

**REPORT OF THE  
JOINT LEGISLATIVE  
AUDIT AND REVIEW COMMISSION ON**

**Special Education In  
Virginia's Training Centers  
For The Mentally Retarded**

**TO THE GOVERNOR AND  
THE GENERAL ASSEMBLY OF VIRGINIA**



**Senate Document No. 3**

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## PREFACE

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Senate Joint Resolution 13 of the 1983 General Assembly directed the Joint Legislative Audit and Review Commission (JLARC), in coordination with an eight-member subcommittee, to examine eight issues "concerned with the operation, funding and quality of the educational programs" for children and youth in facilities operated by the Department of Mental Health and Mental Retardation:

- the quality of instruction and materials,
- the uniformity of the offered services,
- the suitability of the educational environment,
- the eligibility of students for mainstreaming,
- the appropriateness of the administrative authority,
- the appropriateness of the funding mechanism,
- the cost-effectiveness of the programs, and
- whether all children are receiving education as required by law.

To respond to SJR 13, JLARC staff conducted two parallel research efforts. This report, Special Education in Virginia's Mental Retardation Training Centers, is a companion volume to Special Education in Virginia's Mental Health Facilities.

The report concludes that the quality of training in mental retardation training centers has improved significantly over the past ten years. The report urges, however, that additional steps be taken to ensure compliance with federal regulations concerning education in the least restrictive environment possible.

Education for the emotionally-disturbed in mental health hospitals has also improved over the past eight years, but several problems still effect overall quality. Among principal changes suggested are those which would (1) enhance administrative support for the education, (2) equalize resources and funding, (3) address the special needs of young adults, (4) enhance the quality of vocational education, (5) consolidate programs for autistic students, and (6) increase utilization of the Virginia Treatment Center.

Following staff reports to the Commission on June 11, September 10, and September 11, 1984, which included tours of two facilities, the reports were authorized for printing and referred to the subcommittee for further consideration.

On behalf of the Commission staff, I wish to acknowledge the cooperation and assistance of central office staff in the Department of Mental Health and Mental Retardation and the Department of Education and the staff in the facilities who provided information for this report.



Ray D. Pethtel  
Director

## LEGISLATION AND ADMINISTRATIVE STRUCTURE

State and federal policies on the education of handicapped children have been implemented over the past 12 years. These policies stress that handicapped children are entitled to a free public education that is appropriate to their level of functioning and identified educational needs.

The General Assembly requested two previous studies to review special education programs in State institutions. These studies examined the quality, funding, and policies of the programs, and have served to improve programs over time.

### Special Education Laws

Action by the Virginia General Assembly and the U.S. Congress in the past decade has established a legislative framework for the education of the Commonwealth's handicapped children.

*Virginia's Special Education Laws.* Sections 22.1-213 through 22.1-222 of the *Code of Virginia* establish the State's policy on educational services to handicapped children. In addition, Section 22.1-7 of the *Code of Virginia* specifies that each State institution is required to provide training and education to resident children and youth. These educational programs are to be comparable to programs provided to children in the public school system. State agencies have the option of operating the programs themselves or contracting with a public or private agency for the services. Generally, the special education programs for children in the State's mental retardation institutions are provided by DMHMR through each institution. Northern Virginia is an exception, however, and contracts directly with the Fairfax County Public Schools for the educational services which are provided at county schools and at a school known as "Center School" at the institution.

*Federal Mandates.* The cornerstone of federal policy on special education is P.L. 94-142, the Education for All Handicapped Children Act of 1975. The Act outlines procedures for providing appropriate education for handicapped children, and also sets out guidelines to safeguard the rights of children and their parents. Federal funding of State programs is contingent on State compliance with the Act.

Under Public Law 94-142:

- schools are responsible for outreach programs, and ensuring that no child is excluded from an appropriate education at public expense;
- handicapped children should be identified, evaluated, and prescribed appropriate educational services without being mislabeled, stigmatized, or discriminated against;



- each child must have an individual education program (IEP) which is reviewed at least annually. The IEP for each student must include statements of present level of performance, annual goals, short-term instructional objectives, necessary special education and related services, the extent to which the child will be able to participate in regular educational programs, projected dates for initiation of services and the anticipated duration of the services, appropriate objective criteria and evaluation procedures, and schedules for determining whether the short-term objectives are being met;
- handicapped children should be educated in the least restrictive environment (LRE) appropriate;
- the process by which a child's program is decided should involve the child's parents and the child (where appropriate), as well as the child's teacher, a representative of the responsible agency, the public school system, and other relevant qualified professionals; and
- parents must be notified about a child's identification, evaluation, and placement; parents should participate in decisions and must give informed consent to program changes; due process rights to a fair hearing are to be provided when parents and the school cannot agree on a child's evaluation or program.

In addition to Public Law 94-142, Title I of the Elementary and Secondary Education Act of 1965 (P.L. 89-313) provides funds to supplement education programs in state-operated and state-supported schools. In FY 1982-83, such funds provided about \$500 for each student in the five mental retardation institutions.

### Legislative Studies

Since the passage of the State's laws on education for the handicapped, two studies have looked at the education of children in the State's mental health and mental retardation institutions.

*SJR 156.* In 1975, the General Assembly directed the Department of Education and the Department of Mental Health and Mental Retardation to study the education of handicapped children in State-operated institutions including hospitals, training centers, and schools. The study committee found that the "education programs for handicapped children in facilities operated by the Department of Mental Health and Mental Retardation [were] substantially lacking." Furthermore, it concluded that a large number of children were not receiving an appropriate education. Curriculum guidelines, which are needed to provide educational services, were unavailable.

Major recommendations made by the study commission (see Table 1) established funding, administrative, and educational policies for

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Table 1

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MAJOR RECOMMENDATIONS OF THE SJR 156  
STUDY COMMITTEE

1. DMHMR should receive a direct appropriation for the programs it operates in the MR facilities. Furthermore, DOE should transfer to DMHMR the local school divisions' share of basic aid for children in State facilities.
2. The administrative structure in DMHMR should be similar to that of local school divisions. DMHMR should establish a "school administrator" in the central office and an education director in each institution.
3. The DMHMR facilities should follow the "concept of normalization" (providing education in as "normal" a setting as possible), and coordinate their programs with local school divisions.
4. DMHMR should follow program and personnel standards developed by DOE for education programs operated in State facilities.
5. DOE should develop and adopt specific curriculum guidelines for the severely handicapped, multi-handicapped, and very young handicapped populations.

Source: *Report of the Committee to Study the Education of Handicapped Children*, Senate Document 6 (1976).

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educating students in MHMR facilities. The study and recommendations formally established the current educational structure, which had been developing informally.

*Joint Subcommittee Studying the Placement of Handicapped Children.* In 1982, a joint legislative subcommittee was formed to identify problems in the placement of children in residential institutions. The subcommittee re-examined concerns about the quality of education in the State's MR and MH institutions, as well as the appropriateness of the administrative framework and funding mechanisms. The subcommittee identified the following concerns:

- variation in the quality of instructional materials and the environment across institutions;
- students not receiving education or training in the least restrictive environment possible;
- aides not qualified to teach carrying primary teaching responsibilities;

- blurred responsibility and accountability for education because DOE operates programs in the MH institutions and DMHMR operates programs in the MR institutions;
- insufficient and inequitable funding for special education programs in State institutions; and
- resistance on the part of local school divisions to accept children from institutions into their education programs.

The subcommittee determined that a "valid, undisputed assessment" of the programs was necessary. SJR 13, one of the several recommendations of the subcommittee, directed JLARC to conduct the study.

### Administration of Education in Mental Retardation Institutions

The Department of Mental Health and Mental Retardation is responsible for developing a comprehensive system of mental retardation services. Within the Office for Mental Retardation, a Director of Special Education has broad administrative responsibilities for education programs operated by the mental retardation training centers. The main responsibility of this position is to ensure that programs meet State and federal requirements. Each MR institution has either a school administrator or school principal, or both, to administer the school programs, under the supervision of the institution's director. School programs must comply with DOE special education standards, and DMHMR employs teachers and aides according to the staffing ratios established in Board of Education regulations.

Since the Northern Virginia Training Center contracts with Fairfax County Public Schools to provide educational services for its residents, the institution's education director is responsible for overseeing the services provided by the county and ensuring that contractual obligations are met.

### RESIDENT POPULATION AND EDUCATIONAL PROGRAMS

During FY 1982-83, 613 mentally retarded students were served in five institutions across the State. The characteristics of the population determine the types of educational goals set for students. To implement the different educational goals, teachers develop a wide array of education programs.

#### Population Characteristics

Mental retardation is defined as significant sub-average intellectual functioning which exists concurrently with deficits in adaptive behavior. Using IQ as a standard measurement tool, students are generally classified as mentally retarded if their IQs are less

than 70. Virginia's mental retardation institutions typically serve students who are severely or profoundly retarded, with IQs of less than 40. In addition, many of these students have physical and behavioral handicaps. Due to the severity of their handicaps, these students remain institutionalized for extended periods of time. For example, in FY 82-83 only seven percent of school-aged residents were discharged from MR training centers.

To facilitate analysis and discussion of educational needs and achievements, students in mental retardation institutions were grouped into three broad categories: multi-handicapped, higher-functioning, and intermediate-functioning. Multi-handicapped comprise 26 percent of the sample examined by JLARC staff. These students are unable to independently perform basic self-help activities. The higher-functioning students, which comprise 14 percent of the sample, are able to independently care for personal hygiene as well as express themselves verbally. The remaining students, 60 percent of all school-aged residents, have characteristics which fall between these two groups.

### Educational Goals

The educational goals of students in mental retardation institutions focus on basic self-help, community living, and vocational skills that might enable the individual to live as independently as possible in a State-supported or community setting. This differs from the academic orientation of education for students in mental health hospitals. A basic curriculum is developed by the teachers and the education director and adapted to fulfill a student's Individual Education Program.

Programming depends in large part on the distribution of populations. Since the proportion of students within each of the three groups -- multi-handicapped, intermediate-functioning, and higher-functioning -- is unevenly distributed across the MR institutions, each education program must implement a wide range of services to meet the distinct educational needs of its students.

### Types of Education Programs

A variety of programming is offered at each institution. The programs fall within the three broad areas of motor skills development, training in independent functioning, and pre-academics. The subject matter within a program is individualized for each resident depending on current level of functioning and prospective placement in the community.

*Motor Skills Development.* Motor skills development focuses on developing and improving physical abilities by enhancing coordination and fine motor skills, and strengthening large muscles to increase mobility.

*Independent Functioning.* Independent functioning attempts to progressively increase residents' abilities to function on their own and appropriately in institutional and community settings. Programming for the multi-handicapped centers on basic self-help skills such as toileting, personal hygiene, dressing, and eating. For students who have mastered basic self-help skills, programs in independent living and pre-vocational training are most appropriate. Programming in independent living focuses on domestic skills such as housekeeping and cooking, while pre-vocational training teaches simple job skills such as packaging and assembling.

Many of the higher-functioning students need behavior management programs. These programs work to improve the ability of residents to interact appropriately with others. Most students also receive instruction in leisure-time skills. Training promotes residents' abilities to initiate their own leisure activities or join others in play.

*Pre-academics.* Pre-academic instruction prepares students for acquisition of more difficult skills. For the multi-handicapped, pre-academics may simply consist of skills such as responding to one's name and recognizing common objects. For both intermediate and higher-functioning students, pre-academics may attempt to increase task persistence or attention. For the higher-functioning, functional academics are included, such as writing one's name and recognizing numbers and shapes.

All functioning levels receive some form of communication programming. The multi-handicapped are trained to express needs by pointing, while the higher-functioning are taught new words or sign language.

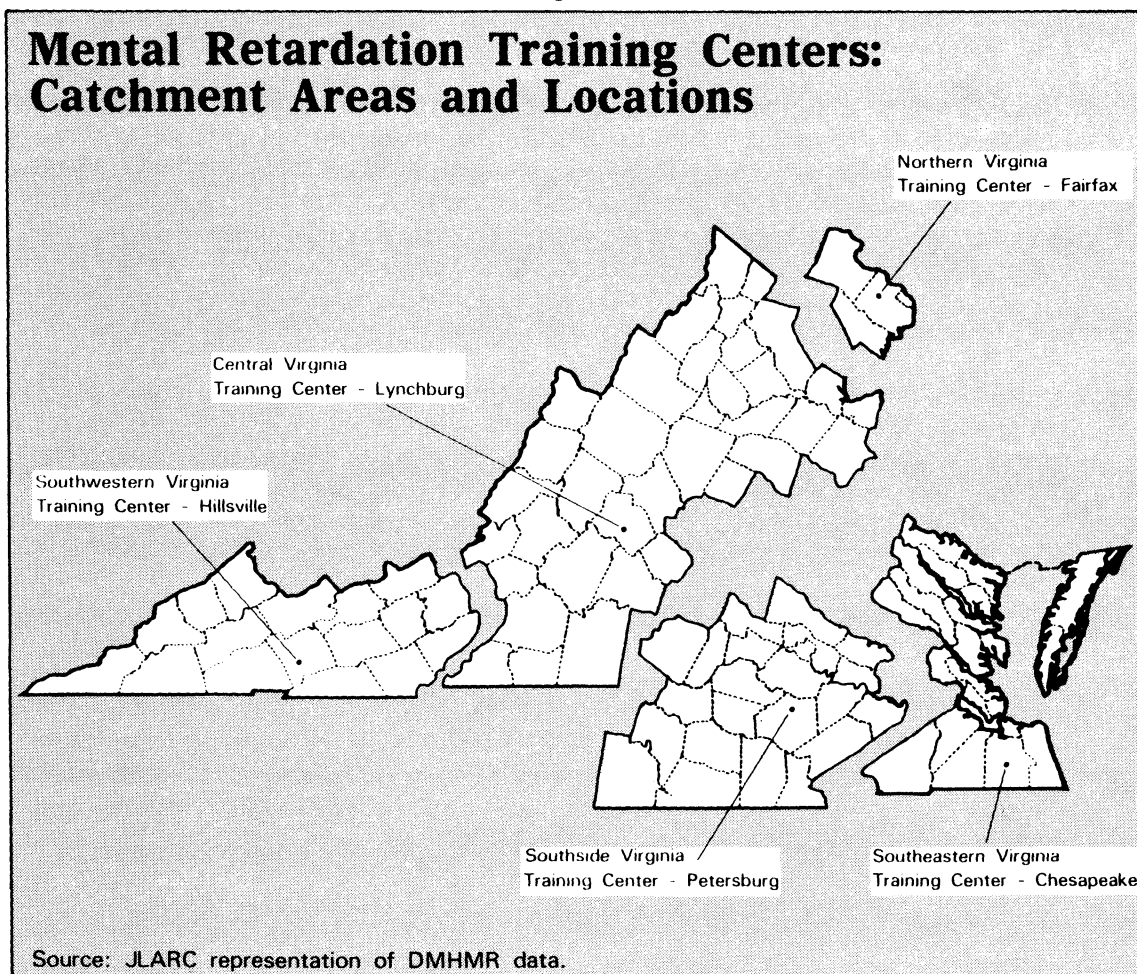
## VIRGINIA'S FIVE MENTAL RETARDATION INSTITUTIONS

The State of Virginia operates five mental retardation institutions. This decentralized system resulted from overcrowding at the Lynchburg Training School and Hospital, which at one time served all of the State's mentally retarded citizens. Overcrowding, in conjunction with the inappropriate housing of mentally retarded citizens at mental health hospitals led to the State creating four additional training centers (see Figure 1).

### Central Virginia Training Center (CVTC)

The Central Virginia Training Center, located just outside of Lynchburg, served an average of 228 severely and profoundly retarded school-age residents during FY 1982-83. Central Virginia has the largest geographic catchment area and serves 16 cities and 32 counties. The education program focuses on self-help skills, sensory stimulation,

Figure 1



gross motor activities, communication and pre-vocational activities. Related services include speech, physical, occupational, music, recreational, and psychological therapies.

Central Virginia is unique in that it provides specialized programs, in addition to operating a campus school. These programs include: (1) A skilled care program for students who have severe physical problems in addition to mental retardation and must be educated under the supervision of medical staff in their living units, (2) an infant program for children under the age of three, and (3) a federally-funded program for mentally retarded students who are deaf and blind.

#### Northern Virginia Training Center (NVTC)

Northern Virginia Training Center for the Mentally Retarded, located in Fairfax County, serves two cities and counties. As a result of the cooperative relationship Northern Virginia has with Fairfax County Public Schools, a variety of educational settings are available to the training center's residents. Of the 110 students at Northern

Virginia, 47 attend schools off-campus. The other 63 students are educated in the school located at the institution. Educational programs provided through Fairfax County Public Schools focus on the development of motor and cognitive skills, self-help, communication, pre-vocational and and pre-academic skills.

#### Southwestern Virginia Training Center (SWTC)

Southwestern Virginia Training Center, outside of Hillsville in Carroll County, is the newest training center and serves an average of 50 school-aged residents from four cities and 17 counties. Most residents, 70 percent, are taught in classroom settings across campus. Programs focus on development of motor, language, and cognitive skills. Thirty percent of the residents are taught in the special education programs of Carroll County schools.

#### Southeastern Virginia Training Center (SETC)

Southeastern Virginia Training Center is located in Chesapeake, and serves 10 cities and 15 counties in the southeastern region. Southeastern provided services for about 78 school-aged residents during the 1992-83 school year. Its cottage-based system provides a unique setting. Residents are clustered by functioning level in cottages, where approximately 60 percent receive most of their education. Educational programs focus on self-help skills, communication, pre-academics, and independent living. Twelve percent of the residents currently receive their education in the Chesapeake public school system.

#### Southside Virginia Training Center (SSTC)

Southside Virginia Training Center, located in Dinwiddie County near Petersburg, serves five cities and 22 counties in the southside and south-central part of the State. Southside provides education to an average census of 202 school-aged residents. The majority of these students, 78 percent, receive training in the campus school building. Educational programs focus on motor skill development, self-help, communication, and pre-academics.

#### Report Framework

To assess the overall quality of education, and to address the SJR 13 mandate, JLARC staff organized this report into six broad areas: Administrative Structure, Costs Incurred in Providing Services, Institutional Differences, Development of Training Programs, Quality of Instruction, and Student Achievements.

Chapter Two, *Administrative Structure for Training Programs*, outlines the responsibilities of all relevant decision-makers and

evaluates the extent to which DMHMR is fulfilling its administrative responsibilities. Recommendations urge greater involvement on the part of DMHMR in selecting and implementing successful programs at individual institutions statewide.

Chapter Three discusses *Costs Incurred in Providing Services*. The review focuses on sources of revenue and categories of expenditures and is principally descriptive, since recommendations related to increased budget supports are contained in other chapters.

*Institutional Differences*, Chapter Four, details the variation in population, educational settings, and use of staff. Recommendations focus on improving the quality and range of educational settings, and re-examining the role of non-professional staff.

*The Development of Training Programs*, Chapter Five, addresses whether the process of developing training programs promotes program selection tailored to students' identified needs and consistent with the expectations of both education and treatment staff. Recommendations focus on providing a basis for program development which is comparable across institutions.

*The Quality of Instruction*, Chapter Six, discusses the extent to which training centers implement programs which are tailored to the functioning level of the student. An analysis of program emphasis for similar populations residing across institutions is presented. Recommendations focus on developing greater comparability in programming for residents with similar needs.

*Student Achievements*, Chapter Seven, presents two analyses: (1) a descriptive analysis of the achievements of the mentally retarded students, and (2) a qualitative analysis of the types of instructional objectives and the criteria for evaluating progress toward completion of these objectives. Recommendations address actions which would standardize the existing record-keeping procedures.

Chapter Eight, *Action Agenda and Options*, summarizes the recommendations offered in the report and offers additional items for consideration by the General Assembly.

Throughout the report, graphic ratings have been included to show the summary conclusions reached by JLARC staff.



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## II. CURRENT ADMINISTRATION OF DMHMR TRAINING PROGRAMS

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The Department of Mental Health and Mental Retardation (DMHMR) is responsible for the education of school-aged training center residents. This contrasts with public education in general and with education in the mental health institutions, where the Department of Education (DOE) is the principal agency involved. DMHMR does, however, operate its programs in compliance with standards set forth by the State Board of Education.

All relevant decision makers (Director of Special Education, facility director, and principal) work for DMHMR, creating clear lines of authority and responsibility for the administration of education programs in MR training centers. This uncomplicated administrative structure poses few barriers to timely implementation of education programs. It lacks, however, a mechanism to monitor and evaluate programs to ensure comparability across the MR education programs, and to promote the transfer of information among the various programs.

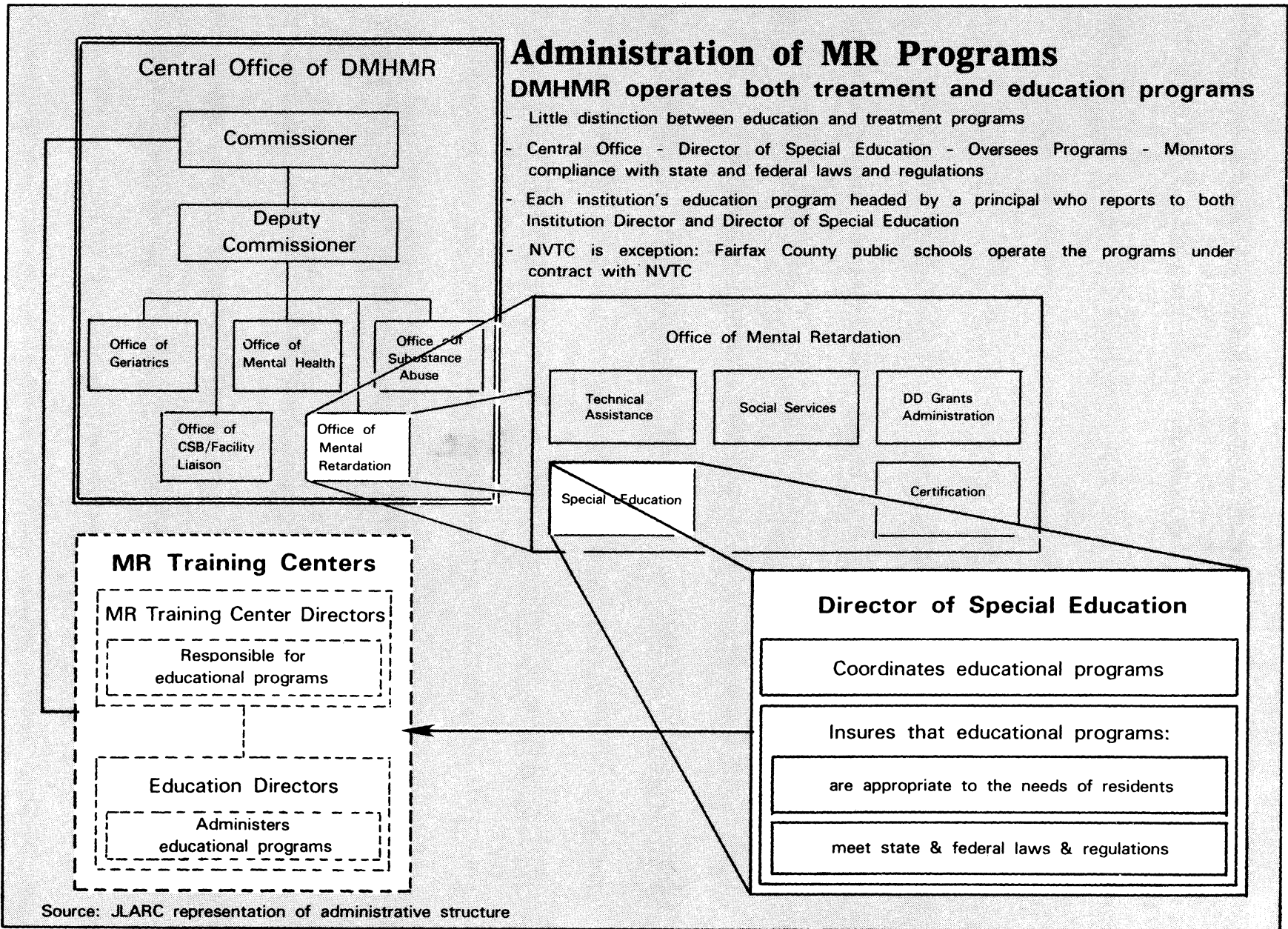
### Administrative Structure

The administrative structure for operating education programs in MR training centers is relatively simple. In compliance with the report resulting from SJR 156, DMHMR developed an "identifiable school administrator" in the central office, and in each facility operating a school program under its jurisdiction. This structure, illustrated in Figure 2, is analogous to that of the local school superintendent and principals of individual public schools. The roles and relationships of primary administrative actors are briefly described below.

*The Institution and Education Directors.* Responsibility for providing school-aged residents with appropriate training services rests with the institution director. The institution director designates an education director or school principal who manages the daily administration of the programs. The education director supervises the development and implementation of individual training programs. The institution and education directors have day-to-day responsibility for administering school programs in accordance with the guidelines, policies, and procedures promulgated by the State Board of Education.

