than abstract concepts.
10. Use concrete, tangible demonstrations rather than verbal and abstract.
11. Use illustrations, audiovisual aids, field trips, and direct experiences.
12. Keep learners aware of progress at all times and give them reason to believe they are succeeding.
13. Use orderly well-planned procedures to help give students security and stability. Use progress charts to document achievements.
14. Encourage learner expression whenever possible, such as during teacher-student planning and group activities.
15. Format instructional materials into shorter units of work.
16. Provide for frequent evaluation of progress to identify and provide necessary remedial assistance.
17. Avoid covering too much content too quickly.
18. Help build learner self-concept and self confidence by constant encouragement and reinforcement.
19. Work as closely and as much as possible with other agencies and school resources.
20. Use a simple, direct vocabulary to keep communication channels open.
21. Avoid sarcastic or judgmental comments.
22. Recognize that the student's vocabulary may be more limited and less precise than other students.
23. Make directions simple, explicit, and precise.
24. Provide written assignment sheets, or have learners copy assignments in notebooks to develop organization skills.
25. Use hands-on activities whenever possible.
26. Provide reading materials with appropriate vocabulary levels.
27. Allow the learners to progress at their own pace.
28. Use constructive criticism.
29. Refrain from creating undue pressure.
30. Provide for closure at the end of lessons and units.
31. Present examples of successful workers from various cultural or minority groups to serve as examples and role models.
32. Identify the reading and math levels of the students and select or develop instructional materials based on their abilities.
33. Encourage students who are proficient in hands-on skills to become peer tutors for other students.
34. Provide exposure to people who hold jobs associated with the instructional program with the use of field trips and shadowing experiences.
35. Encourage students to assume responsibility.
36. Utilize student-teacher contracts to allow students to proceed at their own pace but within a specified time period.

private vocational training institutions, private postsecondary educational institutions, employers, labor organizations, and joint labor-management apprenticeship programs (American Vocational Association, 1992b).

While the Carl D. Perkins Act of 1990 focuses the majority of its attention on insuring equal access, success, and progress of our special population students, educators must recognize that very often the handicapped, disadvantaged, and LEP students are victims of circumstances beyond their control. Social, economic, emotional, and institutional barriers, as well as discriminatory stereotypes prevent many students from achievement patterns that our nation's leaders and employers are demanding. Rather than force students to stay in school, strategic and motivational methods must be devised for shifting enrollment to programs that students perceive as useful and valuable.

Teaching Students With Special Needs

Downey (1985) stated that in order to successfully teach the disadvantaged, the teacher must love to teach, be creative, and exhibit patience, optimism, and a sense of humor. Special population students may have difficulty adapting to conventional school programs because they may not possess the basic academic skills necessary to succeed. They may have developed a limited perception of educational value and lack the motivation to achieve in regular programs. This lack of success contributes to the development of poor attitudes and poor self-images. The academically disadvantaged student especially lacks self-confidence and tends to rely on others for support. This increases dependency on others and decreases individual initiative. Programs that ensure the success of these students will incorporate activities which will build their self-concept. Techniques used in such programs include developing simple, clear, short-term objectives; praising students for correct answers; expecting students to succeed; using active listening techniques; using simulation activities that encourage class discussion and critical thinking; and using activities that promote the involvement of all students (Missouri LINC, 1985).

Managing Negative Behaviors

Many students demonstrate behaviors and attitudes which are contrary to those expected of them in school. The insecurities of daily living, a history of failure in school, and inner tensions caused by family conflicts may contribute to a hostile or apathetic attitude toward education by special population students. They may view school as irrelevant and feel alienated from the educational system. To counteract the negative behaviors of disadvantaged youth, teachers can use rewards and encouragement for even small accomplishments; examine the number of classroom rules and regulations placed upon the students and make sure the students know the consequences of breaking the rules; use specific rather than general statements; develop rapport with parents through home visits; show practical application of what is taught; provide continuous feedback for socially approved behavior and academic and skill achievement; accept the student as a person; and always acknowledge the individual's self-worth. Other suggestions for teachers are to involve motor activities whenever possible, stress actions rather than tests, use role playing, appeal to a broad array of senses and learning styles, offer tasks for extra credit, avoid grading all students by the same criteria, and give out study sheets for new units. Teachers can increase a student's motivation by showing a personal interest. Successful teachers are flexible, innovative, and creative at making their programs student oriented (Missouri LINC, 1985). Another behavior management scheme described by Crunkilton (1985) is to deny the student some privilege. If the student does not do something which is expected, then the student would not be allowed to do something else.

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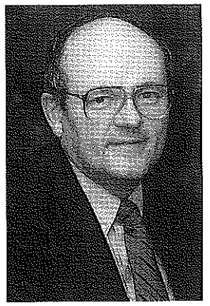
The Education Reform Movement and Academically Disadvantaged Students



BY RODNEY TULLOCH AND CHARLOTTE TULLOCH

Dr. Rodney Tulloch is associate professor of agricultural education and Dr. Charlotte Tulloch is an associate professor of vocational special needs and home economics education at the University of Kentucky, Lexington.

Academically disadvantaged, at-risk, low achievers — all are terms with similar but not necessarily identical meanings. Under the Carl Perkins Act of 1990, "disadvantaged" means "individuals . . . who have economic or academic disadvantages and who require special services and assistance in order to enable such individuals to succeed in vocational education programs. This includes individuals who are members of economically disadvantaged families, migrants, individuals of limited English proficiency, and individuals who are dropouts from, or who are identified as potential dropouts from, secondary school" (Part C, Section 521).

While "academically disadvantaged" is not specifically defined in the Perkins Act of 1990, states such as Kentucky have working definitions that include the following factors: scoring below the 25th percentile on a standardized achievement test; being two grade levels below grade placement in reading, English, or math skills; having secondary grades below 2.0 on a 4.0 scale; or failing to attain minimal academic competencies in a vocational program. These criteria help identify students who are having difficulty academically and who might be expected to have problems with academic aspects of vocational education. These criteria also help to point out students who may need specific services, such as assistance in learning the vocabulary in a service manual or assistance with the mathematics needed to calculate feed rations.

