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## ABSTRACT

This volume summarizes information provided by state education agencies on student achievement in Chapter 1 Migrant Education Programs. For the regular term, 34 states (out of 48) provided statewide achievement information using norm-referenced tests (29 states), criterion-referenced tests (8 states), and locally developed instruments (1 state). For the summer term, 14 states (out of 47) provided statewide achievement information. Several underlying factors affect the assessment of achievement outcomes in migrant education programs. The most important are the lack of standardized reporting requirements for achievement, tendency for currently migrant students to be underrepresented due to mobility and language deficits, incompatibility of standardized test schedules with the short-term nature of many migrant projects or the cyclical patterns of migrant movement, and a poor match between testing and services received. This report presents summary findings for those states reporting regular-term achievement results, expressed in normal curve equivalent scores, using a pre- and posttest norm-referenced model. Such data were reported for about 30,000 migrant students in 16 states tested on an annual cycle in reading and for slightly over 17,000 tested in mathematics, and for over 2,800 students in 9 states tested on a fall-spring test cycle in reading and for slightly over 2,000 students in 10 states tested similarly in mathematics. Following summary information, individual state information includes enrollments, services provided, and achievement results. Includes extensive data tables. (SV)

# A SUMMARY OF STATE CHAPTER 1 MIGRANT EDUCATION PROGRAM PARTICIPATION AND ACHIEVEMENT INFORMATION

1988-89

## VOLUME 2: ACHIEVEMENT

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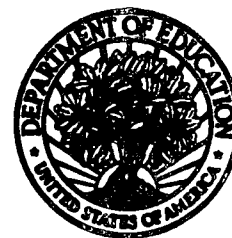
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**A SUMMARY OF STATE CHAPTER 1 MIGRANT EDUCATION  
PROGRAM PARTICIPATION AND ACHIEVEMENT  
INFORMATION**

**1988-89**

**VOLUME 2: ACHIEVEMENT**

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**Office of Policy and Planning, Planning and Evaluation Service**

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**A SUMMARY OF STATE CHAPTER 1 MIGRANT EDUCATION  
PROGRAM PARTICIPATION AND ACHIEVEMENT  
INFORMATION FOR 1988-89**

**EXECUTIVE SUMMARY**

This report encompasses two volumes and summarizes the participation and achievement information provided by state education agencies (SEAs) on the ESEA Chapter 1 Migrant Education Program (as amended in 1988) for the 1988-89 school year. The 1988-89 school year was the fifth year in which SEAs were required to submit information using the State Performance Report.<sup>1</sup>

Volume 1 provides participation information, while this volume presents state-by-state descriptions of the types and results of the achievement information submitted by SEAs.

Thirty-four states (out of 48) provided statewide achievement information for the regular term,<sup>2</sup> using various types of tests. Norm referenced tests were used in 29 states, 18 of which provided matched pre- and posttest norm curve equivalent (NCE) scores. Eight states used criterion referenced tests, and one state used locally-developed instruments. In the summer term, 14 states (out of 47) provided statewide achievement information.<sup>3</sup> Summer term achievement testing was distributed among norm referenced tests (seven states), criterion referenced tests (eight states), and locally-developed instruments (three states).

State achievement data should not be interpreted as an indication of the relative performance of individual state migrant programs for the following reasons:

- **Statistical insignificance.** Many of the state achievement statistics are based on very small samples. In these cases there can be little confidence that the data provide an accurate estimate of the achievement of all migrant children in a given category. For example, of the 502 sets of average reading and math scores calculated by grade and by state, 36 percent are based on a sample of ten or fewer (see Appendix B). The effect

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<sup>1</sup>In 1988-89, State Performance Reports were received from 49 states, the District of Columbia, and Puerto Rico. Hawaii does not participate in the migrant education program.

<sup>2</sup>Montana, Nebraska, and Utah did not operate migrant education projects in the regular term.

<sup>3</sup>Louisiana, Mississippi, Oklahoma, and Puerto Rico did not operate migrant education projects in the summer term.

of low test participation can be seen in erratic fluctuations in average scores and pretest percentiles, which are often well above the mean.

- **Selectivity bias.** Achievement data may disproportionately include settled-out migrant children (formerly migrants), for whom matched pre- and posttest scores can be more easily obtained. To the extent that settled-out migrant children are less disadvantaged, achievement data is not representative of all migrant children.
- **Mobility.** To the extent that state averages reflect the scores of students who attended education programs in several states, the effect of a particular state's program cannot be separated from the effects of other states' programs (under current data collection and reporting requirements).
- **Testing variation.** Considerable variation in state testing practices exists, reducing the interstate comparability of test results. Annual tests, for example, may be administered at different points in the school year. The tests themselves also vary, and some experts question the validity of aggregations or comparisons across different norm-referenced tests.
- **Non-match between testing and services received.** Students tested in reading and math have not necessarily participated in migrant programs in those subjects. For example, in three states the number of math test participants is substantially larger than the number of migrants receiving supplemental math services.

Several underlying factors affect the assessment of achievement outcomes in migrant education projects. Among the most important factors are:

- Since there were no standardized reporting requirements, states provided information from a variety of test types (such as norm referenced, criterion referenced, and locally-developed), using a range of test measures (such as normal curve equivalents, grade equivalents, number of objectives mastered, and number of skills mastered);

- Currently migrant students were typically the least likely to be part of project evaluation testing (especially testing with a pre- and posttest design) because of their mobility and their language deficits;
- Standardized tests, with norms for fall and/or spring testing, may not be compatible with the short term basis of many migrant projects or the cyclical patterns of migrant movement; and
- Most states submitted results for participants tested in reading and mathematics. However, projects funded by the Chapter 1 migrant education program tended to be highly diversified. Therefore, evaluations of performance in these two subject areas may be inappropriate or inadequate measures of the impact of the services provided.

While these factors preclude the development of a national estimate of the achievement of migrant education participants, summary findings are presented in this report for those states reporting regular term achievement results, expressed in NCEs, using a pre- and posttest norm referenced model. This achievement information was reported for about 30,000 Chapter 1 migrant students in 16 states tested on an annual cycle in reading and slightly over 17,000 tested in mathematics. Over 2,800 Chapter 1 migrant students in nine states were tested on a fall-spring test cycle in reading and, in 10 states, slightly over 2,000 were tested in mathematics. The majority of students tested were in the elementary grades.

Children of migrant workers traditionally have been regarded as one of the most educationally disadvantaged segments of the school-aged population. Over 50 percent of the summary pretest percentiles fell at or below the 25th percentile. In both the annual and fall-spring cycles, summary pretest percentiles were higher in mathematics than in reading. On average, pretest percentiles were higher at the elementary level than at the secondary level.

Participants tested on a fall-spring cycle demonstrated higher NCE gains than students tested on an annual cycle. Summary NCE gains within test cycles tended to be higher in mathematics than in reading.

For the Chapter 1 migrant students tested on an annual test cycle in reading, the total summary gains ranged from a high of 1.8 NCEs in grade 9 to a low of 0.3 NCEs in grades 2 and 8. The total summary pretest percentiles ranged from the 29th percentile in grade 2 to the 15th percentile in grade 9.



In mathematics, for migrant education participants tested on an annual cycle, the total summary NCE gains ranged from 3.1 NCEs in grade 5 to -1.3 NCEs in grade 8. The total summary pretest percentiles ranged from the 47th percentile in grade 2 to the 25th percentile in grade 9.

For the Chapter 1 migrant students tested on a fall-spring test cycle in reading, the total summary gains ranged from 9.1 NCEs in grade 3 to 1.2 NCEs in grade 11. The total summary pretest percentiles ranged from the 28th percentile in grade 8 to the 17th percentile in grade 3.

In mathematics, for migrant education participants tested on a fall-spring cycle, the total summary gains ranged from 13 NCEs in grade 2 to 2.1 NCEs in grades 11 and 12. The total summary pretest percentiles ranged from the 38th percentile in grade 2 to the 20th percentile in grade 10.

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## INTRODUCTION

Recognizing that the migratory children of migratory agricultural workers were disadvantaged, P.L. 89-750 was enacted in November 1966, amending Title I of the Elementary and Secondary Education Act (ESEA), to authorize a program of services for these youths. The 1988-89 Migrant Education Program was reauthorized by the Augustus F. Hawkins-Robert T. Stafford Elementary and Secondary School Improvement Amendments of 1988, P.L. 100-297, Title I, Chapter 1, Part B and Part D, Subpart 1 (20 U.S.C. 2741-2790) (expires September 30, 1993). P.L. 100-297 authorized funds to state education agencies (SEAs) for "programs and projects...which are designed to meet the special educational needs of migratory children of migratory agricultural workers (including migratory agricultural dairy workers) or of migratory fishermen, and to coordinate such programs and projects with similar programs and projects in other states, including the transmittal of pertinent information with respect to school records of such children" (Section 1202).

## EVALUATION REQUIREMENTS

While evaluation requirements were always part of the legislation governing the Migrant Education Program, the U.S. Department of Education (ED) did not initially specify the format or provide guidelines for the information to be collected. As a result, states developed their own locally relevant criteria for collecting participation information.

In 1983, however, ED determined that all SEAs were required by the Chapter 1 statute to submit standardized information on the Migrant Education Program to ED. To implement this decision, ED solicited input from SEAs on the most appropriate measures and assembled a standard format for reporting of the participation information. The resulting standard form, the State Performance Report, received final approval by the Office of Management and Budget (OMB) in the spring of 1985. The 1984-85 school year was the first year of data collection using this form. Further, ED published rules and regulations pertaining to these requirements in May 1986.

Prior to the passage of P.L. 100-297, SEAs provided the following information on the State Performance Report:

- participation by gender, migrant status, year of birth, and race/ethnicity;
- participation by grade level for the regular and summer terms;
- participation by services provided for the regular and summer terms; and
- FTE staff funded by the Chapter 1 Migrant Education Program for the regular and summer terms.

Additionally, statewide summaries for achievement information were requested, and any format desired by the SEAs could be used. Although no specific format was prescribed, states were encouraged to provide data by school term, grade, subject area, and testing schedule.

The passage of P.L. 100-297 resulted in the following changes to the Chapter 1 Migrant Education Program evaluation requirements:

- the reporting of achievement data became mandatory (P.L. 100-297, §1202(a)(6) and 34 CFR §201.51 through §201.54);
- the separate reporting of achievement data for formerly (settled out) migrant students was required (P.L. 100-297 §1202(a)(6) and 34 CFR §201.51 through §201.54); and
- the collection of information on the number of migrant children with handicapping conditions was required (P.L. 100-297, §1019(b)(3)).

### Revisions to the State Performance Report

In order to incorporate the new provisions of P.L. 100-297 and to improve the utility of the data collection, ED revised the State Performance Report, which received OMB approval in 1989. Under the revised form, states are required to submit annually the following information to ED (new information is indicated in italics):

- gender, migrant status, ethnicity, year of birth, and *handicapping condition* of participants (an unduplicated count across both terms);
- the number of participants by grade and *migrant status* for the regular and summer terms;
- the number of participants by service area, and by *grade span and migrant status* for the regular and summer terms;
- the number of FTE staff funded by the Chapter 1 Migrant Education Program for the regular and summer terms;
- information on *the number of projects and project sites operating in the state for both terms*;

- *sustained gain achievement information for formerly migrant children by subject, grade, term and skill level (basic and advanced);*
- *pre- and posttest information for formerly migrant children by subject, grade, term, and skill level; and*
- other outcome measures the SEA would like to report.

### **Reporting for the 1988-89 School Year**

Realizing that the SEAs would require time to redesign their data collection systems to provide the additional information, SEAs were allowed to report the data for 1988-89 on either the original or the revised State Performance Report. Twenty-nine states completed the original form, while 22 used the revised form, although the majority of the latter states reported missing data in the new categories. *Since most of the states reported data in the original format, this summary document presents information consistent with the original form.*

The information for the 1988-89 school year was submitted by the SEAs in the winter and early spring of 1990.<sup>4</sup> The achievement information is presented here in Volume 2. Volume 1 provides participation information submitted by the SEAs for the 1988-89 school year.

### **ORGANIZATION**

The remainder of this volume provides a summary of achievement information reported by the states, followed by state-by-state descriptions of the types of achievement information reported by each state. In Appendix A, the methodology used to review the 1988-89 State Performance Reports submitted by the states is presented. Appendix B presents state-level tabular displays of achievement information, by grade, for those states reporting regular term achievement results, expressed in normal curve equivalent scores, using a pre- and posttest norm-referenced model. Appendix C provides a brief description of norm- and criterion-referenced testing.

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<sup>4</sup>In 1988-89, State Performance Reports were received from 49 states, the District of Columbia, and Puerto Rico. Hawaii does not participate in the Migrant Education Program.



## SUMMARY OF ACHIEVEMENT INFORMATION REPORTED BY THE STATES<sup>5</sup>

### Regular Term Reports

Thirty-four states (out of 48) provided statewide achievement information in the regular term.<sup>6</sup> The most prevalent subject areas for which information was reported were reading and mathematics (33 states). In addition, achievement information in the other language arts area was provided by 19 states, four states reported achievement information on English to limited English background students, and five states tested in other subject areas. (Table 1)

The states used various types of tests. Norm referenced tests were the most frequently used: results from norm referenced tests were reported in 29 states. Eight states used criterion referenced tests, and one state used locally-developed instruments. (Table 2)

Twenty-eight states provided information on the number of Chapter 1 migrant education participants tested using norm referenced measures. Over 76,000 Chapter 1 migrant students were tested in reading and almost 68,000 were tested in mathematics. Eight states provided information on the number of Chapter 1 migrant education participants tested using criterion referenced tests or locally-developed measures. Over 6,200 Chapter 1 migrant students were tested in reading and over 3,500 were tested in mathematics. (Tables 3 and 4)

Of the total number of participants receiving migrant education services in the regular term, 25 percent were tested in reading and 21 percent were tested in mathematics using a variety of test measures. Information was not available, however, to determine what percentage of those tested in reading or mathematics actually received reading or mathematics services.<sup>7</sup> (Tables 3 and 4)

In the eight states that used criterion referenced tests and/or locally-developed tests, a variety of measures were used to assess achievement. (Table 5)

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<sup>5</sup>This discussion is based on information submitted in the State Performance Reports and information obtained through telephone conversations with state officials. Appendix A discusses the methodology used in reviewing the submitted information.

<sup>6</sup>Montana, Nebraska, and Utah did not operate migrant education projects in the regular term.

<sup>7</sup>In Missouri, New Jersey, New Mexico, and Puerto Rico, there were more participants tested in reading than were reported receiving reading services in the Chapter 1 migrant education program. In Arizona, California, Kentucky, and New Jersey, there were more participants tested in mathematics than were reported receiving mathematics services in the Chapter 1 migrant education program.



Table 1

Regular Term  
 Statewide Achievement Information  
 by Subject Area and State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Statewide Achievement Data Provided	Subject Area				
		Reading	Math	Other Language Arts	English to Limited English Background	Other
Alabama	X	X	X			
Alaska	X	X	X	X		
Arizona	X	X	X	X		
Arkansas	X	X	X			
California	X	X	X	X		
Colorado	X	X	X			
Connecticut						
Delaware						
District of Columbia						
Florida	X	X	X	X		
Georgia	X	X	X	X		X
Idaho	X	X	X	X	X	
Illinois	X	X	X	X	X	
Indiana	X	X	X			
Iowa <sup>2/</sup>	X					
Kansas	X	X	X			
Kentucky	X	X	X	X		X
Louisiana	X	X	X	X		
Maine	X	X	X			
Maryland						
Massachusetts	X	X	X			X
Michigan						
Minnesota						
Mississippi	X	X	X	X		
Missouri	X	X	X	X	X	

Table 1 (continued)

State	Statewide Achievement Data Provided	Subject Area				
		Reading	Math	Other Language Arts	English to Limited English Background	Other
Montana <sup>b/</sup> Nebraska <sup>b/</sup> Nevada New Hampshire New Jersey	X  X	X  X	X  X	X  X		X
New Mexico New York North Carolina North Dakota Ohio	X X X	X X X	X X X	X  X	X	X
Oklahoma Oregon Pennsylvania Puerto Rico Rhode Island	X X X X	X X X X	X X X X	X X  X		
South Carolina South Dakota Tennessee Texas Utah <sup>b/</sup>	X X X X	X X X X	X X X X	X		
Vermont Virginia <sup>c/</sup> Washington West Virginia Wisconsin Wyoming	X X	X X	X X	X		
<b>Total</b>	<b>34</b>	<b>33</b>	<b>33</b>	<b>19</b>	<b>4</b>	<b>5</b>

a/ Iowa provided statewide achievement information in a narrative format, but did not provide the information by subject area.

b/ Montana, Nebraska, and Utah did not operate migrant education projects in the regular term.

c/ Virginia provided achievement by project, but the data could not be aggregated because the information was not reported in a uniform manner.

Table 2

Regular Term  
 Statewide Achievement Testing  
 by Type and State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Norm Referenced	Criterion Referenced	Locally-Developed
Alabama	X		
Alaska	X		
Arizona	X		
Arkansas	X	X	
California	X		
Colorado	X	X	
Connecticut			
Delaware			
District of Columbia			
Florida	X		
Georgia	X		
Idaho	X		
Illinois		X	
Indiana	X		
Iowa	X		
Kansas	X		
Kentucky	X		
Louisiana	X		
Maine	X		
Maryland			
Massachusetts	X		
Michigan			
Minnesota			
Mississippi	X		
Missouri		X	X
Montana <sup>1/</sup>			
Nebraska <sup>1/</sup>			
Nevada	X		
New Hampshire			
New Jersey	X		

Table 2 (continued)

State	Norm Referenced	Criterion Referenced	Locally-Developed
New Mexico	X		
New York		X	
North Carolina	X		
North Dakota			
Ohio			
Oklahoma	X		
Oregon	X		
Pennsylvania	X		
Puerto Rico		X	
Rhode Island			
South Carolina	X		
South Dakota	X		
Tennessee	X	X	
Texas	X		
Utah <sup>a/</sup>			
Vermont			
Virginia		X	
Washington	X		
West Virginia			
Wisconsin			
Wyoming			
Total	29	8	1

a/ Montana, Nebraska, and Utah did not operate migrant education projects in the regular term.

Table 3

Regular Term  
 Participants Receiving Reading Services and Number  
 Tested in Reading by State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Number of Participants <sup>a/</sup>	Number Receiving Reading <sup>a/</sup>	Number Tested in Reading	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Alabama	2,546	611	437	-
Alaska	6,487	2,090	1,287	-
Arizona	13,372	4,055	5,331 <sup>b/</sup>	-
Arkansas	6,660	3,576	1,172	363
California	116,347	34,357	32,495	-
Colorado	2,086	992	337	638
Connecticut <sup>a/</sup>	3,388	633	-	-
Delaware <sup>a/</sup>	75	51	-	-
District of Columbia <sup>a/</sup>	107	11	-	-
Florida	23,597	7,437	1,893	-
Georgia	4,755	1,712	511	-
Idaho	2,241	1,404	610	-
Illinois	918	595	-	595
Indiana	2,400	270	184	-
Iowa	180	63	<sup>a/</sup>	-
Kansas	5,439	899	582	-
Kentucky	2,814	1,386	1,995 <sup>b/</sup>	-
Louisiana	5,672	2,851	1,813	-
Maine	3,802	2,265	1,173	-
Maryland <sup>a/</sup>	113	0	-	-
Massachusetts	2,460	1,692	308	-
Michigan <sup>a/</sup>	8,827	5,706	-	-
Minnesota <sup>a/</sup>	755	326	-	-
Mississippi	3,421	1,181	556	-
Missouri	1,488	608	-	615 <sup>a/</sup>

Table 3 (continued)

State	Number of Participants <sup>a/</sup>	Number Receiving Reading <sup>a/</sup>	Number Tested in Reading	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Montana <sup>a/</sup>	0	0	-	-
Nebraska <sup>a/</sup>	0	0	-	-
Nevada	612	528	167	-
New Hampshire <sup>a/</sup>	111	1	-	-
New Jersey	1,784	262	402 <sup>b/</sup>	-
New Mexico	1,383	130	325 <sup>b/</sup>	-
New York	5,285	4,234	-	805
North Carolina	4,475	2,419	668	-
North Dakota <sup>a/</sup>	80	0	-	-
Ohio <sup>a/</sup>	931	319	-	-
Oklahoma	1,455	544	342	-
Oregon	10,910	2,611	946	-
Pennsylvania	3,359	840	271	-
Puerto Rico <sup>b/</sup>	9,779	0	-	3,063
Rhode Island <sup>a/</sup>	232	0	-	-
South Carolina	134	128	83	-
South Dakota	45	31	27	-
Tennessee	116	116	75	16
Texas	58,568	41,211	22,366	-
Utah <sup>a/</sup>	0	0	-	-
Vermont <sup>a/</sup>	817	23	-	-
Virginia	566	240	-	120
Washington <sup>b/</sup>	11,810	4,896	458	-
West Virginia <sup>a/</sup>	21	16	-	-
Wisconsin <sup>a/</sup>	618	261	-	-
Wyoming <sup>a/</sup>	1	0	-	-
<b>Total</b>	<b>333,042</b>	<b>133,581</b>	<b>76,814</b>	<b>6,215</b>

<sup>a/</sup> Data from *A Summary of State Chapter 1 Migrant Education Participation and Achievement for 1988-89, Volume 1: Participation, 1991*.