*Central Office Director of Special Education.* Within DMHMR's Office of Mental Retardation, a Director of Special Education has broad administrative responsibility for the operation of training programs in MR training centers. The director's administrative responsibilities include coordinating educational activities, and ensuring that education programs meet student needs and conform to State and federal laws

Figure 2



and regulations. The central office director maintains contact with institution-based education directors, but assumes no supervisory or oversight responsibility for their programs.

*Department of Education.* The Department of Education has no direct role in the implementation of MR training programs. The Board of Education promulgates the "standards, rules, and regulations" under which these programs operate. In addition, DOE's Division of Special Education Administration and Finance monitors education programs in the MR institutions to ensure compliance with State and federal requirements. This monitoring process, called "administrative review," focuses on the policies and procedures established at each training center to protect the educational rights of students. Where problems are detected, DOE works with the principals to ensure that they are corrected on a timely basis.

### KEY ADMINISTRATIVE ISSUES

The current administrative structure provides sufficient policy clarification to ensure that training programs are operated in compliance with requirements set forth in State and federal laws, policies, and regulations. JLARC staff concluded, however, that institution-based training programs could benefit from both greater supervision at the central office level and increased communication among the five MR training programs. This would entail broadening the current role of central office staff.

#### Program Supervision By DMHMR

Training programs in MR training centers appear to be developed and implemented with little guidance or supervision from the central office. As illustrated in subsequent chapters, JLARC found that training centers are not comparable in their development of curriculums, the types of programs offered or emphasized across comparable student groups, or in the availability of educational resources (e.g., settings, materials, staff) for implementing training programs.

The absence of comparability across training centers appears to reflect insufficient program supervision at the central office level rather than real differences in the educational needs of students served in each institution. The independent development of training models has had an important impact on the implementation of the least restrictive environment (LRE) doctrine as well.

State and federal laws and regulations require that each individual be educated in the LRE appropriate to his or her needs. There is, therefore, no single least restrictive environment. Although LRE is most frequently interpreted as public school placements for students residing in an MR institution, LRE settings for a given student could range from bedside instruction to a public school. In

the absence of supervision and direction from DMHMR, institutions have pursued divergent approaches to the implementation of LRE. Southside and Southeastern provide a particularly striking contrast as they adhere to different, if not conflicting, training models.

*Southside.* Southside serves the greatest number of multi-handicapped students and provides training to 78 percent of its students in a separate school building -- a practice consistent with the LRE doctrine. JLARC staff found that Southside's school offers a wide variety of appropriate classroom environments. Classrooms reflect teachers' intentions to approximate a "normal" environment as closely as possible.

During interviews, teachers stressed the importance of providing training services outside of the residential unit, noting that the educational environment of a classroom has a positive impact on student achievement. This educational perspective was frequently articulated at Northern Virginia and Southwestern as well.

*Southeastern.* Southeastern's training approach is unique among the MR institutions in two important respects. First, unlike other institutions, Southeastern provides the majority of its programming in the residential cottages. The philosophy behind this approach is that school-aged students are best served by concentrating training efforts on the skill deficits which led to placement in the training center. This approach is expected to permit more rapid return to community residences and schools. Southeastern has two campus classrooms which are used primarily to further prepare students for placement in community schools and discharge from the facility.

Second, aides play a significant role in assisting teachers with primary teaching responsibilities. Teachers develop the programs, and train and supervise the aides; but aides, not the teacher, often deliver direct training services. Southeastern's teachers are considered "team leader/teachers," and are responsible for the overall management of their cottages, including supervising training programs.

Southeastern's approach is a marked departure from the educational models of other facilities, and has both problems and promise. However, DMHMR has made no apparent effort to evaluate its appropriateness or effectiveness, or to determine whether its principles should be applied to other education programs.

As the above example illustrates, insufficient direction and monitoring at the central office level does result in inconsistencies across institutions in the interpretation and implementation of policies, such as the LRE doctrine. DMHMR should assume a more active leadership role by working with DOE and instructional personnel to evaluate the effectiveness of extant training models, and to identify superior approaches that can be more consistently applied across the five MR centers. (The concept and implementation of LRE are discussed further in Chapter IV, *Institutional Differences.*)

## Communication

DMHMR could also play an important leadership role by stimulating greater communication among educators both within and across MR training centers. Teachers in each facility are developing innovative and effective training strategies, yet they lack a forum for sharing these ideas and techniques. Further, such an exchange will be critical to DMHMR's evaluation of the effectiveness of current training approaches. The following example highlights the need for the development of mechanisms that allow teachers to learn from one another.

*On one of Central Virginia's units, the program coordinator, teachers, and consultants have worked together to develop a wide array of electronic devices that allow severely handicapped students to carry out programming with minimal teacher assistance.*

*For example, students are strengthening their arm muscles, or decreasing the number of times they put their hands in their mouths by pressing down upon a pressure-sensitive board that starts a tape recorder playing. When the student stops pressing, the music stops. Teachers note that students work diligently to sustain the amount of time the tape recorder is playing.*

*A similar device has been developed to encourage proper posture in students. With the help of a mercury switch, a television or tape recorder turns on when a student lifts his/her head or brings it into proper alignment with the rest of the body. Currently, computers adapted to meet the physical needs of the handicapped are being used to facilitate communication with students who have previously been unable to communicate or could do so only through facial expressions or pointing.*

Such devices hold tremendous potential for increasing the actual amount of programming received by each student, as these activities can be carried out with limited teacher assistance.

Unfortunately, few if any teachers outside of this unit are exposed to these types of instructional aids. JLARC found that important innovations are occurring in every training center, but that there are no effective mechanisms for disseminating these ideas within or among institutions. Typical of what JLARC heard in its visits to each facility is the following assessment by a teacher at Central Virginia:

*It would strongly benefit educators at this facility if we'd convene collectively from all centers to share ideas, programmatic changes, new innovative teaching techniques.... I'm not sure of what*

other centers are doing -- what curricula they provide or carry out that might benefit my residents on my center with similar levels of functioning.

While informal communications are sometimes successful, teachers in all facilities indicated that they would like to know more about other teachers' approaches. JLARC found that teacher experience is a rich and untapped resource.

DMHMR acknowledges the need for greater inter-facility communication, and had a program of this type in place at one time. DMHMR's director of special education explained:

The department, several years ago, implemented a workshop program for teachers to visit other facilities and share ideas on the latest training methods for Severely/Profoundly Handicapped. One such workshop was held at Southside Virginia Training Center. Unfortunately, due to fiscal measures instituted by the Governor, travel budgets were reduced in facilities which prohibited the continuation of this training and communication for teachers.

DMHMR should re-establish a mechanism to ensure discussion among education staffs on a regular basis. Education principals and their staffs should identify to DMHMR techniques or ideas that could benefit teachers in other institutions. These ideas or techniques could be presented in conferences, or videotaped and circulated widely across training centers. DMHMR should take the lead in developing these and other mechanisms for promoting a healthy exchange of ideas within and among the training centers. Such an exchange would also assist DMHMR in its evaluation of existing training models, and in its efforts to provide greater leadership and direction to the training programs.

## CONCLUSIONS AND RECOMMENDATIONS

DMHMR operates the training programs in MR training centers. The current administrative structure has clearly delineated lines of authority and responsibility and provides sufficient policy clarification to ensure that MR training programs are operated in compliance with State and federal laws and regulations. This structure lacks, however, a mechanism to monitor and evaluate programs. In the absence of such supervision, training centers have developed disparate training models, programs, and resources which lead to students with similar training needs receiving dissimilar training programs.

DMHMR should assume a greater leadership role by evaluating the effectiveness of extant training models and attempting to identify

superior approaches that could be more uniformly applied across institutions. DMHMR should also facilitate a greater exchange of educational strategies and techniques both across and within facilities.

The current administrative framework for the operation of educational programs in MR facilities could be improved by the development of an oversight or supervisory capability.

*Recommendation (1).* The General Assembly may wish to clarify for DMHMR its responsibility to provide leadership, monitoring, and evaluation of training programs for school-aged residents in MHMR institutions.

*Recommendation (2).* DMHMR should staff appropriately to provide more aggressive program supervision and oversight.

*Recommendation (3).* DMHMR should take a more active leadership role by working with DOE and the institutions to evaluate the effectiveness of prevalent educational models. Further, DMHMR should work with DOE and the institutions to develop approaches that can be more consistently applied across the five institutions.

*Recommendation (4).* DMHMR should ensure that comparable curriculums, resources, and programs are provided across institutions for students with comparable educational needs.

*Recommendation (5).* DMHMR should create a framework and specific mechanisms within which education directors and teachers can better communicate and share ideas and approaches across institutions. DMHMR should seek out innovations that could be applied across institutions and develop mechanisms to assure that these innovations are made known. One possibility is the increased use of videotaped presentations which could disseminate information in a timely and cost-effective manner.





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### III. COSTS INCURRED IN PROVIDING SERVICES

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In FY 1982-83, over \$5.4 million was spent to provide education to 613 students at the State's mental retardation institutions. The cost of education is an important consideration in the evaluation of education programs because the analysis helps to determine if funds to educate and train mentally retarded youths are provided fairly across the State. The review of education costs focuses on sources of revenues and categories of expenditures.

In addition to the costs of education services, JLARC staff examined related services, such as occupational therapy (OT), physical therapy (PT), and speech therapy, as well as the total costs of residential care and treatment services. The assessment of these costs considers the entire range of services provided for youths, taking into account the interrelationship of education, treatment and living unit care.

The State assumes the overwhelming majority of the education costs for youths in MR training centers. The 93 percent share it pays far exceeds the twenty percent the State pays for special education programs in public schools. The federal government pays the remaining costs. Localities do not pay to support these programs.

The costs of total service provision to MR youths appears comparable (Table 2). Based on statewide average daily membership, the annual per-pupil year expense for education-related services and residential care varies from \$35,317 (Southside) to \$43,283 (Central Virginia). Central Virginia's higher costs are due primarily to the higher staffing levels and associated costs of its specialized programs. The higher costs at NVTC result from Northern Virginia cost-of-living differences.

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Table 2

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COSTS OF  
TOTAL SERVICE PROVISION PER PUPIL YEAR  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Training	\$ 9,059	\$11,058	\$ 9,759	\$ 4,541	\$ 8,275
Overall	\$35,317	\$43,283	\$42,566	\$36,010	\$39,346

Source: JLARC compilation of data from DMHMR and institution records.

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## JLARC Methodology

JLARC staff divided the cost analysis into two parts, revenues and expenditures. The revenue portion describes the total amount of funds used, the sources of revenue, and the distribution of funds to the five institutions.

The expenditure section discusses the categories of spending, and breaks the total into direct and indirect costs. JLARC staff employed a step-down allocation procedure determined by training center accounting standards.

Estimating the costs of related services provided for mentally retarded youths involved the most detailed cost calculation. At the request of JLARC staff, program administrators and financial staff estimated the percentage of time spent in providing OT, PT, and speech therapy to students. These percentages were applied to the total cost of each program to estimate the value of service.

The computations of living unit costs were developed by using actual expenditure information from the facility, or by using an estimate based on the proportion of youths in the total population of a living unit. The method used was determined by the quality and specificity of each institution's financial accounting records.

Examining education costs, related services, and living unit costs on a per-pupil basis enabled an assessment of the fairness and consistency of the costs by facility. This method provides a descriptive measure of the value of services received by each student.

## FUNDING MECHANISMS FOR EDUCATION

The majority of funds for education come from the Department of Mental Health and Mental Retardation through general fund appropriations totalling \$4.7 million. DOE transfers about \$330,000 in Basic Aid funds, and distributes \$318,000 in P.L. 89-313 funds from the federal government. The remaining one percent of the funds is from the federal government, to support a unique program at Central Virginia Training Center for students who are deaf and blind. Table 3 details the distribution of funds to each institution by revenue source.

### DMHMR Funds

The Department of Mental Health and Mental Retardation pays about \$3.7 million in direct costs, and another \$1.0 million in indirect costs for the five education programs. The education programs are small parts of the MR institutions' budgets. DMHMR determines each of the budgets on a case-by-case basis, taking into account the individual framework of each hospital and education program.

Table 3

DISTRIBUTION OF FUNDS BY SOURCE  
(FY 1982-83)

<u>Institution</u>	<u>DMHMR</u>	<u>DOE</u>	<u>89-313</u>	<u>Title VI-C</u>	<u>Total</u>
SSTC	\$1,637,405	\$100,453	\$ 92,009	\$ 0	\$1,829,867
CVTC	1,642,068	110,356	81,721	63,714	1,897,859
NVTC	964,668	47,029	61,845	0	1,073,542
SETC	235,925	48,486	31,985	0	316,396
SWTC	<u>276,284</u>	<u>23,751</u>	<u>50,782</u>	<u>0</u>	<u>350,817</u>
Total	\$4,756,350	\$330,075	\$318,342	\$63,714	\$5,468,481
Percent of Total	87%	6%	6%	1%	

Source: JLARC compilation of data from DMHMR and institution records.

DOE Funds

The Basic Aid transfer from DOE to DMHMR is determined through a process based on definitions of residency from the *Code of Virginia*. A youth in a State facility is considered a resident of the locality he was in at the time of placement. This locality includes the youth in its ADM count for Basic Aid purposes. DOE withholds from the localities the State's share of Basic Aid payment for these youths, and transfers the total Basic Aid amount to DMHMR.

Federal Funds

Federal funds (P.L. 89-313) are allocated to DOE as a lump sum, and are distributed to the five MR training centers on a per-pupil basis. In federal FY 1982-83, this amount was \$507 per pupil, based on membership as of October 1, 1981. Additionally, in FY 1982-83, the federal government provided \$63,714 to Central Virginia Training Center under Title VI-C. These funds support a program for mentally retarded children who are also deaf and blind.

LRE Placement Funding

In addition to these general funds, the General Assembly made a special appropriation in 1981 to fund community school placements. Payments for community placements are negotiated between the training center and the local school division, and are paid from a central DMHMR account. Six local school divisions received an average of \$5,000 per

pupil-year in FY 1982-83. The total sum provided by DMHMR for these LRE placements was over \$350,000. Table 4 details the total LRE payments for FY 1982-83.

Table 4

LRE PAYMENTS  
(FY 1982-83)

<u>Institution</u>	<u>Number of ADM</u>	<u>LRE Payment</u>	<u>Funds Per ADM<sup>1</sup></u>
SSTC	1	-0-	-0-
CVTC	3	\$ 15,156 <sup>2</sup>	\$ 5,052
NVTC	43	240,000 <sup>2</sup>	5,581
SETC	8	37,800	4,725
SWTC	<u>15</u>	<u>\$ 62,910</u>	<u>\$ 4,194</u>
	70	\$ 355,866	\$ 5,084

<sup>1</sup>Per pupil-year basis

<sup>2</sup>Already included in Table 3 which identifies all funds paid to Fairfax County Schools.

Source: DMHMR records and survey of education directors.

EXPENDITURES FOR EDUCATION, RELATED  
SERVICES, AND RESIDENTIAL SERVICES

JLARC staff examined three components of costs incurred in the residential care of youths at MR facilities: education, related services, and living unit activities and care. The integrated array of services provided to MR students makes the combined costs the most important focus. Since each facility coordinates the services in a different fashion, the most comparable measure is the total cost per student. For clarity, however, a description of each of the three areas of service is provided.

Education Costs

There are two types of education costs: direct costs and indirect costs (Table 5). Direct costs are those identified as being directly involved with service provision or program operation such as personnel, equipment, and supplies. Indirect costs are the support costs which enable the program to operate, and include a portion of each facility's administrative expenses, as well as the heat, electricity, and building maintenance costs.

Table 5

DIRECT AND INDIRECT EDUCATION COSTS<sup>1</sup>  
(FY 1982-83)

<u>Institution</u>	<u>Direct</u>	<u>Indirect</u>	<u>Total</u>
SSTC	\$1,317,554	\$ 512,313	\$1,829,867
CVTC	1,454,677	443,182	1,897,859
NVTC	1,021,242	52,300	1,073,542
SETC	207,224	109,172	316,396
SWTC	<u>261,979</u>	<u>88,838</u>	<u>350,817</u>
Totals	\$4,262,676	\$1,205,805	\$5,468,481

<sup>1</sup>LRE funds are excluded. Only facility spending is included.

Source: DMHMR and institution records.

*Direct Costs.* In FY 1982-83, there was an average daily membership of 613 students receiving in-house training in the mental retardation training centers at a direct cost of over \$4.2 million. The great majority of these funds cover salaries and fringe benefits for over 300 staff members. A detail of the staff in each education program is shown in Table 6.

*Indirect Costs.* In FY 1982-83, indirect costs were \$1.2 million in MR institutions. This includes costs from other programs or departments which are attributable to the education program, such as general administration, building and grounds maintenance, housekeeping, utilities and transportation. The MR centers use an accounting procedure known as step-down to allocate these support costs to each operating program.

The different levels of indirect spending at the MR institutions reflect the differing administrative arrangements for providing education, or the different distinctions made in identifying education and treatment services.

#### Services Related to Education

In addition to the instruction provided by education staff, many students receive related services, primarily physical or occupational therapy, and speech therapy. These services are available to all training centers residents including the youths. The related therapies are not included as part of the costs of education in the facility's accounting records.

JLARC staff worked with each training center's financial staff to estimate the value of the related services, based on the

Table 6

DETAILS OF DIRECT COST IN ON-CAMPUS FACILITIES  
(FY 1982-83)

<u>Institution</u> <sup>1</sup>	<u>Cost</u>	<u>Personnel</u>
Southside 201 students (ADM)	\$1,317,554	6 Administrators 35 Teachers 34 Teachers' Aides 11 Related Service Therapists 13 Therapists' Aides 2 Clerical
Central Virginia 171 students (ADM)	\$1,454,677	8 Administrators 31 Teachers 25 Teachers' Aides 23 Related Service Therapists 18 Therapists' Aides 1 Music Therapist 7 Clerical
Northern Virginia <sup>2</sup> 67 students (ADM)	\$ 629,506	1.3 Administrators 10 Teachers 16 Teachers' Aides 15 Related Service Therapists 1 Music Therapist 1 Clerical
Southeastern <sup>3</sup> 71 students (ADM)	\$ 207,224	5 Administrators 10 Teachers 9 Related Service Therapists 30 Aides 3 Contracted Professionals 1 Clerical
Southwestern 40 students (ADM)	\$ 261,979	1.1 Administrators 5.4 Teachers 4.2 Related Service Therapists 1 LRE Van Driver .6 Clerical

<sup>1</sup>ADM excludes those receiving educational services in public schools, and is adjusted to include those students for services provided on-campus in the summer.

<sup>2</sup>This is for the NVTC Center School (on-campus operation only).

<sup>3</sup>The education programs at Southeastern are conducted primarily on the living units, and costs are accounted for differently. Thus, only the combined total costs at Southeastern can be compared to other facilities.

Source: Institution records and survey of education directors.

amount of staff time spent with youths. The five facilities spent about \$1.1 million in FY 1982-83 to provide related services to their school-aged residents.

Living Unit Services

The largest part of each resident's day is spent in the living unit: eating, sleeping, recreating, or receiving additional training or therapy. Not surprisingly, the cost incurred is large -- over \$19.0 million. The time represents about 75 percent of the day, and similarly, the cost is about three-quarters of the total cost of youth services.

JLARC calculated living unit expenses using training center financial records, and data on residential population. The costs included are for residential room and board services, day-to-day patient care by residential staff, psychology and social services (about 5% of the total), and all general administrative and maintenance costs incurred providing the services. All services not previously included in education or related costs are included in these costs, except for individual medical needs.

On the basis of the proportion of youths in the population, JLARC staff estimated the costs associated with providing living unit care (Table 7). Again, the costs are shown as a total sum to define the magnitude of costs, and to review spending per pupil.

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Table 7

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TOTAL COSTS\* OF LIVING UNIT SERVICES  
(FY 1982-83)

<u>Institution</u>	<u>Total Cost</u>	<u>Cost Per Pupil-Year</u>
SSTC	\$ 4,826,918	\$23,896
CVTC	6,786,639	29,766
NVTC	3,493,232	31,757
SETC	2,417,954	30,999
SWTC	<u>1,505,207</u>	<u>30,104</u>
Total	\$19,029,950	\$28,488

\*Costs exclude medical costs which are highly variable among students.

Source: JLARC analysis of data provided by DMHMR, and institution records.

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## Combined Costs

Due to the handicaps of MR residents, "education" is a process that is integrated into the total services received by each resident. Education and treatment staffs generally coordinate their programs so that a continuous and cohesive total program is implemented for each resident. Therefore, the most appropriate review of spending is a comparison of the total expense incurred for the average resident during a one-year period at each MR training center.

In FY 1982-83 the State spent over \$25.7 million for combined education, related services, and living unit costs for youths in mental retardation training centers. On average, one youth staying in an MR center for 12 months will cost the State \$39,398.

The total expense per resident reflects those costs strictly defined as education (teachers' salaries and fringe benefits, supplies and materials), the related service expenses (OT, PT, speech therapy, and vocational training), and the costs of maintaining a residence and providing ancillary treatment for the resident (room and board, patient activities, and the applicable overhead costs). Table 8 provides details of the total annual cost per resident.

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Table 8

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### TOTAL EXPENDITURES PER PUPIL-YEAR (FY 1982-83)

<u>Institution</u>	<u>Education</u>	<u>Related Services</u>	<u>Living Unit</u>	<u>Combined Costs</u>
SSTC	\$ 9,059 (26%)	\$2,362 (7%)	\$23,896 (67%)	\$35,317
CVTC	11,058 (26%)	2,459 (6%)	29,766 (68%)	43,283
NVTC	9,759 (23%)	1,050 (2%)	31,757 (75%)	42,566
SETC	4,541 (13%)	470 (1%)	30,999 (86%)	36,010
SWTC	<u>8,275 (22%)</u>	<u>967 (2%)</u>	<u>30,104 (76%)</u>	<u>39,346</u>
Average	\$ 9,110 (23%)	\$1,800 (5%)	\$28,488 (72%)	\$39,398

Note: The numbers in parentheses represent the percent of total for the institution.

Source: JLARC analysis of data from DOE, DMHMR, and facility financial records.

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The variances in the combined per-pupil costs are explainable. The highest costs are at Central Virginia, where 30% of the youths are in skilled nursing units which require costly medical attention. Further, CVTC is the oldest MR center, and the physical plant maintenance and operation costs are higher than for the other facilities.

The costs at NVTC are about 8% higher than average, and can be accounted for by the higher cost-of-living in Northern Virginia. The per-pupil costs at NVTC do not include approximately \$150,000 in subsidized spending provided by Fairfax County (difference between estimated costs incurred by Fairfax County Public Schools and the amount paid by the State).

Southside is most comparable to Central Virginia in its physical structure, with large older wards; however, the costs at Southside are considerably lower. Three factors account for the difference. First, about 50 students at Central Virginia receive no education due to severe medical problems, and they must have expensive skilled care 24-hours a day. At Southside the skilled-care residents are less-severely handicapped, and require less expensive care. In addition, Southside has a large number of young adults (aged 18 to 21) in residence. Young adults can be housed with other adults, and residential service costs are often lower for adults than for children or adolescents. Finally, Southside's physical plant is newer than CVTC's, and less expensive to operate and maintain.

Southeastern and Southwestern have similar physical facilities; however, their combined per-pupil costs differ by \$4,000. Southeastern's system is operated in a manner substantially different from Southwestern. At Southeastern, little distinction is made between treatment and education, and "teachers" perform both functions. This system keeps the costs at Southeastern low.

## CONCLUSIONS

The State assumes the great majority of the costs of educating MR youths, funding over \$5.5 million for training center education programs in FY 1983. In addition, another \$1.1 million was incurred in providing education-related services to youths. The largest cost component is the \$19 million spent on living unit services. In total, in the five MR facilities over \$25.7 million was spent in services to children. On a per pupil-year basis, it costs the State an average of \$10,910 to provide education and related services, and \$28,488 to provide residential services. The funds expended for pupils in the five MR centers appear reasonable.



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## IV. INSTITUTIONAL DIFFERENCES: STUDENT POPULATIONS, RESOURCES, AND STAFFING

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While the education of the mentally retarded takes place within the context of the overall system described in Chapter II, direct services are provided in five training centers. Across training centers there are differences in the populations served, the resources and materials available, and the staff which deliver the services. The differences discussed in this chapter are important. Overall, staffing is very good. Some disparities in the availability of LRE placements and in educational resources, however, warrant the attention of DMHMR.

Educational resources for motor skill development, independent living, and pre-academic programs are also unevenly distributed, reflecting, in part, the absence of broad oversight and supervision by DMHMR's central office. In general, Central Virginia appears to have the greatest need for additional resources across all program areas.

Education staff are the most important determinant of the quality of education. (The team "educators" or "education staff" encompasses teachers and related service providers.) Educators must have both a comprehensive knowledge of the nature of mental retardation and physical disability, and the personal qualities of patience and enthusiasm to be successful in their difficult and demanding jobs. Overall, JLARC staff concluded that teachers possessed these important characteristics. Teachers are also appropriately endorsed and certified. Ongoing training opportunities, however, need to be expanded. Staffing ratios affect the amount of time that teachers can dedicate to providing individual instruction. While every institution is in compliance with DOE's staffing standards, DMHMR and DOE may have to adjust standards, since the population is expected to include more of the severely disabled in the future.