In recognition of the academic difficulties many American students are having, various reform movements have presented changes needed in order to bring up to an acceptable academic level not only the "academically disadvantaged" but also the average American student. In Kentucky, reform took the shape of the Kentucky Educational Reform Act of 1990 (KERA). Some features of KERA, as well as the Perkins Act and other reform movements, are of special interest in serving academically disadvantaged agriculture students.

Helpful Elements of Reform

More than ever, the latest wave of educational reform has emphasized that every student is capable of learning and every student is expected to learn. Many agricultural educators have had a special place in their hearts for students with learning problems. They have often gone above and beyond the call of duty in assisting these students who have struggled to be successful.

Many elements of the reform movement can assist teachers in working with students who are academically disadvantaged. Some of the components of reform useful to teachers working with these students include: integration of academics in vocational courses, outcome-based education, cooperative learning, assessment, business-education partnerships, tech prep, youth service centers, and transition. These components are just part of the package which, along with higher standards, is to lead American students to a world class education. Let's examine how each of these elements can be used to expand and improve educational opportunities for students who are academically disadvantaged.

Integration of Academics

While good teachers of agriculture have always been interested in academics, good schools and the Perkins Act are now requiring the integration of academics in vocational education. KERA also promotes integration of academics and vocational education, as well as integration of one academic area with another. Course such as Applied Math, Applied Communication, Applied Biology/Chemistry, and Principles of Technology relate academic skills directly to all vocational areas. Instead of having separate applied courses, some schools have integrated the applied curriculum directly into academic programs. For example, a biology course may include biology portions of the CORD Applied Biology/Chemistry curriculum. An agriculture class may cooperate with a biology class in participating in the Water Watch program, an ongoing stream monitoring activity.

Academic and vocational teachers working together to integrate their subjects not only learn about other areas of the curriculum, but often learn new things about their students. By working together, teachers have better opportunities to assist academically disadvantaged students.

Outcome-Based Education

The degree to which schools are becoming outcome based varies, depending upon leadership and regulations from state departments →

of education and views and attitudes within the school and school system. However, vocational education has always been interested in outcome-based measures. For many years a strong emphasis was placed on performance objectives. Then, for several years the emphasis was on competency-based vocational education with skilled performance being the expected outcome. Students in agricultural educations have historically been expected to be able to perform in real world situations. Students have been expected to perform in the classroom, in the laboratory, on the farm, and in agricultural business.

Some students who have difficulty performing well on traditional paper and pencil tests or even standardized tests may do quite well in real-life situations where they repair an engine, plant a tree, establish a sod waterway, or select and purchase an outstanding animal. Changing the way we measure student competence has allowed some academically disadvantaged students to show what they have learned in ways that are more meaningful to them.

A group project, such as raising a crop at the school, is a good way to develop cooperation among students. (Courtesy of Scott Co. H.S., Georgetown, KY.)

Cooperative Learning

Cooperative learning is an instructional method in which small groups of students work collaboratively, but each student is held accountable for his/her performance. Many vocational teachers have practiced some form of cooperative learning through the years as students have worked in groups in class and carried out group projects. Cooperative learning activities can be very useful in working with academically disadvantaged students. Students within groups also help each other informally. Classmates can sometimes see problems experienced by other students more clearly than can the teacher. Cooperative learning is important in teaching students to develop goals and work together. If properly conducted, cooperative learning not only helps students do better in the classroom, but they also become more employable. Many employers are demanding that their employees function as team members.

Assessment

Implementation of the Carl Perkins Act has brought about increased assessment of vocational students' abilities, interests, and learning styles. As counselors and teachers recognize learning styles, interests, strengths, and weaknesses, they can use this information to develop a career plan that focuses student attention on a potential future career. Many Kentucky schools are implementing a Student Career/Transition Plan, begun in the eighth grade and continuing with the student throughout high school. This emphasis on the individual has been particularly helpful to some of the academically disadvantaged students. Giving the student input into his her own educational plan is an important motivational process for the student.

Business-Education Partnerships

As agriculture has become more diverse and agricultural course offerings have tried to keep up, the need for business-education partnerships has likewise increased. Business and industry partners are an excellent source of up-to-date information and sound advice. Partners can provide resources such as speakers, films, books, videos, charts, and other materials that can be used at the school. They may also provide wood, metal, plastic, containers, and many other useful things. Some partners may provide financial support and/or a place to visit on field trips. Some partners are willing to spend time with individual students or small groups, and this can be a great encouragement to the academically disadvantaged student.

Tech Prep

Many academically disadvantaged students are unable or unwilling to pursue a four-year college degree. Tech Prep provides these students with an integrated program of two years of high school and two years of postsecondary education. Tech Prep is becoming available in desirable, challenging, and rewarding career areas. The number of agriculture programs involved with Tech Prep is increasing. State departments of vocational education can provide further information about Tech Prep programs.

Youth Services Centers

Parents and families are key factors in a student's academic success. In recognition of the needs of Kentucky families, KERA mandated the creation of Family Resource and Youth Services Centers. The youth services centers are located in or near schools having at least 20% of students eligible for free or subsidized school meals. Centers include but are not →

limited to the following: making referrals for health and social services; providing drug and alcohol abuse counseling, and giving crisis and mental health counseling. In Kentucky in the 1991-92 school year, about 60 youth services centers served middle schools or high schools.

Transition

One of the great difficulties for many students in today's world is obtaining meaningful employment. School reform is requiring more thorough planning for the transition from school to work or further education for all students. The Perkins Act specifies that eligible recipients receiving assistance must provide counseling and instructional services designed to facilitate the transition from school to employment and careers. While vocational education has long been interested in placement rates, the entire school is going to be more accountable for transition of all its students into the world of work.