Table 3 (continued)

- b/** In Arizona and Kentucky there were more participant tested in reading than were reported receiving reading services. SEA officials explained that the number tested represents migrant education participants given a reading test even though they may have received services other than reading.
- c/** Connecticut, Delaware, District of Columbia, Maryland, Michigan, Minnesota, New Hampshire, North Dakota, Ohio, Rhode Island, Vermont, West Virginia, Wisconsin, and Wyoming did not provide achievement information for the regular term.
- d/** Iowa submitted achievement information in a narrative format which did not include the number of participants tested by subject or grade.
- e/** Missouri tested participants on a range of basic skills. The number tested is a duplicate count.
- f/** Montana, Nebraska, and Utah did not operate migrant education projects in the regular term.
- g/** In New Jersey and New Mexico participants were tested for basic and advanced skills. The number tested is a duplicate count and exceeds the number of participants receiving reading.
- h/** For Puerto Rico, the number receiving reading was reported as other instructional (Spanish reading and language arts). The number tested in reading was calculated by adding the numbers tested in Spanish and English for reading and language. The number tested is a duplicate count.
- i/** Washington submitted a statewide achievement report, but because the number tested was not representative of the participants receiving migrant education services, the Washington SEA requested that the NCE scores not be reported. As a result, Washington's information was not included in the state level aggregation of NCE data and are not a part of the total number tested in Tables 11, 12, 13, and 14.

Table 4

Regular Term  
 Participants Receiving Mathematics Services and Number  
 Tested in Mathematics by State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Number of Participants <sup>a/</sup>	Number Receiving Mathematics <sup>a/</sup>	Number Tested in Mathematics	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Alabama	2,546	1,823	909	-
Alaska	6,487	1,922	1,194	-
Arizona	13,372	3,155	5,222 <sup>b/</sup>	-
Arkansas	6,660	2,600	872	265
California	116,347	29,381	38,200 <sup>b/</sup>	-
Colorado	2,086	749	231	479
Connecticut <sup>a/</sup>	3,388	365	-	-
Delaware <sup>a/</sup>	75	44	-	-
District of Columbia <sup>a/</sup>	107	0	-	-
Florida	23,597	1,656	207	-
Georgia	4,755	1,448	485	-
Idaho	2,241	1,037	418	-
Illinois	918	500	-	500
Indiana	2,400	239	184	-
Iowa	180	41	<sup>a/</sup>	-
Kansas	5,439	534	204	-
Kentucky	2,814	1,598	1,995 <sup>b/</sup>	-
Louisiana	5,672	2,998	1,590	-
Maine	3,802	2,086	1,055	-
Maryland <sup>a/</sup>	113	5	-	-
Massachusetts	2,460	969	214	-
Michigan <sup>a/</sup>	8,827	5,140	-	-
Minnesota <sup>a/</sup>	755	237	-	-
Mississippi	3,421	878	389	-
Missouri	1,488	647	-	647 <sup>a/</sup>



Table 4 (continued)

State	Number of Participants <sup>a/</sup>	Number Receiving Mathematics <sup>a/</sup>	Number Tested in Mathematics	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Montana <sup>a/</sup>	0	0	-	-
Nebraska <sup>a/</sup>	0	0	-	-
Nevada	612	253	133	-
New Hampshire <sup>a/</sup>	111	37	-	-
New Jersey	1,784	220	374 <sup>a/</sup>	-
New Mexico	1,383	819	309 <sup>a/</sup>	-
New York	5,285	3,429	-	479
North Carolina	4,475	2,082	668	-
North Dakota <sup>a/</sup>	80	0	-	-
Ohio <sup>a/</sup>	931	249	-	-
Oklahoma	1,455	709	470	-
Oregon	10,910	1,779	890	-
Pennsylvania	3,359	735	65	-
Puerto Rico	9,779	1,721	-	1,147
Rhode Island <sup>a/</sup>	232	0	-	-
South Carolina	134	128	83	-
South Dakota	45	28	27	-
Tennessee	116	116	63	16
Texas	58,568	22,204	10,956	-
Utah <sup>a/</sup>	0	0	-	-
Vermont <sup>a/</sup>	817	0	-	-
Virginia	566	200	-	57
Washington <sup>a/</sup>	11,810	3,479	458	-
West Virginia <sup>a/</sup>	21	16	-	-
Wisconsin <sup>a/</sup>	618	206	-	-
Wyoming <sup>a/</sup>	1	0	-	-
<b>Total</b>	<b>333,042</b>	<b>98,462</b>	<b>67,865</b>	<b>3,590</b>

<sup>a/</sup> Data from *A Summary of State Chapter 1 Migrant Education Participation and Achievement for 1988-89, Volume 1: Participation, 1991.*

**Table 4 (continued)**

- b/** In Arizona, California, and Kentucky there were more participant tested in mathematics than were reported receiving mathematics services. SEA officials explained that the number tested represents migrant education participants given a mathematics test even though they may have received services other than mathematics.
- c/** Connecticut, Delaware, District of Columbia, Maryland, Michigan, Minnesota, New Hampshire, North Dakota, Ohio, Rhode Island, Vermont, West Virginia, Wisconsin, and Wyoming did not provide achievement information for the regular term.
- d/** Iowa submitted achievement information in a narrative format which did not include the number of participants tested by subject or grade.
- e/** Missouri tested participants on a range of basic skills. The number tested is a duplicate count.
- f/** Montana, Nebraska, and Utah did not operate migrant education projects in the regular term.
- g/** In New Jersey and New Mexico participants were tested in basic and advanced skills. The number tested is a duplicate count and in New Jersey exceeds the number of participants receiving mathematics.
- h/** Washington submitted a statewide achievement report, but because the number tested was not representative of the participants receiving migrant education services, the Washington SEA requested that the NCE scores not be reported. As a result, Washington's information was not included in the state level aggregation of NCE data and are not a part of the total number tested in Tables 11, 12, 13, and 14.

Table 5

Regular Term  
 Number Tested Using Criterion Referenced and Locally-Developed  
 Measures by State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Measure Used	Number Tested	
		Reading	Mathematics
Arkansas	Average Number of Skills Mastered	363	265
Colorado	Average Number of Objectives Mastered	638	479
Illinois	Percent Meeting Standards	595	500
Missouri	Average Percent of Gain	615 <sup>a/</sup>	647 <sup>a/</sup>
New York	Mean Number of Objectives Mastered	805	479
Puerto Rico <sup>b/</sup>	Average Number of Skills Mastered	3,063	1,147
Tennessee	Skills Gained	16	16
Virginia <sup>c/</sup>	--	120	57
<b>Total Tested</b>		<b>6,215</b>	<b>3,590</b>

- a/ Missouri tested participants on a range of basic skills. The number tested is a duplicate count.
- b/ For Puerto Rico, the number tested in reading was calculated by adding the numbers tested in Spanish and English for reading and language.
- c/ Virginia submitted project level information using a variety of test measures.

## Summer Term Reports

In the summer term, 14 states (out of 47) provided statewide achievement information.<sup>8</sup> Fourteen states provided reading and 13 states provided mathematics achievement. Achievement information in other language arts was provided by five states, English to limited English background students by one state, and six states tested in other subject areas. (Table 6)

Summer term achievement results were divided among norm referenced tests (seven states), criterion referenced tests (eight states), and locally-developed instruments (three states). (Table 7)

Seven states provided information on the number of Chapter 1 migrant education participants tested for reading, and six states for mathematics, using norm referenced measures. About 1,500 Chapter 1 migrant students were tested in reading and slightly over 1,000 in mathematics. Eight states provided information on the number of Chapter 1 migrant education participants tested using criterion referenced tests and/or locally-developed measures. Over 5,000 Chapter 1 migrant students were tested in both reading and mathematics. (Tables 8 and 9)

Of the total number of participants receiving migrant education services in the summer term, 5 percent were tested in reading and mathematics using a variety of test measures. Information was not available, however, to determine what percentage of those tested in reading or mathematics actually received reading or mathematics services. (Tables 8 and 9)

In the nine states that used criterion referenced tests and/or locally-developed tests, a variety of measures were used to assess achievement. (Table 10)

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<sup>8</sup>Louisiana, Mississippi, Oklahoma, and Puerto Rico did not operate migrant education projects in the summer term.

Table 6

Summer Term  
 Statewide Achievement Information  
 by Subject Area and State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Statewide Achievement Data Provided	Subject Area				
		Reading	Math	Other Language Arts	English to Limited English Background	Other
Alabama Alaska Arizona Arkansas California						
Colorado Connecticut Delaware District of Columbia Florida	X	X	X			
Georgia Idaho Illinois Indiana Iowa	X X	X X	X X	X	X	
Kansas Kentucky Louisiana <sup>a/</sup> Maine Maryland	X	X	X			
Massachusetts Michigan Minnesota Mississippi <sup>a/</sup> Missouri	X	X	X	X		

Table 6 (continued)

State	Statewide Achievement Data Provided	Subject Area				
		Reading	Math	Other Language Arts	English to Limited English Background	Other
Montana Nebraska Nevada New Hampshire New Jersey	X	X	X			X
New Mexico New York North Carolina North Dakota Ohio	X	X				
Oklahoma <sup>a/</sup> Oregon Pennsylvania Puerto Rico <sup>a/</sup> Rhode Island	X	X	X			
South Carolina South Dakota Tennessee Texas Utah	X X X X	X X X X	X X X X	X		X X X
Vermont Virginia Washington West Virginia Wisconsin Wyoming	X X X X	X X X X	X X X X	X X		X X
<b>Total</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>5</b>	<b>1</b>	<b>6</b>

a/ Louisiana, Mississippi, Oklahoma, and Puerto Rico did not operate migrant projects in the summer term.

**Table 7**  
**Summer Term**  
**Statewide Achievement Testing**  
**by Type and State -- 1988-89**  
**Chapter 1 Migrant Education Program**

State	Norm Referenced	Criterion Referenced	Locally-Developed
Alabama Alaska Arizona Arkansas California			
Colorado Connecticut Delaware District of Columbia Florida		X	
Georgia Idaho Illinois Indiana Iowa	X	X	
Kansas Kentucky Louisiana <sup>v</sup> Maine Maryland	X		
Massachusetts Michigan Minnesota Mississippi <sup>v</sup> Missouri		X	
Montana Nebraska Nevada New Hampshire New Jersey	X	X	

Table 7 (continued)

State	Norm Referenced	Criterion Referenced	Locally-Developed
New Mexico New York North Carolina North Dakota Ohio	X		
Oklahoma <sup>a/</sup> Oregon Pennsylvania Puerto Rico Rhode Island		X	
South Carolina South Dakota Tennessee Texas Utah	X	X  X	X  X
Vermont Virginia Washington West Virginia Wisconsin Wyoming	X   X	   X	   X
Total	7	8	3

<sup>a/</sup> Louisiana, Mississippi, Oklahoma, and Puerto Rico did not operate migrant projects in the summer term.



Table 8  
 Summer Term  
 Participants Receiving Reading Services and Number  
 Tested in Reading by State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Number of Participants <sup>b/</sup>	Number Receiving Reading <sup>a/</sup>	Number Tested in Reading	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Alabama <sup>b/</sup>	616	370	-	-
Alaska <sup>b/</sup>	43	35	-	-
Arizona <sup>b/</sup>	1,456	1,048	-	-
Arkansas <sup>b/</sup>	561	561	-	-
California <sup>b/</sup>	57,266	32,797	-	-
Colorado	1,810	1,559	-	710
Connecticut <sup>b/</sup>	339	25	-	-
Delaware <sup>b/</sup>	334	302	-	-
District of Columbia <sup>b/</sup>	33	33	-	-
Florida <sup>b/</sup>	734	202	-	-
Georgia <sup>b/</sup>	1,870	1,455	-	-
Idaho <sup>b/</sup>	2,094	1,439	-	-
Illinois	2,421	2,235	-	2,235
Indiana	2,662	196	47	-
Iowa <sup>b/</sup>	6	6	-	-
Kansas <sup>b/</sup>	850	22	-	-
Kentucky <sup>b/</sup>	505	0	-	-
Louisiana <sup>a/</sup>	0	0	-	-
Maine <sup>b/</sup>	414	341	-	-
Maryland	592	307	180	-
Massachusetts <sup>b/</sup>	3,641	3,101	-	-
Michigan <sup>b/</sup>	10,404	8,200	-	-
Minnesota	3,523	1,529	-	736
Mississippi <sup>a/</sup>	0	0	-	-
Missouri <sup>b/</sup>	30	0	-	-

Table 8 (continued)

State	Number of Participants <sup>a/</sup>	Number Receiving Reading <sup>a/</sup>	Number Tested in Reading	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Montana	606	384	156	217
Nebraska <sup>b/</sup>	743	536	-	-
Nevada <sup>b/</sup>	91	12	-	-
New Hampshire <sup>b/</sup>	104	91	-	-
New Jersey <sup>b/</sup>	1,052	672	-	-
New Mexico <sup>b/</sup>	539	123	-	-
New York <sup>b/</sup>	4,987	4,033	-	-
North Carolina <sup>b/</sup>	2,021	1,916	-	-
North Dakota	1,223	529	475	-
Ohio <sup>b/</sup>	1,792	384	-	-
Oklahoma <sup>c/</sup>	0	0	-	-
Oregon <sup>b/</sup>	5,054	2,809	-	-
Pennsylvania <sup>b/</sup>	2,167	1,164	-	-
Puerto Rico <sup>c/</sup>	0	0	-	-
Rhode Island	74	74	-	<sup>d/</sup>
South Carolina	609	368	-	313
South Dakota <sup>b/</sup>	33	33	-	-
Tennessee	266	266	-	222
Texas <sup>b/</sup>	4,655	3,572	-	-
Utah	1,327	822	493	-
Vermont <sup>b/</sup>	258	108	-	-
Virginia	561	435	75	-
Washington <sup>b/</sup>	3,608	2,647	-	-
West Virginia <sup>b/</sup>	46	17	-	-
Wisconsin	882	368	76	533 <sup>e/</sup>
Wyoming	525	39	-	360 <sup>e/</sup>
Total	125,427	77,165	1,502	5,326

<sup>a/</sup> Data from *A Summary of State Chapter 1 Migrant Education Participation and Achievement for 1988-89, Volume 1: Participation, 1991*.

Table 8 (continued)

- b/** Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Vermont, Washington, and West Virginia did not provide achievement information for the summer term.
- c/** Louisiana, Mississippi, Oklahoma, and Puerto Rico did not operate migrant projects in the summer term.
- d/** Rhode Island provided achievement information, but did not report the number tested.
- e/** In Wisconsin and Wyoming there were more participants tested in reading than were reported receiving reading services.

Table 9

Summer Term  
 Participants Receiving Mathematics Services and Number  
 Tested in Mathematics by State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Number of Participants <sup>a/</sup>	Number Receiving Mathematics <sup>a/</sup>	Number Tested in Mathematics	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Alabama <sup>b/</sup>	616	370	-	-
Alaska <sup>b/</sup>	43	31	-	-
Arizona <sup>b/</sup>	1,456	855	-	-
Arkansas <sup>b/</sup>	561	59	-	-
California <sup>b/</sup>	57,266	32,270	-	-
Colorado	1,810	1,583	-	722
Connecticut <sup>b/</sup>	339	35	-	-
Delaware <sup>b/</sup>	334	303	-	-
District of Columbia <sup>b/</sup>	33	0	-	-
Florida <sup>b/</sup>	734	202	-	-
Georgia <sup>b/</sup>	1,870	1,318	-	-
Idaho <sup>b/</sup>	2,094	1,438	-	-
Illinois	2,421	2,235	-	2,235
Indiana	2,662	213	29	-
Iowa <sup>b/</sup>	6	6	-	-
Kansas <sup>b/</sup>	850	194	-	-
Kentucky <sup>b/</sup>	505	0	-	-
Louisiana <sup>a/</sup>	0	0	-	-
Maine <sup>b/</sup>	414	404	-	-
Maryland	592	305	178	-
Massachusetts <sup>b/</sup>	3,641	1,362	-	-
Michigan <sup>b/</sup>	10,404	8,041	-	-
Minnesota	3,523	1,556	-	733
Mississippi <sup>a/</sup>	0	0	-	-
Missouri <sup>b/</sup>	30	0	-	-

Table 9 (continued)

State	Number of Participants <sup>a/</sup>	Number Receiving Mathematics <sup>a/</sup>	Number Tested in Mathematics	
			Using Norm Referenced Measures	Using Criterion Referenced or Locally-Developed Measures
Montana	606	384	202	217
Nebraska <sup>b/</sup>	743	536	-	-
Nevada <sup>b/</sup>	91	0	-	-
New Hampshire <sup>b/</sup>	104	5	-	-
New Jersey <sup>b/</sup>	1,052	683	-	-
New Mexico <sup>b/</sup>	539	211	-	-
New York <sup>b/</sup>	4,987	3,147	-	-
North Carolina <sup>b/</sup>	2,021	1,932	-	-
North Dakota <sup>a/</sup>	1,223	571	-	-
Ohio <sup>b/</sup>	1,792	424	-	-
Oklahoma <sup>a/</sup>	0	0	-	-
Oregon <sup>b/</sup>	5,054	2,941	-	-
Pennsylvania <sup>b/</sup>	2,167	1,033	-	-
Puerto Rico <sup>a/</sup>	0	0	-	-
Rhode Island	74	74	-	<sup>a/</sup>
South Carolina	609	368	-	314
South Dakota <sup>b/</sup>	33	10	-	-
Tennessee	266	266	-	253
Texas <sup>b/</sup>	4,655	2,290	-	-
Utah	1,327	821	493	-
Vermont <sup>a/</sup>	258	0	-	-
Virginia	561	435	75	-
Washington <sup>b/</sup>	3,608	2,734	-	-
West Virginia <sup>b/</sup>	46	17	-	-
Wisconsin	882	366	76	542 <sup>a/</sup>
Wyoming	525	38	-	360 <sup>a/</sup>
<b>Total</b>	<b>125,427</b>	<b>72,066</b>	<b>1,053</b>	<b>5,376</b>

<sup>a/</sup> Data from *A Summary of State Chapter 1 Migrant Education Participation and Achievement for 1988-89, Volume 1: Participation, 1991.*

Table 9 (continued)

- b/** Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Delaware, District of Columbia, Florida, Georgia, Idaho, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Vermont, Washington, and West Virginia did not provide achievement information for the summer term.
- c/** Louisiana, Mississippi, Oklahoma, and Puerto Rico did not operate migrant projects in the summer term.
- d/** North Dakota provided reading, but not mathematics achievement information for the summer term.
- e/** Rhode Island provided achievement information, but did not report the number tested.
- f/** In Wisconsin and Wyoming there were more participants tested in mathematics than were reported receiving mathematics services.

Table 10

Summer Term  
 Number Tested Using Criterion Referenced and Locally-Developed  
 Measures by State -- 1988-89  
 Chapter 1 Migrant Education Program

State	Measure Used	Number Tested	
		Reading	Mathematics
Colorado	Average Instruction Hours Per Week/Grade Level Equivalent Gains	710	722
Illinois	Percent Meeting Standards	2,235	2,235
Minnesota	Estimated Achievement Gains	736	733
Montana	Objectives Achieved	217	217
Rhode Island	Correlation of Grade Level to Lesson	a/	a/
South Carolina	Objectives Mastered	313	314
Tennessee	Objectives and Skills Mastered	222	253
Wisconsin	Number of Competencies	533	542
Wyoming	Skills Acquired	360	360
<b>Total Tested</b>		<b>5,326</b>	<b>5,376</b>

a/ Rhode Island provided achievement information, but did not report the number tested.

## Summary Results from Selected States

Eighteen states reported achievement information for the regular term by grade expressed in normal curve equivalent (NCE) scores using a pre- and posttest norm referenced model.<sup>9</sup>

Although *the summary figures* for this group of states *are not national estimates* of the overall achievement levels of migrant education participants, they do provide a measure of achievement for the participants tested in these selected states.

State achievement data should not be interpreted as an indication of the relative performance of individual state migrant programs for the following reasons:

- **Statistical insignificance.** Many of the state achievement statistics are based on very small samples. In these cases there can be little confidence that the data provide an accurate estimate of the achievement of all migrant children in a given category. For example, of the 502 sets of average reading and math scores calculated by grade and by state, 36 percent are based on a sample of ten or fewer (see Appendix B). The effect of low test participation can be seen in erratic fluctuations in average scores and pretest percentiles, which are often well above the mean.
- **Selectivity bias.** Achievement data may disproportionately include settled-out migrant children (formerly migrants), for whom matched pre- and posttest scores can be more easily obtained. To the extent that settled-out migrant children are less disadvantaged, achievement data is not representative of all migrant children.
- **Mobility.** To the extent that state averages reflect the scores of students who attended education programs in several states, the effect of a particular state's program cannot be separated from the effects of other states' programs (under current data collection and reporting requirements).