This chapter discusses the above factors as they exist in training centers for the mentally retarded. Analyses of the characteristics of student population, the availability of resources, and staffing provide an overview of differences across institutions, and indicate areas where further attention is warranted by DMHMR.

### POPULATIONS IN THE TRAINING CENTERS

The classification of "mental retardation" is based on an individual's IQ and functioning level. The majority of students in the State's MR training centers have IQs that range from "unmeasurable" to

40, leading to a primary diagnosis of "severe" or "profound" mental retardation. Within this range of IQ, however, students have different functioning abilities.

### Population Characteristics

In interviews with teachers, administrators, and central office staff, it became clear that, while most school-aged residents are severely/profoundly retarded, students perform at disparate functional levels. Currently accepted terminology fails to convey the range of functional abilities within this student group. For this reason, JLARC staff developed three descriptive groups:

- multi-handicapped
- intermediate handicapped
- higher functioning.

These groups will be described in greater depth after a brief discussion of the JLARC staff methodology.

*Methodology.* To classify students by functioning level, JLARC staff employed multiple research methods. JLARC worked with DMHMR's "Individual Data Base" (IDB) to identify the group of school-aged students in the system during June 1983. Special student groups, such as students served by CVTC's Skilled Nursing and Acute Units were excluded before selecting a random sample at each mental retardation training center.

The "Individual Data Base" (IDB) includes over 75 variables relating to each student's functioning level. Variables were identified by institution staff, and appeared to be good proxies for distinguishing high from low functioning.

In order to statistically test these discriminations, JLARC staff employed a factor analysis of identified variables. The purpose of this review was to test the degree of convergence between the variables selected by instructional staff as distinguishing functioning levels and those variables identified through statistical procedures. There was a high degree of convergence. Six of the seven variables used by JLARC were demonstrated through statistical analysis to form a highly related factor which clearly differentiated the functioning levels of different students.

The determination of three levels of functioning was a key research effort. Factor analysis enabled JLARC staff to: (1) detect differences in students' characteristics across institutions; (2) define more fully the characteristics and training needs of students in the intermediate group, and (3) consider the nature of the students' handicaps in assessing student achievements.

*Description of Functioning Groups.* Students were assigned to the *multi-handicapped* group if they exhibited five or more of the following seven characteristics:

- visually impaired;
- hearing impaired;
- non-ambulatory;
- attention span of less than five minutes;
- no independent feeding skills;
- no independent toileting skills.

Students in this group comprised 26 percent of the sample. These students often have extensive needs for medical supervision, lack awareness of the environment, and are unable to perform basic self-help activities.

A set of criteria was also developed to identify students at the other end of the continuum of skills and disabilities. *Higher-functioning* students were defined as those possessing four of the five following characteristics:

- ambulatory;
- able to speak in simple sentences;
- attention span of 15 minutes or greater;
- absence of significant behavior problems;
- absence of significant physical handicaps.

Fourteen percent of the students fell within this group. These students have developed adaptive skills in eating, dressing, toileting, and personal hygiene. Many are able to express themselves through sentences and can respond to others. Because of their greater level of adaptive functioning, these students are often eligible to be placed in public school (LRE) settings.

The remaining students in the sample, classified as "*intermediate functioning*" fall between the multi-handicapped and higher-functioning and share some characteristics of both groups. Sixty percent of training center students can be considered intermediate-functioning.

#### Differences In Populations Across Training Centers

MR training centers differ in the populations that they serve in two important respects: the total size of the student body and the distribution of the three functioning levels as described above.

Approximately 613 school-aged residents received education services in Virginia's mental retardation institutions in FY 82-83. The two oldest centers, Southside and Central Virginia, serve twice as many students as the other institutions.

JLARC found the proportion of students in each of the three groups -- multi-handicapped, intermediate functioning, and higher functioning -- is unevenly distributed across the five MR training centers (Table 9). Southside and Central Virginia serve the greatest

Table 9

PERCENT OF STUDENTS BY LEVEL OF  
FUNCTIONING AND INSTITUTION  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Multihandicapped	38% (52)	38% (35)	12% (14)	15% (19)	11% (12)
Intermediate	55 (45)	50 (52)	79 (79)	60 (55)	67 (70)
Higher Functioning	7 (3)	12 (13)	9 (7)	24 (26)	22 (18)
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Average Daily Membership	202 (29)*	173 (31)	110 (27)	78 (31)	50 (33)

Note: Numbers in parentheses indicate the number of students in the JLARC sample.

\*33 sampled at each institution. Students with full waivers from services excluded.

Source: DMHMR Individual Data Base and JLARC analysis.

number of multi-handicapped, Northern and Southwestern serve the greatest number of intermediate functioning, and Southeastern has the largest concentration of higher functioning students.

The distribution of these different types of students across institutions determines the types of educational needs which must be met. Central Virginia and Southside, for example, have high percentages of multi-handicapped students who require basic training in motor skills and self-help skills. In comparison, Southeastern has a relatively high percentage of higher-functioning students. To meet this group's needs, staff must have the resources and expertise to provide more "advanced" training in communication as well as instruction in pre-academics and independent living. The training needs and programs of training center students are described more fully in the next section.

While the variation in population does affect an institution's need for specific resources and materials, all training centers serve students in each of the three functioning levels. Moreover, a high percentage of students in each center are categorized within the intermediate group, which shares some functional characteristics of both the multi-handicapped and higher-functioning groups.

In sum, Central Virginia and Southside serve large numbers of students. Central Virginia and Northern Virginia both serve students in many different educational settings. Having a large student body or a great number of educational settings complicates the delivery of training services, the demand for educational resources, the extent to which staff communicate student information, and the amount of resources that must be dedicated to transportation services. All training centers serve students in each of the three functional groups. This broad range of student needs strains the institutions' educational resources, as resources cannot be targeted to more fully address the needs of one group to the exclusion of other students with different needs. As described in the next section, instructional staff implement a wide variety of programs to meet the diverse educational needs of their students.

### PROGRAMS FOR MENTALLY RETARDED STUDENTS

The divergent functioning levels of the student population present a significant challenge to education staff to implement training programs which meet a wide range of individual needs. Instructional personnel implement programs in three primary areas -- gross motor development, independent living, and pre-academics -- to address students' handicaps. While most students receive programming in each of these three primary areas, the major focus of the program is determined by the specific handicaps of the student. For example, gross motor development for a multi-handicapped student might emphasize controlling leg muscles, while for a higher-functioning student training might focus on improving body balance and coordination. The training needs of students in MR institutions and the nature of the programs that education staff implement to address them are further described in the following sections.

#### Motor Skill Development

For the multi-handicapped, motor skill development programs are designed to develop and strengthen the large muscles to facilitate greater mobility. Other programs focus on fine motor skills such as picking up a toothbrush or spoon, or pointing to desired objects. The development of fine motor skills works towards self-help goals such as dressing and feeding independently.

Higher-functioning students, most of whom can walk without assistance, receive instruction which is typically oriented toward the development of physical skills such as endurance and coordination, as well as social skills such as learning to respect rules and to play cooperatively. Training in fine motor development is also essential for this population, to enhance the students' abilities to perform daily living and pre-vocational activities.

## Independent Living

Independent living programs are designed to increase students' autonomy in residential and work settings. Independent living programs include training in self-help, daily living skills, behavior management, leisure time management and pre-vocational training. For lower-functioning students, emphasis is placed on the acquisition of basic self-help skills, such as indicating a need to go to the bathroom. Higher-functioning students need program emphasis in pre-vocational and home care skills. Specific program components are described further below.

*Self-Help Skills.* While multi-handicapped students are typically not candidates for community placement, self-help training fosters greater independence within the institutional setting. Self-help programs for this group focus on dressing, toileting, eating, and hygiene. The severity of the residents' handicaps makes progress in these areas difficult. Programs are designed to increase these abilities in a step-by-step manner. For example, a feeding program must first focus on swallowing, with the ultimate goal of having the student use a spoon without assistance.

*Independent Living Skills and Pre-Vocational Training.* For students who have mastered basic self-help skills, daily living skills and pre-vocational training are most appropriate. These programs promote the development of skills and attitudes needed for successful adjustment to home and work environments. Programs in independent living include training in housekeeping, clothing care, meal preparation, and the basic concepts of time and money. Some students also require training in sex education. Pre-vocational training prepares intermediate and higher-functioning students for adjustment to work settings. Pre-vocational programs emphasize acquisition of generalizable job skills (e.g., collating, packaging, labeling, and stapling) as well as fine motor skills.

*Behavior Programs.* Many of the higher-functioning students are in institutional rather than community settings because of aggressive tendencies or inappropriate social behaviors. Behavior modification programs are thus an important step towards improving a student's chances of successful community placement.

## Pre-Academics

The term "pre-academics" describes programs designed to improve communication and computational skills and increase student abilities to concentrate on a given task (task persistence).

*Communication.* The ability to communicate is essential for MR students. Most multi-handicapped students receive training to learn to express needs through vocalization or pointing. Since most of the higher-functioning students can express words, communication programs typically emphasize the learning of new words or sign language for expression.



**Task Persistence.** Another requisite for pre-academics is the ability to maintain attention on a given object or task. The majority of MR students lack the ability to concentrate on a task. Task persistence programs are therefore necessary to increase the amount of time that a student is able to attend to, and work on, specific tasks.

**Pre-Academics.** Pre-academic programs develop many of the functional skills needed for successful independent living and vocational training. For example, pre-writing programs seek to improve the student's ability to draw or copy lines and shapes. The more advanced student learns to write words, names, and sentences. Early math programs teach students to recognize, count, and sequence numbers. Often instruction involves the use of money and time, since these pre-academic skills contribute to a student's success in supervised community work and residential placements.

### LRE AND THE APPROPRIATENESS OF EDUCATIONAL SETTINGS

JLARC staff reviewed the appropriateness of educational environments from two perspectives. The first addresses the range of educational settings, while the second focuses on the physical condition and atmosphere of each. Table 10 summarizes the JLARC staff's assessment.

Table 10

#### ASSESSMENT SUMMARY: QUALITY OF EDUCATIONAL ENVIRONMENT AND RESOURCES

<u>LRE Availability</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Campus School	○	●	○	⊙	○
Public School	●	●	○	○	○
<u>Quality of Campus Settings</u>	○	●	●	⊙	⊙
<u>Availability of Campus Resources</u>					
Motor Skills	⊙	⊙	⊙	○	⊙
Independent Living	○	⊙	⊙	○	○
Pre-Academic	○	⊙	⊙	○	○

- - Satisfactory or higher quality
- ⊙ - Deficiencies noted (attention warranted by DOE/DMHMR)
- - Significant problems (action warranted by DOE/DMHMR)

Source: Synthesis of data from JLARC analysis.

Local school placements generally offer high quality educational environments, but such placements are not routinely available to students at Southside and Central Virginia. The sufficiency of program space, and the suitability of educational environments are inconsistent within and among institutions. Particular problems with adequacy of program space were noted at Northern Virginia and Central Virginia.

### Availability of LRE

State and federal regulations require that each student be educated in the least restrictive environment appropriate to his or her needs. Because each institution serves students with disparate functional abilities, a continuum of educational settings should be available at each institution. Figure 3 illustrates a complete continuum of educational settings ranging from bedside instruction to integration into a regular public school classroom with support services. Any one of the settings in Figure 3 could be considered a least restrictive environment for a specific student, depending upon the nature of the student's educational needs.

As Table 11 illustrates, most students in MR training centers receive training in one of three settings: at bedside in the living unit, in a classroom in the living unit, or in a campus classroom. Exceptions were observed at Southwestern and Northern Virginia, where students do not receive services in the living unit, reflecting the staff's belief that students should receive training in the classroom.

Three institutions -- Northern Virginia, Southeastern, and Southwestern -- have students attending local public schools. Despite efforts by DMHMR and training center personnel, local schools have not provided equivalent opportunities to students at Southside or Central Virginia. However, in a small number of instances local school divisions near Southside and Central Virginia have accepted residents from their own jurisdictions which institution staff have identified as needing an LRE placement. Factors beyond the control of DMHMR personnel, such as the availability of space or resources in the local school division, have resulted in different levels of success in implementing the LRE doctrine across training centers.

JLARC staff also assessed the physical conditions of the educational facilities. Structured observations and survey responses were used to determine if the settings were: (1) free from hazards or barriers, (2) large enough and appropriately furnished to comfortably accommodate students, (3) clean and well-maintained, and (4) comparable to a "normal" classroom environment.

The educational environments at all five training centers meet medicaid safety standards and are regularly inspected by State fire safety and sanitation personnel. Educators perceive, however, that these environments are not uniformly free of physical barriers and safety hazards. Central office and training center staff should con-

Figure 3

**Least Restrictive Environment**

Federal and State laws require that handicapped children have the opportunity for education with non-handicapped children

Most institutions have a continuum of educational settings

MORE RESTRICTIVE

Full integration into a regular classroom with support services

Education part-time in a regular classroom

Education in a separate classroom in a regular community school

Education in a separate school building in a community or regional program (off campus)

Education in a separate school on the institution's campus

Education in separate classroom on the living unit

Education in the living unit

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SOURCE: JLARC STAFF GRAPHIC

Table 11

RANGE OF SETTINGS AND PERCENTAGE OF STUDENTS IN EACH  
(FY 1982-83)

<u>Types of Settings</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Bedside in living unit	18%	3%	0	12%	0
Classroom in living unit	3	57	0	47	0
Separate school or campus classrooms	78	25	60	0	70
Living unit part-time and campus classroom part-time	0	15	0	29	0
Community school	0**	1*	39	12	30
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Total number students	204	232	103	83	50

Note: Data reflects actual numbers provided by education directors and may not equal average daily membership data used elsewhere in the report.

\*Available during 1982-83 school year only to students originally from locale of local school division.

\*\*One student, originally from the locale, attended a local school.

Source: JLARC survey of education directors.

tinue efforts to provide safe, barrier-free educational settings by working with instructional personnel to identify and remediate areas of concern.

Overall, the "atmosphere" of educational settings was appropriate. However, particular problems were noted at Northern Virginia's Center School and on some residential units at Central Virginia and Southeastern. In addition, educators at Central Virginia and Northern Virginia's Center School had strong concerns about the appropriateness of educational settings (Table 12).

The range and sufficiency of LRE placements, as well as the suitability of the physical conditions and atmosphere of educational settings at each institution are described below.

*Central Virginia Training Center.* Local public schools have not cooperated in providing community-based educational services to students from outside of their jurisdiction, but Central Virginia does

Table 12

EDUCATORS' ASSESSMENTS OF EDUCATIONAL SETTINGS  
(Percent Agreeing With Statements)

<u>Statements:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
Free from safety hazards	92%	94%	57%	92%	100%
No physical barriers	72	68	45	75	87
Large enough	95	51	64	85	64
Appropriately furnished	92	56	80	83	100
Clean/well-maintained	86	87	54	92	73
Facilitate classroom management	95	60	73	70	87
Facilitate effective instruction	91	61	100	92	64

\*Educators at NVTC responding to survey.

Source: JLARC's survey of instructional personnel.

have a campus school which offers many appropriate educational environments. The campus school has limited space available; thus 35 of the 93 students attending school there are on a part-time basis. In addition, nearly 60 percent of Central Virginia's students receive all of their educational services on the living units. While provision of educational services on the living unit is appropriate for students with severe medical problems, and is one appropriate setting for teaching self-help skills, CVTC serves a far greater proportion of students on the living unit than any other training center.

Through facility observations, interviews with teachers, and responses to the survey of instructional personnel, JLARC staff concluded that constrained educational space is a major problem at Central Virginia. For example, educators indicated that many of the students who attend the campus school on a part-time basis could benefit from a full day of instruction at the school. Similarly, staff noted that some Child Development Center (CDC) students, who currently receive all of their programming on the residential units, could benefit from at least part-time placements in the campus school.

Few residential units had sufficient or appropriate educational space available. Education services at the CDC, for example, are often provided in recreation areas and in day halls. Teachers confirmed JLARC's observation that the day halls presented many distractions. One teacher summarized:

there is not enough programming space available to instructors. We are usually forced to teach in an environment where there are many interruptions or where the noise level is high.

Problems with constrained educational space were also apparent at Central Virginia's skilled care center. Students in this center are multi-handicapped and require intensive medical services. For this reason, education is typically limited to an hour per day under a physician's waiver. The educational areas on this unit are small and living unit space is constrained. For example, JLARC staff noted that residents in wheelchairs line the hallways due to overcrowding.

Overall, educators at Central Virginia were less satisfied with the educational settings than their colleagues at other institutions. As seen in Table 12, about half of the teachers indicated that educational space and furnishings were insufficient. Teachers indicated that these constraints impeded classroom management and limited the effectiveness of their instructional efforts.

*Southside Virginia Training Center.* Southside has also been unable to establish routine local school placements for all students in need of them. In contrast with Central Virginia, however, Southside educates 78 percent of its students in its campus school building. In general, Southside's classrooms were spacious and appropriately furnished. These classrooms were nicely decorated, and mirrored "normal" classroom environments. Approximately 22 percent of Southside's students receive all of their educational services either at bedside or in dayrooms furnished for this purpose.

Southside's educators also gave their educational settings higher ratings than did teachers at other institutions, confirming the JLARC staff's observations (Table 12).

*Northern Virginia Training Center.* Northern Virginia is unique among the training centers in that nearly 40 percent of its students are educated in five public schools. JLARC staff found that local public schools provide high quality educational environments.

The other students are educated in the Center School located on the Northern Virginia campus. While the Center School is also operated by Fairfax County, it does not match the standards of the community schools. From their observations, the JLARC staff concluded that nine of 13 Center School classrooms failed to provide a suitable educational atmosphere. With two or three exceptions, the classrooms were stark and cramped. JLARC's assessments were confirmed by teachers' survey responses. As seen in Table 12, a high proportion of Center School teachers felt that classrooms had insufficient space (46%), and were not clean or well-maintained (46%). The analysis did not identify specific safety hazards of physical barriers at the Center School, but teacher perceptions of hazards (43%) and barriers (55%) are cause for concern.

Northern Virginia's educational director stated that steps are being taken to address many of these problems at Center School. Janitorial services at the school have been increased, for example. Problems with classroom crowding will also be alleviated in the

upcoming school year because: (1) school-aged admissions are decreasing, and (2) a greater number of students will attend community schools in the 1984-85 school year. Northern Virginia Training Center and Fairfax County Public Schools should continue to identify and correct deficiencies in the Center School's physical plant and educational atmosphere.

*Southeastern Virginia Training Center.* Southeastern has a wide spectrum of educational settings available, ranging from bedside instruction to placement in a local public school. Decisions about placement are made by the interdisciplinary (ID) team. The majority of students receive education in the residential cottages. As outlined in Chapter II, Southeastern's educational approach is unique in that students generally master skills which led to admission to a training center, such as basic self-help skills, before emphasis is placed on education in a classroom environment. Southeastern has two normal campus classrooms, which are used primarily to prepare students for placement in community schools.

JLARC staff are concerned that Southeastern's approach may not ensure that students are educated in the least restrictive environment. Specifically, some students spend 24 hours a day in the cottage due to the absence of certain "requisite" skills.

JLARC staff found the cottage setting to be distracting in comparison with classroom settings at other institutions. For example, educational activities are disrupted by daily cottage operations (e.g., housekeeping, shift changes, and the delivery of supplies). In addition, only a few cottages have attempted to create a "normalized" environment for pre-academics, which may postpone the students' successful transition to a classroom. Survey responses indicate that 30 percent of respondents do not think that the educational environment facilitates classroom management. While the advantages of Southeastern's system seem to outweigh the problems, JLARC staff conclude that staff and DMHMR should determine if a greater number of students ought to be placed in classroom settings.

*Southwestern Virginia Training Center.* Southwestern's students are educated in either public school placements (30%) or in campus classrooms (70%). JLARC staff found that the two public schools and the on-campus classrooms provided appropriate educational environments. However, 36 percent of Southwestern's teachers felt that classroom size was a problem which impeded their ability to provide effective instruction.

## EDUCATIONAL RESOURCES

In addition to reviewing the suitability of educational environments, Senate Joint Resolution 13 directed JLARC staff to review the availability and quality of instructional materials and resources, and the uniformity of services offered. JLARC staff found that the

availability and quality of educational resources is uneven across institutions. The absence of comparability in the quality of educational resources reflects the need for additional assistance from the central office.

Training centers require sufficient educational resources in order to provide the individualized education services mandated by State and federal laws. The term "educational resources" encompasses materials and equipment, related services such as speech, physical, and occupational therapies (PT/OT), and specialized educational facilities such as pre-vocational workshops or home economics areas.

JLARC staff employed four methods to assess the availability of educational resources in the five MR training centers: (1) facility observations, (2) a survey of education directors, (3) a survey of all instructional personnel, and (4) structured interviews with educators.

Table 13 summarizes the results of the teachers' survey assessments. Southside's educators expressed the greatest overall satisfaction and Central Virginia's teachers the least satisfaction with the availability of resources. Southwestern's educators fell between these two extremes and were evenly divided in their assessment of available resources. With the exception of Southside, a high percentage of educators indicated that greater availability of related services and more specialized educational facilities would significantly improve student achievement.

The following section describes the types of resources that training centers have available in both on- and off-campus settings in each of the three major program areas, and highlights differences among institutions.

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Table 13

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EDUCATORS' ASSESSMENTS OF RESOURCES  
(Percent Agreeing With Statements)

<u>Statements:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
Educational materials are needed	35%	67%	10%	33%	50%
Related services are needed	31	64	41	39	55
Additional educational facilities are needed	33	78	50	47	56

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

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## Resources For Motor Skill Development

JLARC staff found that resources available for motor skill development programs are not consistent across the five training centers. While every institution has a gymnasium and most provide special physical and occupational therapy areas, these resources may not be sufficient to meet student demand in all cases. As seen in Table 14, Central Virginia and Northern Virginia expressed the greatest demand for additional motor skill resources, while Southeastern's educators indicated that resources are sufficient.

*Central Virginia and Southside.* Educational programs for school-aged children are carried out in at least nine different buildings at Central Virginia. Resources for motor development programs must, therefore, be distributed across the campus. Central Virginia has two gyms, three physical or occupational therapy areas, two sensory stimulation, areas and two indoor recreational rooms. While Central Virginia has appropriate settings available, instructional personnel indicated a need for motor skill equipment and services. Table 14 reveals this same need to a lesser extent at Southside.

During interviews, teachers at these institutions explained that the need for more motor skill equipment and services stems from the high census and type of students served. Large proportions of the students at Central Virginia (35%) and Southside (52%) are multi-handi-

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Table 14

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<u>Type of Resource:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
<i>Facilities:</i>					
Playground	0%	0%	100%	0%	0%
PT/OT Room	0	0	67	0	50
<i>Equipment:</i>					
Recreational	27	33	0	25	0
Gym	0	29	0	25	0
<i>Therapy:</i>					
Physical Therapy	0	33	71	0	0
Occupational Therapy	0	29	29	0	100
Recreation Therapy	45	48	43	20	0

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

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capped and require extensive motor skill programming. For these reasons, equipment is used extensively and needs to be replaced on a regular basis.

*Northern Virginia.* Although Northern Virginia's campus offers a well-equipped sensory stimulation area, a gym, and an indoor pool, Center School teachers' strongest responses were for the additional motor skill resources, including a room for PT/OT (67%), an outdoor playground (100%), and increased physical (71%) and recreational (43%) therapies. A playground was built at Center School during the 1982-83 school year.

An occupational therapist was available at Center School during the 1982-83 school year. During the 1983-84 school year, both an occupational and a physical therapist were available on-campus. Educators stress, however, that motor therapy services continue to be insufficiently supplied for two primary reasons. First, with the exception of OT services, therapists serve the total campus, not just school-age residents. Second, the Center school has not made the greatest possible use of available therapy services. One teacher summarized the situation:

Potential was there for utilization of all stated [related] services. However, [campus] school neither coordinated services nor availed themselves of services offered.

Most motor skill development programming is therefore carried out in classroom areas that JLARC staff found were too small for this use. Northern Virginia should work with Fairfax County Public Schools to ensure that: (1) adequate motor skill resources are made available to Center School students, and (2) Center School fully utilizes available resources.

Students educated in off-campus settings are not affected by these campus problems, however, as these students receive motor skill training in the community. With one exception, each of the public schools attended by students from Northern Virginia were equipped with a gym. In addition, Key Intermediate school offers an indoor pool and Kilmer Center has a spacious suite of therapy areas. Only Canterbury school, which served a small number of Northern's students in 1982-83, lacked a gym area. For this reason, these students received their motor skill programs on Northern's campus.

*Southwestern.* Southwestern lacks sufficient occupational therapy services. As seen in Table 14, teachers were unanimous in responding that the greater availability of OT services would significantly improve students' achievements. Half of the respondents cited the need for an OT room. Southwestern's education director noted that the institution has been unable to attract a full-time occupational therapist for the past six years. The institution contracts for these services, but is unable to obtain sufficient services to fully address student needs. While students attending two local public schools

participate in gym activities in these community settings, they receive their physical and occupational therapy services on campus. Greater availability of motor skill therapies would enhance the overall quality of Southwestern's motor skill development program.