Higher Standards

Another vital part of school reform is emphasis on higher standards. Each and every student must perform at higher levels. Individual schools are going to be examined and evaluated by how well their students perform. Under some reform plans, such as KERA, schools where students do well will be rewarded, and schools whose students do not perform well will be penalized or sanctioned. In the process of getting all students to perform at higher levels, it will be important to work with all populations, including the academically disadvantaged.

The Challenge

Teachers of agriculture can look at the areas of reform — including integration of academics in vocational education, outcome-based education, cooperative learning, assessment, business-education partnerships, tech prep, youth services centers, transition, and higher standards — and make changes that will help their students who are academically disadvantaged. Integrating these elements of reform into good programs of agricultural education has the potential to make outstanding programs even better. Putting more emphasis on assisting academically disadvantaged students has the potential to improve both school climate and learning levels throughout the school. Each positive change in a school has to start some place. Let us be leaders in making these changes.

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Teacher Expectations . . .

(continued from page 9)

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Georgia's Special Lamb . . .

(continued from page 7)

Meeting the Challenge

Definitions evolve with each new generation of educational theory and often with restructuring in government agencies. Handicapped, gifted, at-risk, and advanced placement are some of the many labels educators put on students in an attempt to better serve their individual needs. As agricultural educators, we are challenged to be innovative in our approach to educate all segments of the student population. Student progress is sometimes hard to measure and can take years. However, research has found that handicapped and disadvantaged students respond effectively and immediately to proven methods of hands-on teaching. The Georgia Special Lamb Project Adoption Program is a good example of how the social, intellectual, and physical needs of handicapped students can be met for the benefit of all. By welcoming these special students into our teaching environment, we not only expand and improve the impact of our classes, but we also enrich the lives of our students, as well as the community which supports our program. ■

FFA Advisement

Maintaining The Enjoyment In FFA Advisement

BY BETH SPENCER

Ms. Spencer is an agriculture teacher at Tri-Valley High School, Grahamsville, NY.

While recently attending a surprise birthday celebration for a second cousin in Boston, my cousin's colleague at Kodak inquired about the Cornell Alumni sticker on my truck window, and asked, "Who is the Cornell graduate?"

I promptly replied, "I am."

He then asked, "What did you major in?"

"Agricultural Education" was my answer.

"So, what do you do?"

"I am an agriculture teacher and advisor to the FFA."

"Why do you teach when you could be making more money doing something else as a Cornell graduate?"

And the conversation continued, but it made me stop and think. Why do I teach agriculture and advise FFA members? Obviously the answer was not the monetary gains that one earns as a teacher and FFA advisor, especially if I was being told I could make more money doing something else. There had to be some other underlying reason. Enjoyment? Travel? Meeting other people? Watching students learn? Grow? Achieve success? Or was it because I believe in a strong work ethic, endless hours of time, dedication, and 100% commitment of otherwise personal time? I really don't honestly believe it was the latter, however, I wouldn't want to mislead anyone by denying the fact that being an FFA advisor does consume time in order to achieve the self-satisfaction of enjoyment, traveling with students, success, etc. . . .

So, if being an FFA advisor requires so much of oneself, what can FFA advisors do to ensure that the underlying reason they are FFA advisors is for enjoyment, watching students learn, grow, and achieve?

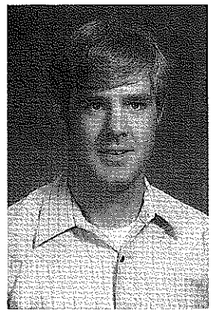
Get to know the students to which you devote and dedicate so much of yourself. Volunteer to take a student home once in a while from an FFA contest, officer meeting, convention, or fundraising event so you have the opportunity to meet the family and discuss positive contributions of their child. This often leads to a much greater understanding of the home environment of the student, improved behavior, and higher expectations of the student between the parents and yourself as the FFA advisor. Knowing and understanding the home situation of the student can also assist you as the advisor (with your knowledge of FFA opportunities) in guiding the student into FFA opportunities where they are most likely to achieve success. Whether it be an FFA public speaking contest, specific skill contest, proficiency award, or talent program, it now becomes a "win/win" situation for the student, family, and you as the advisor. As an FFA advisor you can't make a habit of taking the students home all the time, so this must be communicated with the family in an effective way to maintain the respect for your personal time and devotion.

Another method to get to know students and their families may be to drop by the home and leave information for the FFA member, such as contest materials, travel plans, jackets, banquet tickets, and so on. Again, knowing the home situation of the student develops a level of understanding between you and the member which establishes respect and maintains your role as an FFA advisor.

A third method in getting to know your students is to be knowledgeable and aware of teaching tools, such as personality indicators (e.g., winning colors, the disc indicator, etc.). Knowing these personality indicators and discussing them with your students also helps you as the advisor guide your students where they are likely to be most effective based on their personality.

Why teach agriculture and advise FFA members as opposed to working in a job where monetary gains may be more rewarding? Hopefully because much of the personal time and dedication that you commit to being an FFA advisor and working with students is often returned in great appreciation, personal enjoyment, and self-fulfilling rewards by getting to know students and their families. ■

The Gifted Student in Agricultural Education



BY RICHARD HOOK

Mr. Hook is an agriculture teacher at Gordon High School, Gordon, NE.

The term "gifted student" is not a familiar phrase for most vocational teachers. Educators assume that students with above average intellect and capabilities are found in the hard sciences such as chemistry, physics, trigonometry, and calculus, rather than in vocational programs. Unfortunately, this premise is somewhat accurate since many of the "hands-on" vocational programs are typically "dumping grounds" for students who are perceived by counselors and some teachers as not being able to master "content" classes in an academic program. The belief that students who are not academically competent can take vocational classes and at least learn a trade to keep their hands busy is a far too common assumption, even in today's schools. Consequently, a gifted program is usually not offered in most vocational areas.