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<sup>9</sup>The NCE is a type of standard score resulting from the division of the normal curve into 99 equal units, and is derived from the percentile rank. The mean of the NCE score distribution is 50, and the standard deviation is 21.06.



- **Testing variation.** Considerable variation in state testing practices exists, reducing the interstate comparability of test results. Annual tests, for example, may be administered at different points in the school year. The tests themselves also vary, and some experts question the validity of aggregations or comparisons across different norm-referenced tests.
- **Non-match between testing and services received.** Students tested in reading and math have not necessarily participated in migrant programs in those subjects. For example, in three states the number of math test participants is substantially larger than the number of migrants receiving supplemental math services.

Several factors affect the assessment of achievement outcomes in migrant education projects. Among the most important factors are:

- Since there were no standardized reporting requirements, states provided information from a variety of test types (such as norm referenced, criterion referenced, and locally-developed), using a range of test measures (such as normal curve equivalents, grade equivalents, number of objectives mastered, and number of skills mastered);
- Currently migrant students were typically the least likely to be part of project evaluation testing (especially testing with a pre- and posttest design) because of their mobility and their language deficits;
- Standardized tests, with norms for fall and spring testing, may not be compatible with the short term basis of many migrant projects or the cyclical patterns of migrant movement; and
- Most states submitted results for participants tested in reading and mathematics. However, projects funded by the Chapter 1 migrant education program tended to be highly diversified. Thus, evaluations of performance in these two subject areas may be inappropriate or inadequate measures of the impact of the services provided.

With the above cautions in mind, the following summary findings are presented for those states reporting regular term achievement results, expressed in NCE scores, using a pre- and posttest norm referenced model.

The largest number of participants were tested in annual reading (30,224), followed by annual mathematics (17,322), fall-spring reading (2,828), and fall-spring mathematics (2,079). (Figure 1) The majority of students tested were in the elementary grades.

Children of migrant workers traditionally have been regarded as one of the most educationally disadvantaged segments of the school-aged population. Over 50 percent of the summary pretest percentiles fell at or below the 25th percentile--the majority of the low pretest percentiles were found in reading. In both the annual and fall-spring cycles, summary pretest percentiles were higher in mathematics than in reading. On average, pretest percentiles were higher at the elementary level than at the secondary level. (Tables 11, 12, 13, and 14)

Participants tested on a fall-spring cycle demonstrated higher NCE gains than students tested on an annual cycle. Summary NCE gains within test cycles tended to be higher in mathematics than in reading. (Figures 2, 3, 4, and 5 and Tables 11, 12, 13, and 14)

**Annual Test Results.** Sixteen states reported achievement results based on an annual test cycle.<sup>10</sup> In these states there were 30,224 participants tested in reading and 17,322 tested in mathematics. Positive NCE gain scores were experienced in all but two grades in reading and three grades in mathematics.

The total summary gains in reading ranged from a high of 1.8 NCEs in grade 9 to a low of -0.3 NCEs in grades 2 and 8. The total summary pretest percentiles in reading ranged from the 29th percentile in grade 2 to the 15th percentile in grade 9. (Figure 2 and Table 11)

In mathematics, the total summary NCE gains ranged from 3.1 NCEs in grade 5 to -1.3 NCEs in grade 8. The total summary pretest percentiles in mathematics ranged from the 47th percentile in grade 2 to the 25th percentile in grade 9. (Figure 3 and Table 12)

**Fall-Spring Test Results.** Nine states reported reading achievement results and 10 states reported mathematics achievement results based on a fall-spring test cycle.<sup>11</sup> In these states there were 2,828 participants tested in reading and 2,079 tested in mathematics. Positive NCE gain scores were experienced in reading and mathematics in all grades.

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<sup>10</sup>These 16 states are Alabama, Alaska, Colorado, Florida, Georgia, Louisiana, Maine, Mississippi, New Jersey, New Mexico, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, and Texas.

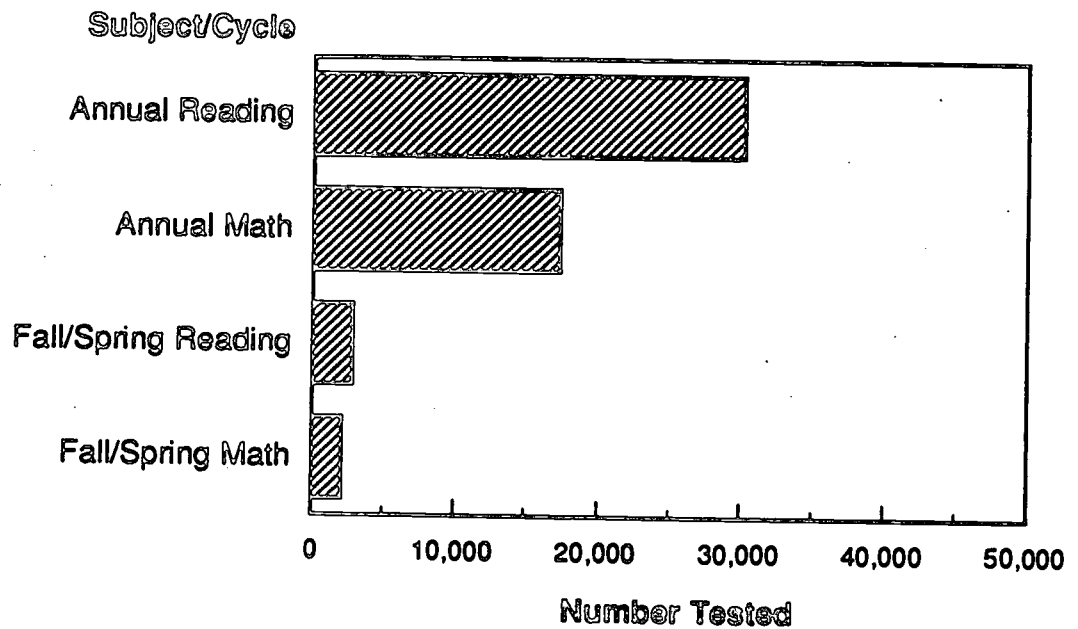
<sup>11</sup>These 9 states are Arkansas, Colorado, Louisiana, Maine, Mississippi, Oklahoma, Pennsylvania, Tennessee, and Texas. New Mexico reported results only for mathematics.

The total summary gains in reading ranged from 9.1 NCEs in grade 3 to 1.2 NCEs in grade 11. The total summary pretest percentiles in reading ranged from the 28th percentile in grade 8 to the 17th percentile in grade 3. (Figure 4 and Table 13)

In mathematics, the total summary gains ranged from 13.2 NCEs in grade 2 to 2.1 NCEs in grades 11 and 12. The total summary pretest percentiles in mathematics ranged from the 38th percentile in grade 2 to the 20th percentile in grade 10. (Figure 5 and Table 14)

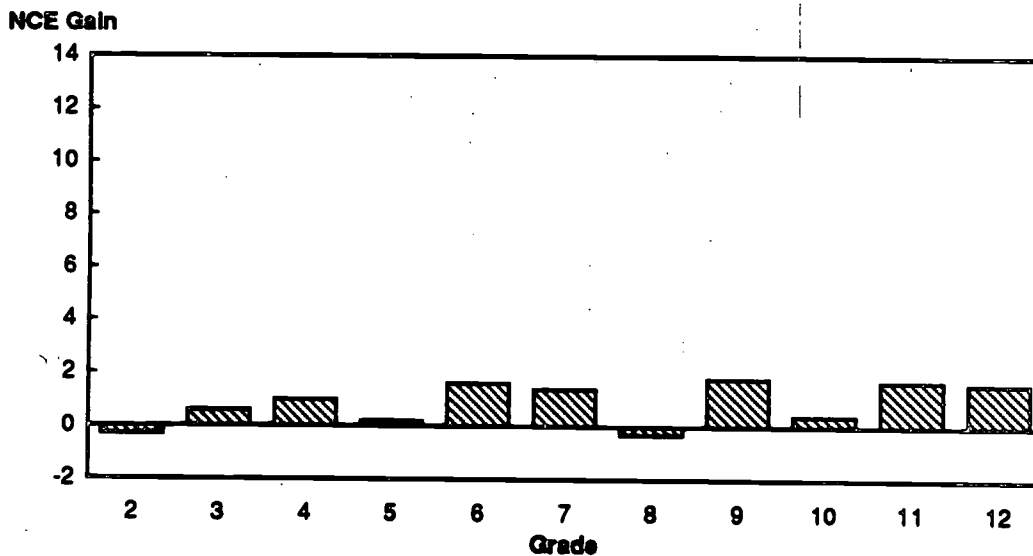
Figure 1

**Number of Participants with Pretest and Posttest Reading and Mathematics NCE Scores, by Cycle -- 1988-89**



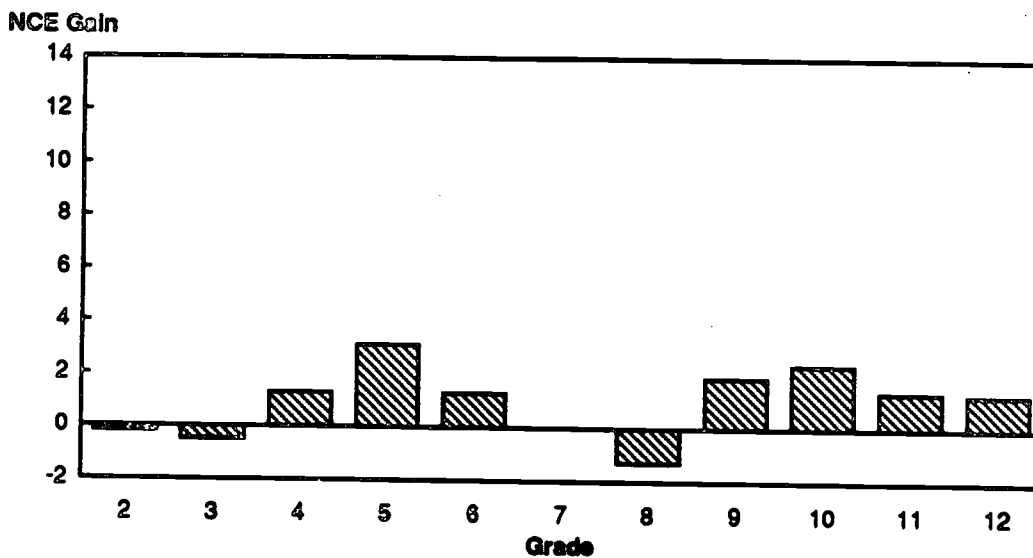
16 States Tested on an Annual Cycle  
 9 States Tested in Fall/Spring Reading  
 10 States Tested in Fall/Spring Mathematics

**Figure 2**  
**Migrant Education**  
**Annual Reading NCE Gains: 1988-89**



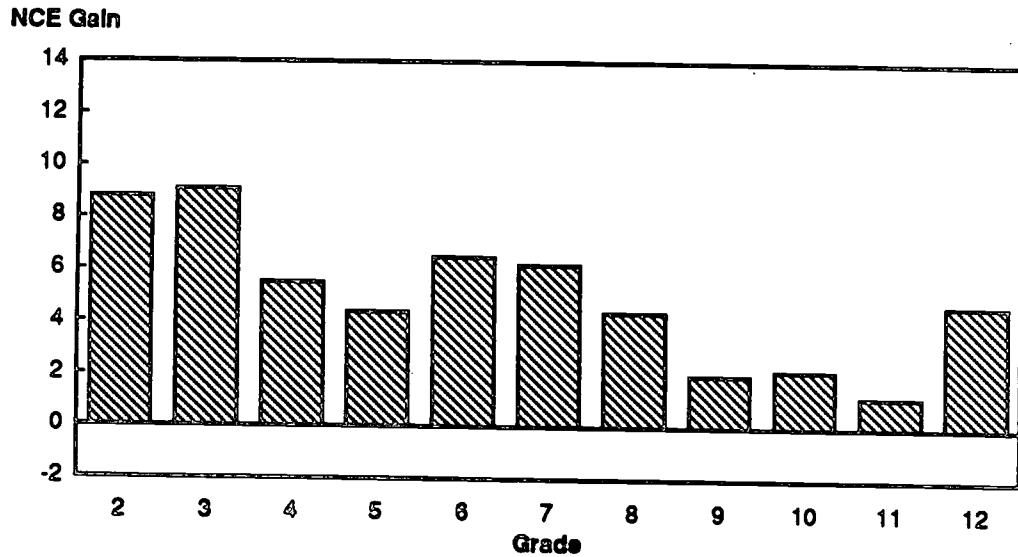
16 States Reporting

**Figure 3**  
**Migrant Education**  
**Annual Mathematics NCE Gains: 1988-89**



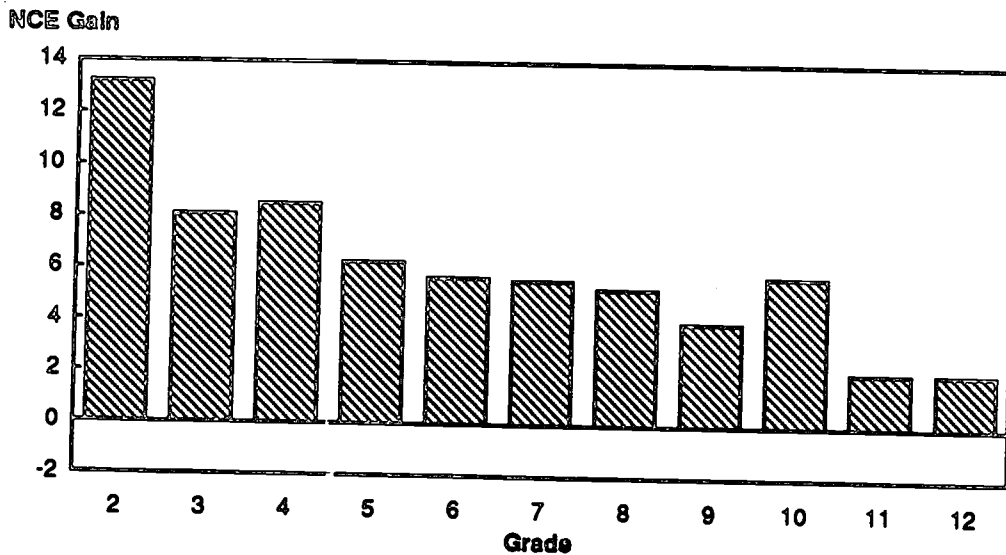
16 States Reporting

**Figure 4**  
**Migrant Education**  
**Fall/Spring Reading NCE Gains: 1988-89**



9 States Reporting

**Figure 5**  
**Migrant Education**  
**Fall/Spring Mathematics NCE Gains: 1988-89**



10 States Reporting

Table 11

Reading Achievement Results for Selected States  
Annual Test Cycle by Grade--1988-89 Chapter 1  
Migrant Education Program<sup>a/</sup>

Grade	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
2	2,813	38.4	29	38.1	28	-0.3
3	4,023	36.5	26	37.1	27	0.6
4	4,102	34.9	23	35.9	25	1.0
5	4,203	33.6	21	33.8	22	0.2
6	4,070	32.3	20	33.9	22	1.6
7	3,432	30.0	17	31.4	18	1.4
8	3,184	31.6	19	31.3	18	-0.3
9	1,951	28.2	15	30.0	17	1.8
10	1,155	31.2	18	31.6	19	0.4
11	784	31.8	19	33.5	21	1.7
12	507	30.5	17	32.1	19	1.6
Total <sup>b/</sup>	30,224					

a/ Sixteen states (Alabama, Alaska, Colorado, Florida, Georgia, Louisiana, Maine, Mississippi, New Jersey, New Mexico, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, and Texas) provided achievement information by grade using a pre- and posttest norm-referenced model.

b/ The sum of the number tested in reading on Tables 11 and 13 is not the same as the total number tested in reading using norm-referenced testing on Table 3 for four reasons. First, the numbers on Table 3 represent achievement results from a variety of test scores, not just pre- and posttest NCE scores, as shown on Tables

11

and 13. Second, Tables 11 and 13 include information for participants in grades 2 through 12 only, while Table 3 also includes information for kindergarten and grade 1. Third, while California reported the average of normal curve equivalent scores by grade level, pre- and posttest scores were not provided. Fourth, the Washington SEA requested that the NCE scores not be reported since the number tested was not representative of participants receiving migrant education services.

Table 12

Mathematics Achievement Results for Selected States  
Annual Test Cycle by Grade--1988-89 Chapter 1  
Migrant Education Program<sup>a/</sup>

Grade	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
2	1,628	48.8	47	48.6	47	-0.2
3	2,261	46.7	43	46.2	42	-0.5
4	2,265	42.9	36	44.2	39	1.3
5	2,587	41.4	34	44.5	39	3.1
6	2,371	42.8	36	44.1	39	1.3
7	1,841	41.2	33	41.2	33	0.0
8	1,681	40.6	32	39.3	30	-1.3
9	1,087	35.9	25	37.8	28	1.9
10	810	38.0	28	40.4	32	2.4
11	500	39.9	31	41.3	34	1.4
12	291	37.7	28	39.0	30	1.3
Total <sup>b/</sup>	17,322					

a/ Sixteen states (Alabama, Alaska, Colorado, Florida, Georgia, Louisiana, Maine, Mississippi, New Jersey, New Mexico, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, and Texas) provided achievement information by grade using a pre- and posttest norm-referenced model.

b/ The sum of the number tested in mathematics on Tables 12 and 14 is not the same as the total number tested in mathematics using norm-referenced testing on Table 4 for four reasons. First, the numbers on Table 4 represent achievement results from a variety of test scores, not just pre- and posttest NCE scores, as shown on

Tables 12 and 14. Second, Tables 12 and 14 include information for participants in grades 2 through 12 only, while Table 4 also includes information for kindergarten and grade 1. Third, while California reported the average of normal curve equivalent scores by grade level, pre- and posttest scores were not provided. Fourth, the Washington SEA requested that the NCE scores not be reported since the number tested was not representative of participants receiving migrant education services.

Table 13

Reading Achievement Results for Selected States  
 Fall-Spring Test Cycle by Grade--1988-89  
 Chapter 1 Migrant Education Program<sup>a/</sup>

Grade	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
2	657	33.4	21	42.2	35	8.8
3	505	30.2	17	39.3	30	9.1
4	409	35.3	24	40.8	33	5.5
5	467	33.2	21	37.6	27	4.4
6	309	34.2	22	40.7	33	6.5
7	161	33.9	22	40.1	32	6.2
8	172	37.8	28	42.2	35	4.4
9	54	35.6	24	37.6	27	2.0
10	32	34.1	22	36.3	25	2.2
11	27	35.2	24	36.4	25	1.2
12	35	35.6	24	40.3	32	4.7
Total <sup>b/</sup>	2,828					

a/ Nine states (Arkansas, Colorado, Louisiana, Maine, Mississippi, Oklahoma, Pennsylvania, Tennessee, and Texas) provided achievement information by grade using a pre- and posttest norm-referenced model.

b/ The sum of the number tested in reading on Tables 11 and 13 is not the same as the total number tested in reading using norm-referenced testing on Table 3 for four reasons. First, the numbers on Table 3 represent achievement results from a variety of test scores, not just pre- and posttest NCE scores, as shown on Tables

11 and 13. Second, Tables 11 and 13 include information for participants in grades 2 through 12 only, while Table 3 also includes information for kindergarten and grade 1. Third, while California reported the average of normal curve equivalent scores by grade level, pre- and posttest scores were not provided. Fourth, the Washington SEA requested that the NCE scores not be reported since the number tested was not representative of participants receiving migrant education services.



Table 14

Mathematics Achievement Results for Selected States  
 Fall-Spring Test Cycle by Grade--1988-89  
 Chapter 1 Migrant Education Program<sup>a/</sup>

Grade	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
2	443	43.8	38	57.0	63	13.2
3	336	43.1	37	51.2	52	8.1
4	296	40.5	32	49.0	48	8.5
5	365	39.5	30	45.8	42	6.3
6	243	37.4	27	43.1	37	5.7
7	128	39.7	31	45.3	41	5.6
8	128	42.4	35	47.7	45	5.3
9	55	35.1	24	39.1	30	4.0
10	31	32.5	20	38.3	29	5.8
11	29	34.2	22	36.3	25	2.1
12	25	39.2	30	41.3	34	2.1
Total <sup>b/</sup>	2,079					

a/ Ten states (Arkansas, Colorado, Louisiana, Maine, Mississippi, New Mexico, Oklahoma, Pennsylvania, Tennessee, and Texas) provided achievement information by grade using a pre- and posttest norm-referenced model.

b/ The sum of the number tested in mathematics on Tables 12 and 14 is not the same as the total number tested in mathematics using norm-referenced testing on Table 4 for four reasons. First, the numbers on Table 4 represent achievement results from a variety of test scores, not just pre- and posttest NCE scores, as shown on Tables 12 and 14. Second, Tables 12 and 14 include information for participants in grades 2 through 12 only, while Table 4 also includes information for kindergarten and grade 1. Third, while California reported the average of normal curve equivalent scores by grade level, pre- and posttest scores were not provided. Fourth, the Washington SEA requested that the NCE scores not be reported since the number tested was not representative of participants receiving migrant education services.