*Southeastern.* Southeastern appears to have both appropriate settings and sufficient services and equipment to carry out its motor skill programs. Southeastern offers both a gym and areas for physical and occupational therapies. In addition, physical and occupational therapy services are often delivered in the cottage setting, and JLARC staff often observed appropriate PT and OT equipment in these areas.

### Resources for Independent Living

JLARC staff found that resources for independent living are not comparable between on- and off-campus settings, or across MR training centers. Local public schools were able to offer a wider array of independent living resources than the institutional programs. For example, during the 1982-83 school year approximately 27 students from Northern Virginia attended community schools that offered independent living programs. Five of Northern Virginia's students attended a community school where they received pre-vocational training and music therapy in addition to pre-academic programs. Another 20 students attended a local secondary school that has a wide variety of independent living resources, including two separate home-living units consisting of a kitchen, living room, dining room, and bedrooms; several different workshops areas; and a music therapy classroom. Another three students spent part of their school day at a local high school that has four different pre-vocational workshop settings available.

Similarly, during the same school year, approximately 30 percent of Southwestern's students received their programs in community schools, where available resources for independent living skills include two music rooms, a fully equipped home-economics area, and a woodshop. Twelve percent of Southeastern's students attended a local public school where independent living resources include a simulated sheltered workshop, a woodshop, and art and music rooms.

On-campus resources for independent living are unevenly distributed among MR institutions. Southeastern, for example, lacks any type of structured music or art programs, though these are available in the local schools attended by training center residents. Conversely, Southside has both a house for independent living skills and a pre-vocational workshop. On-campus resources for independent living programs are further described below.

*Skills of Daily Living.* Each institution has some type of on-campus setting for teaching daily living skills such as clothing care, housekeeping, and meal preparation. For example, Southeastern and Southwestern each offer residential cottages equipped with kitchens, living and dining rooms, and bedrooms, which are good resources for independent living training.

Northern Virginia's campus school is not equipped with a kitchen area. Such a resource is available on campus, but Center School does not take advantage of it. Underutilization of this resource limits Center School's teachers in their ability to provide this type of training, since these skills are not easily taught in a classroom environment.

Southside has a separate house available where students can learn and practice daily living skills. This house may be the best example of an appropriate setting for this type of training, and it has a home-like atmosphere.

While Central Virginia has several home economics units across its campus, educators indicated the strongest need for equipment and related services associated with training in daily living skills. Almost 50 percent of the educators felt that additional transportation services were necessary. Increased transportation resources would facilitate field trips into the community, where students could practice skills such as making purchases and ordering food at a restaurant. Similarly, over half of Central Virginia's educators requested additional psychological services to develop and implement behavior programs. Inappropriate behavior is often a barrier to student placements in community settings.

*Pre-Vocational Training.* While off-campus placements offer a wide array of appropriate pre-vocational and vocational resources, MR training centers generally have limited resources for school-aged residents. Most institutions have a workshop setting on campus, but typically these workshops serve the needs of adult residents. Northern Virginia has developed a pre-vocational training classroom at its Center School, but the room is extremely cramped.

Southside has the only on-campus, pre-vocational work activity center geared exclusively to the training needs of school-aged residents. The work activity center is a large, well-equipped area where students learn and practice a variety of pre-vocational tasks such as sorting, collating, and labeling. This area is particularly appropriate for pre-vocational training and provides an atmosphere similar to a sheltered workshop.

As seen in Table 15, educators at Central Virginia (48%) and Southeastern (40%) cited a need for additional pre-vocational opportunities. Southeastern serves the greatest proportion (26%) of higher-functioning students, who need pre-vocational training to increase their potential for successful community placements.

Although Central Virginia has a smaller proportion (13%) of higher-functioning students, it serves a larger total number than Southeastern. Therefore, pre-vocational training is also an important component of Central Virginia's education program.

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Table 15

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PERCENT OF EDUCATORS INDICATING NEED FOR  
ADDITIONAL PRE-VOCATIONAL RESOURCES

<u>Resources Needed In:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
Pre-Vocational Instruction	0%	48%	29%	40%	20%
Pre-Vocational Area	0	35	0	50	0
Pre-Vocational Equipment	27	25	0	50	0

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

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Resources for Pre-Academic Programs

This section focuses on the availability of pre-academic materials, equipment, and related services such as speech therapy and audiology.

*Pre-Academic Materials and Equipment.* Like the quality of educational environments, the availability and quality of pre-academic materials was found to vary among training centers. About 60 percent of Central Virginia's educators stated that additional materials and equipment could have improved student achievements. At Central Virginia, the large number of separate educational settings makes it difficult for educators to share limited resources. Central Virginia's list of needed pre-academic equipment during the 1982-83 school year included: computers for instruction (38%), record players (29%), records (42%), and tape recorders (38%). However, the training center director indicated that more than 90 percent of teachers requests for materials and equipment have been granted.

To a lesser extent, educators at each of the other training centers indicated difficulty in securing either appropriate materials or equipment. As Table 16 illustrates, educators at all institutions agree that the quality of educational materials is generally good, but are divided regarding the overall quality of educational equipment. Equipment is more prone to damage, and more expensive to replace than materials, which are by nature expendable. This may explain the negative teacher assessments of equipment quality, as well as the high level of expressed need for additional resources.

Educators noted that they have trouble finding materials which are appropriate to the educational needs of their severely and profoundly retarded students. Finding materials that are age-appropriate for students is particularly difficult, as many students

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Table 16

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EDUCATORS' ASSESSMENTS OF AVAILABILITY,  
 APPROPRIATENESS, AND QUALITY OF EDUCATIONAL  
 MATERIALS AND EQUIPMENT  
 (Percent Agreeing With Statements)

<u>Statements:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
<i>Availability:</i>					
Needed materials were available	72%	37%	82%	67%	63%
Needed equipment was available	67	43	75	83	80
<i>Appropriateness:</i>					
Materials were age-appropriate	54	40	36	61	50
Teachers made their own materials	94	76	100	60	100
<i>Quality:</i>					
Quality of materials was good	96	82	88	88	100
Quality of equipment was good	55	46	58	53	50

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

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function at a pre-school level while in chronological terms they are young adults. DMHMR and DOE could assist the MR institutions by regularly identifying age-appropriate materials and equipment.

JLARC staff found that educators in every institution attempt to compensate for the limitations of the available materials by making their own. Educators cannot readily compensate for problems in the supply or quality of educational equipment, however. For this reason, problems in the availability or quality of equipment are more serious than are similar shortcomings in the supply or quality of materials.

*Related Services for Pre-Academics.* Speech therapy and audiology services are the primary related services associated with pre-academic programs. A need for more speech therapy services was cited by teachers at Northern Virginia's Center School (43%), Central Virginia (38%), and Southside (27%). Over half (57%) of Northern Virginia's teachers also indicated that student achievement would be enhanced by additional audiology services. Speech and audiology therapies are critical to the development of communication skills for students of all handicap levels. Northern Virginia should ensure that these services are made available to its students as required by State and federal mandates.

## STAFFING

Teachers in the mental retardation training centers face a challenging job. Unlike their public school counterparts, teachers work for a 12-month school year engaged in instructional and caretaking activities. Further, teachers working with aggressive, assaultive students often do so at personal risk. JLARC staff were impressed, through observations and interviews, with teachers' professionalism, dedication, and evident affection for their students.

To assess staffing issues, JLARC staff reviewed measures of teacher qualifications, staffing levels, and the utilization of staff resources. Table 17 provides an overview of how institutions compare on these measures. With few exceptions, teachers meet DOE's standards for certification and endorsement, although ongoing training opportunities need to be expanded.

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Table 17

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### ASSESSMENT SUMMARY: QUALITY OF STAFFING

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Competency	○	○	○	○	○
Adequacy (Staffing ratios)	○	○	○	○	○

- - Satisfactory or higher quality
- ⊙ - Deficiencies noted (attention warranted by DOE/DMHMR)
- - Significant problems (action warranted by DOE/DMHMR)

Source: Synthesis of data from JLARC analysis.

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All institutions are in compliance with DOE staffing levels; however, teachers at Central Virginia, Center School at Northern Virginia, and Southwestern expressed need for lower student/teacher ratios for multi-handicapped students. The availability and use of aides to assist teachers in instructional activities varies significantly across MR institutions.

### Qualifications of Education Staff

JLARC staff looked at teacher certification and training as measures of staff competency. Additionally, JLARC staff interviewed about 50 percent of all teachers at MR institutions and observed teachers' work in the institutions. JLARC staff was generally impressed with the teachers' patience and enthusiasm, and the individualized

attention and care they gave to their students. Survey responses suggest, however, that teachers feel there are limited opportunities for furthering their professional development.

*Certification.* Teaching in the MR institutions requires a special kind of person, and special training as well. The State requires that administrative and instructional personnel hold valid professional certificates and endorsements in their assigned areas.

Using DOE's computerized records, JLARC staff reviewed the certification records of teachers employed during the 1982-83 and 1983-84 school years. Teachers in the MR institutions were appropriately certified (or working toward certification) and endorsed during this time period.

Effective July 1, 1982, the Department of Education established a new area of endorsement for the severely and profoundly handicapped. This certification was developed to address the needs of the severely and profoundly retarded as well as students who have multiple handicaps. Since educators across the State expressed concern that teachers were not trained to work with these students, the development of this new endorsement is timely. Moreover, DMHMR is developing strategies to assure that teachers have the new certification by the end of the 1984-1985 school year.

*Training.* Currently, all institutions offer the same core of teacher training programs to increase teacher effectiveness and ability to cope with the numerous stresses and challenges of their jobs. As shown in Table 18, a majority of teachers felt that existing training opportunities were relevant to their needs. There is, nevertheless, a strong demand for training in specific program areas.

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Table 18

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TEACHERS' ASSESSMENTS OF TRAINING OPPORTUNITIES  
(Percent Agreeing With Statements)

<u>Statements:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
Teachers were encouraged to take additional coursework	79%	44%	100%	100%	89%
Training opportunities were relevant to needs	89	61	80	100	55
More training opportunities should be made available	90	90	59	53	90

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

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While most educators felt that they were encouraged to take additional coursework, teachers at Central Virginia did not feel that they were encouraged to obtain new skills or refine existing ones.

Existing training opportunities most frequently address procedural safeguards or clinical perspectives. Seminars are offered in patients' rights, documentation in the Problem Oriented Records (PORs), behavior modification techniques, and medical aspects of training the handicapped.

About 76 percent of the educators felt that more training opportunities should be made available. Training needs mentioned center around educational approaches to developing independent functioning in students. These include training for teachers to:

- learn new theories of teaching the severely and profoundly retarded;
- write evaluable goals and objectives;
- define "functionality" in order to provide programs that foster greater student independence; and
- introduce recent innovations in teaching severely and profoundly retarded and multi-handicapped students.

DMHMR acknowledges the desirability of increased training opportunities. The special education director explained that, "in recent years, tighter fiscal measures reduced opportunities to hire appropriate university consultants for teacher inservices and reduced out-of-state travel to professional education conferences".

### Staffing Levels

An adequate staffing level must be available to provide appropriate educational services. JLARC staff assessed the adequacy of the staffing level based on the staffing requirements specified in DOE regulations, educators' assessment of the reasonableness of their class size, and the availability and use of aides.

JLARC staff determined that each institution's overall staffing level meets DOE standards. Teachers in a majority of training centers expressed the need for lower staffing ratios for the multi-handicapped.

*Statutory Staffing Requirements.* DOE regulations specify the following staffing levels for students in State operated programs:

- one teacher and one aide for every 10 mildly or moderately retarded students,

- one teacher and one aide for every 6 severely-profoundly retarded or multi-handicapped students, or
- one teacher and two aides for every 10 severely-profoundly or multi-handicapped students.

These staffing ratios are identical to those for special education students in public schools, although the handicaps of institutionalized students are typically much more severe than their public school counterparts.

According to estimates by education directors, staffing levels at all institutions meet DOE standards. During on-site visits, JLARC staff found variation in staffing levels within each institution. Typically, higher ratios were found in classroom settings and lower ratios were found where education was conducted on the living unit. For example, Southeastern's ratios varied from one teacher for every three students (1:3) in a lower-functioning cottage to 1:5 in the classroom.

Institutions meet standards in different ways. Central Virginia and Southside have the necessary teachers to meet the 1:6 minimum, while Northern Virginia, Southeastern, and Southwestern have a combination of teachers and aides to meet the 1:2:10 minimum for severely-profoundly retarded students (Table 19).

Table 19

	LEVEL OF CLASSROOM STAFFING (FY 1982-83)				
	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u> <sup>1</sup>	<u>SETC</u>	<u>SWTC</u>
Teacher/Student Average Ratio	1:5.7	1:5.5	1:6.7	1:7.1	1:7.4
Aide/Student Average Ratio	1:5.9	1:3.9	1:4.2	1:2.4	1:4*
Teacher & Aide/ Student Average	1:2.9	1:2.3	1:2.6	1:1.8	1:2.2

\*Observed ratio during on-site visits. Southwestern has no educational aides. Residential aides follow residents to classroom.

<sup>1</sup>Refers to Center School.

Source: JLARC survey of education directors.

*Educators' Assessment.* Approximately one quarter of all the education staff in the State's MR institutions expressed discontent with staffing levels. In response to a question on the appropriateness of class size, teachers at Central Virginia, Southwestern, and Northern Virginia's Center School responded less favorably than other teachers.

At Central Virginia, half of the instructional personnel felt their class size was too large. Teachers at Central Virginia maintain that for particular segments of the MR population, the State's ratio should be lower to effectively implement educational programming. As one instructor stated:

The education programs for the profoundly and severely retarded were wholly ineffective in promoting change to the lives of the residents. It must be realized that effective programming for most profoundly retarded residents involves intensive training on the order of 10 times the present level.

Another instructor cited the demands of training mentally retarded residents who also have emotional disorders:

My aide and I work with eight ambulatory students with aggressive and pica [refers to consumption of non-edible items] behaviors. Even though we work on self-help, we've got to work on behaviors because they interfere tremendously. It's hard to teach handwashing if he's beating his head.

During on-site visits at Central Virginia, JLARC staff found staffing levels did vary for the different levels of handicaps. For example, teacher-student ratios in the deaf/blind unit were 1:2 compared to a 1:3 ratio in the social behavior unit and 1:7 in the classroom settings.

At Southwestern, one-third of the staff felt their class size was unreasonable. One instructor stated, "since I have been employed by the State, the ratio of staff to resident has greatly been reduced...our staff is stretched to maximum." It is difficult to isolate the problem on the basis of the survey response; however, Southwestern has the highest number of students per teacher in the State (7.4:1 compared to the 6.5:1 average), which may contribute to teacher dissatisfaction.

Northern Virginia's Center School has been facing a difficult transition. In FY 1982-83, the teacher/student ratios were the second highest in the State. Since that time, the number of staff and staff hours have been reduced 20 percent due to declining enrollment. Although Northern Virginia has remained in compliance with State staffing requirements, instructors voiced dissatisfaction similar to that expressed by teachers at Southwestern. One teacher at Northern Virginia's Center School wrote, "Our program has been 'mediocritized' partly due to a reduction in 10 staff in the past 14 months."

While JLARC staff did not assess whether these allocations of staff were proper, DMHMR should examine specific as well as overall staffing levels within each institution, to ensure variation is equitable. Furthermore, DOE should review the appropriateness of its current staffing standards given: (1) the different educational needs of students in institutional and public school placements, (2) the declining census of school-aged residents, and (3) the increasing severity of handicaps of students in institutions.

*Availability and Use of Aides.* Aides can offset the burden on teachers for the delivery of educational services. The availability and use of aides in the classroom differ. Southside for example, assigns educational aides to a specific teacher, while Southwestern and Central Virginia have aides rotate with a specific group of students rather than work with one teacher.

Southeastern's training and use of aides is innovative. Aides are trained to have instructional competencies; their responsibilities include assisting in individual instruction, observing and recording behavior, and supporting the teacher in behavior management programs.

Counter to assessments at the other training centers, all of the teachers surveyed at Southeastern reported that their class sizes were reasonable. This appeared to be a result of the extensive use of aides. As one administrator wrote:

I believe that training residential staff in instructional techniques offers a more intensive and coherent educational training program for institutionalized or multi-handicapped individuals.

## CONCLUSIONS AND RECOMMENDATIONS

Institutions differ in both the total number of students served and in the distribution of students among the functional groups -- the multi-handicapped, higher-functioning, and intermediate-functioning. The size of the student body has an important impact on how student information is coordinated, whether resources can be shared among teachers, and on how much staff time must be dedicated to transporting students from one setting to another.

The distribution of different handicapping conditions within an institution is the most salient influence in program selection and emphasis in each. Student characteristics also determine each training centers' need for specific educational settings, materials, and services.

The educational environment plays an important role in the quality of educational programs. State and federal laws specify that students should be educated in the least restrictive environment appro-

priate to their needs. While three facilities have an appropriate range of settings available, two of the five facilities have encountered obstacles to full compliance with the LRE mandate. Southside and Central Virginia have been unsuccessful in their repeated attempts to obtain routine public school placements to the small number of students in need of them. Furthermore, Southeastern and Central Virginia do not have sufficient classroom space available to accommodate all students in need of a least restrictive setting.

*Recommendation (6).* DMHMR should continue to work with DOE and the education directors to ensure that all students are in the least restrictive setting. To improve the availability of on-campus LRE placements, the following steps should be taken:

- (a) The institution and education directors, along with the DMHMR Director of Special Education, should review students' needs at Central Virginia and Southside to determine the number that could benefit from off-campus placement.
- (b) DMHMR should increase its efforts to work with DOE and the appropriate local school divisions to ensure that students at Central Virginia and Southside are provided opportunities for placements in public schools, where appropriate. Legislative support may be necessary in the form of a clear statement of intent.
- (c) Southeastern should develop more classroom space outside the residential units and provide more programming for more students in non-residential settings. Central Virginia should explore alternatives for expanding classroom space, such as renovating vacant areas. Appropriation requests for capital outlay should be given high priority.

In addition to assessing the sufficiency of the range of available educational settings, JLARC reviewed the adequacy and appropriateness of each setting from several perspectives. Classrooms should be free from safety hazards and physical barriers, clean and well-maintained, large enough and appropriately furnished to accommodate the students adequately, and should provide an environment that is "normalized" to the extent possible.

JLARC staff found that the quality of educational facilities is not consistent across training centers. Further, some teachers perceived that educational settings were not always free of safety hazards and physical barriers to handicapped students.

*Recommendation (7).* DMHMR and education directors should work with to identify and correct safety hazards and physical barriers, and to assure that all educational environments approximate "normal" classroom environments as closely as possible. Appropriation requests for these items should be given high priority.

Although each facility serves students with roughly comparable educational needs, resources across the five facilities are not uniformly available in any of the three major program areas of motor skill development, independent living, or pre-academics. JLARC staff also found that a large proportion of teachers felt the availability and quality of educational materials and equipment could be improved. Numerous disparities were noted in the availability of resources. Due to differences in the training orientations and procedures across training centers, JLARC identified only general resource needs for each institution.

*Recommendation (8).* DMHMR should work with education directors to assure that all teachers are supplied with adequate instructional materials and equipment. They should assure that comparable educational resources are available for similar populations across institutions. Specific attention should be given to the following differences:

● *Motor Skill Development.*

- Because of large proportions of multi-handicapped students at Central Virginia and Southside, high utilization of motor skill resources require that these resources be replaced at a greater rate than at other institutions;
- Northern Virginia should ensure that existing physical therapy and occupational therapy resources are fully utilized; and
- Southwestern should develop the kinds of occupational therapy services found at other institutions, and provide an adequate area for the service provision.

● *Independent Living.*

- With the exception of Southside, all institutions should develop pre-vocational training areas designed and equipped to meet the training needs of school-aged residents;
- Southeastern and Southwestern should offer music and art therapies;
- Central Virginia has a need for increased transportation services. The adequacy of available psychological services should also be assessed, as teachers at Central Virginia noted a need for these services; and
- Other institutions should develop resources comparable to Southside's home environment for independent living or living unit environments at Southeastern and Southwestern.

● *Pre-Academics.*

- Central Virginia needs greater availability of all types of pre-academic materials and supplies because of its larger population and number of educational settings; and
- DMHMR should take steps to improve the quality of educational equipment across institutions.

By DOE's current standards, staffing levels are adequate; however, these levels vary considerably across training centers.

*Recommendation (9):* DOE should review the appropriateness of prescribed staffing ratios. In making this assessment, DOE should consider the variation among institutions in the number and handicaps of students, and the availability of resources and classroom space. Consideration should be given to delegating to aides the patient care activities currently undertaken by the education staff.

Overall, teachers are appropriately endorsed and certified in their areas of instruction. Ensuring the relevance of educational skills and knowledge, however, poses difficulties.

Training can serve a variety of important purposes. In addition to appraising teachers of hospital procedures and policies, training can keep teachers abreast of innovative and successful training techniques and assure greater uniformity between institutions in the design and implementation of educational programs.

*Recommendation (10):* DMHMR should work with DOE and the education directors to survey teachers and determine their training needs. Appropriate training opportunities should be provided. DMHMR and DOE should provide guidelines and offer administrative and financial support. Training efforts which tap the existing expertise in the State should be supported.





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## V. DEVELOPMENT OF TRAINING PROGRAMS

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The development of training programs to comprehensively address students' needs relies upon three primary factors. First, a curriculum must be available which provides structure and directs teachers' training efforts. Second, participation of a broad base of experts in the development of Individual Education Programs (IEP) is necessary. Finally, a system must be in place to coordinate the programming efforts of education, treatment, and living unit staffs. (Treatment staff are also referred to as "clinical" or "residential" staff. For the purposes of this report, they will be referred to as treatment staff.)

JLARC staff found inconsistencies in the development of curriculums across institutions. Levels of interdisciplinary participation in the IEP process also varied. Lastly, not all institutions used an effective process to ensure consistent programming for students in living units and educational programs.

### Methodology

JLARC assessed quality of curriculum, IEP development, and coordination of program objectives by analyzing a variety of documents and surveying numerous sources. These documents included: (1) curriculum and curriculum guidelines, (2) IEPs for the 1981-1982 and 1982-83 school years, and a follow-up review of IEPs for 1983-84 school year, (3) assessment information provided by members of the interdisciplinary team (ID team) in IEPs and the Problem-Oriented Records (POR), (4) records of parent contacts, (5) annual updates of the Six-Year Plan for Special Education Programs submitted by the institutions to DOE, and (6) State and federal statutory requirements and administrative opinions.

In addition, JLARC questioned teachers through a survey of all instructional personnel. JLARC staff also conducted extensive interviews of administrative and treatment staff. These interviews provided details of the program development processes and the variation in these processes across the training centers.

Table 20 summarizes the extent to which each institution sufficiently addresses program development processes.

Table 20

ASSESSMENT SUMMARY:  
QUALITY OF PROGRAM DEVELOPMENT

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Curriculum	⊙	⊙	⊙	○	○
Development of IEPs					
- Assessment Information	○	○	○	○	○
- Staff Participation	○	○	●	○	○
Family Participation	⊙	⊙	○	⊙	○
Staff Communication	○	⊙	●	○	○

- - Satisfactory or higher quality
- ⊙ - Deficiencies noted (attention warranted by DOE/DMHMR)
- - Significant problems (action warranted by DOE/DMHMR)

Source: Synthesis of data from JLARC analysis.

EDUCATIONAL CURRICULUM

A curriculum for the handicapped includes a compilation of training programs and guidelines for sequencing programs. A useful curriculum is one that addresses all major program areas, and is suitable for the diversity of student needs. JLARC staff found major differences in the comprehensiveness of content and overall usefulness of curriculums.

Curriculum Content

DOE has not developed curriculum guidelines for teaching mentally retarded children in training centers, even though the SJR 156 study committee recommended this action eight years ago. Curriculum development, therefore, has proceeded in a decentralized fashion. As a result, there is little consistency in the comprehensiveness and use of curriculums across the training centers. Central Virginia, for example, does not feel a compilation of educational programs is appropriate for the population served. Central Virginia's teachers have guidebooks to provide them with sample programs.

At other training centers, curriculums do not always describe programs in all major skill areas, or include guidelines for sequencing programs. For example, only at Northern Virginia, Southwestern, and Southeastern do curriculums address socialization, with programs devoted to developing leisure skills, respect for property, and emotional control. Only at Southside, Southeastern, and Southwestern do curriculums include pre-vocational skills with programs in work orientation and manual dexterity tasks.

In addition to providing a pool of programs for use in essential skill areas, the curriculum provides a means for ordering programs to promote skill mastery. Teachers typically have hundreds of programs available to choose from. Without any guidelines for sequencing programs, teachers may spend time teaching programs that are not essential to promoting a resident's functioning level.

From this perspective, curriculums also vary. Only Southeastern and Southwestern provide a logical progression of educational programs to ensure that a functional goal is mastered. Southeastern arranges its programs according to functions that will be required of students in non-institutional settings. This is known as the "ultimate functioning" model. In contrast, Southwestern arranges its programs in an order similar to basic skill training of "normal" children. Training center staff identify this approach as the "developmental" model. In both models, a logical rationale is provided to educators for sequencing programs. In addition, both models ensure similar programming for residents with similar aptitudes.