In reality, many vocational programs have gifted students. Yet, some educators' perceptions of gifted students are not always accurate. A gifted student, by most definitions, is one who is identified as having outstanding abilities and is capable of extremely high performance. He or she is usually identified by an intelligence test or other standardized instruments showing his/her potential performance level. Because of the high ability level of gifted students, differentiated instruction may be needed to stimulate and challenge them. Often these kinds of programs go beyond the basic services provided by small, local school districts.

Characteristic behaviors of gifted students often include persistence in exploring stimuli, asking penetrating questions, expanding on new ideas, developing complex hypotheses about events, and articulating novel or unique ideas about material being presented in class. Frequently, gifted students will find flaws in conventional theory and many times will question authority and show indifference toward accepted custom and thought. These students often perceive themselves as different and may appear stubborn and uncooperative. Often these students are not interested in "team play" or group interaction and may seek solitude. Some gifted students are ashamed of or stigmatized by their intellectual abilities and sometimes repress their capabilities, or they may become rebellious in order to gain acceptance by their peers.

To a classroom teacher, gifted students can either be a valuable asset or a challenge that can tax even the most seasoned educator. Often, gifted students can be a threat to teachers' content knowledge by constantly questioning their presentations. While working with these students, teachers may begin to feel insecure when they have to answer "I don't know" so many times. This also may threaten the authority of the teacher and can cause a class to lose respect for the teacher.

What can a teacher do when the students have a grater grasp of a subject and are more talented in that area than the teacher? Certainly that is a sobering thought. Yet, educators must remember that they don't know everything! If teachers can guide students to find the correct answers and use unique approaches in helping students to solve problems, they are on the right track.

How can an educator teach gifted students and still maintain control of a regular classroom? One approach is to keep an open mind and maintain an excellent sense of self-assurance. Be confident in yourself and in your teaching. A warm, compassionate teacher willing to admit weakness and mistakes is an asset to any classroom. Yet, teachers need to be assertive and show their strengths, such as content knowledge, maturity, wisdom, and life experiences. Flexibility in dealing with gifted students is the key in any program. Teachers should provide many opportunities for students to think creatively in the classroom by providing a rich environment for problem solving. Group brainstorming techniques, cooperative learning, and rewarding students for making connections with previous learning may also be successfully employed. In addition, teachers can model creative thinking in the classroom and should try not to be the ultimate judge of worth on a project or an "all knowing" type educator. Drawing on the world outside the classroom for knowledge rather than relying only on the conventional textbook approach can greatly stimulate gifted students and allow for better student understanding on the part of the teacher. Vocational educators are well suited for this type of instruction. They have laboratories in their facilities to further enrich student learning and understanding. These laboratories draw heavily on student experiences and abilities in building curriculum designed to test real-world living.

Methods of instruction for gifted students include the use of independent study (often outside the classroom and with a resource teacher). The utilization of consultant teachers who are specialists on a subject can help gifted →

students pursue study in an area of interest and integrate these interests within the existing school curriculum.

Classroom approaches include enriching the regular curriculum by expanding the content level or advancing the student to a higher level of thought. The teacher can incorporate content novelty, combine interrelated subjects, and examine major issues and conflicts between these subjects. An example includes examining the use of wood products in our society in relation to destroying forest habitat and changing the landscape. What is the impact on society, the environment, and the people employed by the wood industry? Students can design and develop alternative materials to replace wood products. This approach could be used in a woods program or a natural resources unit in an agriculture program. It would be interesting to speculate how far young Tom Edison might have gone had his teachers identified him as gifted and placed him in an enriched or accelerated program!

Two questions emerge from this focus on gifted programs: (1) How do you evaluate programs?, and (2) How do you attract and keep gifted students in the programs? In order to organize a program for the gifted one must develop realistic objectives. These objectives must be clearly articulated. A clear set of objectives organized by the teachers, students, parents, and the school counselor is necessary. Curricular adaptations include special grouping, acceleration, enrichment, special mentors and/ or tutors.

Attracting gifted students to vocational programs and keeping them there is a challenge. Teachers must be creative, open, flexible, enthusiastic and care about student growth. Students who are challenged will excel and thus attract others. Often, word of mouth by enthusiastic, students is one's best advertisement. A distinct advantage vocational educators have in their programs is the VSO (vocational student organization) — groups such as DECA, FHA, FBLA, VICA and FFA. These are natural magnets for attracting students and honing their skills in exciting, stimulating, and challenging activities. These programs provide experiences in pubic speaking, parliamentary procedure, and in specific skill development. These VSOs, if managed carefully, can enhance a gifted program immensely, and vocational education is often the only program where gifted students have these kinds of opportunities. Clearly, gifted students can benefit from what vocational education offers. Vocational educators can attract gifted students and help them achieve new levels of growth and maturity. Coupled with a strong VSO, gifted students can find challenges, as well as group interaction, with other gifted peers. Vocational education can meet the needs of today's gifted students and enhance students' transition from adolescence to a successful adult life.

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Will We Serve the . . .

(continued from page 6)

4. Involve others. Counselors, special needs personnel, other teachers, teaching assistants, administrators, parents, and volunteers from the community should be used to help with the program. For teachers of agriculture to try to stand alone in serving the academically disadvantaged may be the first step toward failure.

5. Set limits. Proportions of academically disadvantaged who are admitted and retained in the program should be based on the capacity to serve. If we are to avoid the "dumping ground" label, and the accusation of misplaced priorities, (i.e., "majoring in the minors"), the mixture of students having varying abilities should reflect the demographic makeup of the community. An imbalance on either end of the spectrum of academic talent does not live up to established program standards. It is our obligation and challenge to actively recruit and work to develop the academically disadvantaged; however, it is also our professional responsibility to ensure that program integrity is maintained for all students.