## **STATE-BY-STATE DESCRIPTIONS**

## ALABAMA

During the regular term, the Alabama migrant education projects provided services to 2,546 students in pre-kindergarten through grade 12. During the summer term, services were provided to 616 students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- language arts;
- mathematics;
- vocational/career education;
- tutoring;
- sewing;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

### *Summer Term*

- English to students of limited English background;
- language arts;
- mathematics;
- vocational/career education;
- tutoring;
- sewing;
- attendance, social work, and guidance;
- survival skills;
- early childhood development; and
- recreation instruction;

Alabama provided pre- and posttest achievement data for migrant students in reading and mathematics for the regular term. Data were reported in NCEs for an annual testing cycle. Students were tested using the Stanford Achievement Test, Number 7 (SAT 7) (Table 15).

Achievement data were not provided for the summer term.

Table 15

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

Alabama

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	57	52.5	51.7	-0.8
3	61	47.3	44.0	-3.3
4	58	53.3	51.5	-1.8
5	57	43.1	41.2	-1.9
6	51	40.3	43.8	3.5
7	45	38.2	37.7	-0.5
8	41	26.3	30.0	3.7
9	44	33.4	36.4	3.0
10	15	27.3	30.4	3.1
11	8	26.5	29.7	3.2
12	--	--	--	--
Total	437			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	146	53.2	53.6	0.4
3	131	56.8	45.9	-10.9
4	105	46.0	48.4	2.4
5	137	50.4	55.7	5.3
6	120	48.4	49.4	1.0
7	141	49.4	47.6	-1.8
8	66	44.5	45.7	1.2
9	26	30.3	36.7	6.4
10	29	34.4	39.3	4.9
11	4	63.8	52.5	-11.3
12	4	38.6	37.9	-0.7
Total	909			

## ALASKA

The migrant education projects in Alaska provided services to 6,487 regular term students in pre-kindergarten through grade 12. During the summer term, services were provided to 43 students in kindergarten through 8th grade.

Services that were provided included:

### *Regular Term*

- reading;
- language arts;
- mathematics;
- vocational/career education;
- attendance;
- attendance, social work, and guidance;
- health;
- pupil transportation; and
- other supporting (not specified).

### *Summer Term*

- reading;
- language arts; and
- mathematics.

During the regular term Alaska used norm-referenced testing. Alaska reported number tested and NCEs for reading, mathematics, and language arts on an annual testing cycle. Some districts used a fall-spring testing cycle, however, these data were not reported (Table 16).

Achievement information was not provided for the summer term.

Table 16

**Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89**

**Alaska**

**Reading**

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	159	32.2	25.8	-6.4
3	151	25.7	25.0	-0.7
4	173	22.7	23.2	0.5
5	155	19.9	21.6	1.7
6	170	20.4	22.6	2.2
7	154	21.0	22.1	1.1
8	101	22.7	20.7	-2.0
9	88	24.9	23.3	-1.6
10	50	26.8	27.6	0.8
11	38	21.7	19.6	-2.1
12	48	23.5	23.8	0.3
<b>Total</b>	<b>1,287</b>			

**Mathematics**

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	127	33.9	32.1	-1.8
3	127	30.6	34.6	4.0
4	148	28.1	27.0	-1.1
5	143	25.1	27.6	2.5
6	151	26.7	28.1	1.4
7	143	25.6	26.9	1.3
8	107	28.9	24.5	-4.4
9	93	26.0	24.3	-1.7
10	64	28.8	30.0	1.2
11	40	24.6	24.4	-0.2
12	51	24.4	23.0	-1.4
<b>Total</b>	<b>1,194</b>			

Table 16 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	19	22.3	35.5	13.2
3	12	5.3	9.3	4.0
4	82	22.1	23.4	1.3
5	52	10.3	11.1	0.8
6	51	16.7	18.8	2.1
7	33	13.7	12.9	-0.8
8	29	22.4	22.9	0.5
9	15	30.9	29.1	-1.8
10	14	36.6	38.8	2.2
11	10	26.2	26.9	0.7
12	13	23.9	19.3	-4.6
Total	330			

## ARIZONA

The state's migrant education projects served 13,372 regular term students and 1,456 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- instruction for preschool, gifted, and handicapped participants;
- PASS (Portable Assisted Study Sequence);
- secondary and elementary tutorial services;
- special activities;
- health/education safety;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- instruction for gifted and handicapped participants;
- PASS (Portable Assisted Study Sequence);
- secondary and elementary tutorial services;
- health/education safety;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

Arizona provided a statewide summary of achievement results for migrant students in reading, language arts, and mathematics for the regular term. The test scores included in Arizona's State Performance Report were the results of the April 1989 state administration of standardized achievement testing carried out for all students in grades 1 through 12. These scores are not directly comparable to the previous year's data because: 1) scores for the April 1988 testing were gathered in grade equivalents which are not directly convertible to NCEs; and 2) students in grades 9 through 12 were tested in April of 1988 using the Stanford Achievement Test and the Stanford Test of Academic Skills while the April 1989 testing instrument was the ITBS Tests of Achievement and Proficiency (TAP) (Table 17).

Achievement data were not provided for the summer term.



Table 17

## NCE Scores, April 1989

## Arizona

## Reading

Grade	Number Tested	Participants Scoring Above 50th NCE		Participants Scoring Below 50th NCE		Average NCE
		Number	Percent	Number	Percent	
1	11	0	(0)	11	(100)	26.3
2	176	27	(15)	149	(85)	35.2
3	621	95	(15)	526	(85)	30.9
4	622	62	(10)	560	(90)	30.7
5	600	71	(12)	529	(88)	32.8
6	596	80	(13)	516	(87)	32.1
7	631	90	(14)	541	(86)	33.8
8	546	90	(16)	456	(84)	36.5
9	496	69	(14)	427	(86)	34.5
10	417	92	(22)	325	(78)	35.6
11	329	48	(15)	281	(85)	33.3
12	286	61	(21)	225	(79)	34.7
Total	5,331	785	(15)	4,546	(85)	33.4

## Mathematics

Grade	Number Tested	Participants Scoring Above 50th NCE		Participants Scoring Below 50th NCE		Average NCE
		Number	Percent	Number	Percent	
1	12	1	(8)	11	(92)	23.5
2	166	46	(28)	120	(72)	39.6
3	608	164	(27)	444	(73)	38.8
4	613	111	(18)	502	(82)	31.6
5	586	113	(19)	473	(81)	34.2
6	593	101	(17)	492	(83)	32.7
7	571	132	(23)	439	(77)	35.0
8	536	79	(15)	457	(85)	35.0
9	496	95	(19)	401	(81)	37.4
10	424	114	(27)	310	(73)	38.4
11	328	71	(22)	257	(78)	36.0
12	289	62	(21)	227	(79)	35.1
Total	5,222	1,089	(21)	4,133	(79)	35.4

Table 17 (continued)

Language Arts

Grade	Number Tested	Participants Scoring Above 50th NCE		Participants Scoring Below 50th NCE		Average NCE
		Number	Percent	Number	Percent	
1	11	0	(0)	11	(100)	25.2
2	165	36	(22)	129	(78)	34.2
3	602	124	(21)	478	(79)	21.9
4	603	138	(23)	465	(77)	33.8
5	585	124	(21)	461	(79)	43.2
6	588	124	(21)	464	(79)	34.4
7	627	115	(18)	512	(82)	34.7
8	538	128	(24)	410	(76)	37.3
9	496	119	(24)	377	(76)	37.9
10	411	95	(23)	316	(77)	40.9
11	312	49	(16)	263	(84)	37.2
12	277	77	(28)	200	(72)	40.6
<b>Total</b>	<b>5,215</b>	<b>1,129</b>	<b>(22)</b>	<b>4,086</b>	<b>(78)</b>	<b>35.9</b>

## ARKANSAS

Migrant education projects in this state provided services to 6,660 regular term students in kindergarten through grade 12. Summer term services were provided to 561 students in kindergarten through grade 6.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- mathematics;
- vocational/career education;
- health (instructional)
- attendance, social work, and guidance;
- health (supporting);
- pupil transportation;
- clothing;
- school supplies; and
- personal supplies.

### *Summer Term*

- English to students of limited English background;
- reading;
- mathematics;
- pupil transportation; and
- nutrition.

Arkansas provided pre- and posttest achievement data for migrant students in reading and mathematics for the regular term. Data were reported in NCEs for the fall-spring testing cycle. Achievement gains were based on pre- and posttesting performance on the Individualized Criterion Referenced Test (ICRT) Form A (Table 18).

In addition, the ICRT M-Micro System was used to evaluate the effectiveness of the tutorial program for migrant participants who move frequently and thus are not always available for a pre- and posttest schedule. Arkansas provided counts for the number of skills mastered for the time tutored in all districts for the 1988-89 school year (Table 19).

Achievement data were not provided for the summer term.

Table 18

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

Arkansas

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	293	31.0	44.0	13.0
3	236	26.0	38.0	12.0
4	181	34.0	40.0	6.0
5	222	30.0	35.0	5.0
6	136	33.0	42.0	9.0
7	56	32.0	44.0	12.0
8	48	42.0	55.0	13.0
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	1,172			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	196	49.0	65.0	16.0
3	165	46.0	56.0	10.0
4	144	43.0	51.0	8.0
5	181	40.0	47.0	7.0
6	102	37.0	46.0	9.0
7	49	36.0	49.0	13.0
8	35	49.0	58.0	9.0
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	872			

Table 19

Chapter 1 Migrant Education Achievement Results  
 Number of Participants Evaluated, Average Number of  
 Weeks Tutored, and Average Number of Skills Gained,  
 1988-89 School Year

Arkansas

Grade	Reading			Mathematics		
	Number Eval.	Average Number Weeks Tutored	Average Number Skills Mastered <sup>a/</sup>	Number Eval.	Average Number Weeks Tutored	Average Number Skills Mastered <sup>a/</sup>
2	90	15	9	63	14	9
3	64	16	9	50	15	10
4	56	14	9	38	15	11
5	53	15	9	42	16	10
6	51	15	8	42	16	9
7	30	14	8	19	16	8
8	19	17	9	11	17	8
<b>Total</b>	<b>363</b>			<b>265</b>		

<sup>a/</sup> Information was not provided on the possible number of skills that could be mastered over a given time period.

## CALIFORNIA

The California migrant education projects provided services to 116,347 regular term students and 57,266 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- tutoring;
- other instructional services (not specified);
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting services (not specified).

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- tutoring;
- other instructional services (not specified);
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting services (not specified).

In 1988-89, California implemented the first year of its sustained gains testing program. Since the 1988-89 results were the first data point in a three year testing cycle, pre- and posttest data were not available. California tested students in reading, mathematics, and language arts during the regular term. Participants were tested in English and Spanish (Table 20).

According to the California SEA, the number of participants tested in Spanish was too small to provide representative data, therefore the scores for these students were excluded in the evaluation report. About 7,000 participants were tested in Spanish in reading and mathematics.

Achievement information was not provided for the summer term.

Table 20

**Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89**

**California**

**Reading**

Grade	Number Tested	Average NCE Score
K	154	24.1
1	1,148	36.3
2	3,018	34.0
3	3,824	33.1
4	3,890	35.2
5	3,990	35.2
6	3,841	34.3
7	3,436	34.9
8	3,430	36.4
9	2,029	34.2
10	1,579	32.6
11	1,195	31.8
12	961	32.0
<b>Total</b>	<b>32,495</b>	

**Mathematics**

Grade	Number Tested	Average NCE Score
K	204	28.3
1	1,142	40.5
2	3,391	45.8
3	4,372	44.7
4	4,430	43.3
5	4,556	43.7
6	4,452	43.2
7	4,159	43.3
8	4,042	43.5
9	2,497	41.8
10	2,145	40.5
11	1,582	42.4
12	1,228	43.1
<b>Total</b>	<b>38,200</b>	

Table 20 (continued)

Language Arts

Grade	Number Tested	Average NCE Score
K	52	31.8
1	633	39.6
2	2,848	37.7
3	3,599	34.4
4	3,765	36.5
5	4,070	37.9
6	8,048	37.8
7	3,677	39.7
8	3,490	40.4
9	2,244	38.8
10	1,796	36.2
11	1,347	35.9
12	1,054	35.9
<b>Total</b>	<b>36,623</b>	



## COLORADO

Colorado's migrant education projects served 2,086 regular term students and 1,810 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computer literacy;
- multicultural education;
- health education/safety;
- special activities;
- elementary and secondary tutorial services;
- instruction for preschool and handicapped participants;
- PASS (Portable Assisted Study Sequence);
- attendance, social work, and guidance;
- health;
- nutrition;
- pupil transportation;
- clothing;
- needs assessment;
- support for at-risk students;
- home visits;
- emergency housing assistance;
- food stamps; and
- glasses.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computer literacy;
- multicultural education;
- health education/safety;
- special activities;
- physical education;
- swimming;
- arts and crafts;
- music;
- outdoor education;
- science;
- dental instruction;
- computer education;
- attendance, social work, and guidance;
- health;
- nutrition;
- pupil transportation;
- clothing;
- needs assessment;
- support for at-risk students;
- home visits;
- emergency housing assistance;
- food stamps;
- glasses; and
- dental.

Colorado provided pre- and posttest achievement data for reading and mathematics for the regular term. Data were reported in NCEs for the annual and fall-spring testing cycles for settled-out students who participated in the regular school year program. The tests used were at the discretion of the program directors. The Individualized Test of Basic Skills (ITBS) and the Comprehensive Test of Basic Skills (CTBS) were two tests that were most commonly used (Tables 21 and 22).

In addition, criterion-referenced tests were used for reading and mathematics during the summer term as well as for active migrant participants during the regular year. Most districts used the Brigance Inventory of Basic Skills (Tables 23 and 24).

Table 21

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

Colorado

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	3	57.0	49.0	-8.0
3	2	38.0	60.0	22.0
4	2	31.2	46.7	15.5
5	6	50.8	47.4	-3.4
6	4	48.6	44.9	-3.7
7	1	5.0	49.0	44.0
8	--	--	--	--
9	--	--	--	--
10	2	41.9	43.0	1.1
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>20</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	3	82.0	66.0	-16.0
3	2	67.0	61.0	-6.0
4	2	24.3	45.6	21.3
5	6	59.9	53.0	-6.9
6	4	54.0	53.6	-0.4
7	1	23.0	22.0	-1.0
8	--	--	--	--
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>18</b>			

Table 22

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

Colorado

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	14	20.5	40.9	20.4
1	30	29.5	47.5	18.0
2	53	34.9	39.4	4.5
3	51	32.8	39.3	6.5
4	49	38.0	40.1	2.1
5	37	33.1	36.9	3.8
6	20	35.2	30.0	-5.2
7	16	33.7	31.6	-2.1
8	28	36.4	32.8	-3.6
9	9	35.5	28.9	-6.6
10	4	28.1	27.6	-0.5
11	5	31.0	35.6	4.6
12	1	26.0	16.0	-10.0
Total	317			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	4	25.7	30.6	4.9
1	23	33.0	44.4	11.4
2	34	41.5	47.3	5.8
3	26	41.9	44.4	2.5
4	29	42.0	48.8	6.8
5	24	39.8	48.9	9.1
6	13	37.2	41.2	4.0
7	16	39.9	38.1	-1.8
8	23	38.4	43.1	4.7
9	13	26.0	32.7	6.7
10	2	36.1	30.8	-5.3
11	5	22.9	16.3	-6.6
12	1	44.0	22.0	-22.0
Total	213			

**Table 23**

**Chapter 1 Migrant Education Achievement Results  
for Criterion Referenced Testing for the Regular  
Term, by Subject Area, 1988-89**

**Colorado**

	<b>Reading</b>	<b>Mathematics</b>
<b>Number of Students Tested</b>	638	479
<b>Number of Students for Whom the Average Number of Objectives Mastered was Available</b>	533	374
<b>Average Hours of Instruction Per Week</b>	3.1	2.5
<b>Average Number of Objectives Mastered</b>	7.5	6.0

**Table 24**

**Chapter 1 Migrant Education Achievement Results  
for Criterion Referenced Testing for the Summer  
Term, by Subject Area, 1989**

**Colorado**

	<b>Reading</b>	<b>Mathematics</b>
<b>Number of Students Tested</b>	710	722
<b>Average Hours of Instruction Per Week</b>	6.7	5.6
<b>Average Number of Grade Level Equivalents Gained</b>	0.5	1.0

## CONNECTICUT

Migrant education projects in this state served 3,388 regular term students and 339 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- ethnic arts;
- instruction for preschool participants;
- attendance, social work, and guidance;
- health;
- pupil transportation;
- food;
- clothing;
- housing; and
- parent contact.

### *Summer Term*

- reading;
- language arts;
- mathematics;
- vocational/career education;
- ethnic arts;
- instruction for preschool participants;
- attendance, social work, and guidance;
- health;
- pupil transportation;
- food;
- clothing;
- housing; and
- parent contact.

Achievement data were not provided for the regular or the summer term. Achievement information is reported biennially and will be filed with the 1989-90 State Performance Report.

## DELAWARE

Delaware's migrant education projects served 75 regular term students in kindergarten through grade 9. Summer term services were provided to 334 students in kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading; and
- mathematics.

### *Summer Term*

- English to students of limited English background;
- reading;
- mathematics;
- vocational/career education;
- language arts;
- instruction for GED/HEP participants;
- multicultural education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

This past year Delaware decided not to continue with the Comprehensive Test of Basic Skills and all regular term students took the California Achievement Test (CAT). As a result, Delaware was unable to compare the two standardized tests for 1988 and 1989. The 1990 report will be able to show gains comparing the CAT for 1989-1990.

During the six week summer term, two migrant projects tested all students in reading upon entry into the program.

## DISTRICT OF COLUMBIA

The District of Columbia's migrant education projects served 107 regular term students in pre-kindergarten through grade 11. Thirty-three participants in pre-kindergarten through grade 6 and grades 8 and 9 were served during the summer term.

Services that were provided included:

### *Regular Term*

- reading;
- attendance, social work, and guidance;
- dental; and
- nutrition.

### *Summer Term*

- reading;
- language arts;
- nutrition;
- pupil transportation; and
- cultural enrichment.

Achievement data were not provided for the regular or summer term.



## FLORIDA

The migrant education projects in Florida provided services to 23,597 regular term and 734 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- instruction for preschool participants;
- elementary and secondary tutorial services;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- needs assessment; and
- support for at-risk students.

### *Summer Term*

- reading;
- mathematics;
- vocational/career education;
- instruction for preschool participants;
- elementary and secondary tutorial services;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- needs assessment; and
- support for at-risk students.

Florida provided pre- and posttest achievement data for reading, mathematics, and language arts for the regular term. Data were reported in NCEs for an annual testing cycle. The following norm-referenced tests were used: Comprehensive Test of Basic Skills (CTBS), California Achievement Test (CAT), Stanford Achievement Test (SAT), Metropolitan Achievement Test (MAT), Science Research Associates (SRA), and the Iowa Test of Basic Skills (ITBS) (Table 25).

Achievement data were not provided for the summer term.

Table 25

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

Florida

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	237	37.0	36.0	-1.0
3	416	34.6	36.0	1.4
4	408	34.8	35.0	0.2
5	371	33.7	34.0	0.3
6	288	31.7	33.0	1.3
7	104	30.7	32.0	1.3
8	69	29.4	29.0	-0.4
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>1,893</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	25	38.4	42.0	3.6
3	39	34.1	39.0	4.9
4	24	36.5	39.0	2.5
5	43	34.6	36.0	1.4
6	29	31.3	35.0	3.7
7	29	30.0	30.0	0.0
8	18	32.4	33.0	0.6
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>207</b>			

Table 25 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	21	39.6	41.0	1.4
3	68	36.7	35.0	-1.7
4	60	36.4	40.0	3.6
5	61	37.1	36.0	-1.1
6	75	36.0	38.0	2.0
7	80	30.6	34.0	3.4
8	61	30.0	31.0	1.0
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>426</b>			

## GEORGIA

Georgia's migrant education projects served 4,755 regular term students and 1,870 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- general tutoring;
- outdoor education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- clothing; and
- pupil service.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- general tutoring;
- outdoor education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- clothing;
- pupil service; and
- field trips.

Georgia provided pre- and posttest achievement data for the regular term for reading and mathematics (Table 26).

Data were reported comparing NCE gains for migrant students who were served and those unserved by the migrant program (Table 27).

Analyses were also provided comparing the achievement of students served by the migrant education program to state averages and to students not receiving MEP services. The Iowa Test of Basic Skills (ITBS) is administered in grades 2, 4, and 7. The Tests of Achievement and Proficiency (TAP) is administered in grade 9 (Tables 28 and 29).

Achievement data were not provided for the summer term.