An important measure of the quality of curriculum is whether the content is suitable for the instructional purposes, given the diverse population at each institution. The JLARC survey asked institution-based educators if they were familiar with their curriculum, and whether they found it relevant, comprehensive, and useful. At institutions where a curriculum exists, its utility for guiding programming decisions received mixed reviews from educators.

Comments from instructional staff at Central Virginia suggest that the absence of a curriculum results in inconsistent programming. As one teacher wrote:

We don't have a set curriculum guide available to us.... There is a great need for a curriculum guideline in order for teachers to have consistency of programs between teachers.

Educators at Northern Virginia's Center School expressed the most concern about the quality of their curriculum. As shown in Table 21, only 8% found it useful for program development or implementation. This may be explained by the fact that the curriculum is solely a product of the Fairfax County School System. The curriculum addresses the needs of the special education population in the public schools, but it lacks programs for the severely or profoundly retarded with aggressive or self-abusive behavior disorders.

Across the State, teachers expressed concern over misplaced program priorities. One educator felt there should be "more emphasis put on social, independent living skills, self-help and vocational skills". Another felt existing programs emphasized pre-academic programs, while insufficient emphasis was placed on socialization programs:

Table 21

TEACHERS' ASSESSMENTS OF CURRICULUM  
(Percent Agreeing With Statements)

<u>Statement</u>	<u>SSTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
Curriculum is relevant	77%	11%	69%	44%
Curriculum is comprehensive	77	11	54	33
Curriculum is useful	62	8	30	50
Percent of Teachers Participating in Curriculum Development	48	0	75	30
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Number of Cases	45	13	18	11

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel and IEP review.

Non-functional goals (such as matching color, shape, size, or tracing letters) are emphasized, while basic communication and interactive skills are neglected. Programs that are quantifiable and able to be applied to many residents take precedence over individualized programs which focus on resident's real needs.

In addition, teachers offered varying opinions about the sequencing of programs for mastering a skill. For example, some teachers suggested that "functional" tasks (e.g., turning a knob) were better for fine motor development; while other teachers suggested that non-functional tasks (e.g., coloring) were more likely to promote skill mastery.

These differences in strategies may reflect the limited involvement teachers have in the curriculum development process. The low participation can result in a limited knowledge of the preferred sequencing of programs, and the absence of a sense of "ownership" of the curriculum.

In sum, curriculum guidelines for basic skill areas are not available at all training centers. The JLARC survey and structured interviews revealed staff concerns with priorities in the selection and sequencing of training programs. In light of the low participation of educators in curriculum development, an approach allowing more teacher involvement is recommended.

## DEVELOPMENT OF INDIVIDUAL EDUCATION PROGRAMS

State and federal regulations require that an individual education program (IEP) be developed for each student receiving special education services. To meet DOE guidelines each IEP should contain statements of:

- the students' present level of performance;
- annual goals and short-term instructional objectives;
- educational and related services to be provided;
- the extent the child will be able to participate in regular educational programs;
- dates for initiation and duration of services; and
- criteria and a schedule for evaluating results.

An IEP document describes the types and nature of training programs the student will receive. The IEP represents the culmination of an extensive planning process involving an interdisciplinary (ID) team. The ID team includes both treatment and education staff, who comprehensively assess the resident's training needs.

After the ID team assessments are completed, an IEP conference is held to provide parents, teachers, and clinicians with an opportunity to participate in the development of the student's training program. Once approved, the IEP serves as an evaluation instrument for monitoring student progress. In assessing IEP development, JLARC staff focused on participation in the process and compliance with legal requirements.

### Participation in IEP Development

Federal and State regulations require each institution to include treatment staff, education staff, parents, and (where appropriate) the resident in the annual IEP planning conference. All institutions employ similar procedures to assemble these participants. When a resident is admitted to the institution, an interdisciplinary team conducts a complete diagnostic assessment to identify training, treatment, and medical needs. Thirty days following admission, the interdisciplinary team convenes for an IEP meeting with parents to finalize decisions on the resident's programming goals and objectives.

This interdisciplinary approach is important because the problems associated with developmental disabilities do not fall within the purview of any one discipline. Yet JLARC found that key participants in the ID team process do not always attend the IEP planning conference.

*Treatment and Education Staff Participation.* The JLARC staff's review of IEPs at each institution found that complete assessments are routinely conducted at all institutions.

Inspection of a representative sample of students' IEPs showed that teachers attended 94% of their students' IEP meetings. Treatment staff participated in 78% of IEP meetings. As seen in Table 22, teachers generally gave IEP meetings favorable ratings as an effective coordinative mechanisms. Similarly, at four of the five institutions, over 80% of respondents indicated that the interdisciplinary team included representatives from all appropriate disciplines.

Table 22

ASSESSMENT OF IEP MEETING EFFECTIVENESS

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u> <sup>1</sup>	<u>SETC</u>	<u>SWTC</u>
Frequency of treatment staff participation at IEP meeting	91%	95%	34%	91%	83%
Percent agree IEP meetings effective	79	69	75	83	81
Percent agree ID team is appropriate to each resident's needs	88	84	71	100	100
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Number in sample	42	40	17	19	12

<sup>1</sup>Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel and IEP review.

Educators at the Northern Virginia's Center School were less favorable in their ratings than teachers at other institutions. This likely reflects the separation of education and treatment programs resulting from contractual arrangements with Fairfax County Public Schools.

At four institutions treatment staff representatives attended 90% of the IEP conferences. In contrast, treatment staff at Northern Virginia attended only 34% of the IEP meetings. Because of such low attendance, it is uncertain if there is sufficient involvement from the treatment staff in programming, or if treatment staff feel that decisions are made in the best interests of the residents.

The assessment of Northern Virginia's Center School teachers regarding the interdisciplinary nature of the IEP process was also less favorable than the State norm. Again, this appears to reflect the greater degree of segregation between education and treatment programs.

Recently, Northern Virginia requested and received assistance from Fairfax County Public Schools to strengthen the interdisciplinary team approach at the Center School. It is commendable that efforts are being undertaken to coordinate Center School services with the training center staff.

*Parents' Participation.* Parents can have an important impact in bringing benefits to their handicapped children through their inclusion in the IEP process. When their child is at home on visits and when the child is discharged, parents need to ensure consistent training and proper response to their child's behavior. Most importantly, parents should be included in the process by virtue of their implicit responsibility for their child.

According to federal and State requirements, education staffs must notify parents of the IEP meeting in a manner which ensures their participation. If a parent cannot attend, the staff must use other methods to ensure parental involvement, including individual or conference telephone calls.

An IEP meeting can take place without parental involvement if the necessary steps to inform the parent have been taken. The education staff must keep records of attempts to arrange a mutually convenient time and place.

Parental participation varied across institutions; however, all institution staffs have documented efforts in their residents' records to involve the parents. Of the teachers surveyed, 83 percent felt strong efforts were made to encourage parents or guardians to participate in the IEP process (Table 23).

Northern Virginia, Southwestern, and Southeastern appear to have the greatest success in involving parents in the development of the IEP. The larger catchment areas at Central Virginia and Southside may account for a less active parental group. The organizational efforts of these other institutions may also contribute to their greater level of parental involvement.

Southwestern and Southeastern have "family trainers" who have an on-going involvement with family members and guardians. Family trainers typically explain programs, offer guidance during periods when children are home on weekend visits, and contact community service providers to ensure the successful transition of residents into community-based programs. Family training units provide an avenue for informal communication with parents during the resident's stay; and more importantly, family trainers provide a way of encouraging the parents to undertake programming at home as well as in a special edu-

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Table 23

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PARTICIPATION OF PARENTS IN IEP DEVELOPMENT

	<u>Percent agree strong efforts were made to encourage participation</u>	<u>Guardians approving IEP program *</u>
SSTC	81%	30%
CVTC	86	23
NVTC	71	72
SETC	85	38
SWTC	100	53

\*Percent attending IEP meeting or signing IEP.

Source: JLARC survey of instructional personnel and IEP reviews.

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cation setting. These frequent, less formal contacts with parents possibly contribute to the higher participation at formal meetings, such as the IEP meeting.

At Northern Virginia, high parental participation is a result of characteristics of the parent population, as well as staff efforts. Northern Virginia is the only institution to issue a newsletter to inform parents of scheduled events and activities on a bi-monthly basis. Also, since Northern Virginia has the smallest geographical catchment area of any mental retardation institution, it is easier for parents to attend meetings. Northern Virginia staff suggest that the higher income and education of the parents helps to promote greater involvement, as well.

*Resident Participation.* Federal and State regulations require residents to participate in the IEP meeting as "appropriate". In general, the level of participation statewide is low. During the 1981-82 and 1982-83 school years only 13 percent of students attended their IEP meetings.

To assess the adequacy of this level of student inclusion at IEP meetings, the proportion of higher functioning residents at each institution was compared with the proportion of residents who attended IEP meetings. As shown in Table 24, the institutions with a larger proportion of higher-functioning residents also had larger proportions of residents participating in IEP meetings. Similarly, institutions with fewer higher-functioning residents had lower proportions of residents participating in the IEP meeting.

Northern Virginia failed to include students in IEP meetings. This total absence of student participation suggests that Northern Virginia should improve efforts to include students in the meetings.



Table 24

EXTENT OF RESIDENT INVOLVEMENT  
IN IEP MEETINGS  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Percent of higher- functioning residents	3%	13%	7%	26%	18%
Percent of residents parti- cipating in IEP meeting	2	16	0	35	23

Source: JLARC review of IEPs and DMHMR data.

Overall, with the exception of Northern Virginia, the inclusion of residents in IEP meetings roughly corresponds with the pool of residents most able to benefit.

Compliance With Legal Requirements

All institutions meet federal and State requirements for scheduling annual IEP meetings. Most IEP documents meet the DOE guidelines on IEP content. Statements are included which describe the student's present level of performance, annual goals and objectives, the educational and related services the institution will commit to the student, dates for initiating services and anticipated duration, and criteria and a schedule for evaluation.

The main problem identified was the lack of documentation on student participation in "regular" education programs. Federal administrative opinion describes such participation as "any non-curricular activities in which the child will be participating with non-handicapped students (e.g., lunch, assembly periods, club activities, and other special events)". Most institutions have not addressed this item in the IEP document; instead they simply specify if a student will receive education in a community setting. Only Central Virginia and Southwestern have IEP documents that consistently identify the level of student participation in non-curricular activities. This conformity with the regulations provides an accurate representation of all the educational experiences students receive.

In sum, the needs of the students are individually and fully evaluated by members of the treatment and education staffs in the IEP process. Typically, adequate representation at the IEP meeting is ensured through an interdisciplinary team approach which includes staff from all appropriate disciplines. Problems are apparent with Northern Virginia's educational and treatment staff attendance at IEP meetings. Current efforts should be continued to ensure adequate participation in IEP meetings at Northern Virginia.

Participation of students and parents varies. Parental representation is highest at those institutions with the strongest outreach programs -- Southeastern, Southwestern, and Northern Virginia. Student participation is not high; however, it corresponds with the level of higher-functioning residents at each institution.

In general, most education staffs comply with legal requirements in the development of IEPs. Greater attention should be paid to documenting the level of activities of the non-handicapped, to provide a complete picture of the total educational experience of students in mental retardation institutions.

## COORDINATION OF PROGRAM OBJECTIVES

At the mental retardation institutions, the high degree of overlap in education and treatment needs of students necessitates a structured method of coordinating the efforts of the different staffs. Clinical, direct care, and education staffs need to work together in order to adapt their strategies and methods to the collective observations of the resident's changing needs. Without this collaborative effort, the best course of instruction cannot be attained.

JLARC reviewed administrative procedures for indications of an organizational structure which encouraged both treatment and education staffs to coordinate programming for students. In general, each institution primarily relies on interdisciplinary team meetings for formal professional communication between the staffs. In addition, education staff engage in periodic conferences with treatment staff which augment their knowledge about students. The frequency of these informal conferences varies among institutions.

### Participation in ID Team Meetings

As part of its six-year plan, each institution must develop a system of communication among education, treatment, and living unit staffs. The communication is to ensure that a coordinated program of services is provided to all residents. The primary method of staff coordination is through an interdisciplinary team review of IEP objectives. This review must take place at least annually, and often is done semi-annually. Statewide participation by educators in interdisciplinary team meetings is high. At most facilities, teachers participate in ID team meetings regularly. ID team meetings are staffed in one of two ways, determined by the degree of separation of the education program with other services. Southeastern, Southwestern, and Central Virginia are organized on a unit system where all professional staff (educators, therapists, psychologists) work under the direction of a unit manager. Staff at these institutions coordinate information in routine "unit" meetings. Thus, each unit is equipped with a full array of resources necessary to meet the needs of the residents.

At Southside and Northern Virginia, the education program is organizationally separate from the living unit and treatment programs. The treatment and living unit staffs coordinate the ID team meetings, and an education representative can be invited to attend. Educators must rely on their one representative -- generally an education coordinator -- to communicate the agenda of each meeting. This method does not allow a two-way dialogue between key staff members.

Despite these differences in ID team arrangements, a majority of teachers at each institution report that ID team meetings are effective (Table 25). In addition, most teachers feel that treatment staff adequately report program modifications to educators. Survey responses indicate that teachers at Northern Virginia and Central Virginia are less satisfied with the effectiveness of ID team meetings. Staff at both institutions also felt that treatment staff failed to notify them of modifications in a resident's program.

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Table 25

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PERCENT OF EDUCATORS WITH FAVORABLE  
ASSESSMENTS OF THE COORDINATION  
OF INFORMATION WITH TREATMENT STAFF

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
ID team meetings are effective	79%	69%	53%	92%	80%
Program modifications were communicated by treatment staff	76	61	27	75	100
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Number in sample	45	40	16	19	11

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

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Informal Communications

To determine whether institutions with less frequent ID team meetings have greater use of informal discussions, JLARC surveyed teachers regarding their informal conferences with other staff members. It was found, however, that institutions with more frequent ID team meetings also had more frequent informal contacts between the treatment and education staffs. As shown in Table 26, informal contacts occur less frequently at Northern Virginia and Central Virginia, corresponding to the lower levels of satisfaction with ID meetings at these two institutions.

Table 26

PERCENT OF EDUCATORS WHO ASSESS  
INFORMAL COMMUNICATION FAVORABLY

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC*</u>	<u>SETC</u>	<u>SWTC</u>
Engage in discussions with residential or treatment staff at least monthly	77%	56%	39%	84%	80%
Good coordination with education staff	94	75	85	100	100
Number in sample	38	38	14	18	11

\*Educators at NVTC responding to survey.

Source: JLARC survey of instructional personnel.

Some teachers at Northern Virginia's Center School maintain that poor communication between staffs may result in the underutilization of the institution's related services. Twenty-five percent of the survey respondents advocated more frequent contact with interdisciplinary team members to avail themselves of potential services.

At Central Virginia, the arrangement of self-sufficient units encourages frequent discussion of training methods within units. Communication between units, and between the school and living units, however, is fragmented. As one teacher noted:

The current system of units also alienates professional staff from others in their fields, impeding the exchange of various teaching/therapeutic techniques.

With no planned communication time between units, effective access to services or methods employed in other units is lacking.

The process for initiating, sustaining, and interrelating the various parts of the resident's program is adequate at most institutions. Northern Virginia lacks an adequate coordination procedure. A majority of staff felt program modifications were not communicated to them and that carryover of behavior programming to the educational setting suffered as a result. In addition, Central Virginia must develop a formal system to allow professionals in various disciplines to share expertise in programming for individual residents.

## CONCLUSIONS AND RECOMMENDATIONS

The establishment of a curriculum, individual education programs, and communication among service providers enhance the opportunity for residents to achieve their maximum independence. These components have evolved at the institutional level and only partially support the staffs' endeavors and, therefore, residents' needs.

Overall, the development of education programs is good at the training centers. The inconsistency across centers in the quality of the curriculum and the poor assessments of the teachers, however, warrants the attention of DMHMR. Efforts statewide to solicit parental participation, and at Northern Virginia to improve coordination, should be continued.

*Recommendation (11).* DOE and DMHMR should develop curriculums which address a comparable range of skills across institutions in order to ensure consistency of programming for residents with similar abilities. At all institutions the range of programs should include socialization and pre-vocational skills. Since instructional staff are familiar with conceptual models and instructional procedures for the handicapped, DOE and DMHMR should actively solicit their participation in program selection and sequencing for skill mastery.

*Recommendation (12).* Northern Virginia should continue its efforts to increase the frequency of joint meetings between treatment and education staff to ensure educational programming is not separate from the total treatment plan.

*Recommendation (13).* Provision should be made for inclusion of family members in the development of programs to ensure continuity in training across institutional and home settings. DMHMR should expand the use of family trainers and similar programs which have successfully involved families in program development.



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## VI. QUALITY OF INSTRUCTION

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A key research effort was an assessment of the programs received by the handicapped students. Analysis focused on a sample of 33 residents, stratified by age, at each institution. A systematic coding scheme was developed to record the training programs offered to each resident, as reflected on his or her individual education program (IEP). This data allowed an assessment, by functioning level, of the degree to which staff individualize training and provide comprehensive programming.

JLARC used multiple methods to assess the degree of individualization. Analyses demonstrated that staff at all training centers implemented programs which were tailored to the functioning level of the student. This is an indication of quality programming. For example, the average number of different training programs increased with the functioning level of the student. Similarly, the multi-handicapped received training emphasizing "basic" program areas, while the higher-functioning received "advanced" instruction. Special analysis, focusing on the intermediate functioning group, which comprises 60% of the population, revealed an appropriate degree of individualization.

Program emphasis varied for students with similar handicaps residing in different institutions. Some variation is due to different orientations held by education directors. For example, some emphasize communication training, while others stress independent living. However, lack of emphasis in some program areas at some training centers warrants the attention of DMHMR.

The following analysis is based on the JLARC staff's review and analysis of IEPs. In interviews, educators consistently noted that not all educational goals and objectives are noted on the IEP. Reported percentages of student participation may, therefore, slightly underestimate actual student participation in the training programs described below.

Similarly, one learning activity may simultaneously address several different educational deficits. For example, sorting pegs into bins sharpens fine motor skills, improves eye-hand coordination, and develops a pre-vocational skill. Objectives were recorded by JLARC staff according to the primary skill area identified in the IEP -- in this case, "pre-vocational skill development" instead of "fine motor skill".

Table 27 summarizes the extent to which each institution adequately addresses the needs of its population.

Table 27

SUMMARY ASSESSMENT:  
QUALITY OF INSTRUCTION

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Overall Degree of Individualization	○	○	○	○	○
- Multi-handicapped	⊙	⊙	⊙	⊙	○
- Intermediate	⊙	○	⊙	○	⊙
- Higher-functioning	n/a	⊙	n/a	⊙	⊙

- - Satisfactory or higher quality.
- ⊙ - Deficiencies noted (attention warranted by DOE/DMHMR)
- - Significant problems (action warranted by DOE/DMHMR)
- n/a - Insufficient number of students for analysis

Source: Synthesis of data from JLARC analysis.

Degree of Individualized Training

To assess the general degree to which staff individualize training programs on the basis of handicap, JLARC staff computed the average number of different programs received by students. A direct relationship between the number of programs received and the functioning level of the student was hypothesized to be an indicator of "individualization." The results of this analysis are shown in Table 28, which presents the number of program areas, by functioning level, across the five MR institutions.

Table 28

AVERAGE NUMBER OF DIFFERENT PROGRAMS OFFERED  
BY HANDICAP LEVEL  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Multi-Handicapped	3.5 (15)	2.9 (11)	3.5 (4)	4.0 (6)	4.0 (4)
Intermediate	5.5 (13)	8.7 (16)	5.3 (22)	9.1 (17)	7.2 (23)
Higher-Functioning	7.0 (1)	13.5 (4)	6.5 (2)	14.9 (8)	7.2 (6)

Note: ( ) indicates number of students in sample population.

Source: JLARC record review.



At all training centers, the average number of different programs offered to students increased with functioning level. Across training centers, the multi-handicapped received 3.5 programs, the intermediate group received 7.1 programs, and the higher-functioning students received 11.3 programs. These trends indicate that staff are succeeding in individualizing training programs on the basis of handicap.

To further examine the degree of individualization, JLARC staff analyzed program emphasis for the three functioning groups. The number of IEP objectives written in each program area was computed. Individualization, it was hypothesized, would be reflected in the multi-handicapped group receiving the greatest emphasis in "basic" program areas (e.g., motor skills, self-help). Similarly, it was expected that the higher-functioning students would have a greater degree of emphasis in the more "advanced" (e.g., independent living) program areas.

The data is summarized in Table 29. In self-help and motor skill programming, the multi-handicapped had more emphasis than the higher-functioning students. For example, at Southwestern, 48% of the multi-handicapped objectives were in self-help, compared to 17% for the higher-functioning students.

In other more "advanced" program areas (e.g., independent living, communication, pre-academics), the higher-functioning students had greater emphasis than the other two groups. For example, at Southeastern, no objectives in independent living were written for multi-handicapped students. In comparison, 14% of the IEP objectives for the intermediate group and 29% for the higher-functioning group were in this area.

While some unexpected trends were observed at Central Virginia and Southside, the data clearly show that training staff within institutions are individualizing on the basis of three broad functioning groups, and suggest that the handicaps of students are being addressed. Inspection of Table 29, however, indicates that program emphasis is not comparable across training centers. These differences will be discussed in the next part of the chapter, which is divided into sections on training provided to the multi-handicapped, intermediate-functioning, and higher-functioning.

#### TRAINING FOR THE MULTI-HANDICAPPED

The multi-handicapped have significant intellectual and physical disabilities. For this reason, training is limited, and aims to promote basic self-care skills and responsiveness to the environment. In general, there is a lack of comparability across institutions in training programs for this group. This suggests that the institutions' staffs and DMHMR should re-examine and clarify training goals and procedures for the multi-handicapped.

Table 29

PERCENTAGE OF IEP OBJECTIVES WRITTEN,  
WITHIN PROGRAM AREA, BY FUNCTIONING LEVEL  
(FY 1982-83)

	<u>Self Help</u>	<u>Motor Skills</u>	<u>Independent Living</u>	<u>Communi- cation</u>	<u>Pre- Academics</u>	<u>Social Behavior</u>
Southside						
Multi.	0%	38%	0%	30%	0%	0%
Inter.	20	33	9	25	3	3
Central Virginia						
Multi.	11	33	0	16	0	0
Inter.	41	33	13	25	3	3
High	9	9	46	22	4	8
Northern Virginia						
Multi.	8	41*	0	19	0	0
Inter.	9	27	13	24	3	8
Southeastern						
Multi.	29	40	0	2	0	0
Inter.	27	15	14	16	5	17
High	10	10	29	16	11	18
Southwestern						
Multi.	48	16	0	11	0	0
Inter.	41	12	1	14	3	7
High	17	3	20	27	7	7

\*Indicates that 41% of all objectives for multi-handicapped were written in motor skills, and 27% for intermediate students.

Source: JLARC record review.

Population Characteristics

The multi-handicapped have significant deficiencies in intellectual and adaptive functioning. As seen in Table 30, none of the multi-handicapped can independently perform basic self-care skills such as bathing, eating, or dressing. Social skills are also limited. For example, these students do not participate in social interactions unless encouraged greatly. In addition, the students are passive. Few have disruptive behavioral problems.

Table 30

CHARACTERISTICS OF THE MULTIHANDICAPPED:  
PERCENT OF STUDENTS HAVING SEVERE HANDICAPS  
IN FUNCTIONAL ABILITIES  
(FY 1982-83)

<u>Deficits</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Cerebral palsy	86%	18%	100%	83%	75%
Epilepsy	66	90	75	100	50
Poor vision	33	27	100	66	0
Poor hearing	6	27	25	16	0
Unable to walk	100	100	100	100	100
Unable to bathe	100	90	75	100	25
Unable to feed self	100	100	100	100	100
Unable to dress self	100	100	100	100	100
Lack verbal expression	100	100	100	100	100
Lack task persistence	100	100	100	100	100
Disruptive	6	0	0	33	25
-----					
Number in sample	15	11	4	6	4

Source: JLARC analysis of DMHMR data.

Physical handicaps are also prevalent. A high percentage of students have cerebral palsy, epilepsy, and significant handicaps in sight and hearing. None of the multi-handicapped can walk independently.

#### Emphasis in Training Programs

To assess program emphasis, JLARC staff computed the percentage of IEP objectives written in each program area. As seen in Table 31, training objectives for the multi-handicapped are written in three primary areas: self-help, motor skills, and communication. Program emphasis, however, is not comparable. For example, Southeastern and Southwestern emphasize self-care programs, but the other training centers do not. Southside, in comparison, emphasizes communication skills.

#### Programming in Communication, Motor Skills, and Self-Help

As seen in Table 32, a high percentage of multi-handicapped students receive communication training at Southside (80%) and Southwestern (75%). In comparison, relatively few students at Southeastern (16%) and Central (9%) receive this training.