The authors in this issue bring some interesting ideas and perspectives to the challenge of serving the academically disadvantaged. Their work can help us as we begin to discuss the complex issues that are involved. However, as we enter into an open dialogue on serving the academically challenged, let's not forget the principle of inclusion which has made America great, as embodied in the following verse:

". . . Give me your tired, your poor, your huddled masses yearning to breathe free, the wretched refuse of your teeming shore. Send these, the homeless, tempest-tost to me, I lift my lamp beside the golden door!"

—From "The New Colossus", a poem by Emma Lazarus, which is inscribed on the pedestal of the Statue of Liberty. ■

The Exceptional Learner In Agricultural Education

BY RONALD REPPS & TOM DORMODY

Mr. Repps (not shown) is special education facilitator, El Paso Independent School District and a doctoral student in special education at New Mexico State University. Dr. Dormody is an assistant professor of agricultural and extension education at New Mexico State University, Las Cruces.

Introduction

A renewed drive by both state and federal educational agencies for the inclusion of students with special needs in regular education has come with the passage of the Americans With Disabilities Act of 1990. This will have a tremendous effect on both academic and vocational education programs. All teachers, including agriculture teachers and school administrators who do not familiarize themselves with the law, population, and pedagogy of special education, will find difficulties in working with this growing segment of their student populations. To that end the authors address the following points: special education legislation, various special education exceptionalities that agriculture teachers may encounter, strategies for working with special education students, and a rationale for including these students in regular classes.

Laws and Legislation

Unlike regular education, special education finds its origin in the civil rights movement. In 1954, when the supreme Court ruled in Brown vs. Board of Education that separate was not equal, a precedent was set for eliminating obstacles that barred citizens of the United States from enjoying full constitutional rights. Among the groups benefitting from this decision were people with disabilities. Due to their handicaps, these persons had often been denied access in the past, not the least being access to a "free and appropriate public education." Section 504 of the 1973 Rehabilitation Act prohibited discrimination against an "otherwise qualified handicapped individual solely by reason of his handicap under any program or activity receiving federal financial assistance." Thus, the stage was set for the passage of the first special education legislation, the 1975 Education for all Handicapped Children Act (P.L. 94-142).

Public Law 94-142 outlined the requirements school districts must follow in servicing their special education students. Students entering special education are to be given a series of physical, intellectual, educational, and in some cases, psychological tests to determine placement. An Individual Education Plan (IEP), containing goals, objectives, strategies, and evaluation plans, is then written for each student. Public Law 94-142 introduced the important concept of "least restricted environment" (LRE), the basis for including special education students in regular academic and vocational education classes. Simply stated, students with disabilities should not be separated from the mainstream population for any more time than it takes to service their special needs.

The Education of All Handicapped Children Act also established guidelines for disciplining special education students. These regulations were expanded by a number of high court decisions, most notably Honig vs. Doe in 1988, which upheld the "stay-put provision" regarding the suspension or expulsion of special education students more than ten days for a violation that is attributable to their handicapping condition. This does not mean that special education students can do anything they wish in a regular education class. It does mean that in order to remove a disruptive students, due process must be granted the student, including rights to a hearing and a placement determination. If it can be shown that a special education student is receiving no educational benefit from being in the regular education class or is detrimental to the education of the other students in the class, the student can be removed. Mainstreaming does not mean teachers will no longer be in charge of their classrooms.

The Americans With Disabilities Act of 1990 strengthened the provisions of Section 504 of the Rehabilitation Act and extended them to the private sector. It called upon both public and private sectors to ensure access and equal services to all, regardless of handicapping condition. School districts around the nation are now creating Compliance/Coordinator positions to ensure their schools meet federal ADA guidelines. The impact of compliance on agricultural education programs is yet to be determined. To begin to understand what compliance with ADA might mean, agriculture teachers can perform a simple test in their classrooms and laboratories: spending a day in a wheelchair. If they cannot get a drink of water, get to the lab, or use a bathroom, their facilities are not in compliance with ADA. Future judicial rulings will decide how much impact ADA will have on public schools.

Exceptionalities

A wide spectrum of exceptionalities are included in the generic term "special education." These include physical disabilities, learning disabilities, mental handicaps, →

and emotional or conduct disorders.

In agriculture classes, teachers may encounter students with physical disabilities. These include students with hearing or vision deficits, limited use or complete absence of arms or legs, problems with bodily functions, speech or communication disorders, or combinations thereof.

A second group that agriculture teachers may encounter is students with learning disabilities. A learning disability is an inability to learn in one or more academic areas while being able to function well in other academic settings. Students labeled "learning disabled" have average-to-above-average intelligence. A well-known example of a learning disability is dyslexia, manifested by extreme difficulty in learning to read. Other learning disabilities include inabilities to do math, spelling, writing, or tasks involving fine motor skills.

A third group of special education students that agriculture teachers may work with are those labeled mentally handicapped. An average IQ is 100. Mentally handicapped students fall into three subgroups: Educable Mentally Retarded (EMR), with IQs from 90 to 70 (these numbers vary somewhat from state to state, as do the terms used here); Trainable Mentally Retarded (TMR), with IQs from 70 to 50; and Custodial Mentally Retarded (CMR), with IQs below 50. Agriculture teachers may encounter EMR and TMR students.

Another exceptionality that may be served by agriculture programs is students with emotional or conduct disorders. These students have an inability to learn based on a psychological problem. Students with emotional disorders are likely to be inwardly troubled, while students with conduct disorders are likely to turn their anger outward. Behaviors exhibited by students with emotional and conduct disorders will vary. Teachers may encounter students who withdraw; act out; are fine one day and greatly disturbed the next; get along with the teacher, but have trouble with peers; and have trouble only with particular classes or teachers.

Both regular and special education will be serving a growing number of students who have been labeled Attention Deficit Disorder (ADD) and Attention Deficit-Hyperactive Disorder (ADHD). These students are more often included in regular education than in special education. ADD represents students who cannot concentrate in class; ADHD represents students who, in addition to having a problem with concentration, have trouble controlling an impulse to be in constant motion. These categories are relatively new and presently are not special education designations.