Table 26

Chapter 1 Migrant Education Achievement Results  
for Migrant Students Served and Tested on an  
Annual Schedule, by Subject Area, 1988-89

## Georgia

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	6	32.7	36.5	3.8
2	29	37.2	39.6	2.4
3	34	37.3	34.4	-2.9
4	20	33.5	32.0	-1.5
5	34	35.9	34.1	-1.8
6	18	34.4	34.7	0.3
7	15	37.4	37.3	-0.1
8	6	35.8	31.3	-4.5
9	6	42.5	32.0	-10.5
10	1	46.0	59.0	13.0
11	--	--	--	--
12	--	--	--	--
Total	169			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	6	36.8	58.0	21.2
2	25	44.4	50.4	6.0
3	33	47.5	38.9	-8.6
4	19	43.3	42.0	-1.3
5	27	38.4	38.7	0.3
6	14	39.5	40.6	1.1
7	8	37.6	41.6	4.0
8	4	44.0	33.0	-11.0
9	6	32.3	40.7	8.4
10	1	46.0	32.0	-14.0
11	--	--	--	--
12	--	--	--	--
Total	143			

Table 27

Comparison of Migrant Students' NCE Gains  
(Served and Unserved), for Students Tested on an  
Annual Schedule, by Subject Area, 1988-89

Georgia

Grade	Reading Gain (Served)	Reading Gain (Unserved)	Math Gain (Served)	Math Gain (Unserved)
1	3.8	24.5	21.2	11.1
2	2.4	1.0	6.0	13.3
3	-2.9	-3.6	-8.6	-1.4
4	-1.5	-11.6	-1.3	-5.8
5	-1.8	-0.8	0.3	-0.5
6	0.3	-2.6	1.1	4.5
7	-0.1	0.6	4.0	-5.4
8	-4.5	2.9	-11.0	10.1
9	-10.5	1.7	8.4	-2.2
10	13.0	-14.0	-14.0	-11.5
Total	-1.0	0.0	0.1	1.0
Total Number Tested	169	122	143	154

Table 28

Percentile of Migrant Students, by Grade  
and Instructional Area, Spring 1989

Georgia

Subtest	2nd Grade	4th Grade	7th Grade	9th Grade
	MEP Served Percentile (147) <sup>a/</sup>	MEP Served Percentile (126)	MEP Served Percentile (51)	MEP Served Percentile (18)
Listening	48			
Word Analysis	46			
Vocabulary	36	24	20	
Reading	30	25	27	24
L1 Spelling	43	31	35	
L2 Capitalization	60	42	40	
L3 Punctuation	56	44	38	
L4 Usage	50	30	35	
Language Total	53	35	36	24
W1 Visual Material	45	34	32	
W2 References	49	32	39	
Work-Study Total	48	33	36	23
M1 Concepts	51	44	37	
M2 Problems	53	30	28	
M3 Computation	58	44	35	
Math Total	55	39	33	19
Science	42	43	43	35
Social Studies	54	35	32	26
Composite	45	30	29	21

a/ The numbers in parentheses indicate the number tested.

Table 29

Percentile of Migrant Students Served, Migrant Students Unserved and State Average, by Grade and Instructional Area, Spring 1989

Georgia

Subject/Grade	Migrant Served Percentile	Migrant Unserved Percentile	State Average Percentile
<b>Reading</b>			
2nd Grade	30	43	63
4th Grade	25	33	54
7th Grade	27	35	51
9th Grade	24	32	52
<b>Language</b>			
2nd Grade	53	56	73
4th Grade	35	38	62
7th Grade	36	35	55
9th Grade	24	30	57
<b>Mathematics</b>			
2nd Grade	55	55	74
4th Grade	39	43	64
7th Grade	33	34	55
9th Grade	19	35	50
<b>Composite</b>			
2nd Grade	45	48	70
4th Grade	30	36	59
7th Grade	29	32	55
9th Grade	21	32	54



## IDAHO

Idaho's migrant education projects served 2,241 regular term students and 2,094 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- art;
- music;
- physical education;
- social studies;
- science;
- attendance, social work, and guidance;
- health;
- nutrition; and
- pupil transportation.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- art;
- music;
- physical education;
- social studies;
- science;
- attendance, social work, and guidance;
- health;
- nutrition; and
- pupil transportation.

Based on norm-referenced tests, Idaho provided pre- and posttest achievement data for reading, mathematics, language arts, and English as a second language for the regular term. Data were reported in NCEs for the fall-spring and annual testing cycles. Each district chose what test to use. Some of the tests used included the Iowa Test of Basic Skills (ITBS), the Comprehensive Test of Basic Skills (CTBS), the Science Research Associates (SRA), and the California Achievement Test (CAT). However, for English as a second language, data were reported as raw scores (Tables 30 and 31).

There were no statewide achievement data provided for the summer term. However, criterion-referenced tests measuring skills mastered were given at the discretion of the district.

Table 30

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

Idaho

Reading

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	56	2.6
3	62	5.4
4	55	4.8
5	67	-0.6
6	32	-5.0
7	13	5.0
8	5	-2.3
9	2	10.0
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>292</b>	

Mathematics

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	18	3.0
3	48	1.4
4	41	7.2
5	49	1.0
6	21	-0.8
7	7	-2.9
8	7	7.5
9	3	7.7
10	3	8.0
11	1	-16.0
12	--	--
<b>Total</b>	<b>198</b>	

Table 30 (continued)

Language Arts

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	19	4.2
3	19	1.5
4	9	-2.6
5	11	6.3
6	16	-0.3
7	7	8.4
8	5	3.3
9	1	9.0
10	--	--
11	2	2.5
12	--	--
<b>Total</b>	<b>89</b>	

English as a Second Language

Grade	Number Tested	Raw Score
K	--	--
1	--	--
2	11	15.5
3	8	5.0
4	8	0.7
5	3	7.0
6	2	7.4
7	1	15.0
8	2	2.8
9	2	-1.5
10	4	1.3
11	--	--
12	--	--
<b>Total</b>	<b>41</b>	

Table 31

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

Idaho

Reading

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	72	6.3
3	50	7.7
4	49	6.4
5	40	12.1
6	31	-0.7
7	31	11.1
8	27	9.0
9	11	4.3
10	2	3.5
11	4	13.8
12	1	2.0
<b>Total</b>	<b>318</b>	

Mathematics

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	34	12.1
3	39	8.5
4	37	15.3
5	35	11.6
6	25	7.5
7	19	5.8
8	23	1.4
9	3	1.3
10	2	0.0
11	3	16.3
12	--	--
<b>Total</b>	<b>220</b>	

Table 31 (continued)

Language Arts

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	5	-1.2
3	8	14.7
4	2	-0.5
5	2	11.0
6	11	4.1
7	2	0.5
8	--	--
9	--	--
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>30</b>	

English as a Second Language

Grade	Number Tested	Raw Score
K	--	--
1	--	--
2	25	12.1
3	14	13.1
4	12	15.7
5	3	8.7
6	7	6.9
7	4	11.5
8	7	6.9
9	2	37.0
10	2	10.5
11	2	36.5
12	--	--
<b>Total</b>	<b>78</b>	

## ILLINOIS

The migrant education projects in Illinois served 918 regular term students and 2,421 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computers;
- physical education;
- social studies;
- science;
- art;
- music;
- health;
- consumer education;
- cultural development;
- shop;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- blood pressure screening;
- physical exams;
- needs assessment; and
- RIF (Reading is Fundamental) field trips.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computers;
- physical education;
- social studies;
- science;
- art;
- music;
- health;
- consumer education;
- cultural development;
- shop;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- blood pressure screening;
- physical exams;
- needs assessment; and
- RIF (Reading is Fundamental) field trips.

Statewide achievement data were collected from the Self Assessment Questionnaire (SAQ). Illinois migrant project staff report the number of students by grade level not meeting standards and those who are meeting/exceeding standards in four basic skill areas--English to limited English background, reading, other language arts, and mathematics (Tables 32 and 33).

Local projects established their own standards and criteria for success. Most projects used a variety of teacher-made tests, standardized achievement measures, checklists, and observation to assess student performance. Standardized instruments that projects report using included:

Stanford Achievement Test;  
WRAT/Peabody;  
Hoffman Audio/Visual Test;  
Addison-Wesley Math Series;  
DMI Math;  
EPSF;  
Dolch Spelling List;

Hott Mathematics Unlimited;  
Silver Burdett and Ginn English Exams;  
Iowa Test of Basic Skills; and  
California Achievement Test Battery.

Table 32  
Achievement Data for the Regular Term  
School Year 1988-1989

Illinois

English to Limited English Background

Grade	Number Assessed by Staff	Number Meeting and/or Exceeding Standards	Percent Meeting and/or Exceeding Standards
PreK	--	--	--
K	49	29	59
1	53	41	77
2	59	38	64
3	45	24	53
4	37	22	59
5	42	28	67
6	24	15	63
7	26	17	65
8	22	16	73
9	10	2	20
10	9	2	22
11	2	2	100
12	6	2	33
UG*	1	1	100
<b>Total</b>	<b>385</b>	<b>239</b>	<b>62</b>

Reading

Grade	Number Assessed by Staff	Number Meeting and/or Exceeding Standards	Percent Meeting and/or Exceeding Standards
PreK	--	--	--
K	62	40	65
1	75	62	83
2	92	68	74
3	72	49	68
4	66	45	68
5	41	30	73
6	47	38	81
7	37	26	70
8	37	28	76
9	20	16	80
10	19	18	95
11	12	12	100
12	12	11	92
UG*	3	1	33
<b>Total</b>	<b>595</b>	<b>444</b>	<b>75</b>

Ungraded



Table 32 (continued)

Language Arts

Grade	Number Assessed by Staff	Number Meeting and/or Exceeding Standards	Percent Meeting and/or Exceeding Standards
PreK	--	--	--
K	29	11	38
1	52	42	81
2	44	42	95
3	37	33	89
4	36	31	86
5	36	21	58
6	40	31	78
7	32	25	78
8	32	27	84
9	21	17	81
10	25	22	88
11	12	12	100
12	16	13	81
UG*	2	0	0
<b>Total</b>	<b>414</b>	<b>327</b>	<b>79</b>

Mathematics

Grade	Number Assessed by Staff	Number Meeting and/or Exceeding Standards	Percent Meeting and/or Exceeding Standards
PreK	--	--	--
K	49	32	65
1	57	50	88
2	61	45	74
3	56	37	66
4	49	37	76
5	51	35	69
6	44	35	80
7	34	28	82
8	39	35	90
9	18	15	83
10	19	18	95
11	11	11	100
12	11	10	91
UG*	1	0	0
<b>Total</b>	<b>500</b>	<b>388</b>	<b>78</b>

\* Ungraded

**Table 33**  
**Achievement Data for the Summer Term, 1989**

**Illinois**

**English to Limited English Background**

<b>Grade</b>	<b>Number Assessed by Staff</b>	<b>Number Meeting and/or Exceeding Standards</b>	<b>Percent Meeting and/or Exceeding Standards</b>
PreK	212	146	69
K	263	160	61
1	239	140	59
2	152	111	73
3	144	99	69
4	116	89	77
5	102	81	79
6	87	61	70
7	76	46	61
8	56	34	61
9	36	22	61
10	22	15	68
11	16	9	56
12	3	3	100
UG*	--	--	--
<b>Total</b>	<b>1,524</b>	<b>1,016</b>	<b>67</b>

**Reading**

<b>Grade</b>	<b>Number Assessed by Staff</b>	<b>Number Meeting and/or Exceeding Standards</b>	<b>Percent Meeting and/or Exceeding Standards</b>
PreK	229	155	68
K	282	177	63
1	293	176	60
2	252	180	71
3	247	164	66
4	231	178	77
5	181	131	72
6	171	115	67
7	135	82	61
8	91	54	59
9	54	26	48
10	42	33	79
11	22	14	64
12	3	3	100
UG*	2	0	0
<b>Total</b>	<b>2,235</b>	<b>1,488</b>	<b>67</b>

\* Ungraded

Table 33 (continued)

Language Arts

Grade	Number Assessed by Staff	Number Meeting and/or Exceeding Standards	Percent Meeting and/or Exceeding Standards
PreK	196	142	72
K	253	166	66
1	259	159	61
2	238	176	74
3	234	169	72
4	215	165	77
5	159	116	73
6	151	105	70
7	124	77	62
8	91	53	58
9	52	24	46
10	42	32	76
11	22	13	59
12	3	3	100
UG*	2	0	0
<b>Total</b>	<b>2,041</b>	<b>1,400</b>	<b>69</b>

Mathematics

Grade	Number Assessed by Staff	Number Meeting and/or Exceeding Standards	Percent Meeting and/or Exceeding Standards
PreK	195	162	83
K	297	205	69
1	300	199	66
2	252	190	75
3	250	181	72
4	231	179	77
5	184	136	74
6	174	130	75
7	141	92	65
8	99	65	66
9	56	31	55
10	26	15	58
11	21	12	57
12	6	4	67
UG*	3	1	33
<b>Total</b>	<b>2,235</b>	<b>1,602</b>	<b>72</b>

\* Ungraded

## INDIANA

Indiana's migrant education projects served 2,400 regular term students and 2,662 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- multicultural education;
- instruction for preschool, gifted, and handicapped participants;
- elementary and secondary tutorial;
- RIF (Reading is Fundamental);
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- multicultural education;
- elementary and secondary tutorial;
- RIF (Reading is Fundamental);
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

Indiana utilized a point-in-time evaluation model. At the beginning of the 1988-89 school year, point-in-time assessment was initiated for participants in grades 2-9 in fall projects. Participants in grades 3, 5, 7, and 9 during the summer term were considered for testing. The following criteria were used to screen students for inclusion in both assessments: students must have sufficient English proficiency to understand test directions and items; and students must perform at no more than one level below the test publisher's recommended level for children of that age and time of testing. The instrument used in the 1989 point-in-time assessment during the summer term was the SAT (Stanford Achievement Test, 1982 edition) (Tables 34, 35, and 36).

Although the same grade levels are assessed each summer, the aforementioned criteria precluded ninth graders from qualifying for participation prior to 1986, and ninth grade scores were not available for summer, 1984 or summer, 1985.

Table 34

Point-in-Time Assessment, Fall 1988

Indiana

Grade	Reading Comprehension		Total Reading		Total Mathematics	
	Number Tested	NCE Average	Number Tested	NCE Average	Number Tested	NCE Average
2	14	46.2	29	33.5	28	51.2
3	22	36.2	22	31.1	23	55.3
4	24	36.2	24	27.4	24	34.0
5	21	45.4	22	38.0	22	48.7
6	22	35.7	22	34.4	22	48.7
7	28	36.4	28	37.1	28	42.8
8	20	29.0	20	27.4	20	38.7
9	17	37.7	17	33.9	17	46.2
<b>Total</b>	<b>168</b>		<b>184</b>		<b>184</b>	

Table 35

Point-in-Time Assessment, Summer Term 1984-1989

Indiana

	NCE Scores - Reading Comprehension						Total Number Tested
	Grade 3		Grade 5		Grade 7		
	Number Tested	NCE	Number Tested	NCE	Number Tested	NCE	
1989	33	34.2	16	35.8	2	44.6	51
1988	13	22.9	16	33.9	8	56.4	37
1987	21	30.1	16	33.3	6	21.1	43
1986	23	27.9	18	34.2	10	33.6	51
1985	42	29.9	23	34.8	5	36.8	70
1984	26	30.5	10	30.5	10	43.2	46

Table 36

Point-in-Time Assessment, Summer Term 1989

Indiana

Grade	Number Tested	NCE Scores - Total Reading
3	32	32.6
5	15	35.3
7	--	--
Total	47	

Grade	Number Tested	NCE Scores - Total Mathematics
3	11	41.6
5	16	37.3
7	2	56.5
Total	29	

## IOWA

The migrant education projects in Iowa provided services to 180 regular term students in pre-kindergarten through grade 12. The summer term program provided services to six students.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics; and
- vocational/career education.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education; and
- pupil transportation.

For the regular term, participants in migrant education projects in four school districts were tested using standardized achievement tests near the fall and spring norming dates. Two school districts reported NCE gains using the ITBS (Iowa Test of Basic Skills) and the LAB (Language Assessment Battery).

A third school district had sketchy evaluation results due to the high turnover of migrant students. Eight of the Hispanic and Vietnamese students served at this site spoke no English so they were administered the IDEA (Oral Language Proficiency Test in English). Score levels were reported by student name.

Fifty-five percent of the kindergarten and first grade migrant students from the fourth school district were pre- and posttested with the Peabody Picture Vocabulary Test.

Achievement data were not provided for the summer term.



## KANSAS

The migrant education projects in Kansas served 5,439 regular term students and 850 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- secondary tutorial services;
- instruction for GED/HEP, preschool, and handicapped participants;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- instruction for GED/HEP and preschool participants;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

Kansas used a norm-referenced model to evaluate local migrant projects and encouraged the projects to use the Individualized Criterion Referenced Test. The State Performance Report provided information on the number tested and the average gains reported in reading and mathematics for a fall-spring testing cycle (Table 37).

Achievement data were not provided for the summer term.

Table 37

NCE Gain Scores for Students Tested on a  
Fall-Spring Schedule, by Subject Area, 1988-89

Kansas

Reading

Grade	Number Tested	Average NCE Gain
PS	9	12.1
K	12	-1.0
1	75	27.8
2	102	24.0
3	89	14.9
4	94	13.9
5	75	10.5
6	46	15.8
7	23	5.3
8	22	6.5
9	7	9.7
10	10	7.8
11	13	14.2
12	5	0.6
<b>Total</b>	<b>582</b>	

Mathematics

Grade	Number Tested	Average NCE Gain
PS	3	27.7
K	9	11.6
1	23	5.2
2	19	10.8
3	25	12.0
4	33	4.8
5	32	7.3
6	22	6.6
7	13	8.7
8	16	11.3
9	6	6.5
10	2	-3.5
11	1	38.0
12	--	--
<b>Total</b>	<b>204</b>	

## KENTUCKY

In Kentucky, migrant education services were provided to 2,814 regular term students in pre-kindergarten through grade 12. Services were provided to 505 summer term students in pre-kindergarten through grade 10.

Services that were provided included:

### *Regular Term*

- reading;
- language arts;
- mathematics;
- vocational/career education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

### *Summer Term*

- language arts;
- attendance, social work, and guidance; and
- nutrition.

Kentucky administered the Comprehensive Test of Basic Skills (CTBS/4) at one point-in-time (May 1989). Students were tested in reading, mathematics, language arts, spelling, and study skills. Data were provided comparing the achievement of migrant students to all students (Table 38).

Dropout rates were also provided as an outcome measure. Migrant students attended 93.3 percent of the days in membership in FY 1989; all Kentucky students attended 94.7 percent. The migrant dropout rate in FY 1989 was 5.25 percent, and for all Kentucky students it was 3.15 percent.<sup>12</sup> In FY 1990, the goal is to close the gap between "at-risk" students and all Kentucky students.

Achievement data were not provided for the summer term. According to the SEA, it was difficult to measure program outcomes during the summer because of the variety of programs that were offered. The programs concentrated more on improving student attitudes than instruction.

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<sup>12</sup>Annual dropout rate is calculated by dividing the total number served in grades 7-12 into the total number leaving school before graduation.

**Table 38**  
**Chapter 1 Migrant Education Achievement Results for Migrant**  
**Students and All Students Tested Using a Point-in-Time**  
**Assessment Approach, by Subject Area, May 1989**

**Kentucky**

**Reading**

Grade	Migrant Students		All Students
	Number Tested	NCE Mean Score	NCE Mean Score
K	--	--	--
1	284	38.9	49.5
2	210	40.8	51.1
3	222	41.0	50.8
4	220	44.0	52.0
5	199	41.2	50.9
6	222	42.8	50.7
7	195	42.5	50.4
8	149	43.6	51.8
9	119	40.7	49.7
10	86	40.6	50.4
11	60	41.2	47.9
12	29	41.5	47.1
<b>Total</b>	<b>1,995</b>		

**Mathematics**

Grade	Migrant Students		All Students
	Number Tested	NCE Mean Score	NCE Mean Score
K	--	--	--
1	284	41.6	50.2
2	210	46.3	52.3
3	222	40.1	48.8
4	220	46.7	51.9
5	199	43.9	51.7
6	222	45.9	52.6
7	195	44.2	51.2
8	149	45.2	51.6
9	119	43.4	51.4
10	86	49.3	52.8
11	60	44.0	50.4
12	29	46.3	48.7
<b>Total</b>	<b>1,995</b>		

Table 38 (continued)

Language Arts

Grade	Migrant Students		All Students
	Number Tested	NCE Mean Score	NCE Mean Score
K	--	--	--
1	284	39.1	48.8
2	210	41.9	51.9
3	222	40.2	50.3
4	220	44.7	52.7
5	199	41.7	52.6
6	222	42.4	51.6
7	195	44.0	50.9
8	149	45.2	52.7
9	119	44.6	52.6
10	86	46.3	53.6
11	60	45.3	52.2
12	29	45.3	50.3
Total	1,995		

Spelling

Grade	Migrant Students		All Students
	Number Tested	NCE Mean Score	NCE Mean Score
K	--	--	--
1	--	--	--
2	210	39.4	49.6
3	222	39.0	50.2
4	220	42.8	51.4
5	199	41.0	50.3
6	222	43.0	50.1
7	195	42.0	49.5
8	149	44.9	50.5
9	119	40.6	50.0
10	86	42.7	50.2
11	60	41.0	49.3
12	29	36.4	48.5
Total	1,711		

Table 38 (continued)

Study Skills

Grade	Migrant Students		All Students
	Number Tested	NCE Mean Score	NCE Mean Score
K	--	--	--
1	--	--	--
2	--	--	--
3	--	--	--
4	220	45.4	53.4
5	199	43.2	52.5
6	222	42.9	52.1
7	195	39.8	48.5
8	149	40.1	50.1
9	119	41.9	51.0
10	86	44.7	52.1
11	60	40.9	50.1
12	29	39.7	48.6
<b>Total</b>	<b>1,279</b>		

## LOUISIANA

Migrant education projects in this state provided services to 5,672 regular term students in pre-kindergarten through grade 12. Louisiana did not offer a summer program.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computer literacy;
- science;
- social studies;
- speech;
- health;
- secondary tutorial services;
- pre-kindergarten and elementary home sheets;
- free books;
- instruction for handicapped/special education students;
- health; and
- dental.