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Table 31

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PERCENTAGE OF OBJECTIVES IN PROGRAM AREAS  
FOR MULTI-HANDICAPPED  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Communication	30%	16%	19%	2%	11%
Motor Skills	38	33	41	40	16
Self-Help	0	11	8	29	48

Note: Percentage may not add to 100 as only primary programs are included.

Source: JLARC record review.

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Table 32

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PERCENT OF MULTI-HANDICAPPED STUDENTS  
RECEIVING TRAINING BY PROGRAM AREA  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Communication	80%	9%	50%	16%	75%
Motor Skills	86	82	50	100	75
Self-Help	0	45	25	83	100

Source: JLARC record review.

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Training staff at all centers provide motor skill programs to at least half of their multi-handicapped students. However, further analysis showed that staff at Southeastern (0%) and Northern Virginia (25%) write few objectives in fine motor skills.

The greatest variation across institutions was in self-help. At Southwestern, all the multi-handicapped receive programming in hygiene, toileting, eating, and dressing. At Southeastern, 83% of these students receive self-help training, primarily focused on improving eating skills. In comparison, self-help objectives are written for few multi-handicapped students at Northern Virginia, Central, or Southside.

Because of the severe disorders of the multi-handicapped, not all students can profit from training in communication, motor skills, and self-help. However, the wide variation across institutions in implementing these programs does not appear appropriate given the comparable populations of multi-handicapped students. For example,

when considering the emphasis placed on self-help skills at Southeastern and Southwestern, it becomes unlikely that no students at Southside and only 25% of the students at Northern could profit from this training.

While recognizing the different needs existing among the multi-handicapped, DMHMR should set general guidelines specifying the types of skills which are of the most "functional" value to the students. That is, those skills which will allow the students to achieve a greater degree of independence.

## TRAINING FOR THE INTERMEDIATE-FUNCTIONING

Intermediate students comprise a significant percentage of students in the mental retardation institutions: Northern Virginia (78%), Southeastern (55%), Southwestern (70%), Central Virginia (51%), and Southside (44%). Intermediate students share some characteristics, but are more variable than the multi-handicapped or higher-functioning groups. Analysis for intermediate students was conducted on two levels to assess the comprehensiveness of programming and the degree of individualized instruction. Overall, Southeastern, and Central Virginia appear to provide the most comprehensive training. While Southwestern's students do not receive comparable programming, staff most clearly individualize on the basis of general functioning level.

### Characteristics of Intermediate Functioning

Many intermediate-functioning students have developed a number of self-care and social interaction skills. As seen in Table 33, a high percentage of these students can walk, feed, toilet, and engage in group activities. Communication skills and some self-care skills are lacking for many.

The diversity of strengths and weaknesses among the intermediate-functioning requires staff to develop and implement programs which specifically address the most salient handicaps of each student. Additionally, staff must provide instruction to improve existing skills so as to promote movement to the least restrictive environment.

### Self-Help and Independent Living

Similar to the multi-handicapped, most intermediate students have handicaps in self-care abilities. Similar to the higher-functioning, most intermediate students have the ability to profit from instruction in independent living skills. Instruction in these areas thus provides a means for promoting students' skills which will foster the likelihood of deinstitutionalization.

Table 33

POPULATION CHARACTERISTICS OF  
INTERMEDIATE-FUNCTIONING STUDENTS:  
PERCENTAGE DISPLAYING DIFFERENT ABILITIES  
(FY 1982-83)

<u>Deficiencies:</u>	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Unable to feed self	92%	66%	77%	78%	65%
Unable to toilet	31	31	24	23	56
Unable to wash	84	56	66	41	65
Unable to dress self	84	50	62	41	74
Unable to walk	38	19	28	6	26
Lack sentence articulation	85	94	85	94	96
Lack ability to indicate hunger/other wants	46	75	47	65	61
Does not interact with others	46	25	14	35	22
Self-abuse	46	44	27	47	21
-----					
Number in sample	13	16	22	17	23

Source: JLARC analysis of DMHMR data.

The majority of students receive programming in independent living and self-care. As seen in Table 34, Southeastern and Central Virginia are the only institutions to write objectives in both.

Table 34

PERCENTAGE OF INTERMEDIATE STUDENTS RECEIVING  
SELF-HELP AND INDEPENDENT LIVING PROGRAMS  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Self-Help	46%	100%	62%	100%	100%
- Hygiene	38	87	19	76	95
- Toileting	23	43	4	29	61
- Eating	38	81	33	29	56
- Dressing	23	81	4	53	66
Independent Living	46	62	33	70	17
Pre-Vocational	7	0	38	5	8
Art/Music	0	25	33	23	43

Source: JLARC record review.

Analysis of the four self-help programs revealed that Southwestern and Southeastern offer a variety of self-help programs to most students. Southeastern emphasizes hygiene and dressing. Education staff at Northern Virginia and Southside choose not to emphasize self-help programs as much as the other training centers. Northern Virginia offers a relatively high number of students a single program in self-help. In comparison, Southside writes few self-help goals and objectives, but each student with this type of objective receives an average of two specific programs.

As noted, Southeastern (70%) and Central Virginia (62%) provide training in independent living to most students. In comparison, only 17% of Southwestern's residents receive this training, suggesting that staff may not be addressing the students' needs for independent living skills due to their strong emphasis on self-help programs. Only Northern Virginia provides pre-vocational training on a consistent basis.

In sum, training staff implement self-help and independent living programs for a majority of students. Northern Virginia and Southside do not emphasize self-help programming, relative to the other institutions, while Southwestern does not stress independent living.

### Motor Skills

Programming in motor skills is offered to a majority of intermediate students. As seen in Table 35, only Southwestern does not emphasize instruction in this area. Training staff at Southside offer both gross motor and fine motor programs to most students. Their emphasis on fine motor development is implemented to assist students in daily living functions such as handling objects and dressing.

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Table 35

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PERCENTAGE OF INTERMEDIATE STUDENTS RECEIVING  
TRAINING IN MOTOR SKILLS  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Motor Skills	100%	93%	85%	82%	56%
- Gross Motor	84	50	57	47	39
- Fine Motor	61	37	28	41	30
- Physical Education	23	44	28	35	8

Source: JLARC record review.

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## Communication and Pre-Academics

Task persistence is a valuable skill and is one of the most important barriers confronting handicapped students. A limited attention span restricts one's ability to profit from any type of instruction. Southside (31%) is the only institution, as seen in Table 36, which does not write IEP objectives in this area for a majority of students.

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Table 36

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PERCENTAGE OF INTERMEDIATE STUDENTS RECEIVING  
TRAINING IN PRE-ACADEMICS AND COMMUNICATION  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Task Persistence	31%	69%	57%	70%	61%
Communication	100	69	90	76	73
Pre-Academics	31	25	19	41	34

Source: JLARC record review.

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Staff at Southside emphasize training in communication. Emphasis in communication, though not as strong, is evidenced at the other institutions. However, less than half of the intermediate students across institutions receive training in pre-academics. This reflects both the intellectual handicaps of the students, and the fact that staff incorporate pre-academic training into other programs.

## Degree of Individualized Instruction for Intermediate Students

To assess the degree to which individualized training is offered, the intermediate-functioning group was divided into "higher" and "lower" classifications (as described in Technical Appendix). The "higher" population is most similar to the higher-functioning group, while the "lower"-functioning population is most similar to the multi-handicapped. It was expected that program emphasis for the two groups would be different if staff were individualizing instruction to students' functional abilities.

The data are summarized in Table 37. The pattern of results indicates that staff are tailoring training to address students' functioning levels. Southwestern consistently individualizes across program areas. For example, a greater percentage of "lower" intermediate students received training in all self-help areas. Similarly, the "higher" intermediate students were more likely to be offered training in independent living and communication.



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Table 37

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INDIVIDUALIZED TRAINING FOR INTERMEDIATE STUDENTS:  
 PERCENTAGE OF OBJECTIVES WRITTEN WITHIN PROGRAM AREAS  
 (FY 1982-83)

	Func. Abil.	Self-Help			Ind. Living	Social Behavior	Adv. Commun.
		Dress	Eat	Toilet			
Southside	High	50%	25%	0%	75%	0%	75%
	Low	33	11	33	33	22	100
Central Virginia	High	77	67	33	88	40	77
	Low	85	85	57	14	63	43
Northern Virginia	High	0	18	9	36	25	95
	Low	9	45	0	27	57	85
Southeastern	High	58	0	100	91	43	83
	Low	40	100	20	20	100	60
Southwestern	High	33	16	16	50	53	100
	Low	76	70	76	6	60	65

Note: "High" represents good adaptive skills.  
 "Low" represents poor adaptive skills.

Source: JLARC analysis of IEP records and DMHMR data.

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It also appears that staff at the other training centers are implementing programs consistent with students' general functioning levels. The data, however, are inconclusive in self-help programming, where no consistent patterns were observed. For example, at Southeastern, 100% of the "lower" students received toileting programs; but objectives in self-feeding programs are not written. The opposite trend was observed for the "higher" students. Education staff, monitored by DMHMR, should assess procedures for determining placement of students in self-help programs.

TRAINING FOR THE HIGHER-FUNCTIONING

Higher-functioning students represent about 13% of the MR population. Because of the small number of higher-functioning students in JLARC's sample at Northern Virginia (2) and Southside (3), these institutions were excluded from the analysis.

Population Characteristics

Higher-functioning students do not demonstrate the intensity of adaptive handicaps observed in the multi-handicapped or intermediate functioning students. As seen in Table 38, all of the higher-functioning students have developed some self-help skills. A relatively small percentage have significant handicaps. At Central Virginia, the four higher-functioning students in the sample have achieved a high level of independent-functioning in the self-help area.

Table 38

POPULATION CHARACTERISTICS OF HIGHER-FUNCTIONING STUDENTS:  
PERCENTAGE DISPLAYING SEVERE HANDICAPS IN FUNCTIONAL ABILITIES  
(FY 1982-83)

<u>Functional Deficits</u>	<u>CVTC</u>	<u>SETC</u>	<u>SWTC</u>
Unable to walk	0%	37%	0%
Unable to toilet	0	50	26
Unable to bath self	0	25	16
Unable to feed self	0	25	16
Unable to dress self	0	25	16
Unable to write	100	87	100
Unable to read	75	87	50
Lacks verbal expression	50	37	66
Lacks task persistence	0	0	17
Does not participate in activities	50	37	50
Disruptive	50	37	83
Unable to use money	25	50	50
Unable to prepare food	25	25	66
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Number in sample	4	8	6

Source: JLARC analysis of DMHMR data.

Social skills handicaps are evident. Most higher-functioning students do not volunteer in group activities without prompting and are disruptive in the classroom. Handicaps in independent living are also apparent. For example, about half of the students have developed a basic ability to use money and to engage in food preparation.

The most salient handicaps of the higher-functioning students are in pre-academics and communication. The majority of students sampled were unable to read or write fifteen words. Additionally, most cannot speak in complex sentences.

## Emphasis in Training

To provide an overview of training for the higher-functioning, the percent of objectives across program areas was calculated. As seen in Table 39, all three institutions emphasize programming in communication and independent living. Secondary emphasis is placed on training in self-help, motor skills, academics, and behavior.

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Table 39

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PERCENTAGE OF OBJECTIVES, BY PROGRAM AREA,  
FOR HIGHER-FUNCTIONING STUDENTS  
(FY 1982-83)

	<u>CVTC</u>	<u>SETC</u>	<u>SWTC</u>
Communication	22%	16%	27%
Independent Living	46	29	20
Self-Help	9	10	17
Motor Skills	9	10	3
Academics	4	11	7
Behavior	8	18	7
Other			

Source: JLARC record review.

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While emphasis on the broad program level is generally comparable, important differences were observed within program areas. To analyze these differences, JLARC staff computed the percentage of students receiving training within more specific program areas.

### Self-Help and Independent Living

As discussed previously, the higher-functioning students have developed skills in self-help areas -- such as eating and dressing. As seen in Table 40, staff at the three institutions implement training programs for most students to improve these skills. At Southeastern (75%), Southwestern (83%), and Central Virginia (100%), the majority of students receive programming in hygiene. However, few objectives were written for toileting, eating, and dressing for the higher-functioning students at any institution. This is due, in large part, to the adequate functioning of students in these areas. However, given the importance of these skills for movement to a least restrictive environment, greater emphasis may be warranted.

Training staff have chosen to emphasize independent living instead of self-help at all institutions. This emphasis is appropriate given the adaptive skills of the higher-functioning. However, Southwestern does not write pre-vocational goals and objectives for their

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Table 40

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PERCENTAGE OF HIGHER-FUNCTIONING STUDENTS RECEIVING TRAINING  
IN SELF-HELP AND INDEPENDENT LIVING  
(FY 1982-83)

	<u>CVTC</u>	<u>SETC</u>	<u>SWTC</u>
Hygiene	100%	75%	83%
Toileting	0	12	0
Eating	25	25	0
Dressing	0	25	0
Independent Living	100	87	50
Pre-Vocational	75	75	0
Social Behavior	25	75	66

Source: JLARC record review.

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higher-functioning students. The frequency of training in this area is not comparable to that at Central Virginia or Southeastern and may limit a student's ability to achieve in a community setting such as a sheltered workshop.

Social interaction skills are also important for higher-functioning students. A relatively high number of students display disruptive behavior and have difficulties interacting in group situations. While Southeastern and Southwestern implement behavior management programs for most students, only 25% of Central Virginia's students have "behavioral" goals written in their IEPs.

#### Training For Motor Development

Most higher-functioning students can walk independently, but have coordination problems. Gross motor or physical education programs are implemented to address these handicaps. In addition, physical education may serve as an instructional vehicle for social development. The majority of students at Southeastern (87%) and Central Virginia (100%) receive motor skill programs. In comparison, only 16% of the students at Southwestern receive this training.

#### Programming In Communication and Academics

Communication skills for the higher-functioning enhance students' independence and allow them to express wants and ideas to others. For the higher-functioning student, training in "basic" communication promotes the learning of words and the ability to speak in sentences. Communication training focuses on reading, writing, and

speech. As seen in Table 41, Southeastern and Central Virginia provide communication training to most students. In comparison, Southwestern's training programs are directed to basic expressive skills.

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Table 41

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PERCENTAGE OF HIGHER-FUNCTIONING STUDENTS RECEIVING  
TRAINING IN COMMUNICATION AND ACADEMICS  
(FY 1982-83)

	<u>CVTC</u>	<u>SETC</u>	<u>SWTC</u>
Basic Communication	50%	75%	66%
Communication	100	75	33
Pre-Academics	75	87	33
Task Persistence	0	62	50

Source: JLARC record review.

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The differences across institutions are also apparent in academics. Southeastern and Central Virginia focus on functional math and object identification, while staff at Southwestern choose not to emphasize training in this area. About half of the students at Southeastern and Southwestern receive training to increase task persistence and develop the ability to maintain attention on specific activities.

*Summer Programming.* Due to the severity of students' handicapping conditions, education programs in MR institutions are typically provided continuously throughout the school year. Most education directors indicate that while the students' educational goals are continued throughout the summer, scheduling is more flexible to take advantage of outdoor recreational opportunities such as swimming and picnicking.

Northern Virginia's program is an exception in that educational services are suspended before and after Fairfax County Public School's summer session. During the 1982-83 school year, for example, there are 29 days when school is not in session. Summer session school hours are also reduced from 5.5 hours to 4 hours per day. DMHMR, along with DOE, should review the appropriateness of reducing the educational services provided to Northern Virginia's students during the summer.

### CONCLUSIONS AND RECOMMENDATIONS

Students in MR institutions have significant intellectual and functional handicaps. To provide high quality education, training staff must implement programs which are specifically individualized to each student's handicaps.

JLARC used multiple methods to assess the degree of individualization. Analyses converged in demonstrating that education programs are tailored to the functioning level of the student. For example, the average number of different training programs offered to students increases with the functioning level of the resident. Similarly, the multi-handicapped receive training emphasizing "basic" program areas, while higher-functioning receive "advanced" instruction. The data strongly indicates that the training programs have improved greatly subsequent to 1976, when the SJR 156 study group concluded that they were "substantially lacking".

Program emphasis varied for students with similar handicaps residing in different training centers. In part, this variation is due to different orientations held by education directors, and may be appropriate. However, staff are not providing comparable programming across institutions.

### Training for the Multi-Handicapped

The multi-handicapped have significant adaptive disabilities in all functioning areas. The majority of students, for example, require sensory stimulation programs to enhance their responsiveness to the environment and people. Sensory stimulation programs require staff expertise to develop, but not to implement. However, education staff noted that physical or occupational therapists often implement the programs. Because this may be an inefficient use of staff resources, DOE and DMHMR should consider the use of aides for the delivery of these services.

Central Virginia and Southside implement the most diverse, and perhaps the most appropriate, sensory stimulation programs through the use of art and music materials. The strong emphasis at Central and Southside on sensory stimulation programs is probably due to the high percentage of multi-handicapped students at those hospitals. Their expertise should be shared with other training centers.

*Recommendation (14).* Consideration should be given to supervised aides implementing the majority of sensory stimulation programs for the multi-handicapped. The primary responsibility of teachers and specialists in this program area should be to develop individualized programs and to provide general supervision. The use of art and music materials appears to be a highly appropriate training approach to sensory stimulation. DMHMR should assess this approach and issue guidelines on the goals and procedures of sensory stimulation programs.

Southwestern provides the most comprehensive training to the multi-handicapped. Southeastern and Central Virginia offer communication programs to few students. Northern Virginia and Southside do not emphasize self-help programming. This variation does not reflect inadequate programming, but was unexpected given the similarity in functioning between the multi-handicapped. While recognizing that programs must be individualized, greater comparability should be achieved.

*Recommendation (15).* DMHMR and DOE should set guidelines specifying the types of skills and training procedures which are of the most functional value and lead to a greater degree of autonomy for the multi-handicapped. DMHMR should assist education directors at Northern Virginia, Southeastern, Central Virginia, and Southside in efforts to provide more comprehensive programming for this group.

### Training for the Intermediate-Functioning

Over half of the students in the mental retardation institutions may be classified as intermediate functioning. The intermediate functioning have developed a number of abilities, particularly in the self-help area, but typically lack communication and social skills. It is important for training staff to further these students' self-care skills and to promote communication and social skills to enhance opportunities for deinstitutionalization.

Training staff at the institutions provide comprehensive overall instruction. Southeastern and Central Virginia, specifically, appear to offer an appropriate variety of programs to most students. In comparison, a lack of program emphasis at Southwestern (independent living programs) and Southside (social behavior programs) suggests that important student handicaps are not adequately addressed.

In addition to providing comprehensive programming, Southeastern and Central Virginia appear to individualize training by general functioning ability. While training at Southwestern is less intensive in some program areas, staff clearly individualize instruction to address students' specific needs.

Northern Virginia's programming in self-help and independent living is not comparable to that offered at Southeastern or Central Virginia. Programming was not as comprehensive, and on the basis of available data, was not as tailored to general functioning level in these areas. Similar problems appeared within Southside's self-help programming.

*Recommendation (16).* Training staff at Northern Virginia, Southwestern, and Southside, in collaboration with DMHMR, should take steps to provide more comprehensive programming to intermediate functioning students to ensure comparability among training centers.

### Training for the Higher-Functioning

With some exception, staff at Southeastern and Central Virginia provide comprehensive programming. Almost all students receive training in self-help skills. Emphasis is almost exclusively on hygiene programs such as grooming skills, as opposed to basic self-help programming in toileting, eating, or dressing. The de-emphasis of programming in these areas was unexpected since staff noted that inde-

pendent functioning in these areas was often a pre-requisite for transitions to settings outside the hospital. While higher-functioning students have achieved a greater degree of independence in self-care than other residents, DMHMR should determine if greater emphasis for this population is warranted.

Handicaps in independent living, communication, and pre-academics are most salient for higher-functioning residents. For this reason, staff emphasize programming in these areas and provide instruction to most students. However, pre-academic and pre-vocational instruction is not offered to a majority of students at Southwestern. Thus, the higher-functioning students are not receiving services comparable to those offered in Southeastern and Central. At all institutions, gyms appear to be underutilized for the higher-functioning.

*Recommendation (17).* DMHMR should assess the needs of the higher-functioning students and develop guidelines for determining appropriate program emphasis. Attention by DMHMR should be directed to increasing program emphasis for the higher functioning at Southwestern.



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## VII. ACHIEVEMENT OF EDUCATIONAL OUTCOMES

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One of the major goals of special education programs in training centers is to help students develop skills that will allow them to function as closely as possible to the mainstream of everyday life. Most mentally retarded students have severe disabilities that make skill acquisition a long process. For most, small steps in skill development are viewed as achievements. Preceding chapters of this report have focused on inputs to the educational process: organization, funding, processes, programs, and resources. This chapter examines, to the extent possible, some of the results of these inputs to the education of the mentally retarded.

Education and training programs in MR training centers have developed over the past decade to the extent that some of the impacts of these programs in helping students achieve life-enhancing goals can be assessed. One method of evaluating program impact would be to examine the lives of the students who leave the programs. However, this approach is replete with difficulties: for example, not all students have the same potential, nor do they have access to the same resources and experiences outside the institutions. Further, it is an enormous task simply to locate and test "graduated" MR students.

Another approach, evaluating the completion of individualized objectives, provides a more direct and feasible assessment of the immediate outcomes of education programs on mentally retarded students. The JLARC staff took this approach.

A basic assumption of the analysis was that educational objectives set for a student were generally appropriate to the student's abilities. As such, completion of these educational objectives should represent a successful step toward helping the student realize his or her full potential. The extent to which students complete objectives is thus viewed as another indicator of overall program quality.

It is important to understand the limits to this approach. Foremost, the approach focuses on the record of achievements that is documented in the IEP. A good teacher who is a poor record keeper could understate or overstate the achievements of the student. Also, teachers training similar students might approach goal-setting differently. For example, one teacher might set tooth-brushing as a single objective. Another might cast tooth-brushing into multiple objectives. Because of the incremental nature of multiple objectives, this approach might appear statistically to be more successful. These limits are discussed more fully later.

Given these qualifications, however, the outcomes assessment is a valuable portion of this report. First, it underlines the need

for consistent, reliable IEP documentation. Second, it may illustrate a practical function of the IEP which has not been utilized. And finally, it underlines the fact that the final objective of education is not only procedures, processes, or funding of educational programs, but also the learning that the student experiences. This analysis is one step in focusing on that learning. It builds on the substantial efforts of the teachers, aides, and administrators who work daily to impart skills which will promote greater student independence and diminish the need for constant supervision. As instruction in the training centers moves towards a "functional" approach, it is important that evaluation also moves toward a greater focus on the functional skills acquired by students.

The remainder of this chapter lays out the methodology used in the evaluation of outcomes, findings from the analysis, and what can be drawn from the exercise. A final section restates conclusions and makes recommendations concerning the use of IEPs as tools for evaluating programs.

## RESEARCH APPROACH

The analysis serves two related purposes: to examine the effect of institutional education programs on the students, and to promote the future development of a monitoring and evaluation system for improving education programs. The evaluation of educational outcomes could be used with other information on programs to support program modification in ways that could lead to improved skill attainment. If, for example, future outcome assessments showed a significantly higher achievement level for a certain education program, DMHMR could promote the use of that program system-wide. Given the initiative and rich diversity of approaches employed by teachers in MR institutions, such successful innovations are likely.

To review outcomes, JLARC staff collected and analyzed data recorded on students' IEPs concerning the completion of educational objectives. Objectives are set by teachers, training staff, and other program personnel. Objectives are supposed to be accomplishable within one year, and teachers should record the progress of students in the IEP. The recorded completion of an objective indicates that the student has advanced one step in the process of developing a skill. Therefore, a program which overall produces a greater proportion of completed objectives relative to other programs can be considered more successful on this indicator, if all other things are equal.

It should be noted, however, that several factors outside the control of the education and training programs can interfere with the completion of objectives. The degree of a student's disability and behavioral problems may reduce the likelihood of completion. Medical problems, medication, and change of residence may also affect completions. The type of objective attempted also has an effect on the ability to complete it: objectives which reflect a high level of

expectation for the student are the most difficult to complete. Similarly, the type of programs must also be controlled in the analysis.

Other factors which may affect completions, and in turn the interpretation of the results, must also be acknowledged. First, completion measures reflect the judgement and record-keeping of teachers. Teachers and aides must document progress as well as teach. To the extent that some institutions better promote these documentation goals, interpretation of the results may also be influenced by the method of measuring completion. For example, Southeastern uses skill mastery tests which reduce the element of teachers' judgement in assessing completions. Since Southeastern is the only institution which consistently uses such tests, the inferences that can be drawn from completion results for Southeastern may be limited.

### Methodology for Evaluating Outcomes

The ultimate goal of an outcomes analysis is to provide a basis for refining educational programs in a manner that will produce the greatest impact on the development of life skills. JLARC's methodology relies on assessing the completion of established objectives from the students' IEPs. Each completion is assumed to be the accomplishment of a step in the skills development process. Even though different objectives may not be equivalent in terms of an absolute level of skill attainment, they may be considered one unit of accomplishment individualized to the capabilities of a student. The comparison of overall ratios of completed objectives to attempted objectives for the five training centers may be one indicator of the quality of the institutions' education programs. JLARC staff used experimental controls to make such comparisons more meaningful.