Teaching Strategies

The agriculture teacher's goals for students with special needs should be the same as for regular education students: to realize each student's full subject-area and social potential. Strategies used to achieve these goals with special students may be different from those employed with regular students. Further, strategies used for working with one exceptional will differ from those used with other exceptionalities. To accommodate the variety of exceptionalities, learning styles, and ability levels common in agriculture classrooms, teachers will often need to individualize their instruction.

The agriculture teacher may be asked to improve access to classrooms and laboratories for physically disabled students. Ramps and other special devices may be needed to allow these students access to class. Other accommodations may include lowering the height of lab tables, including a sign language interpreter in class, providing braille or taped books for visually impaired students, as well as providing other adaptive devices. Teachers should approach these accommodations positively and naturally.

A regular education teacher who will receive a special education student in class should attend the IEP meeting for the student, where specifics of the exceptionality will be discussed. With the aid of the IEP committee, the teacher can begin to develop strategies for reaching the student. For learning-disabled students, the range of strategies is as wide as the spectrum of disabilities. Examples could include writing out course notes for a student who has an auditory learning deficit or placing pictures of a sequenced activity in front of a student who has a problem with sequencing tasks.

The student with a mild mental handicap (EMR) may not be able to handle intellectually challenging material but can learn many tasks that are within the province of agricultural education. These students understand concrete examples better than abstract ones. They can learn many unskilled and semi-skilled tasks. Instruction for these students should be simple and concrete. More repetition, and hence time, will be needed for them to master a task. Generally, students with moderate mental handicaps (TMR) will be able to work only in a sheltered workshop setting. These students can be taught simple tasks such as sweeping, feeding, and caring for animals and watering vegetables. The key here is to have a great deal of patience, allow for repetition, and assign realistic goals.

Strategies for teaching students with emotional or conduct disorders might include encouraging a regular student to team up with a introverted special student, seating a student who has trouble concentrating in the front, or giving a special student with low self-esteem an important job in the class. Demand high-quality performance and behavior from →

these students; teachers sometimes do these students an injustice by allowing them to work below their ability level or to engage in behaviors that are not tolerated from other students. To succeed they will need to learn how to get along with others and to get and keep a job, just like everyone else.

As with other exceptionalities and students, students with emotional or conduct disorders must be viewed as people and not as labels. At times the behavior of emotionally or conduct disordered students will challenge this ideal. Students with certain types of psychological disorders can be obnoxious, hard to work with, and dangerous at times. Regular education teachers have avenues to ensure that they and their students are safe from special education students who are a threat to their safety. The law is very clear in stating that a student can be removed from class if he/she presents a danger to self or others. Again, due process must be followed. A behavior modification plan is part of the IEP for emotionally or conduct-disordered students. If problem behaviors attributable to the student's handicapping condition arise, a new behavior modification plan can be written. The student who cannot adhere to the new plan can be moved to a more restrictive setting. Most of the court cases lost by school districts over special education issues are lost because proper procedures have not been followed.

Inclusion

There are many arguments for including special education students in regular classes, as well as arguments against it. The three most powerful points for inclusion are the benefits to special students, the benefits to regular students, and the benefits to society as a whole.

The most obvious benefit for the special education students included in a regular class is access to new educational opportunities. They can learn what other students are learning, enabling them to reach their educational and occupational goals. The social aspects are equally important. Special education students who remain in the special education classroom have only other special education students for models and interaction, producing a stifled picture of the world. By having regular students as role models, special eduction students can learn to interact with a variety of people and are introduced to more socially acceptable behaviors. Finally, exclusion hurts, and exclusion based on something that is not a student's fault hurts even more. It was always wrong to discriminate based on exceptionality; P L 94-142 also makes exclusion illegal.

Inclusion provides a number of benefits to regular education students. It teaches them that they do not live in a homogeneous world, but in a world made up of many races, religions, nationalities, sexes, lifestyles, and levels of abilities and disabilities — an important lesson for all to learn. Regular education students who are integrated with special education students have greater socialization skills than students who do not experience this interaction. Academic scores do not decline when special education students enter regular classes, an important issue for parents and teachers of regular education students. For a long time this has been a common misconception, and one that should no longer be accepted as an excuse for opposing inclusion.

Finally, inclusion benefits society. Students who would have received little or no education in the past receive training. Their self-esteem rises. They are more likely to finish high school, go to college, hold down a job, stay out of institutions and jails, and stay off public welfare. The entire student population, special and regular, learns to be more tolerant and understanding of others.

We are not endorsing full inclusion, a term used by some advocacy groups to mean all students should be included in all activities carried on by regular education, regardless of a student's handicapping condition. Inclusion, like everything else in life, should be approached with common sense. Inclusion should not occur if there is no educational or social benefit to the special education student and if the presence of that student in a regular education class hinders the learning of other students.

Conclusion

Special education students will continue to be placed in all academic and vocational education classes. How successful these students are in regular education will depend on how well teachers and administrators understand and work with special education students. We must see these students as people and not as labels.

References

These are three excellent references for agriculture teachers wishing to know more about special education:

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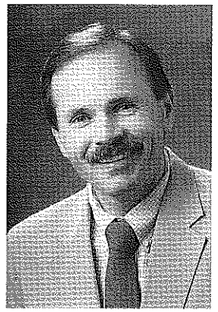
Begin With The End in Mind: A Strategy for Implementing Agricultural Literacy Programs



BY MARTY FRICK

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Every segment of the agricultural education profession has deliberated the need for increasing the agricultural literacy level of all citizens. College agriculture faculty, agriculture industry representatives, the United States Department of Agriculture, and state agriculture and education agencies have, in their own fashion, implemented programs to increase the agricultural literacy of the clientele they each serve. In general, initiatives undertaken to improve agricultural literacy have used many themes and covered many topics about agriculture. This is evident in the plethora of material available from each of the agencies listed above. The possibility of a systematic and comprehensive plan to implement agricultural literacy activities would be of interest to all who are concerned about the dismal lack of agricultural awareness and knowledge possessed by our society. But how can such a plan be conceptualized and ultimately be implemented? The reply to such a question is "begin with the end in mind" (Covey, 1989).