Louisiana provided achievement data by currently and formerly migrant status. The majority of Louisiana's migrant education participants tested were formerly migrant. Data were reported on both an annual and fall-spring schedule. Tests used included the Science Research Associates (SRA) test, California Achievement Test (CAT), and the Comprehensive Test of Basic Skills (CTBS) (Tables 39, 40, 41, and 42).

Table 39

Chapter 1 Migrant Education Achievement Results  
for Currently Migrant Students Tested on an  
Annual Schedule, by Subject Area, 1988-89

## Louisiana

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	70	37.9	40.5	2.6
3	52	39.4	43.1	3.7
4	23	43.9	48.1	4.2
5	43	35.8	38.4	2.6
6	22	36.8	44.9	8.1
7	27	40.5	42.4	1.9
8	16	45.2	45.6	0.4
9	9	52.6	54.7	2.1
10	1	38.0	34.7	-3.3
11	3	43.0	54.0	11.0
12	1	46.0	56.0	10.0
Total	267			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	51	51.3	47.6	-3.7
3	47	44.1	51.9	7.8
4	20	46.2	49.9	3.7
5	36	40.9	46.3	5.4
6	15	44.2	49.3	5.1
7	22	50.0	52.6	2.6
8	14	50.8	53.6	2.8
9	8	53.6	57.7	4.1
10	2	47.0	64.5	17.5
11	3	51.5	56.8	5.3
12	3	49.0	51.5	2.5
Total	221			



Table 39 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	18	36.9	45.1	8.2
3	17	43.1	49.1	6.0
4	4	37.6	41.8	4.2
5	7	44.6	54.0	9.4
6	5	54.7	61.8	7.1
7	6	32.3	39.2	6.9
8	7	59.0	64.1	5.1
9	4	80.9	75.9	-5.0
10	--	--	--	--
11	2	69.4	87.1	17.7
12	--	--	--	--
<b>Total</b>	<b>70</b>			

Table 40

Chapter 1 Migrant Education Achievement Results  
for Currently Migrant Students Tested on a  
Fall-Spring Schedule, by Subject Area, 1988-89

## Louisiana

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	41	27.8	33.0	5.2
3	48	33.3	40.5	7.2
4	38	34.1	43.2	9.1
5	44	41.4	45.1	3.7
6	26	28.3	36.4	8.1
7	11	26.1	24.9	-1.2
8	11	33.7	36.0	2.3
9	2	14.0	20.0	6.0
10	1	10.0	10.0	0.0
11	1	57.0	59.0	2.0
12	1	32.0	38.0	6.0
<b>Total</b>	<b>224</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	28	37.0	43.3	6.3
3	33	36.4	49.6	13.2
4	28	35.7	44.8	9.1
5	30	47.6	52.6	5.0
6	15	25.9	32.8	6.9
7	8	39.6	42.0	2.4
8	5	48.3	48.1	-0.2
9	2	19.0	34.0	15.0
10	1	13.0	32.0	19.0
11	1	55.0	60.0	5.0
12	1	33.0	49.0	16.0
<b>Total</b>	<b>152</b>			

Table 40 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	1	11.5	14.5	3.0
3	2	54.0	62.5	8.5
4	3	45.3	64.6	19.3
5	1	40.0	34.0	-6.0
6	1	5.0	29.0	24.0
7	1	34.0	33.3	-0.7
8	1	6.0	22.0	16.0
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>10</b>			

Table 41

Chapter 1 Migrant Education Achievement Results  
for Formerly Migrant Students Tested on an  
Annual Schedule, by Subject Area, 1988-89

## Louisiana

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	173	38.9	38.7	-0.2
3	180	41.8	45.8	4.0
4	120	41.1	40.2	-0.9
5	170	35.7	39.8	4.1
6	143	40.9	45.2	4.3
7	154	41.0	42.7	1.7
8	107	49.1	50.2	1.1
9	38	40.6	40.6	0.0
10	13	41.2	45.3	4.1
11	14	42.0	45.5	3.5
12	--	--	--	--
Total	1,112			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	157	49.6	49.2	-0.4
3	182	44.9	47.6	2.7
4	145	46.1	49.5	3.4
5	139	39.9	46.8	6.9
6	123	45.1	48.7	3.6
7	135	48.2	49.4	1.2
8	103	57.3	59.4	2.1
9	39	51.5	62.3	10.8
10	17	41.0	51.5	10.5
11	17	53.8	59.2	5.4
12	5	63.0	58.0	-5.0
Total	1,062			

Table 41 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	32	42.0	33.4	-8.6
3	36	42.6	50.8	8.2
4	22	46.7	54.0	7.3
5	37	38.8	39.9	1.1
6	33	49.8	58.7	8.9
7	47	39.6	46.9	7.3
8	31	55.5	74.6	19.1
9	14	52.2	54.9	2.7
10	5	45.6	53.0	7.4
11	9	45.1	54.6	9.5
12	--	--	--	--
<b>Total</b>	<b>266</b>			

Table 42

Chapter 1 Migrant Education Achievement Results  
for Formerly Migrant Students Tested on a  
Fall-Spring Schedule, by Subject Area, 1988-89

## Louisiana

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	52	33.4	37.5	4.1
3	39	28.8	35.2	6.4
4	20	32.2	28.4	-3.8
5	36	33.9	36.7	2.8
6	32	34.2	39.6	5.4
7	9	32.2	32.6	0.4
8	7	57.4	56.3	-1.1
9	5	35.5	38.1	2.6
10	2	43.0	39.5	-3.5
11	5	42.1	43.8	1.7
12	3	33.7	41.2	7.5
Total	210			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	35	40.3	45.2	4.9
3	24	32.8	36.9	4.1
4	13	34.5	41.4	6.9
5	27	31.1	36.5	5.4
6	26	29.5	32.9	3.4
7	8	47.0	45.1	-1.9
8	7	45.6	52.6	7.0
9	5	42.8	44.2	1.4
10	2	40.5	64.5	24.0
11	5	46.3	55.2	8.9
12	3	51.2	54.7	3.5
Total	155			

Table 42 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	5	20.2	20.2	0.0
3	5	19.7	25.5	5.8
4	5	29.8	34.3	4.5
5	4	15.3	10.7	-4.6
6	8	18.7	21.6	2.9
7	--	--	--	--
8	1	73.0	76.0	3.0
9	3	46.0	48.7	2.7
10	2	53.5	58.0	4.5
11	2	36.0	40.0	4.0
12	1	32.0	43.0	11.0
<b>Total</b>	<b>36</b>			

## MAINE

During the regular term, Maine's migrant education projects served 3,802 students in pre-kindergarten through grade 12. During the summer term, services were provided to 414 migrant education students in pre-kindergarten through grade 11.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computer instruction;
- health/safety education;
- RIF (Reading is Fundamental);
- secondary tutorial services;
- attendance, social work, and guidance;
- nutrition;
- pupil transportation;
- needs assessment; and
- supporting services for handicapped participants.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- multicultural education;
- attendance, social work, and guidance;
- nutrition;
- pupil transportation;
- health; and
- dental.

Maine provided regular term pre- and posttest achievement data for reading and mathematics. Data were reported in NCEs for the annual and fall-spring testing cycles (Tables 43 and 44).

Maine is developing a method of measuring program outcomes for the summer term.



Table 43

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

## Maine

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	104	47.2	49.9	2.7
3	104	51.9	53.5	1.6
4	114	53.2	49.7	-3.5
5	111	52.3	50.4	-1.9
6	101	49.0	48.8	-0.2
7	102	52.5	55.4	2.9
8	95	51.3	51.8	0.5
9	29	45.3	41.9	-3.4
10	48	49.4	51.4	2.0
11	37	45.8	49.9	4.1
12	30	48.0	52.3	4.3
<b>Total</b>	<b>875</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	96	50.2	52.4	2.2
3	100	52.0	53.1	1.1
4	107	53.7	54.5	0.8
5	98	51.4	50.0	-1.4
6	95	48.1	51.3	3.2
7	98	50.9	52.5	1.6
8	92	53.4	53.9	0.5
9	25	44.4	42.0	-2.4
10	44	49.6	51.1	1.5
11	37	47.5	52.2	4.7
12	28	44.6	49.1	4.5
<b>Total</b>	<b>820</b>			

Table 44

**Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89**

## Maine

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	34	58.2	62.9	4.7
2	36	46.5	50.6	4.1
3	35	46.0	51.6	5.6
4	39	49.3	54.1	4.8
5	40	50.4	50.4	0.0
6	34	45.7	49.4	3.7
7	31	45.8	50.0	4.2
8	29	44.5	45.7	1.2
9	9	46.2	52.7	6.5
10	4	69.2	68.0	-1.2
11	3	45.1	41.0	-4.1
12	4	55.3	52.9	-2.4
<b>Total</b>	<b>298</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	31	55.7	59.4	3.7
2	26	49.6	55.0	5.4
3	31	51.1	53.3	2.2
4	27	43.5	56.1	12.6
5	36	50.1	51.5	1.4
6	31	55.7	55.2	-0.5
7	19	52.6	51.6	-1.0
8	23	49.5	50.7	1.2
9	6	46.2	47.3	1.1
10	1	61.0	62.0	1.0
11	1	32.0	32.0	0.0
12	3	53.0	56.0	3.0
<b>Total</b>	<b>235</b>			

## MARYLAND

Migrant education projects in Maryland provided services to 113 regular term students and 592 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- mathematics;
- secondary tutorial services;
- special activities;
- attendance, social work, and guidance;
- nutrition; and
- pupil transportation.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- multicultural education;
- instruction for GED/HEP and handicapped participants;
- secondary tutorial services;
- PASS (Portable Assisted Study Sequence);
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

During the summer term, Maryland used the 3 R's Test Class Period Edition, a basic skills test. Test results were provided for three of four summer school sites having matched pre- and posttest scores. The test was administered twice within a six week interval. The same test was also given during the summer with separate scores provided for reading and math (Tables 45 and 46).

Achievement data were not provided for the regular term.

Table 45

Achievement Information Based on 3R's Test, Class  
Period Edition, Composite Raw Scores, Summer Term 1989

Maryland

(Math and Reading Combined)

Grade	Number Tested	Pretest Raw Score	Posttest Raw Score	Difference in Raw Scores
2	25	18.0	21.3	3.3
3	14	27.4	32.6	5.2
4	23	23.0	28.3	5.3
5	13	19.8	23.9	4.1
6	16	24.5	24.9	0.4
7	8	18.9	23.7	4.8
8	3	24.0	26.7	2.7
<b>Total</b>	<b>102</b>			

Table 46

Achievement Information Based on 3R's Test,  
Class Period Edition, by Subject Area, Summer Term 1989

Maryland

Reading

Grade	NCE			
	Number Tested	Pretest	Posttest	Gain
K	--	--	--	--
1	35	10.1	12.5	2.4
2	35	10.5	11.1	0.6
3	30	11.2	12.5	1.4
4	30	8.9	8.5	-0.4
5	24	8.0	10.1	2.1
6	26	6.7	9.6	2.9
7	--	--	--	--
8	--	--	--	--
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	180			

Mathematics

Grade	NCE			
	Number Tested	Pretest	Posttest	Gain
K	--	--	--	--
1	35	9.8	11.3	1.5
2	35	8.1	10.5	2.4
3	28	7.6	9.9	2.3
4	30	6.5	5.4	-1.1
5	24	6.8	8.2	1.4
6	26	6.0	7.1	1.1
7	--	--	--	--
8	--	--	--	--
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	178			

## MASSACHUSETTS

The migrant education projects in Massachusetts provided services to 2,460 regular term students and 3,641 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/life career education;
- elementary and secondary tutorial services;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/life career education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

Massachusetts provided achievement data for the 1988-89 school year; however, the SEA urged that the data be interpreted with extreme caution. The results could not be considered representative of the migrant student population because of serious limitations in the composition of the annual assessment's pre- and posttest population and high attrition rates in the combined dataset (Tables 47, 48, and 49).

In FY 1989 the Massachusetts Migrant Education Program (MMEP) continued its on-going efforts to establish and improve project models that better meet the needs of migrant children. During the school year, these efforts meant terminating a commitment to Saturday Projects and implementing an Extended Day Project Model (i.e., after-school tutorial services). FY 1989 was a year to design, pilot, and experiment with this new project and its operating requirements. During the summer months, program improvement efforts were guided by the FY 1988 *Formative Evaluation of Summer Projects*. The MMEP's response to the evaluation's findings included a major transition from a "mastery learning model of skills instruction" to a "language development curriculum using a whole language approach" in FY 1989.

During the current transition process, the MMEP intends to assess what is happening on site, identify what can be improved, and focus on ways to promote project improvement. In this process, the MMEP does examine learning--but it is the new understandings and skills of the staff and the teacher's perceptions of student learning that the MMEP is primarily interested in measuring. Once the MMEP has made reasonable progress in the implementation of a new project or services, evaluation efforts and resources can be directed toward the more traditional summative evaluation designs (i.e., pre- and posttest standardized measures of student learning gains).

In FY 1990, the MMEP will attempt to improve the quality of achievement test data by testing a randomly sampled selection of all migrant students in grades 2, 4, and 6.

Table 47

Chapter 1 Migrant Education Achievement  
 Results for Currently Migratory Students Tested on  
 an Annual Schedule, by Basic Skills Subject Area and  
 Test Type, 1988-89

Massachusetts

ITBS Listening Skills

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	9	20.4
3	8	19.5
4	10	*
5	9	*
6	4	*
7	5	*
8	11	*
9	--	*
10	--	*
11	--	*
12	--	*
Total	56	

\* NCE score for individual students in grades 4-12 was not available from ITBS.



Table 47 (continued)

ITBS Vocabulary Skills

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	8	20.0
3	8	34.5
4	9	21.1
5	10	18.0
6	8	25.6
7	6	14.2
8	9	15.0
9	--	--
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>58</b>	

**Note:** Results cannot be considered representative of the migrant student population due to serious limitations in the composition of the annual assessment's pre- and posttest population and high attrition rates in the combined data set.

Table 48

Chapter 1 Migrant Education Achievement  
 Results for Currently Migratory Students Tested on  
 an Annual Schedule, by Advanced Skills Subject Area  
 and Test Type, 1988-89

Massachusetts

Reading Comprehension

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	8	28.1
3	8	27.9
4	9	19.6
5	10	18.5
6	8	25.4
7	6	10.3
8	9	20.1
9	--	--
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>58</b>	

Table 48 (continued)

Math Problem Solving

Grade	Number Tested	NCE Gain
K	--	--
1	--	--
2	9	25.6
3	8	31.5
4	9	13.7
5	10	17.7
6	5	21.2
7	6	16.5
8	8	20.3
9	--	--
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>55</b>	

**Note:** Results cannot be considered representative of the migrant student population due to serious limitations in the composition of the annual assessment's pre- and posttest population and high attrition rates in the combined data set.

Table 49

**Chapter 1 Migrant Education Achievement Results for  
Formerly Migratory Students Tested on an Annual Schedule,  
by Advanced Skills Subject Area and Test Type, 1988-89**

Massachusetts

**ITBS Vocabulary Skills**

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	--	--	--	--
4	27	27.4	24.4	-3.0
5	15	21.0	24.1	3.1
6	63	26.3	24.5	-1.8
7	13	17.7	23.4	5.7
8	25	25.1	25.2	0.1
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>143</b>			

Table 49 (continued)

Math Problem Solving

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	--	--	--	--
4	6	25.8	25.8	0.0
5	74	24.3	21.8	-2.5
6	8	12.4	16.1	3.7
7	44	25.3	23.1	-2.2
8	27	15.7	13.3	-2.4
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>159</b>			

Reading Comprehension

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	--	--	--	--
4	29	26.2	19.9	-6.3
5	72	23.5	20.9	2.6
6	72	25.7	21.0	-4.7
7	52	22.4	20.3	-2.1
8	25	26.6	28.9	2.3
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>250</b>			

Note: Results cannot be considered representative of the migrant student population due to serious limitations in the composition of the annual assessment's pre- and posttest population and high attrition rates in the combined data set.

## MICHIGAN

Michigan's migrant education projects provided services to 8,827 regular term students and 10,404 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- multicultural education;
- health education/safety;
- computer literacy;
- elementary and secondary tutorial services;
- instruction for preschool, gifted, handicapped, and GED/HEP participants;
- PASS (Portable Assisted Study Sequence);
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting (not specified).

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- multicultural education;
- health education/safety;
- computer literacy;
- elementary and secondary tutorial services;
- PASS (Portable Assisted Study Sequence);
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting (not specified).

Achievement data were not provided for the regular or summer term.

## MINNESOTA

Migrant education projects in this state provided services to 755 regular term students and 3,523 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- special activities;
- tutoring;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

### *Summer Term*

- English to students of limited English background;
- reading;
- mathematics;
- vocational/career education;
- special activities;
- tutoring;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- PASS (Portable Assisted Study Sequence).

Using criterion-referenced testing, Minnesota reported estimated achievement gains made by participants in kindergarten through grade 8 who attended summer projects in 1989. For reading, students in kindergarten to 2nd or 3rd grade used the Sing, Spell, Read, and Write lesson plan, but were not tested. Second through eighth graders used the McMillan Series R=Basal test. For mathematics, grades 1-8 used the Individualized Computational Skills Program. Language arts students, K through 8, were tested using Individualized Developmental Education Activities (Tables 50, 51, and 52).

Achievement data were not provided for the regular term.

Table 50

Estimated Achievement Gains in Language by  
Objectives Mastered, Summer Term 1989

Minnesota

	Number Tested	Percent Mastering Objectives
5 objectives	13	5
4 objectives	1	0
3 objectives	100	40
2 objectives	56	22
1 objective	83	33
Total	253	

Table 51

Estimated Achievement Gains in Reading  
in Months, Summer Term 1989<sup>a/</sup>

Minnesota

	Number Tested	Percent Achieving Gains
3 months or more	6	1
2 months	67	9
1 month	407	55
Less than 1 month	256	35
Total	736	

<sup>a/</sup> Reading one book equals one month gain, reading two books equals two months gain, etc.



Table 52

Estimated Achievement Gains in Mathematics  
in Months, Summer Term 1989<sup>a/</sup>

Minnesota

	Number Tested	Percent Achieving Gains
3 months or more	51	7
2 months	194	26
1 month	375	51
Less than 1 month	113	15
Total	733	

<sup>a/</sup> Completion of skill levels (addition, multiplication, etc.) is equated with gains in terms of months. The number of months gained varies.

## MISSISSIPPI

Mississippi's migrant education projects provided services to 3,421 regular term students in pre-kindergarten through grade 12. Mississippi did not offer a summer term program.

Services that were provided included:

### *Regular Term*

- reading;
- language arts;
- mathematics;
- attendance, social work, and guidance;
- health; and
- pupil transportation.

Using norm-referenced tests, Mississippi provided pre- and posttest achievement data for reading, mathematics, and language arts for the regular term. Data were reported in NCEs for all subjects for the annual and fall-spring testing cycles (Tables 53 and 54).

The following tests were used: California Achievement Test, Individual Criterion Referenced Test, Comprehensive Test of Basic Skills, Stanford Achievement Test, and Science Research Associates Achievement Test.