### Controls

Without controls for other sources of influence on completions, the comparison of the ratios would not be meaningful. Therefore, controls and a method for estimating the effect of the controls were developed. Five specific controls were added in the original design:

- student's level of disability;
- student's level of behavioral problems;
- type of educational objective (program);
- type of outcome expected; and
- criteria for judging completion (standard).

The analytical technique used to assess the relative levels of completion for the five institutions included a consideration of these controls. A procedure called logit modeling was utilized. Included in the logit model was a total of six independent variables, five controls, and an institutional variable. The six variables are

discussed in Table 42. The model results can be interpreted as the estimate of each independent variable's impact on completion after ruling out the effect of the other five variables.

Table 42

VARIABLES USED IN THE EVALUATION OF OUTCOMES

<u>Variable</u>	<u>Operational Definition</u>	<u>Source</u>
Completion (Dependent Variable)	Teachers' self-report of objective completion in student files (e.g., tooth-brushing mastered).	IEP Review
Program	Type of program for each objective (e.g., self-help, motor skills, pre-academics).	IEP Review
Standard	Criteria used to judge completion (e.g., objective measure, teacher's subjective judgement, third-party test).	IEP Review
Outcome	Type of outcome expected: incremental - increasing difficulty of trials; independent - different tasks; behavioral - progressive steps leading to overall task accomplishment.	IEP Review
Institution	Training center where student resides.	IEP Review
Level of Disability	Factor analytic index loading heavily on six variables (e.g., toileting, ambulation).	DMHMR IDB
Level of Behavioral Problem	Factor analytic index loading heavily on three behavior variables.	DMHMR IDB

*Measures.* The six independent variables used in this analysis (Table 42) were developed from two sources. The first was a review of students' records at each institution. The records included the IEP and any sources of students' progress available. Coding schemes were developed to systematically record the data for analysis. The second source was the Behavior Development Survey (BDS) conducted in each institution by DMHMR personnel. Several variables included in this survey were analyzed through factor analysis to form indices of level of disability and level of behavioral problems. Several checks on reliability and validity of the scales were conducted and positive results were produced.

*Data.* The data for the analysis was collected on a sample of students residing in each MR institution as of July 1, 1982. (The unique population at the skilled care unit at Central was removed from the sampling frame.) The frame was then arranged by age within each institution, and 33 students were systematically selected. This procedure promoted generalizability, because it ensured that a comparable group of students would be selected from each institution.

Before collecting data, a data collection form was developed to systematically record each variable to be retrieved from the IEP. The form was tested in-house on sample IEPs from each training center, and in the field in several institutions. After the refinements to the form were completed, JLARC staff were trained in coding the instrument by completing trials on which scores for consistency between raters were computed. All coders then participated in a series of field tests until they all achieved a high level of consistency in their recording of data.

Data was collected at each institution after the coders had discussed the format of the students' records with educational staff. For each student in the sample, two years of records were coded. Southside did not have sufficient records available for JLARC to review both years.

#### COMPLETION OF OBJECTIVES

Completing objectives is a major on-going goal of education programs in MR institutions. To the extent possible, the State should ensure training centers have comparable levels of success in fostering students' achievements. However, the results of JLARC's analysis indicate that the chance of completing objectives is different in the five State MR institutions. While the completions are influenced by the type of objective written and the way completions are judged, the findings raise questions about the degree to which teachers are fostering the skills which they believe students have the potential to acquire. Table 43 summarizes the completion rates of students and the quality of documentation in the IEP at each institution.

Overall, 34% of the objectives set in the IEPs that were reviewed by JLARC staff were successfully completed. Given the severe handicaps of the population being served, this level of completions may be appropriate. It may also indicate that objectives are being set too high by teachers. The range for completions actually observed in the records was 52% at Northern to 14% at Southside. These percentages do not reflect the controls included in the statistical models developed by JLARC staff. However, the rankings by institution in terms of completions before and after the statistical controls were added differ only slightly from the rank generated by the absolute completion rate (Table 44).

Overall, students in the Northern Virginia program complete a higher percentage of IEP objectives than in the other programs.

Table 43

ASSESSMENT SUMMARY:  
STUDENT ACHIEVEMENTS  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Completion Rates	⊙	⊙	○	⊙	○
IEP Documentation	●	○	⊙	⊙	○

- - Satisfactory or higher quality
- ⊙ - Deficiencies noted (attention warranted by DOE/DMHMR)
- - Significant problems (action warranted by DOE/DMHMR)

Source: Synthesis of JLARC analysis.

Table 44

ANALYSIS OF COMPLETIONS  
AND COMPLETIONS WITH CONTROLS  
(FY 1982-83)

	<u>Completions</u>	<u>Ranking of Institutions by Completions</u>	<u>Controlled* Ranking of Institutions by Completion</u>
SSTC	14%	5	3.5
CVTC	36%	3	3.5
NVTC	52%	1	1
SETC	15%	4	5
SWTC	<u>39%</u>	<u>2</u>	<u>2</u>
Average	34%		

\*Based on model parameter estimates.

Source: JLARC analysis of IEPs.

Southwestern follows Northern Virginia, with Central and Southside tied (statistically) for third. Southeastern shows the lowest probability of completions. Table 44 shows the overall completion of objectives, as well as completion rankings and controlled completion rankings. While these ratings may be illustrative of the differences between institutions, they do not explain what causes the variation in completions. For example, Southeastern requires that an independent mastery test be successfully completed prior to registering a completion. Northern's rate may be influenced by differences between the ways teachers record completions at the on-campus school and the

off-campus schools. The differences in successful completions, however, can be used as a point of departure for understanding differences between institutional completions and for developing a system to monitor student programs.

In the next section, the results of the modeling effort and some descriptive differences among the institutions will be discussed. Some of the qualitative differences across institutions that may influence the results will also be mentioned. In sum, the data indicates that teachers at Northern Virginia and Southwestern assess, on the basis of IEP documentation, a higher level of success in promoting student achievements than do educators at the other training centers.

### Analysis of Completions

Five factors were included as controls in the logit analysis of the training center's impact on completions. Each of the factors was expected to influence completions, and therefore had to be included in the analysis if it had an impact. The student's level of functioning and behavior problems were expected to have an effect on completions. As expected, the higher a student's functioning level, the more likely it was that an objective would be achieved.

Completions by institutions were also affected by IEP completion processes. After reviewing IEPs from the five MR institutions, differences in the way the documents were filled out began to emerge. Differences of this type were also expected to influence the probability of completing objectives. Two of the basic differences were in the type of objectives written and the level of specificity in the way an objective was judged completed. While these differences reflect differences in the way institutions handle IEPs, their effect should be removed, to the extent possible, from the analysis of completions.

The final factor included in the model was the way in which completions were to be judged. Some objectives had clearly defined methods of judging completions, such as completing a specified number of trials for a set number of days in a row (e.g., "will point to 'exit' sign 3 out of 4 trials"). Others were set at the teacher's discretion (e.g., "will walk downstairs independently"). A final group was unspecified (e.g., "will show improvement").

Three distinctive styles of writing objectives were observed in the IEPs: *incremental*, *behavioral*, and *independent*. *Incremental* objectives repeat the expected outcome, but the students are expected to improve their accuracy or the percentage of times they can perform a task. *Behavioral* objectives specify a series of steps which are functionally different, but which lead to completion of an overall task. *Independent* objectives specify tasks that are not necessarily related to subsequent tasks. Common examples of these styles are

cited in Table 45. A few other styles were noted, and some conflicts were observed in different places in the records. These have been coded in a separate category labeled *other*.

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Table 45

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TYPES OF OBJECTIVES

Incremental Objectives

Long-Term Goal - student will independently toilet.  
Objectives:

Student will successfully toilet 25% of all trials.  
Student will successfully toilet 50% of all trials.  
Student will successfully toilet 100% of all trials.

Behavioral Objectives

Long-Term Goal - student will independently toilet.  
Objectives:

On request, the student will enter the bathroom 100% of all trials.

On request, the student will enter the bathroom and pull his pants down, 100% of all trials.

On request, the student will perform the first two steps and then urinate successfully, 100% of all trials.

Independent Objectives

Long-Term Goal - student will independently toilet.  
Objectives:

Student will go 15 consecutive days without wetting pants.

Student will indicate his need to urinate 50% of the time without prompts.

Student will flush toilet after urination, 100% of all trials.

Source: JLARC analysis of IEPs.

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The styles of writing objectives varied across training centers. Table 46 shows that at Central Virginia and Northern



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Table 46

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STYLES OF WRITING OBJECTIVES  
(FY 1982-83)

	<u>Incremental</u>	<u>Behavioral</u>	<u>Independent</u>	<u>Other</u>
SSTC	21%	9%	63%	5%
CVTC	74%	11%	14%	*
NVTC	65%	15%	20%	*
SETC	5%	20%	53%	22%
SWTC	32%	29%	36%	2%
Averages	45%	17%	32%	6%

\*Less than 1%.

<sup>1</sup>Reflects discrepancies in source data.

Source: JLARC analysis of IEPs.

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Virginia the *incremental* style predominates. Southside and Southeastern use more *independent* objectives. Southwestern uses all three almost equally.

Each different style carries a different likelihood of completion. *Incremental* and *behavioral* objectives are more likely to be completed than *independent* or *other* objectives. When data is standardized, over 60% of the *incremental* and *behavioral* objectives are likely to be completed. The completion rates for *independent* and *other* objectives were 35% and 41%, respectively.

All five institutions used more specifically-defined judgements than any other type. However, Northern Virginia and Southeastern used fewer than the other three. Southeastern was the only institution not to specify the criteria used. However, the lack of specification may not indicate procedures are lax for judging completions. In fact, Southeastern's mastery test system may imply criteria more exacting than in other training centers. Also, this acts to lessen their completion rate. Southside writes the most independent objectives. As these have the least likelihood of completion, Southside's controlled ranking for completion rates (Table 44) becomes more consistent with those at the other training centers.

The results of the modeling exercise were somewhat different than expected in this case. The objectives with unspecified criteria were the most likely to be completed. This indicates that educators do not consistently use standard procedures for evaluating completions. The practice of documenting completions when criteria for success are not specified does not meet the purposes of the IEP document.

### Differences Among Handicap Levels

To further examine the variation across institutions, JLARC staff examined differences in completion ratios among students with different handicap levels. Results are presented in Table 47.

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Table 47

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#### COMPLETION RATES BY HANDICAP LEVEL (FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>	<u>AVG</u>
Multi-handicapped	5.7%	12.9%	28%	8.3%	36.8%	13.5%
Intermediate	18.5	35.5	34.9	52.5	13.7	34.9
Higher-Functioning	*	33.6	*	13.2	47.7	29.9

\*Insufficient data for analysis.

Source: JLARC record review.

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Overall, the multi-handicapped completed fewer objectives (13.5%) than the other two functioning groups. This was not unexpected given the severe medical, as well as intellectual handicaps of the multi-handicapped. Staff noted that many of these students receive medication for their physical illnesses. While this medication is often necessary, it does limit their ability to profit from training. For example, at Central Virginia one teacher described a problem with a particular student. Medication limited his attention span and alertness to his environment. After the student's medication was changed, however, progress was enhanced as a result of improved sensory awareness and attention to task.

The higher completion rates for the higher-functioning students indicates that training center staff are working effectively with those who have the greatest potential. The consistent findings across training centers also suggests that objectives may be set at an unrealistically high level for those students who have the most severe disabilities.

### Program Differences

A third analysis assessed student achievements across program areas. Table 48 presents completion rates by five major areas of programming: self-help, motor skills, communication and academics, behavior modification, and independent living.

Table 48

OBJECTIVE COMPLETIONS BY PROGRAM AREA  
(FY 1982-83)

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
Self Help	12.1%	22.2%	51.7%	15.5%	34.8%
Motor Skills	8.0	24.9	53.0	15.1	42.1
Communication/Academics	8.9	26.9	52.9	15.5	40.5
Behavior	*	47.0	58.6	10.3	40.3
Independent Living	6.7	40.2	56.7	16.0	42.9

\*Less than 1%

Source: JLARC analysis of IEP data.

Completion ratios in Northern Virginia were higher than at other institutions. At all training centers, however, completion rates were generally comparable across program areas. This indicates that staff are promoting achievements in a variety of skill areas and that the quality of instruction within each training center does not differ by program area. Divergent findings were observed at Central Virginia. Completion ratios for their behavior modification and independent living programs were much higher than those calculated in other areas. This indicates that, on this measure of quality, instruction is not equally effective across Central's program areas.

CONCLUSIONS AND RECOMMENDATIONS

Analysis of the completion of objectives set out in the IEP documents shows that differences exist among the five MR institutions. Students in some training centers are more likely to complete objectives than in others, even when some factors relating to the students' characteristics and the way IEPs are written are controlled. The analysis cannot pinpoint specific reasons for these discrepancies, which should be examined by DMHMR.

Education in the training centers has improved to the point that evaluation of student progress is possible and desirable. As the training centers begin to emphasize functional skill development, it is appropriate that evaluation also focus on the extent to which these skills are developed. Some standardization and improvements in the IEP process are needed to enhance the use of the IEP as an evaluation tool. In this section, several recommendations are made to improve the IEP process in a way that would make the document useful as a source of data for program monitoring and improvement. The recommendations are not designed to promote large changes in POR/IEP procedures. The purpose is to create a system by which outcomes can be assessed in a similar manner across training centers.

## Monitoring and Evaluation System

A system for monitoring the progress of students at the training centers should be developed by DMHMR in conjunction with DOE and institutional education staff. The monitoring system should rely on the IEP as the basic data collection instrument. Staff should be encouraged to develop innovative educational programs and to assess the results through the evaluation system. Findings should be disseminated throughout the MR system, as they relate to improved programs and teaching methods. The evaluation system should be carefully examined to ensure that the objectives established challenge the students to learn, but remain within their grasp.

## Standardizing the IEP

Although the IEP is a federal requirement and should already be relatively standardized, each training center has developed a different form for reporting IEP information. The differences encourage variation in what is included in the documents and how they are used. In some institutions they are the teachers' main resource for planning the students' activities; in others, they are rarely used after they are approved, and other forms are used for planning and recording progress.

If a common IEP form were used system-wide as a primary resource for documenting students' programs and achievements, the information concerning student progress would be more accurately and readily available for monitoring. In addition, if the document became the primary source for teachers' notes on the students' responses to educational methods, the quality of information would be enhanced and redundancy in documentation reduced.

## Setting of Objectives

Objectives are set in the IEPs with the expectation that they can be accomplished within one year. This process should take into account the student's disability level. However, in JLARC's analysis it was necessary to control for the disability level of the student because it was found that lower-functioning students were less likely to complete objectives. This may indicate that objectives for lower-functioning students are not being set as accurately as are those for higher-functioning students. More reasonable expectations for multi-handicapped children should be established in the IEP process.

Training centers also vary in the use of incremental, behavioral, and independent objectives. While varying the type of objective may increase the flexibility of the teacher, it reduces the value of the IEP as a planning guide if too many independent objectives are set. Objectives should be set in a manner that includes progressive steps toward the achievement of a skill. Incremental or behavioral objectives are most appropriate for this

purpose. In some instances independent objectives are appropriate, especially when the student has fewer disabilities or the objective is not directly skill-related.

### Assessing Students' Achievements

Most training centers rely on the teachers to judge when an objective has been completed. At Southeastern and Southside the mastery test is used for groupings of objectives that comprise a "skill", such as tying shoelaces or toileting. The use of mastery tests removes subjectivity in the assessment of completions and should improve the reliability of the judgements. However, the use of mastery tests should be concentrated in the program areas which contribute most directly to transitioning into a less restrictive environment, such as independent living, self-help, and behavior skills.

### Training

A key component in developing a standard IEP document across the five institutions is training the staff who will prepare the documents and use them. Teachers as well as education program administrators should be trained in the use of the IEP. Training should be developed by DMHMR and DOE central office staff and done consistently in each training center.

*Recommendation (18).* A system for monitoring the progress and learning of students at MR institutions should be developed by DMHMR in conjunction with DOE and institutional education staff. The monitoring system should have as its goal ensuring equal learning opportunities regardless of the institutional placement of a mentally retarded student. The monitoring system should rely on the IEP as the basic data collection instrument. Institutional teaching staff should be encouraged to develop and share innovative teaching practices which encourage students to meet challenging, but achievable, objectives.

*Recommendation (19).* DMHMR and staff at Southside and Southeastern should assess the low completion rates for students recorded in the IEPs to determine the extent to which they result from inadequate documentation, unreasonably high expectations for students, problems in implementation, or other reasons. The high completion rates at Northern Virginia and Southwestern should be assessed by DMHMR to determine if some instructional approaches used by staff at those institutions are appropriate for dissemination to other institutions.

*Recommendation (20).* A standard IEP recording system should be developed by DMHMR, in conjunction with DOE and institutional staff. This system should be consistently implemented across institutions. DMHMR should provide training in preparation of IEPs to ensure consistency.

*Recommendation (21).* IEP goals and objectives should reflect achievements which may be attained by students in a one-year period. Given the handicaps of the students, the use of incremental or behavioral objectives should be emphasized.

*Recommendation (22).* The use of objective and "third party" methods of evaluation should be emphasized to enhance reliability among teachers and to document that skills demonstrated in the classroom are generalizable to other settings.

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## VIII. ACTION AGENDA

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Senate Joint Resolution 13 directed JLARC to re-evaluate the training programs to provide a comprehensive assessment of their quality. Overall, JLARC staff conclude that training in the mental retardation hospitals has significantly improved since the SJR 156 study of 1976. The data indicates that the majority of students receive appropriate special education services.

In this chapter, the primary assessments of JLARC staff are summarized. The first section addresses the issues raised in the SJR 13 resolution. In the second section, discussion focuses on areas where increased supervision and technical assistance by DMHMR would result in continued improvement in the quality of training. The third section summarizes findings on the program level. Broad recommendations, in the form of a short-term action agenda, are included to direct the efforts of DMHMR and staff.

### CONCLUSIONS ADDRESSING THE SJR 13 RESOLUTION

Eight comprehensive issues were included in the SJR 13 study resolution. In addition, the resolution requested JLARC to evaluate "other matters as may be deemed appropriate". In response, JLARC staff conducted analyses to examine the processes of program development and the achievements of students during their institutional stays. Because of legislative interest in Northern Virginia, where a high percentage of students receive services in public schools, additional attention was given to comparisons with the other institutions.

#### Quality of Instruction and Materials

Overall, instruction is good. JLARC concludes that staff are individualizing instruction on the basis of handicap, and that a majority of students are receiving appropriate educational services. The quality of materials is adequate, but availability is not comparable across institutions. Data converges to suggest that Central Virginia is in need of additional resources.

#### Uniformity of Services Offered

Services are not uniform. In large part, this is due to different orientations held by education directors at the different institutions. In some programs, for some types of students, staff at institutions underemphasize specific content areas, which may indicate problems in instruction.

### Eligibility of Students For Mainstreaming

At Northern Virginia, Southwestern, and Southeastern, a relatively high and appropriate proportion of students receive special education services in the public schools. Similar students at Southside and Central, however, did not have this opportunity during the 1982-83 school year due to the refusal of public schools to accept them on a routine basis. This is a problem which must be addressed by DMHMR, DOE, and the local school divisions involved.

### Appropriateness of the Administrative Authority

The implementation of programs, on both the State and institutional levels, is appropriate and relatively well-managed. JLARC concludes, however, that DMHMR should initiate broader supervisory and technical assistance activities to ensure comparable resources across institutions, improvements in curriculum, and adequate communication and dissemination of ideas and instructional approaches among institutions.

The administrative structure differs from that of the MH system since DMHMR, rather than DOE, has primary responsibility for supervision of education programs. JLARC staff concludes that, given the different populations in the two systems, the General Assembly should maintain the current dichotomy in administrative structure.

### Appropriateness of the Funding Mechanisms

Funding mechanisms are appropriate and have resulted in a relatively fair distribution of funds to the training programs in DMHMR hospitals.

### Provision of Services to All Students

All eligible students appear to be receiving educational services for 5.5 hours per day as required by law. However, many multi-handicapped students do not receive this duration of services due to medical waivers.

### Development of Education Programs

The process for developing Individual Education Programs (IEPs) is generally appropriate at the training centers. However, problems were documented at most institutions in one or more of the following areas: curriculum development, communication with family, and coordination between treatment and training staff. In addition, poor documentation procedures were evident at most institutions. These problems may diminish the quality of instruction and program carry-over and should be addressed by institution staff and DMHMR.



### Student Achievements

In addition to assessing educational inputs, JLARC also assessed educational outcomes -- student achievements as measured by the completion of IEP objectives. The frequency with which students successfully complete objectives set by their teachers differs significantly across institutions. Students at Northern Virginia complete the highest proportion of objectives, while teachers at Southside and Southeastern record a low rate of completions. JLARC's efforts at assessing completions were limited by poor IEP documentation procedures at most training centers. DMHMR should focus on improving these procedures and standards to provide valid assessments of students' progress in the future. In addition, DMHMR and institutional staff should study completion of objectives and assess the extent to which objective completions are reflections of poor IEP procedures or teaching approaches.

### Cost-Effectiveness of the Programs

The programs appear to be cost-effective in terms of the services offered. On a per pupil-year basis, it costs the State an average of \$39,510 to treat and educate a student for a year. About 76% of this total is directed to residential and treatment services.

## ADMINISTRATION OF TRAINING PROGRAMS

The current administrative structure, whereby DMHMR assumes full responsibility for the programs, is appropriate given the severe handicaps and training needs of the population. JLARC analysis indicates that administrative staff have fulfilled their responsibilities. For example, the funding mechanisms have resulted in a narrow range of costs across hospitals, which is impressive given the different number of students served, the five separate program administrations, and the varying physical conditions. Staff have proper certifications, and staffing levels are in compliance with DOE standards.

Increased supervision and technical assistance by DMHMR would result in continuing improvement in the quality of programs. Overall, educational resources appear to be adequately available, but they are not comparable across training centers. Thus, similar students at different institutions are not always afforded the same level of service. Similarly, the quality and relevancy of curriculums differ across institutions. As noted in Chapter IV, DOE has not carried out its obligation to develop curriculums; DMHMR in association with DOE, should take steps to address these problems. Three other areas -- IEP documentation, staffing, and communication between institutions -- also warrant the attention of DMHMR.

## IEP Documentation

Assessment of student achievements should also be a priority of DMHMR. Greater focus on achievements could lead to a better understanding of which specific instructional approaches are best suited for specific types of students. JLARC's analysis of student achievements could not identify the most effective approaches due to inadequate IEP documentation. Standardization of IEP procedures would not affect the types of instructional approaches used by the different training centers, but would be an integral step to clearly documenting the achievements of students. This information could be used by DMHMR for use in improving programs system-wide.

## Staffing

Staffing ratios are consistent with state requirements. However, about one-quarter of the teachers felt that classes were overcrowded. This complaint was most salient among those who instructed "behavior problem" students. These teachers noted that one problem student in the classroom often results in the other students being underserved.

DMHMR predicts that the student population in the MR institutions will decrease over the next ten years. Moreover, the remaining population is expected to be more severely handicapped. These trends must be considered by DMHMR and DOE in setting future staffing levels. While the decrease in population should lead to an overall staffing reduction, the existence of a greater proportion of problem students may require more teachers per classroom.

Greater use of aides is an option which should be explored. The use of aides varies across institutions. At Southeastern, aides are used extensively and are trained to have instructional competencies. For example, teachers are responsible for program development, while aides implement many programs. This contributed to the finding that all teachers at Southeastern thought that class size was reasonable.

Southeastern's use of aides should be studied by DMHMR. For example, training for the multi-handicapped requires expertise in program development, but in most cases, not in program implementation. The use of aides for this group, as well as in classrooms with "problem" students, could result in cost economies without diminishing the quality of services.

## Communication Among Institutions

DMHMR's policies allowing training programs to be developed autonomously across the five training centers have resulted in significant variation within the system. Education directors have initiated different types of programs in response to the availability (or lack)

of certain resources, but equally important, as a result of different orientations concerning the training of mentally retarded students.

At Southeastern, over half of the students are educated on the living unit. This reflects the educators' belief that self-care and independent living skills are most valuable for this population. Since resources for instruction in this area are readily available in the residential units, classroom instruction is de-emphasized relative to the other institutions. A negative consequence, however, is that students are not exposed to other settings which may be of benefit to them.

In comparison, staff at Southside have chosen to educate most students in campus classrooms. In part, this is due to the absence of public school placements. It also reflects the staff's assessment that students must have classroom experiences in pre-academics and communication to make a successful transition to the public school. As a result, however, training in independent living is de-emphasized.

Northern Virginia illustrates another model for training the mentally retarded. In FY 82-83, about 40% of the students were educated in the public schools. According to the education director, this percentage is to be increased in FY 84-85. Placing students in the public school system reflects a greater compliance with LRE requirements, but has contributed to problems in other areas. For example, communication and coordination between treatment and education staff are inadequate, since procedures have not been fully implemented to transfer relevant information. It also appears that the attention on mainstreaming students to the public schools has resulted in a lack of attention to students in the campus school. These students do not receive the comprehensive programming offered to public school students.