Begin With the End in Mind

Agriculture is a field of study which applies many disciplines to produce food and fiber and conserve our natural resources. Because of the massive amount of knowledge employed to produce food and fiber in our agricultural system, it is incredibly easy to get caught up in topics which may not be the most effective in at least nudging the agricultural literacy level of an intended audience. According to Covey (1989), to begin with the end in mind means to know where you are going so that you better understand where you are now, which will in turn, assist you in taking steps that are always in the right direction. This principle, applied directly to agricultural literacy, means that one should have a destination and a map of where one needs to go to be most effective in implementing agricultural literacy programs. Defining what it means to be agriculturally literate is one way to begin with the end in mind: to make the citizenry of America more aware and literate about agriculture. So one strategy for embarking upon an agricultural literacy program should begin with a comprehensive definition of what it means to be agriculturally literate. Using the definition as a guidepost can facilitate systematic instruction and provide meaningful, curriculum development.

Soon after the release of the National Academy of Science (NAS) agricultural education report entitled, "Understanding Agriculture — New Directions for Education" (1988), a panel of 78 people representing the agriculture industry (30%), elementary and secondary education (34%), and higher education (36%) was asked to give its definition of what it means to be agriculturally literate. Through a consensus-developing procedure known as the Delphi technique, the following panelists definition was refined (Frick, Kahler, and Miller, 1990):

> Agricultural literacy can be defined as possessing knowledge and understanding of our food and fiber system. An individual possessing such knowledge would be able to synthesize, analyze, and communicate basic information about agriculture. Basic agricultural information includes: the production of plant and animal products, the economic impact of agriculture, its societal significance, agriculture's important relationship with natural resources and the environment, the marketing of agricultural products, the processing of agricultural products, public agricultural policies, the global significance of agriculture, and the distribution of agricultural products.

The definition states that "An individual possessing such knowledge would be able to synthesize, analyze, and communicate basic information about agriculture." This provides a rudimentary threshold from which to be considered agriculturally literate. Also identified in the definition are 11 content areas: 1) the production of plant products, 2) the production of animal products, 3) the economic impact of agriculture, 4) agriculture's societal significance, 5) agriculture's relationship with natural resources, 6) agriculture's relationship with the environment, 7) the marketing of agricultural products, 8) the processing of agricultural products, 9) public agricultural policies, 10) the global significance of agriculture, and 11) the distribution of agricultural products.

The definition furnishes an "end" from which all can begin and describes the attributes and broad content domains possessed by someone who is agriculturally literate. The definition furnishes us with 11 content areas that can be used as a framework for developing a comprehensive plan to more holistically address the agricultural literacy problem. Now that we have a clearer understanding of our destination, the question to be asked is how do we take the right steps to get there?

Where Do We Go From Here?

First is the challenge of infusing →

agricultural literacy into an already crowded curriculum. Although research has indicated that certain core subjects lend themselves to using agriculture, more work needs to be done. States and local school corporations are facing continuing pressure to add courses to an already overloaded school curriculum with agriculture playing a secondary role with the "basics." We need to identify which teachers are more inclined to use a subject like "the impact of agriculture on the environment" to teach aspects of environmental science. Following are areas where the use of the agricultural literacy consensus definition can further the efforts of agricultural literacy programs.

Teacher Development — Current education reform initiatives place heavy emphasis on teacher development. The subject areas provide the content from which specific inservice and preservice courses can be formulated. Using the content areas can support educationally sound, significant, sustained, and cost effective preservice and inservice training programs for teachers, curriculum specialists, school administrators, and youth development professionals. The objective of the training programs would be 1) to increase teachers' knowledge of basic agricultural concepts that undergird the content areas and 2) to familiarize teachers with methods, strategies, and materials so that they can effectively impart that knowledge to their students.

Technical Assistance — Through the content areas identified, needs assessments, curriculum development, course content, resource materials, and strategies could be undertaken. The content areas provide a means of communicating the needs of individuals working at the grassroots level to colleges, universities, and state agencies who can furnish desired technical assistance. Components of the definition can assist state departments of education, school corporations, and other educational organizations in the preparation, dissemination, and evaluation of agricultural literacy instructional materials, teaching units, and curriculum guidelines that stress conceptual development and higher level thinking skills.

Research — Research is necessary to evaluate existing program effectiveness, to measure student learning, and to determine the most effective tools and delivery methods for a high quality agricultural literacy program. This can be accomplished by employing the 11 content areas as a means to identify the areas of knowledge that the intended audience possesses. Additionally, research can identify where weaknesses exist in knowledge possessed by various audiences.

Instructional Materials Development — Material development may benefit the most from using the consensus definition of agricultural literacy. Material development agencies can perhaps avoid overlapping products by communicating and coordinating their material development agendas more effectively through the use of the content areas noted in the definition.

More Has to Be Done!

In conclusion, this author recognizes that to implement all of the suggestions takes money, time, and staff. With budget cuts all around us, resources may be limited. Yet, without a framework or a plan, little will be accomplished. As the old saying goes, "plan your work, then work your plan." The plan revolves around using the content areas and attributes spelled out in the definition to implement a more concerted effort between agencies who are concerned about the agriculturally illiteracy that pervades today's society.

The problem of an agriculturally illiterate society may seem languid and undramatic compared with other topics that receive our attention, such as nuclear war, the national deficit, and world conflicts; however, there are few topics that are of more importance to the world than an adequate food supply, proper food use, and knowledge about the components of the agriculture industry that affects every consumer in our nation. To educate the populace about the importance of this issue means to "begin with the end in mind" by using the goal stated in the consensus definition of agricultural literacy to unite all forces in an effort to increase the agricultural literacy level of our society.