Table 53

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

## Mississippi

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	91	49.6	43.1	-6.5
3	104	40.7	40.9	0.2
4	103	42.1	43.8	1.7
5	93	38.1	37.8	-0.3
6	77	38.2	39.6	1.4
7	28	41.4	45.8	4.4
8	28	38.0	38.0	0.0
9	3	24.5	22.3	-2.2
10	4	13.7	21.6	7.9
11	1	5.4	6.7	1.3
12	2	14.6	12.1	-2.5
Total	534			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	51	44.8	47.2	2.4
3	63	50.1	48.5	-1.6
4	55	43.1	44.4	1.3
5	59	45.1	48.2	3.1
6	47	47.1	48.4	1.3
7	47	43.3	49.4	6.1
8	45	43.5	44.5	1.0
9	3	31.8	25.0	-6.8
10	1	32.0	41.0	9.0
11	2	20.5	44.5	24.0
12	--	--	--	--
Total	373			

Table 53 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	8	50.0	60.0	10.0
4	19	56.8	50.4	-6.4
5	12	51.2	51.1	-0.1
6	11	50.6	51.6	1.0
7	28	40.3	43.7	3.4
8	26	35.5	40.9	5.4
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>104</b>			

Table 54

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

## Mississippi

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	1	34.0	37.0	3.0
4	1	31.0	53.0	22.0
5	3	34.0	35.0	1.0
6	5	38.0	35.0	-3.0
7	4	35.0	42.0	7.0
8	2	31.0	21.0	-10.0
9	2	35.0	37.0	2.0
10	2	32.0	33.0	1.0
11	1	31.0	34.0	3.0
12	1	31.0	28.0	-3.0
Total	22			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	1	37.0	37.0	0.0
4	1	37.0	37.0	0.0
5	3	35.0	36.0	1.0
6	5	42.0	39.0	-3.0
7	4	41.0	44.0	3.0
8	2	33.0	26.0	-7.0
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	16			

Table 54 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	2	52.1	36.5	-15.6
3	5	38.9	44.7	5.8
4	5	40.5	40.7	0.2
5	3	32.2	41.4	9.2
6	6	45.0	50.0	5.0
7	1	60.4	54.2	-6.2
8	6	54.0	49.5	-4.5
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>28</b>			

## MISSOURI

Migrant education projects in Missouri provided services to 1,488 regular term students in pre-kindergarten through grade 12. During the summer term, services were provided to 30 students in pre-kindergarten through grade 10.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- multicultural education;
- secondary tutoring services;
- instruction for preschool participants;
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- pupil transportation; and
- needs assessment.

### *Summer Term*

- health; and
- dental.

Missouri provided a statewide achievement summary that reported information for the following programs: preschool, elementary basic skills, career development, and hands-on vocational. The testing instruments used for school year 1988-89 were a locally constructed rating scale and the Brigance Diagnostic Inventories. The testing schedule for the regular term included a pretest of selected skills during the first week of the project followed by periodic posttests and pre- and posttests of new skills during the term. The measure of achievement -- the average percent of gain scores -- was a ratio of what the participants actually gained to what they could have gained (Tables 55 and 56).

Table 55 summarizes the number tested and the range of average percentage of gain for each program model for the regular term. Because most of Missouri's achievement report included average percentages of gain for different subject areas within each program model, average percentages of gain in this table are presented in ranges.

Achievement data were not provided for the summer term.

**Table 55**

**Average Percentage of Gain by Program Model,  
School Year 1988-1989**

**Missouri**

Program	Regular Term	
	Fall 1988-Spring 1989	
	Number Tested	Range of Average Percent of Gain
Preschool program	17	49 - 56
Elementary basic skills	644	58 - 69
Career development program	69	51 - 54
Hands-on vocational program	14	35 - 60
Total	744	



Table 56

Average Percentage of Gain and Average Number of Objectives Mastered, Regular Term 1988-89

Missouri

Reading

Program	Number Tested	Average Number of Objectives Mastered	Average Percent of Gain
Elementary Basic Skills	551	8	63
Career Development	64	12	54
Total	615		

Mathematics

Program	Number Tested	Average Number of Objectives Mastered	Average Percent of Gain
Elementary Basic Skills	578	7	69
Career Development	69	7	53
Total	647		

Language Arts

Program	Number Tested	Average Number of Objectives Mastered	Average Percent of Gain
Elementary Basic Skills	500	6	64
Career Development	66	7	52
Total	566		

## MONTANA

During the summer term, migrant education services were provided to 606 students in pre-kindergarten through grade 12. Montana did not offer a regular term program.

Services that were provided included:

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- computer literacy;
- art;
- music;
- physical education;
- secondary tutorial services;
- health;
- dental;
- nutrition; and
- pupil transportation.

Montana provided achievement information by school district. Test scores from point-in-time testing for reading and mathematics were reported. The reading instructional component used was the Formal Reading Inventory (FRI), an assessment of reading comprehension. Students tested in mathematics used the Edits Individualized Math Program (IMP). According to the SEA, the data provided were raw scores and do not represent standard scores or NCEs, and the testing differed greatly from site to site in administration, content, length, and reporting methods. For the purpose of this report, the project level data were aggregated, weighting the mean scores by the number of participants tested at each test level (Table 57).

Montana also provided achievement data for number of objectives attempted and achieved for each school district. From this data the percent of objectives achieved was aggregated by subject area and grade (Table 58).

Table 57

Chapter 1 Migrant Education Achievement Results  
for Students Tested in the Summer Term,  
by Subject Area, 1989

Montana

Reading

Grade	Number Tested	Weighted Mean Raw Scores		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	35	13.3	20.0	6.7
3	41	22.1	25.7	3.6
4	27	27.2	28.3	1.1
5	23	29.7	31.1	1.4
6	7	32.8	32.9	0.1
7	13	24.8	31.9	7.1
8	3	27.8	35.8	8.0
9	5	24.3	24.3	0.0
10	2	35.9	35.9	0.0
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>156</b>			

Mathematics

Grade	Number Tested	Weighted Mean Raw Scores		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	46	28.9	34.1	5.2
3	49	41.5	48.9	7.4
4	43	39.1	45.3	6.2
5	30	50.2	59.9	9.7
6	12	54.9	64.9	10.0
7	13	60.5	76.0	15.5
8	2	45.5	79.0	33.5
9	5	50.8	57.8	7.0
10	2	64.5	67.5	3.0
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>202</b>			

Table 58

Chapter 1 Migrant Education Achievement Results  
for Students Tested and Percentage of Objectives  
Mastered in the Summer Term, by Subject Area,  
1989

Montana

Reading

Grade	Number Tested	Percent of Reading Objectives Achieved
2	44	84.2
3	49	89.9
4	43	94.0
5	31	92.8
6	12	79.6
7	16	50.0
8	4	33.3
9	12	40.0
10	3	16.7
11	3	16.7
Total	217	

Mathematics

Grade	Number Tested	Percent of Mathematics Objectives Achieved
2	44	26.4
3	49	48.6
4	43	58.8
5	31	78.1
6	12	61.5
7	16	30.0
8	4	13.3
9	12	30.0
10	3	30.0
11	3	0.0
Total	217	

Table 58 (continued)

Writing

Grade	Number Tested	Percent of Writing Objectives Achieved
2	44	53.2
3	49	44.3
4	43	87.8
5	31	95.4
6	12	71.4
7	16	33.3
8	4	33.3
9	12	50.0
10	3	16.7
11	3	16.7
<b>Total</b>	<b>217</b>	

## NEBRASKA

Nebraska's migrant education projects provided services to 743 summer term students in pre-kindergarten through grade 12. There was no regular term program.

Services that were provided included:

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

Although Nebraska did evaluate migrant participants during the 1989 summer term, achievement data were not provided.

## NEVADA

During the regular term, Nevada's migrant education projects provided services to 612 students in kindergarten through grade 12. Nevada's summer term program served 91 students in kindergarten through grade 8.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics; and
- vocational/career education.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics; and
- vocational/career education.

Nevada provided average NCE gain data for reading, mathematics, and language arts for the regular term for an annual test cycle. A number of tests were used; three of these were the Stanford Achievement Test (SAT), the Iowa Test of Basic Skills (ITBS), and the California Achievement Test (CAT) (Table 59).

Achievement data were not provided for the summer term.

Table 59

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

Nevada

Reading

Grade	Number Tested	Average NCE Gain
K	--	--
1	--	--
2	41	-1.1
3	20	3.0
4	34	6.4
5	23	1.7
6	17	-1.0
7	11	11.0
8	7	8.4
9	5	1.2
10	7	5.1
11	--	--
12	2	4.4
Total	167	

Mathematics

Grade	Number Tested	Average NCE Gain
K	--	--
1	--	--
2	35	2.7
3	10	1.5
4	19	0.1
5	19	1.6
6	13	5.0
7	7	6.0
8	11	4.9
9	16	0.6
10	2	4.1
11	--	--
12	1	-7.5
Total	133	



Table 59 (continued)

Language Arts

Grade	Number Tested	Average NCE Gain
K	--	--
1	--	--
2	8	-2.3
3	3	-6.5
4	6	3.9
5	6	-2.5
6	2	-4.8
7	--	--
8	--	--
9	--	--
10	--	--
11	--	--
12	--	--
Total	25	

## NEW HAMPSHIRE

Migrant education projects in this state provided services to 111 regular term students in pre-kindergarten through grade 12. The summer term projects served 104 participants in pre-kindergarten through grade 11.

Services that were provided included:

### *Regular Term*

- reading;
- language arts;
- mathematics;
- vocational/career education;
- elementary tutoring services;
- instruction for preschool participants; and
- needs assessment.

### *Summer Term*

- reading;
- language arts;
- mathematics;
- elementary tutoring services;
- instruction for preschool participants; and
- needs assessment.

Achievement data were not provided for the regular or the summer term.

## NEW JERSEY

The migrant education projects in New Jersey served 1,784 regular term students and 1,052 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- instruction for preschool and handicapped participants;
- secondary tutorial services;
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- needs assessment.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- instruction for preschool and handicapped participants;
- special activities;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- needs assessment; and
- PASS (Portable Assisted Study Sequence).

New Jersey provided pre- and posttest achievement data for basic skills reading, writing, and mathematics for the regular term. Pre- and posttest achievement data were also provided for students tested on an annual test cycle in advanced skills reading comprehension and math problem solving. Data were reported in NCEs for an annual testing cycle. Norm-referenced testing was administered using a variety of tests (Tables 60 and 61).

Summer term participants were evaluated using skills mastery tests, however, these data were not aggregated to provide analyses at the state level.

Table 60

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Basic Skills Subject Area, 1988-89

## New Jersey

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	27	32.8	40.2	7.4
3	36	37.0	46.8	9.8
4	22	33.9	39.5	5.6
5	25	35.3	39.8	4.5
6	23	35.9	37.1	1.2
7	20	35.8	43.2	7.4
8	18	33.9	41.7	7.8
9	1	46.0	40.0	-6.0
10	2	84.5	52.5	-32.0
11	3	42.0	48.3	6.3
12	1	49.0	31.0	-18.0
Total	178			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	21	44.5	44.0	-0.5
3	31	59.2	63.9	4.7
4	19	48.2	50.8	2.6
5	28	52.1	52.5	0.4
6	24	50.0	53.9	3.9
7	16	45.0	71.1	26.1
8	13	51.3	58.2	6.9
9	2	48.0	57.5	9.5
10	2	94.0	79.0	-15.0
11	3	49.3	36.7	-12.6
12	1	52.0	65.0	13.0
Total	160			

Table 60 (continued)

Writing

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	24	34.1	32.7	-1.4
3	39	39.3	49.8	10.5
4	20	35.8	44.6	8.8
5	27	45.2	52.2	7.0
6	18	40.8	45.7	4.9
7	19	40.0	47.7	7.7
8	17	42.0	45.1	3.1
9	1	48.0	35.0	-13.0
10	2	85.5	57.5	-28.0
11	3	28.7	63.3	34.6
12	1	47.0	44.0	-3.0
Total	171			

Table 61

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Advanced Skills Subject Area, 1988-89

New Jersey

Reading Comprehension

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	35	34.8	42.5	7.7
3	28	39.5	45.2	5.7
4	21	34.8	42.1	7.3
5	36	48.4	53.8	5.4
6	26	39.0	42.4	3.4
7	1	44.0	41.0	-3.0
8	24	68.8	78.8	10.0
9	24	27.9	38.7	10.8
10	15	47.9	55.0	7.1
11	13	29.4	36.7	7.3
12	1	49.0	37.0	-12.0
Total	224			

Mathematics Problem Solving

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	32	57.0	59.5	2.5
3	26	37.7	41.3	3.6
4	20	64.6	65.2	0.6
5	37	54.3	60.0	5.7
6	24	43.1	54.5	11.4
7	22	58.1	64.0	5.9
8	23	80.8	31.6	-49.2
9	1	48.0	55.0	7.0
10	15	49.5	55.8	6.3
11	13	29.9	48.9	19.0
12	1	59.0	57.0	-2.0
Total	214			

## NEW MEXICO

New Mexico's migrant education projects provided services to 1,383 regular term students in pre-kindergarten through grade 12. Summer term services were provided to 539 pre-kindergarten through eleventh graders.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- secondary tutorial services;
- attendance, social work, and guidance;
- health;
- dental;
- pupil transportation;
- clothing;
- glasses;
- nutrition education;
- health education;
- field trips; and
- RIF (Reading is Fundamental).

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- physical education;
- art enrichment;
- attendance, social work, and guidance;
- health;
- dental;
- pupil transportation;
- clothing;
- nutrition education;
- health education;
- field trips;
- RIF (Reading is Fundamental); and
- physical education.

Using norm-referenced tests, New Mexico provided pre-and posttest achievement data for reading, mathematics, and language arts for the regular term. Reading, mathematics, and language arts data were reported in NCEs for an annual testing cycle, while mathematics and language arts data were also submitted for a fall-spring cycle. Pre- and posttest achievement data were also provided for students tested on an annual cycle in advanced skills reading comprehension and math problems and applications. Achievement data for advanced skills reading comprehension was also submitted for a fall-spring cycle. The most commonly used test was the Comprehensive Test of Basic Skills (CTBS) (Tables 62, 63, 64, and 65).

There was no statewide testing during the summer.

Table 62

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Basic Skills Subject Area, 1988-89

New Mexico

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	22	23.9	28.8	4.9
3	10	33.7	37.0	3.3
4	14	30.9	34.3	3.4
5	8	24.8	22.1	-2.7
6	10	30.8	38.1	7.3
7	5	40.4	41.6	1.2
8	3	35.7	36.0	0.3
9	1	30.0	39.0	9.0
10	2	23.0	33.5	10.5
11	2	29.5	32.0	2.5
12	--	--	--	--
Total	77			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	11	29.2	41.2	12.0
3	23	22.2	31.3	9.1
4	28	24.9	39.0	14.1
5	23	29.7	43.8	14.1
6	19	29.1	27.4	-1.7
7	24	13.6	28.9	15.3
8	29	20.3	24.3	4.0
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	157			



Table 62 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	27	21.9	31.9	10.0
3	21	21.7	27.2	5.5
4	33	25.9	32.1	6.2
5	26	19.4	28.7	9.3
6	25	14.9	20.0	5.1
7	33	17.0	26.8	9.8
8	28	15.0	19.2	4.2
9	19	25.1	29.4	4.3
10	19	27.3	28.9	1.6
11	12	27.8	32.1	4.3
12	5	32.9	35.4	2.5
Total	248			

Table 63

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Basic Skills Subject Area, 1988-89

## New Mexico

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	12	34.3	32.0	-2.3
3	3	39.6	44.2	4.6
4	11	33.0	46.2	13.2
5	9	27.9	42.3	14.4
6	9	32.7	30.1	-2.6
7	4	40.5	50.3	9.8
8	4	32.0	45.5	13.5
9	6	35.7	37.7	2.0
10	6	37.3	41.2	3.9
11	3	35.3	39.0	3.7
12	1	46.0	47.0	1.0
Total	68			

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	29	29.2	38.8	9.6
3	28	28.6	34.8	6.2
4	21	23.7	29.7	6.0
5	28	31.1	39.4	8.3
6	19	30.7	31.1	0.4
7	19	27.7	35.4	7.7
8	24	23.6	26.2	2.6
9	14	26.2	29.9	3.7
10	10	33.4	35.9	2.5
11	19	30.7	31.1	0.4
12	3	21.0	26.3	5.3
Total	214			

Table 64

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Advanced Skills Subject Area, 1988-89

New Mexico

Reading Comprehension

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	16	15.8	25.6	9.8
3	12	17.8	25.8	8.0
4	24	23.8	31.5	7.7
5	19	13.6	25.6	12.0
6	18	10.1	14.7	4.6
7	24	12.3	25.6	13.3
8	26	13.3	18.0	4.7
9	17	22.6	27.5	4.9
10	7	25.3	27.1	1.8
11	11	26.3	30.9	4.6
12	3	30.5	35.0	4.5
Total	177			

Math Problems and Applications

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	8	13.5	21.6	8.1
4	12	22.3	31.3	9.0
5	9	22.9	34.6	11.7
6	5	16.6	20.6	4.0
7	24	13.6	28.9	15.3
8	26	18.4	23.2	4.8
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	84			

Table 65

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Advanced Skills Subject Area, 1988-89

New Mexico

Reading Comprehension

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	9	31.4	38.9	7.5
3	9	24.2	36.9	12.7
4	2	23.0	51.0	28.0
5	6	27.4	34.9	7.5
6	9	32.6	32.0	-0.6
7	12	28.0	38.6	10.6
8	12	18.5	20.5	2.0
9	4	22.5	29.0	6.5
10	3	31.0	35.0	4.0
11	3	12.7	20.7	8.0
12	2	33.5	31.5	-2.0
Total	71			

## NEW YORK

In New York, migrant education services were provided to 5,285 regular term students and 4,987 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- physical education;
- social studies;
- parent education;
- instruction for GED participants;
- science;
- adolescent education;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- field trips.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- physical education;
- social studies;
- parent education;
- instruction for GED participants;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- field trips.

Norm-referenced tests were administered, in large part to formerly migrant students, on a fall-spring test cycle. However, since migrant pupils were not always present for both test administrations, migrant projects were encouraged to use other measures for assessing pupil achievement. The norm-referenced data were not provided because the SEA indicated that the criterion-referenced data more accurately reflected the impact of the program.

Where appropriate, mastery level criterion-referenced tests were administered, and the resultant data, including instructional time, were reported by subject area and grade level for the regular term.

Criterion-referenced testing provided information on participants' achievement by allowing for the examination of the mastery of objectives by the amount of instructional time. Based on previous experience, it was expected that participants would master one instructional objective for each six hours of instruction. New York reported, for the regular term, the number of participants, and mean number of contact hours, objectives mastered, contact hours per objective, and objectives per hour (Tables 66 and 67).

Criterion-referenced testing was administered during the summer, however, the information was not provided in the State Performance Report.