As the above examples illustrate, tradeoffs are inevitable in all methods of training the mentally retarded. The variability existing in the system should be used as a foundation for enriching it. Program strengths and effective procedures existing at one institution should be communicated and incorporated into the training programs at the other institutions.

Currently, communication among centers is limited. DMHMR should actively seek to transfer ideas and procedures across institutions. Improvements in these areas would enhance the overall quality of the training programs.

#### QUALITY OF PROGRAM IMPLEMENTATION

Overall, the quality of program implementation at the institutions is good. As summarized in Table 49, Southeastern and Southwestern received positive assessments on a majority of measures used by JLARC staff. Implementation of quality programs is aided by

Table 49

SUMMARY ANALYSIS:  
OVERVIEW OF PROGRAM QUALITY

	<u>SSTC</u>	<u>CVTC</u>	<u>NVTC</u>	<u>SETC</u>	<u>SWTC</u>
<u>Costs</u>					
- Training	\$ 9,059	\$11,058	\$ 9,759	\$ 4,541	\$ 8,275
- Overall	\$35,317	\$43,283	\$42,566	\$36,010	\$39,346
<u>LRE Availability</u>					
- Campus school	○	●	○	⊙	○
- Public school	●	●	○	○	○
<u>Quality Of Campus Setting</u>					
	○	●	● <sup>1</sup>	⊙	⊙
<u>Availability Of Campus Resources</u>					
- Motor skills	⊙	⊙	⊙	○	⊙
- Independent living	○	⊙	⊙	○	○
- Pre-academic	○	⊙	⊙	○	○
<u>Staffing</u>					
- Competency	○	○	○	○	○
- Adequacy (staffing ratios)	○	○	○	○	○
<u>Program Development</u>					
- Curriculum	⊙	⊙	⊙ <sup>1</sup>	○	○
- Development of IEPs					
Assessment information	○	○	○	○	○
Staff participation	○	○	●	○	○
- Family participation	⊙	⊙	○	⊙	○
- Staff communication	○	⊙	●	○	○
<u>Quality Of Instruction</u>					
- Overall degree of individualization	○	○	○	○	○
- Multi-handicapped	⊙	⊙	⊙	⊙	○
- Intermediate	⊙	○	⊙	○	⊙
- Higher-functioning	n/a	⊙	n/a	⊙	⊙
<u>Student Achievements</u>					
- Completion rate	⊙	⊙	○	⊙	○
- IEP documentation	●	○	⊙	⊙	○

- - Satisfactory or higher quality
- ⊙ - Deficiencies noted (attention warranted by DOE/DMHMR)
- - Significant problems (action warranted by DOE/DMHMR)
- n/a - Insufficient number of students for analysis

<sup>1</sup>Refers to Center School only.

Source: Synthesis of data from JLARC analysis.

the small average daily membership in the programs. While Northern Virginia's public school placements offer a comparable level of services, the institution-based programs need improvement. Programs are also good at Central Virginia and Southside, but staff must continue efforts to overcome communication and implementation difficulties presented by the large number of students in the institutions.

### Northern Virginia

Northern Virginia is best viewed as two separate programs -- the public school model and the institutional-based Center School. Northern Virginia mainstreams a high percentage of students into the public schools and clearly fulfills a high degree of LRE requirements. Educational resources are excellent at the public schools, and students receive varied and appropriate instructional activities.

In comparison, training at the Center School is of a lower quality. Many of the educational settings are not maintained. More importantly, there is little communication between education and training staff, suggesting little carry-over between settings. The quality of the curriculum and the process for developing IEPs should also be enhanced. Finally, there is little standardization among staff in IEP documentation procedures. Administrative staff at Northern Virginia recognize the problems at the Center School and have initiated actions to improve quality. These actions should be sustained until the students in the Center School receive training which is comparable to that received in public school settings.

Student completion rates were higher at Northern Virginia than the other institutions, indicating the staff felt that students had obtained many of the objectives set for them. Further, this suggests that teachers at the Center School may have been able to overcome some of the problems noted above. However, a high number of objectives were vague or evaluated subjectively. This finding attenuates somewhat the high completion rate. Staff should be more precise in documenting IEPs in order to obtain a more valid measure of student progress.

Overall, Northern has a fine program, and in some respects, such as objective completions, may be a superior program. However, there are also problems at Northern. Overall, there is insufficient evidence to suggest that Northern should be viewed as a model for other programs. Its LRE progress and objective completions should be emulated, but within the context of programs at other institutions, which have their own strengths as well.

### Southwestern and Southeastern

Southeastern and Southwestern received consistently favorable assessments from JLARC staff. These are the newest institutions in the State and provide further evidence that the General Assembly and DMHMR

have taken appropriate actions to improve training for the mentally retarded. Staff at both institutions have initiated proper procedures for developing IEPs, and coordination between treatment and education staff is good. Further, the training centers have developed excellent relations with the community and place a relatively high percentage of students in the public schools.

JLARC did note problems at both institutions. At Southwestern, higher-functioning students do not receive programming which is as comprehensive as that offered to similar students at other institutions. The education director should assess the nature of programming for the higher-functioning. At Southeastern, teachers documented a low rate of objective completions for their students. Contributing to this are the teachers' high expectations for students (as reflected by independent objectives) and the rigorous evaluation techniques used to assess performance. The education staff should write IEP objectives at levels that can detect incremental changes in the students. The unit-based education of students also raises questions regarding LRE opportunities and should be assessed by DMHMR.

#### Southside and Central Virginia

Southside and Central Virginia have greater obstacles to high quality programming than the other institutions. Foremost is the large number of residents. Coordination of student information and communication among staff become progressively more difficult tasks as the total number of students and educational settings increases. Additionally, the local schools refuse to accept students from the institutions who are not residents of their jurisdictions. This diminishes the ability of staff to adhere to LRE requirements and necessitates the need for additional resources to serve the highest-functioning students.

Staff at both institutions have done excellent jobs in overcoming these and other barriers. For example, Southside places almost 80% of its students in campus classrooms which are well-maintained by teachers. Staff communication is also good. In some areas, however, programming is not as comprehensive as in other institutions. Students' completion rates are low. In part, this is due to the poor quality of IEP documentation. For example, only current IEPs are retained; thus JLARC staff could only assess the students' progress over a one-year period rather than two years.

While staff at Central Virginia provide high quality instruction in terms of individualizing instruction and offering comprehensive programs to students, there are a number of constraints facing them. Foremost is the physical plant. Education space is limited. Nearly 60% of the students receive all educational services on the living units. This is a higher proportion than at the other institutions, and many educational settings on the living units are crowded.

Given the constrained educational space, staff must transport a high number of students to ensure that they receive some classroom instruction. This need is amplified by the fact that the education space is in a number of different buildings. The large number of students leads to a greater need for acquisition and replacement of educational resources. Relative to the other institutions, teachers feel that there is a general lack of necessary resources at Central Virginia.

These problems must be addressed by DMHMR. Concurrently, education staff must make efforts to develop an appropriate curriculum for their populations. Additionally, procedures must be enacted to allow more adequate communication and coordination between education and treatment staff.

#### ACTIONS RECOMMENDED FOR DMHMR

This chapter has provided a broad overview of the mental retardation system. Overall, the quality of training is good. Salient problems, however, must be addressed to maintain and enhance procedures and programs in the institutions. Specific recommendations to this end are provided throughout the report.

DMHMR should provide leadership in these areas to ensure that institution staff are provided with adequate educational resources and materials. Additionally, DMHMR should monitor more closely the programs implemented by staff to ensure that comprehensive programming is offered to all students across institutions.

The three recommendations listed below address primary concerns and should focus the short-term actions by DMHMR.

*Recommendation (23):* DMHMR should increase its level of supervision and technical assistance by:

- (1) assessing and documenting the key resource needs existing in the institutions, and assisting education directors in choosing additional resources for acquisition;
- (2) working with DOE and education directors to improve the quality of curriculums;
- (3) developing standard procedures for documenting students' programs and goals in the IEP; and
- (4) developing a communication network including central office staff, education directors, and teachers, by which ideas, innovative programs and resource issues may be discussed on a regular basis.

*Recommendation (24):* DMHMR must develop a long-term plan for responding to the projected decrease in the student population. This plan must include:

- (1) estimates, by institution, of projected population census and disability levels;
- (2) mechanisms for ensuring comparable services and resources across institutions;
- (3) policies concerning the reduction of education staff; and
- (4) policies concerning the use of educational aides.

*Recommendation (25):* DMHMR should regularly monitor the actions of education directors in their efforts to ensure that adequate procedures for developing programs are initiated or maintained at all institutions and that comprehensive programming is offered to all students.

#### ISSUES FOR LEGISLATIVE CONSIDERATION

Many of the issues raised and recommendations proposed in this report can be addressed by the agencies and institutions affected. There are, however, issues beyond their direct control. Such issues cannot be ignored by the agencies, but warrant specific legislative consideration.

The Virginia General Assembly has shown an enduring interest in the quality of mental retardation institutions and the programs within them. As documented in the introduction to this report, the SJR 13 study is but the most recent of a long series of legislative initiatives in this area. Thus, general legislative oversight can be expected regarding all of the issues raised in this report. However, specific legislative attention should be focused on (1) issues beyond the control of the agencies affected and (2) issues which the agencies have insufficiently addressed in the past. Among the issues warranting specific legislative attention are:

- DMHMR's failure to actively supervise, monitor and evaluate MR education programs;
- DOE's failure to develop adequate curriculums for MR students;
- the unwillingness of certain localities to accept placements of mentally retarded students in public school classrooms if the students are not legal residents of their jurisdictions;



- the need for capital outlay priority for MR education facilities, particularly at Central Virginia Training Center; and
- the possibility of a special grants fund for teaching innovations and equipment development.

While DMHMR is active in assuring compliance with state and federal requirements, it provides no broad supervision or oversight of the development and implementation of training programs across institutions. Increased central office involvement in monitoring and evaluating education programs and in providing technical assistance will lead to improvements in the overall quality and comparability of MR training programs across institutions.

*Recommendation A.* The General Assembly may wish to clarify for DMHMR its responsibility to actively supervise the development and implementation of training programs and to evaluate program effectiveness across MR institutions.

In 1976, SJR 156 recommended that DOE develop and adopt specific curriculum guidelines for the severely handicapped, multi-handicapped, and very young handicapped populations. While progress has been made, this process is not yet complete.

*Recommendation B.* The General Assembly may wish to consider requiring, through the addition of language to the 1985 Appropriations Act or another statutory mechanism, that the Department of Education complete the development of curriculums for MR populations prior to the 1986 Session. Development of curriculums should be done in coordination with DMHMR and should provide a range of programs and suggested program sequences for different functioning levels and handicaps.

Despite efforts by DOE and DMHMR, some localities have been reluctant to place eligible mentally retarded students from Central Virginia and Southside training centers in local public schools. This reluctance is counter to federal and State law and policy.

*Recommendation C.* The General Assembly may wish to consider mandating more aggressive action on the part of DOE and DMHMR to promote placement of eligible MR students in public schools. Among the actions DOE and DMHMR should take is a realistic assessment of the costs of placing MR students in public schools. Should these costs exceed those currently reimbursed, the General Assembly may wish to increase the LRE fund or consider establishing a special incentive fund for this purpose. If DOE needs additional authority to ensure appropriate public school placements, it should request such authority from the General Assembly.

Overall, institutions available for education of MR students are only adequate. Additional classroom facilities are particularly needed at Central Virginia Training Center.

*Recommendation D.* The General Assembly may wish to give capital outlay priority to projects relating to improvement of educational facilities for MR students in general, and to development or renovation of classroom space at Central Virginia Training Center in particular.

JLARC staff observed numerous innovations by teaching staff at MR facilities. Unfortunately, there is not a systematic mechanism for transferring these innovations. While DMHMR and DOE should take administrative steps to assure improved training and the transfer of such innovations, the General Assembly may also wish to play a leadership role.

*Recommendation E.* The General Assembly may wish to consider the establishment of a special teacher grant fund for the support of the development and transfer of innovative teaching aids and procedures. The fund should be directed at the practitioner (teacher) level and be administered by a committee consisting of representatives from DOE, DMHMR, and appropriate parent or interest groups. An initial sum of \$25,000 might be considered, with adjustments based on the success of the program.

Overall, the General Assembly, staff at DMHMR, DOE, and the MR training center, and others who have worked for improvements in the MR system can take pride in the improved education MR residents receive. The recommendations in this report are largely directed at building on this existing foundation.

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## IX. APPENDIXES

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**SENATE JOINT RESOLUTION NO. 13**

Offered January 14, 1983

*Directing the Joint Legislative Audit and Review Commission to evaluate the educational programs provided for children residing in the facilities of the Department of Mental Health and Mental Retardation.*

Patrons—Michie, Brault, DuVal, and Chichester; Delegates: Terry, Diamonstein, Marshall, McDiarmid, Lambert, and Giesen

Referred to the Committee on Rules

WHEREAS, the educational programs in the Mental Health facilities are funded as an appropriation to the Department of Education and operated by the local school divisions; and

WHEREAS, the educational programs in Mental Retardation facilities are funded as an appropriation to the Department of Mental Health and Mental Retardation and operated by the employees of this department; and

WHEREAS, the one exception to this system is in the Northern Virginia Training Center, where the County of Fairfax contracts pursuant to § 22.1-7 with the Department of Mental Health and Mental Retardation to operate the educational programs and mainstreams the largest number of institutional residents in the Commonwealth;

WHEREAS, the educational programs in these facilities have been criticized as to quality, administrative responsibility, uniformity of services and suitability of the environment; and

WHEREAS, providing the educational programs for handicapped children in the least restrictive environment is a policy which appears in the best interest of the children and the Commonwealth because institutionalization is costly; and

WHEREAS, the Joint Legislative Subcommittee Studying the Residential Placement of Handicapped Children has examined issues concerned with the operation, funding and quality of the educational programs and related services in the Department of Mental Health and Mental Retardation facilities and has come to believe that an accurate evaluation of these programs is essential; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Joint Legislative Audit and Review Commission is directed to evaluate the programs of education or training for handicapped children provided by the facilities of the Department of Mental Health and Mental Retardation with special attention to: (1) the quality of instruction and materials; (2) the uniformity of the offered services; (3) the suitability of the environment in which the programs are conducted; (4) the eligibility of the students for mainstreaming; (5) the appropriateness of the administrative authority; (6) the appropriateness of the funding mechanism; (7) the cost-effectiveness of the programs in relationship to the services provided; (8) whether all such school age children are receiving education or training as required by law; and (9) such other matters as may be deemed appropriate; and, be it

RESOLVED FINALLY, That for purposes of coordinating this study with the appropriate

Senate Joint Resolution 13

1 standing committees, an eight member liaison committee shall be appointed as follows: two  
2 members of the Senate Committee on Finance, one member of the Senate Committee on  
3 Rehabilitation and Social Services, and one member of the Senate Committee on Education  
4 and Health, all to be appointed by the Senate Committee on Privileges and Elections and  
5 two members of the House Committeee on Appropriations, one member of the House  
6 Committee on Health, Welfare and Institutions and one member of the House Committee on  
7 Education, all to be appointed by the respective chairmen.

8 The cost of this study for the coordinating legislative members shall not exceed \$6,400.

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Date: _____	Date: _____
Clerk of the Senate	Clerk of the House of Delegates

## APPENDIX B:

### TECHNICAL APPENDIX SUMMARY

JLARC Policy and sound research practice require a technical explanation of research methodology. The full technical appendix of this report is in preparation and will be available upon request from JLARC, Suite 1100, 910 Capitol Street, Richmond, Virginia 23219.

The technical appendix includes a detailed explanation of special methods and research employed in conducting the study. The following areas are covered:

1. Review of Educational and Clinical Records. A sample of 165 students were selected from the five training centers. The Individual Education Plans (IEPs) and Problem-Oriented Records (PORs) for this sample were received for the school years 1981-82 and 1982-83. The reviews included the systematic collection of student data in the following areas: Demographic characteristics and diagnoses, educational strengths and needs, educational goals, and training programs received. The data was then coded on computer. Analysis focused on compilation of descriptive data from the individual and program level.

2. Analysis of Student Achievements. The reviews of IEPs also included systematic reviews of instructional objectives set for each as well as teachers' assessments of student success in meeting objectives. Over 5,000 objectives were reviewed. This data was coded on computer. Quantitative measures of student achievements were developed by computing the percentage of educational goals successfully completed. A LOGIT analysis was completed to identify factors which explained overall completion rates across training centers.

3. Functioning Levels of Students. Data on the functional abilities of students was received by DMHMR on computer tape from their Individual Data Base (IDB). The IDB contains ratings of students' abilities on over 75 variables. JLARC staff assigned students to one of three functioning groups using selected variables from the IDB. To statistically test these judgements, the IDB was analyzed through factor analysis. The purpose of this analysis was to test the degree of convergence between those variables selected by JLARC staff as distinguishing functioning levels and those variables identified through statistical procedures. Six of the seven variables used by JLARC were identified through factor analysis to form a single, highly related factor which clearly differentiated the functioning levels of different students.

4. Assessments by Educators. JLARC developed a survey to collect quantitative measures of educators' assessments of their programs. The survey asked educators to respond to the structured questions addressing all study issues. The survey was pretested with a sample of educators, then mailed to all staff who provided special education in the training centers. The data was coded on computer. Simple arithmetic computations (means, percentages) were used to demonstrate State trends and differences in educators' opinions across training centers.

5. Program Costs. A comprehensive analysis was conducted to examine the sources and magnitude of funding for the special education programs at the training centers. This analysis focused on the costs incurred in providing educational and residential services. Both direct and indirect costs were analyzed. Data was collected from the financial records of the training centers and from financial officers at the Department of Mental Health and Mental Retardation and the Department of Education. The data was analyzed through accepted accounting procedures and reviewed by Central Office Staff at DMHMR.

6. Assessment of Educational Settings. JLARC staff visited each training center an average of three different times. An instrument was developed and pre-tested by JLARC staff to assess all educational environments where students were taught. Specific attention was given to size, atmosphere, and safety to determine the appropriateness of each setting.

## APPENDIX C

### AGENCY RESPONSE

As part of an extensive data validation process, each State agency involved in JLARC's review and evaluation effort is given the opportunity to comment on an exposure draft of the report.

Appropriate technical corrections resulting from the written comments have been made in the final report. Page references in the agency response relate to the exposure draft and may not correspond to page numbers in the final report.



**Department of Mental Health and Mental Retardation Response**  
**to the Recommendations in the**  
**Special Education in Virginia's Mental Retardation Training Centers Report**  
**by the Joint Legislative Audit and Review Commission**

The recommendation in the exposure draft - Special Education in Virginia's Mental Retardation Training Centers prepared by JLARC, listed a number of recommendations which are primarily the responsibility of the Department of Mental Health and Mental Retardation. However, there were several recommendations which are the joint responsibility of this Department and the Department of Education. Those are identified below with either specific action which will be undertaken or an explanation of factors which need consideration before specific action can be considered. Where necessary, we have coordinated with the Department of Education to address the education issues.

**CURRICULUM**

**Recommendation:** DMHMR should increase its levels of supervision and technical assistance by working with DOE and education directors to improve the quality of curricula.

**Response:** The mental retardation report suggests a uniform curriculum be developed for state training centers. It is the Department of Mental Health and Mental Retardation's understanding that draft guidelines for Severely/Profound Handicapped have been developed by the Department of Education and should be completed by January, 1985. These guidelines from the Department of Education will be helpful in determining a benchmark for training center Curricula. Education has confirmed that this Department will have an opportunity to review these guidelines and have input into the development.

In conjunction with these guidelines, I will have the Special Education Administrator in our Central Office enlist the assistance of the task force of available experts in Virginia colleges/universities, community programs and elsewhere to define a baseline of educational services for the Severely/Profound Handicapped and begin to establish program standards of quality with which all education programs can clearly identify and relate.

### TRAINING/COMMUNICATION

**Recommendation: Developing a communication network including central office staff and education directors and teachers by which ideas, innovative programs, and resource issues may be discussed on a regular basis.**

**Response:** The JLARC staff suggest the need for the Department of Mental Health and Mental Retardation to provide additional in-service training for teachers. The Department of Mental Health and Mental Retardation will explore funding for such in-service with our Training Office and determine a procedure for offering additional in-service programs to training center teaching staffs. A communication network will be developed to include Central Office Staff, Education Directors, and Teachers to discuss innovative programs and resource issues.

A series of workshops will be organized beginning in January, 1985 for teachers to visit other facilities and share ideas on the latest methods and techniques for educating the Severely/Profoundly Handicapped. All training centers are now offering teachers six hours of college credit for endorsement in Severely/Profoundly Handicapped as required by the Department of Education.

These classes will be completed by September, 1985. In addition to these classes, training centers offer yearly stipends to teachers to take academic course work in special education and related services.

### **STAFF REDUCTIONS/DECLINING SCHOOL AGE POPULATION**

**Recommendation:** DMHMR must develop a long-term plan for responding to the projected decrease in the student population. This plan must include:

- 1) **Estimates, by institutions, of projected population census and disability levels.**
- 2) **Policies concerning the reduction of education staff.**
- 3) **Policies concerning the use of educational aides.**

**Response:** The Employee Relations Director in Central Office will be requested to develop a five year personnel plan in conjunction with the Special Education Administrator and each training center director to respond to the projected decrease in the student population. This plan will include policies concerning the reduction of education staff and the use of educational aides to ensure comparable services and teaching resources for all training centers.

### **LEAST RESTRICTIVE ENVIRONMENT**

**Recommendation:** The General Assembly may wish to consider mandating more aggressive action on the part of DOE and DMHMR to promote placement of eligible MR students in public schools. Among actions DOE and DMHMR should take is a realistic assessment of the costs of placing MR students in public schools. Should these costs exceed those currently reimbursed, the General Assembly may

**wish to increase the LRE fund or consider establishing a special incentive fund for this purpose. IF DOE needs additional authority to ensure appropriate public school placements it should request such authority from the General Assembly.**

Response: The Department of Mental Health and Mental Retardation will continue efforts to cooperate with the Department of Education and local public schools and to coordinate the implementation of least restrictive education for mentally retarded students in training centers identified as appropriate for LRE. The Department of Mental Health and Mental Retardation and the Department of Education will review, by January, 1985, the state agreement on LRE developed in February, 1980 to determine if such an agreement should be revised and updated. Training Center Education Directors will compile a list of students each year who have been identified by Interdisciplinary Teams as appropriate for LRE. This list of eligible students compiled by the training centers will be shared with local public school administrators to determine if LRE placement is available. The Department of Mental Health and Mental Retardation, if necessary, will request additional appropriations in the 1986-88 biennium budget to reimburse local public schools for providing LRE services to appropriate school age training center residents.

### RESOURCES

Recommendation: **Assessing and documenting the key resource needs existing in the institutions, and assisting education directors in choosing additional resources for acquisition.**

Response: A survey by the Special Education Administrator will be conducted by February 1985, of each training center's education program to determine teaching materials and equipment needs that require future purchase. These needs will be prioritized by facility to decide which require funding. A survey of classroom space allocation will also be made at this time by this department's education task force, and cost estimations will be made for funding considerations.

### **IEP (INDIVIDUALIZED EDUCATION PLAN)**

Recommendation: **Developing standard procedures for documenting students programs and goals in IEP.**

Response: The Department of Mental Health and Mental Retardation disagrees with the JLARC staff recommendation to standardize the IEP's in training centers. Much uniformity already exists in the IEP's in all state training centers based on state and federal regulations. All IEP's must contain educational goals and objectives, adaptive/physical education goals, and annual reviews, etc. The standardization of the IEP would create problems, since current mental retardation practices place major importance on the Interdisciplinary Team approach to assessing the individual needs of each resident. The efforts to create a uniform IEP may conflict with ACMRDD (Accreditation Council for Mental Retardation/Developmentally Disabled) standards, which require extensive individualization of program goals to meet the unique program needs of each retarded resident. The IEP differences found in each training center are no less comparable to the IEP differences which are found in most local school divisions. However, the Department of Mental Health and Mental Retardation education task force will consider the feasibility of making changes in the IEP, and if appropriate implement a standardized IEP report form.

### **MONITORING AND SUPERVISION**

**Recommendation:** DMHMR should regularly monitor the actions of education directors to ensure that adequate procedures for developing programs are initiated or maintained at all institutions and that comprehensive training is offered to all students.

**Response:** The Department of Mental Health and Mental Retardation in conjunction with the Department of Education will increase its monitoring and supervision of the education programs at the five state training centers. The education task force will work closely with Department of Mental Health and Mental Retardation, Office of Quality Assurance to develop and implement by September, 1985 appropriate monitoring and evaluation procedures for all education program.

### **RECOMMENDATION FOR COOPERATIVE CONSIDERATION**

In addition to these recommendations to which the Department has primary responsibility, we will address the following joint areas of responsibility with the Department of Education, through the aforementioned task force.

- o Update interagency agreement on LRE
- o Establish a coordinated system for monitoring and supervision between Department of Mental Health and Mental Retardation and Department of Education Central Office
- o Develop cooperative training activities and explore program for special teacher grant fund
- o Improve curriculum and IEP's.

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