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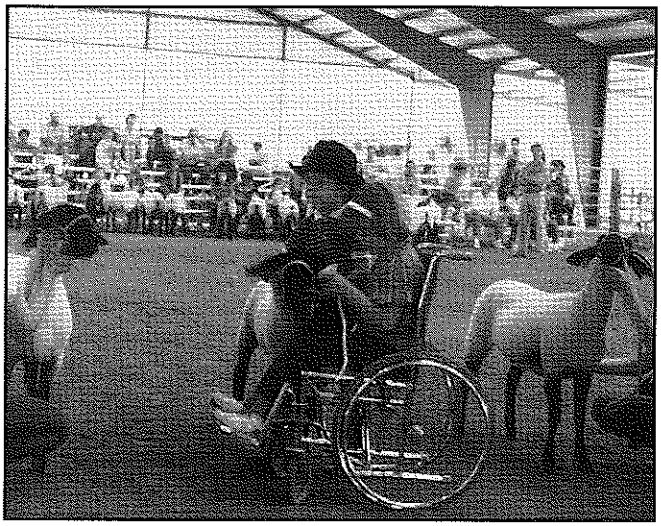
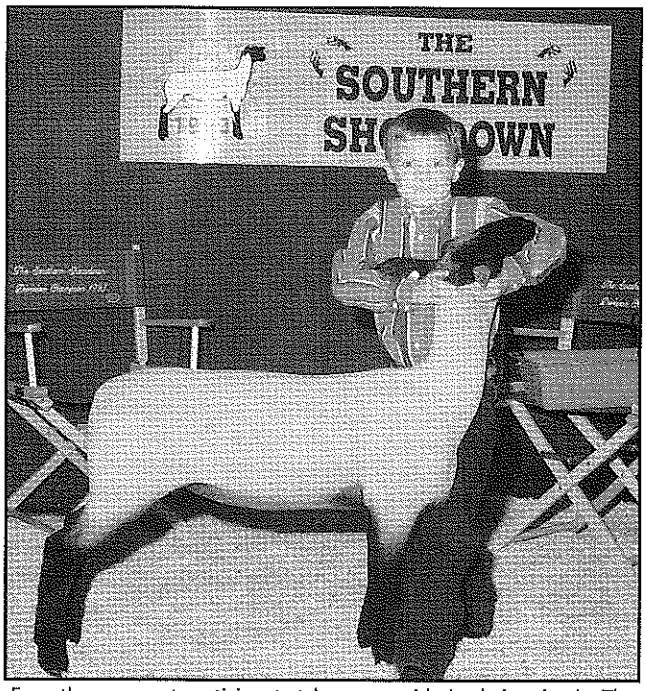
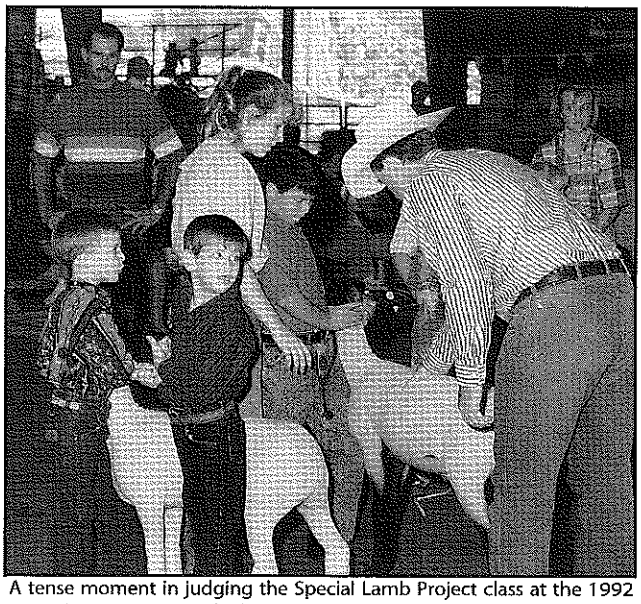


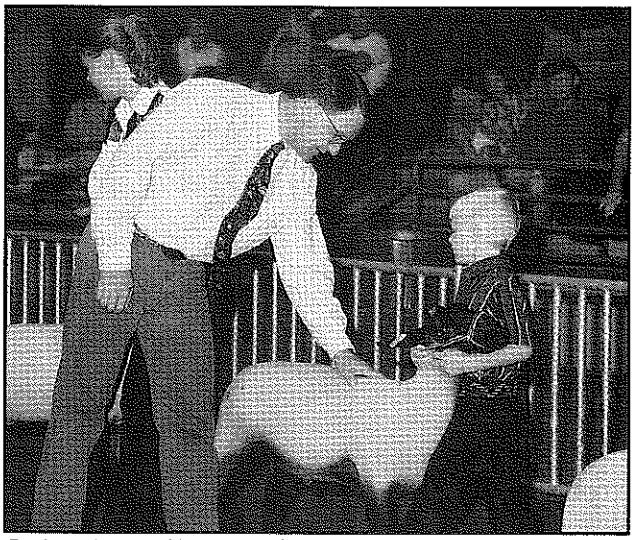
Physically handicapped students are able to participate fully in the Georgia Lamb Adoption Program. (Photo courtesy of Calvin Alford, UGA Extension Animal Scientist)



Even the youngest participants take great pride in their animals. The Southern Showdown is a state show at which Lamb Project students compete for prizes and cash. (Photo by Gary Farmer, Georgia Dept. of Education)



A tense moment in judging the Special Lamb Project class at the 1992 Georgia Junior Livestock Show. (Photo by Gary Farmer, Georgia Dept. of Education)



Dr. Larry Mrozenski, an Animal Science professor from the University of Minnesota, placed 1992 Lamb Project entries at the state show. All students have the opportunity to win. (Photo by Gary Farmer, Georgia Dept. of Education)