Table 66

Number of Objectives Mastered for Non-Limited English  
Proficient Students Tested on an Annual Schedule, by  
Subject Area, 1988-89

New York

Readiness

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	1	20	32.0	0.63	1.60
Total	1				

Reading

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	29	23	25.4	0.89	1.12
1	20	20	45.0	0.45	2.24
2	22	18	28.6	0.63	1.58
3	23	21	45.6	0.45	2.23
4	6	21	30.2	0.69	1.45
5	9	22	46.0	0.48	2.07
6	11	13	11.6	1.16	0.86
7	7	13	9.4	1.39	0.72
8	8	12	5.0	2.38	0.42
9	4	32	14.3	2.23	0.45
10	4	65	32.8	1.97	0.51
11	1	5	13.0	0.38	2.60
12	--	--	--	--	--
Total	144				

Table 66 (continued)

Mathematics

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	15	7	7.6	0.89	1.12
1	14	7	8.9	0.77	1.30
2	14	8	6.9	1.18	0.84
3	16	10	17.3	0.57	1.76
4	3	7	6.3	1.11	0.90
5	8	10	22.9	0.42	2.41
6	6	6	12.7	0.49	2.05
7	4	13	19.3	0.69	1.45
8	6	3	4.2	0.68	1.47
9	2	3	3.0	0.83	1.20
10	1	1	1.0	1.00	1.00
11	1	6	6.0	1.00	1.00
12	--	--	--	--	--
Total	90				



Table 67

Number of Objectives Mastered for Non-Limited English  
Proficient Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

New York

Readiness

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	14	23	42.2	0.55	1.81
1	5	7	10.6	0.62	1.61
2	2	6	13.0	0.46	2.17
Total	21				

Reading

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	83	19	30.2	0.63	1.58
1	70	18	21.3	0.84	1.20
2	54	17	26.4	0.64	1.55
3	49	18	20.9	0.85	1.18
4	47	14	17.1	0.84	1.19
5	50	14	13.7	0.99	1.01
6	28	12	10.4	1.15	0.87
7	20	16	13.8	1.18	0.85
8	13	12	6.5	1.76	0.57
9	12	20	11.1	1.83	0.55
10	14	16	10.0	1.62	0.62
11	13	16	11.7	1.38	0.73
12	4	16	10.0	1.58	0.63
Total	457				

Table 67 (continued)

Mathematics

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	45	5	7.1	0.64	1.56
1	37	6	9.6	0.61	1.65
2	39	6	8.4	0.74	1.35
3	32	7	6.8	1.03	0.97
4	34	8	7.5	1.05	0.96
5	37	9	11.2	0.77	1.31
6	21	6	7.3	0.80	1.24
7	18	5	6.8	0.76	1.32
8	9	3	4.1	0.84	1.19
9	6	4	5.3	0.78	1.28
10	7	5	4.4	1.19	0.84
11	4	5	8.8	0.57	1.75
12	3	3	8.7	0.35	2.89
Total	292				

Table 68

Number of Objectives Mastered for Limited English Proficient  
Students Tested on an Annual Schedule, by Subject Area, 1988-89

New York

Reading

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	24	10	3.8	2.52	0.40
1	27	14	15.0	0.96	1.04
2	23	17	10.7	1.55	0.65
3	22	15	23.4	0.63	1.58
4	24	11	16.8	0.64	1.55
5	15	10	10.1	1.03	0.97
6	11	15	25.6	0.59	1.70
7	9	27	12.6	2.16	0.46
8	13	19	23.4	0.82	1.22
9	2	11	7.5	1.47	0.68
10	5	71	35.6	1.98	0.50
11	4	21	8.5	2.44	0.41
12	--	--	--	--	--
Total	179				

Mathematics

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	18	7	3.2	2.26	0.44
1	10	7	3.5	1.91	0.52
2	9	8	4.6	1.71	0.59
3	13	9	3.2	2.64	0.38
4	11	7	7.1	0.94	1.07
5	8	8	10.9	0.70	1.43
6	7	9	9.1	0.97	1.03
7	3	20	11.3	1.79	0.56
8	2	6	2.0	2.75	0.36
9	1	7	49.0	0.14	7.00
10	--	--	--	--	--
11	1	4	1.0	4.00	0.25
12	--	--	--	--	--
Total	83				

Table 68 (continued)

English as a Second Language

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	20	12	5.8	2.08	0.48
1	14	14	5.2	2.66	0.38
2	16	21	26.6	0.80	1.25
3	8	11	3.4	3.22	0.31
4	6	12	6.5	1.82	0.55
5	5	22	43.8	0.51	1.97
6	4	8	3.3	2.31	0.43
7	2	16	3.0	5.17	0.19
8	2	16	10.0	1.60	0.63
9	--	--	--	--	--
10	--	--	--	--	--
11	1	26	11.0	2.36	0.42
12	--	--	--	--	--
Total	78				

Table 69

Number of Objectives Mastered for Limited English Proficient  
Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

New York

Reading

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	2	9	4.0	2.25	0.44
1	4	15	9.0	1.61	0.62
2	3	11	5.7	2.00	0.50
3	3	11	5.0	2.20	0.45
4	1	11	23.0	0.48	2.09
5	2	13	13.0	1.00	1.00
6	4	9	17.0	0.53	1.89
7	3	6	6.7	0.95	1.05
8	--	--	--	--	--
9	1	5	3.0	1.67	0.60
10	1	22	18.0	1.22	0.82
11	1	22	25.0	0.88	1.14
12	--	--	--	--	--
Total	25				

Mathematics

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	2	3	2.5	1.00	1.00
1	2	6	8.5	0.65	1.55
2	2	2	2.5	0.80	1.25
3	2	4	2.0	1.75	0.57
4	1	15	7.0	2.14	0.47
5	1	6	3.0	2.00	0.50
6	1	3	8.0	0.38	2.67
7	2	4	16.0	0.22	4.57
8	--	--	--	--	--
9	1	5	2.0	2.50	0.40
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
Total	14				

Table 69 (continued)

English as a Second Language

Grade	Number Tested	Mean Number of Contact Hours	Mean Number Objectives Mastered	Mean Number Contact Hours Per Objective	Mean Number Objectives Per Hour
K	1	7	4.0	1.75	0.57
1	1	5	3.0	1.67	0.60
2	2	4	2.0	2.00	0.50
3	2	4	1.5	2.67	0.38
4	1	15	10.0	1.50	0.67
5	1	3	2.0	1.50	0.67
6	--	--	--	--	--
7	3	6	21.0	0.27	3.70
8	--	--	--	--	--
9	1	2	2.0	1.00	1.00
10	--	--	--	--	--
11	--	--	--	--	--
12	--	--	--	--	--
Total	12				

## NORTH CAROLINA

North Carolina's migrant education projects provided services to 4,475 regular term students and 2,021 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- tutorial services;
- field trips;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- clothing.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- tutorial services;
- field trips;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- clothing.

An assessment of the achievement status of migrant participants in the regular term was obtained by an analysis of test results from the annual statewide norm-referenced testing program. Students in grades 3, 6, and 8 were tested annually, usually in April, in the areas of reading, mathematics, and language arts. The instrument used was the California Achievement Test (CAT). During 1986, the state switched from CAT Form C to CAT Form E (Table 70).

Table 71 shows the deviation of the migrant participants' scores from the state scores for the scale score, percentile rank, and NCE score.

Achievement data were not provided for the summer term.

Table 70

Achievement Results for Migrant Participants From  
State Assessment Program, by Subject Area, 1988-89

North Carolina

Reading

Grade	Number Tested	Scale Score	Percentile	NCE
3	233	650	37	43
6	251	708	29	38
8	184	742	29	39
Total	668			

Language Arts

Grade	Number Tested	Scale Score	Percentile	NCE
3	233	668	47	48
6	251	690	32	41
8	184	711	30	43
Total	668			

Mathematics

Grade	Number Tested	Scale Score	Percentile	NCE
3	233	680	51	52
6	251	730	38	44
8	184	764	36	45
Total	668			



Table 71

Deviation From State Scores for Migrant Participants From  
State Assessment Program, by Subject Area, 1988-89

North Carolina

Reading

Grade	Number Tested	Deviation from State Scores		
		Scale Score	Percentile	NCE
3	233	-30	-18	-10
6	251	-28	-23	-14
8	184	-19	-23	-12
Total	668			

Language Arts

Grade	Number Tested	Deviation from State Scores		
		Scale Score	Percentile	NCE
3	233	-19	-15	-9
6	251	-30	-27	-14
8	184	-22	-25	-11
Total	668			

Mathematics

Grade	Number Tested	Deviation from State Scores		
		Scale Score	Percentile	NCE
3	233	-16	-15	-7
6	251	-23	-22	-13
8	184	-15	-19	-9
Total	668			

## NORTH DAKOTA

During the regular term, the migrant education projects served 80 students in pre-kindergarten through grade 8 (excluding grades, 1, 3, 6, and 7). The summer term migrant projects served 1,223 students in pre-kindergarten through grade 7.

Services that were provided included:

### *Regular Term*

- health.

### *Summer Term*

- reading;
- language arts;
- mathematics;
- instruction for early childhood participants;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- computer literacy.

NCE data for reading during the state's summer projects were gathered and averaged for the participating sites. Table 72 provides NCE scores for reading, by grade.

Summer term participants were also tested using skills tests.

Regular term participants were tested under the regular Chapter 1 Basic Grants Program, but the results were not provided in the State Performance Report.

Table 72

Average NCE Scores for Migrant Participants,  
Summer Term 1989

North Dakota

Reading

Grade	Number Tested	NCE Score
2	107	8.2
3	79	7.3
4	107	6.6
5	104	4.1
6	78	3.2
Total	475	

## OHIO

Migrant education projects in Ohio served 931 regular term students and 1,792 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- secondary tutorial services;
- instruction for preschool participants;
- attendance, social work, and guidance;
- health;
- nutrition; and
- pupil transportation.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- attendance, social work, and guidance;
- health;
- nutrition;
- pupil transportation; and
- dental.

Achievement data were not reported for the regular or summer term.

## OKLAHOMA

The migrant education projects in the regular term in this state served 1,455 students in pre-kindergarten through grade 12. Oklahoma did not offer a summer term program.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- vocational/career education;
- cultural awareness;
- attendance, social work, and guidance;
- health;
- dental; and
- nutrition.

Oklahoma provided pre- and posttest achievement data for reading, mathematics, and language arts. Data were reported in NCEs for the annual and fall-spring test cycles. Most districts used the Metropolitan Achievement Test (MAT). Some districts used the MAT and the California Achievement Test (Tables 73 and 74).

Table 73

Chapter 1 Migrant Education Achievement Results for  
Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

## Oklahoma

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	43	53.1	53.2	0.1
3	37	46.0	45.2	-0.8
4	38	44.2	46.6	2.4
5	37	44.1	43.2	-0.9
6	39	38.7	42.9	4.2
7	14	34.8	34.1	-0.7
8	14	35.4	33.5	-1.9
9	17	40.2	38.8	-1.4
10	4	57.2	53.7	-3.5
11	7	31.9	30.9	-1.0
12	4	31.9	34.9	3.0
<b>Total</b>	<b>254</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	51	51.6	52.0	0.4
3	59	52.6	51.1	-1.5
4	66	47.3	50.0	2.7
5	63	46.4	40.8	-5.6
6	51	44.9	45.0	0.1
7	36	28.4	30.4	2.0
8	19	43.5	40.8	-2.7
9	19	45.7	44.8	-0.9
10	9	59.5	57.0	-2.5
11	10	41.7	37.0	-4.7
12	5	44.1	45.0	0.9
<b>Total</b>	<b>388</b>			

Table 73 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	48	53.2	51.8	-1.4
3	64	42.0	43.9	1.9
4	55	42.9	45.4	2.5
5	48	43.3	42.9	-0.4
6	54	39.7	46.6	6.9
7	40	37.0	34.1	-2.9
8	30	38.2	36.7	-1.5
9	19	51.2	45.9	-5.3
10	12	50.0	47.2	-2.8
11	13	41.9	40.0	-1.9
12	13	40.1	40.1	0.0
<b>Total</b>	<b>396</b>			

Table 74

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

## Oklahoma

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	13	44.0	50.0	6.0
3	16	32.6	35.7	3.1
4	14	29.8	40.2	10.4
5	20	34.3	40.3	6.0
6	19	39.5	47.6	8.1
7	2	51.2	62.9	11.7
8	1	23.0	29.9	6.9
9	--	--	--	--
10	--	--	--	--
11	1	6.7	1.0	-5.7
12	2	36.0	33.6	-2.4
<b>Total</b>	<b>88</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	11	52.2	52.8	0.6
3	20	43.0	46.7	3.7
4	7	33.1	34.9	1.8
5	18	39.3	43.5	4.2
6	15	31.8	40.5	8.7
7	3	46.0	46.1	0.1
8	3	28.5	27.5	-1.0
9	2	44.7	50.6	5.9
10	--	--	--	--
11	1	21.5	17.3	-4.2
12	2	37.7	41.9	4.2
<b>Total</b>	<b>82</b>			



Table 74 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	6	44.2	44.3	0.1
3	4	46.4	57.4	11.0
4	4	54.3	53.3	-1.0
5	7	47.4	47.4	0.0
6	12	45.0	46.8	1.8
7	4	43.6	47.9	4.3
8	4	25.6	25.9	0.3
9	2	48.3	53.8	5.5
10	--	--	--	--
11	1	1.0	6.7	5.7
12	2	30.6	31.8	1.2
<b>Total</b>	<b>46</b>			

## OREGON

Oregon's migrant education projects served 10,910 regular term students and 5,054 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- multicultural education;
- instruction for preschool, gifted, and GED/HEP participants;
- PASS (Portable Assisted Study Sequence);
- elementary and secondary tutorial services;
- special activities;
- attendance, social work, and guidance;
- health;
- nutrition;
- pupil transportation; and
- needs assessment.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- multicultural education;
- instruction for preschool participants;
- PASS (Portable Assisted Study Sequence);
- special activities;
- attendance, social work, and guidance;
- health;
- nutrition;
- pupil transportation; and
- needs assessment.

Oregon administered the following tests during the regular term: Comprehensive Test of Basic Skills in reading, mathematics, and language arts; Student Achievement Test in reading and mathematics; Metropolitan Achievement Test in language, mathematics, and reading; Science Research Associates in reading, mathematics, and language arts; and Language Assessment Scales (Table 75).

Achievement data were not provided for the summer term.

**Table 75**  
**Chapter 1 Migrant Education Achievement Results**  
**for Students Tested on an Annual Schedule,**  
**by Subject Area, 1988-89**

Oregon

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	7	17.7	50.0	32.3
2	40	27.4	35.2	7.8
3	144	41.5	42.6	1.1
4	162	42.4	42.3	-0.1
5	138	41.5	41.0	-0.5
6	134	41.2	41.1	-0.1
7	100	40.7	41.6	0.9
8	109	41.2	42.1	0.9
9	36	41.4	45.8	4.4
10	43	45.3	44.9	-0.4
11	20	40.8	35.2	-5.6
12	10	48.9	48.1	-0.8
Ungraded	3	18.0	26.2	8.2
<b>Total</b>	<b>946</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	4	23.8	58.0	34.2
2	30	33.6	40.5	6.9
3	130	48.3	49.6	1.3
4	143	49.9	44.4	-5.5
5	132	43.8	44.7	0.9
6	128	45.2	46.9	1.7
7	99	47.4	45.3	-2.1
8	108	47.7	47.2	-0.5
9	37	45.0	43.1	-1.9
10	42	49.0	50.5	1.5
11	23	48.6	40.7	-7.9
12	10	49.8	45.6	-4.2
Ungraded	4	29.0	28.8	-0.2
<b>Total</b>	<b>890</b>			

Table 75 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	1	27.0	70.0	43.0
2	9	27.2	32.3	5.1
3	53	47.1	45.1	-2.0
4	134	43.4	43.3	-0.1
5	112	42.8	41.0	-1.8
6	109	42.2	44.1	1.9
7	87	42.7	45.5	2.8
8	87	43.7	46.4	2.7
9	27	47.6	50.9	3.3
10	42	44.9	43.4	-1.5
11	22	46.6	39.4	-7.2
12	10	43.8	38.7	-5.1
Ungraded	3	22.6	25.6	3.0
<b>Total</b>	<b>696</b>			

## PENNSYLVANIA

Pennsylvania's migrant education projects served 3,359 regular term students and 2,167 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- multicultural education;
- special activities;
- PASS (Portable Assisted Study Sequence);
- elementary tutorial services;
- instructional services for gifted participants;
- attendance, social work, and guidance;
- health;
- nutrition;
- pupil transportation; and
- other supporting services (not specified).

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- health education/safety;
- computer literacy;
- multicultural education; and
- instructional services for GED participants.

Pennsylvania provided pre- and posttest achievement data for migrant students in reading and mathematics for the regular term. Data were reported in NCEs for annual and fall-spring testing cycles (Tables 76 and 77).

In addition to the pre- and posttest data discussed above, Pennsylvania provided an analysis of statewide data from the Testing of Essential Learning and Literacy Skills assessment program for the 1988-89 school year. All grades 3, 5, and 8 public school students, migrant as well as non-migrant, are assessed in March of each year. The tests were based on skill objectives for reading and mathematics.

Achievement data were not provided for the summer term.

Table 76

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

## Pennsylvania

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	21	34.3	35.7	1.4
3	23	30.0	36.2	6.2
4	32	33.7	37.7	4.0
5	34	36.5	37.1	0.6
6	25	34.7	34.0	-0.7
7	12	30.9	38.2	7.3
8	13	27.1	28.2	1.1
9	3	12.8	26.5	13.7
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>163</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	10	39.8	43.4	3.6
3	13	36.9	46.7	9.8
4	8	33.5	38.9	5.4
5	5	36.8	35.9	-0.9
6	7	35.2	36.9	1.7
7	1	35.1	45.8	10.7
8	2	44.9	39.5	-5.4
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>46</b>			

Table 77

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

## Pennsylvania

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	26	41.6	44.8	3.2
3	29	35.7	40.9	5.2
4	13	34.2	44.8	10.6
5	16	34.8	44.2	9.4
6	6	36.1	47.9	11.8
7	6	25.4	34.7	9.3
8	10	31.3	44.7	13.4
9	2	24.6	44.5	19.9
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	108			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	--	--	--	--
3	6	37.6	43.0	5.4
4	3	25.7	59.3	33.6
5	3	27.3	45.5	18.2
6	2	28.8	30.2	1.4
7	3	28.0	34.2	6.2
8	2	29.4	28.0	-1.4
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
Total	19			

## PUERTO RICO

Puerto Rico's migrant education projects served 9,779 regular term students in grade 1 through grade 12. There was no summer term program.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- language arts;
- mathematics;
- Spanish reading;
- Spanish language arts;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- ophthalmology;
- dermatology;
- laboratory work;
- cultural activities;
- psychological services; and
- field trips.

The Test of Basic Skills provided criterion-referenced achievement data for the regular term gathered on an annual basis. The achievement information was reported as percentages of skills mastered by subject area and grade. Aggregate test score information was provided for Spanish, English, and mathematics. For seventh through ninth graders tested in Spanish and English, separate scores were provided for reading and language (Table 78).



Table 78

Achievement Results -- Skills Mastered,  
by Subject Area and Grade, 1988-89

Puerto Rico

Spanish

Grade	Number Tested	Average Number of Skills Tested	Average Number of Skills Mastered	Average Number of Skills Not Mastered	Average Percentage of Skills Mastered
2	84	8	6	2	75
3	301	9	3	6	33
4	194	15	6	9	40
5	64	16	8	8	50
6	235	15	10	5	67
Reading					
7	144	4	0	4	0
Language					
7	126	11	2	9	18
Reading					
8	110	5	0	5	0
Language					
8	104	11	0	11	0
Reading					
9	234	7	0	7	0
Language					
9	274	12	0	12	0
Total	1,870				

Table 78 (continued)

English

Grade	Number Tested	Average Number of Skills Tested	Average Number of Skills Mastered	Average Number of Skills Not Mastered	Average Percentage of Skills Mastered
4	182	16	5	11	31
5	51	10	8	2	80
6	208	12	11	1	91
Reading					
7	109	5	1	4	20
Language					
7	98	8	3	5	38
Reading					
8	80	6	0	6	0
Language					
8	14	5	3	2	60
Reading					
9	223	6	2	4	33
Language					
9	228	8	7	1	88
Total	1,193				

Mathematics

Grade	Number Tested	Average Number of Skills Tested	Average Number of Skills Mastered	Average Number of Skills Not Mastered	Average Percentage of Skills Mastered
2	52	10	8	2	80
3	258	13	2	11	15
4	150	10	6	4	60
5	69	14	4	10	29
6	215	18	8	10	44
7	128	13	1	12	8
8	81	15	0	15	0
9	194	16	0	16	0
Total	1,147				

## RHODE ISLAND

During the regular term, 232 students in pre-kindergarten through grade 12 received migrant education services. There were 74 summer term participants in grade 1 through grade 9.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics; and
- attendance, social work, and guidance.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- attendance, social work, and guidance;
- nutrition; and
- pupil transportation.

Based on criterion-referenced measures, participants were tested in reading and mathematics in the summer term. For reading, the Botel Reading Inventory was used. For mathematics, the Scott, Foresman/Radio Shack Test was used, and testing was performed in the following sub-areas--addition, subtraction, multiplication, and division. The results were reported in correlations of grade level to lessons.

Achievement data were not provided for the regular term.

## SOUTH CAROLINA

South Carolina's migrant education projects provided services to 134 regular term students in pre-kindergarten through grade 12 (excluding grade 4 and grade 5). Summer term services were provided to 609 students in pre-kindergarten through grade 11.

Services that were provided included:

### *Regular Term*

- reading;
- mathematics;
- instructional services for preschool participants;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- library services; and
- psychological services.

### *Summer Term*

- reading;
- mathematics;
- instructional services for preschool participants;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- library services.

South Carolina provided pre- and posttest achievement data for reading and mathematics in the regular term. The test used was the Comprehensive Test of Basic Skills (CTBS). Data were reported in NCEs for an annual testing cycle (Table 79).

During the summer term, teacher-judgment tests with respect to criterion-referenced instructional curriculum were used.

Gains in developmental skills were reported for participants who were three and four years old in pre-kindergarten and for participants who were five and six years old in developmental programs during the summer term. The number and percent of participants who "gained," "lost," were "unchanged," and "not judged" were provided by skill area (Tables 80 and 81).

Summer term students in grades 1 through 12 who participated in the interstate reading and mathematics programs were given objectives to master. Three hundred and thirteen (313) students were evaluated in reading and 314 were evaluated in mathematics.

Table 79

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

## South Carolina

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	45	40.8	51.6	10.8
2	19	63.5	47.4	-16.1
3	8	54.2	47.9	-6.3
4	--	--	--	--
5	--	--	--	--
6	--	--	--	--
7	--	--	--	--
8	--	--	--	--
9	8	33.8	34.2	0.4
10	2	31.5	34.4	2.9
11	1	21.8	21.8	0.0
12	--	--	--	--
Total	83			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	45	40.7	47.7	7.0
2	19	53.2	57.0	3.8
3	8	51.6	53.7	2.1
4	--	--	--	--
5	--	--	--	--
6	--	--	--	--
7	--	--	--	--
8	--	--	--	--
9	8	46.7	39.7	-7.0
10	2	45.8	45.8	0.0
11	1	35.8	36.5	0.7
12	--	--	--	--
Total	83			

Table 80

Changes in Five- and Six-Year-Olds in the Developmental Program Activity, by Skill Area, Summer Term 1989

South Carolina

Skill Area	Number Tested	Percent			
		Gained	Lost	With No Change	Not Judged
Psychomotor--Gross	93	84	0	14	2
Psychomotor--Fine	93	81	0	14	5
Cognitive--Oral	93	82	0	15	3
Cognitive--Visual	93	86	0	14	0
Cognitive--Auditory	93	74	0	16	10
Affective--Personal/ Interactional	93	84	0	15	1
Total	93				

Table 81

Changes in Three- and Four-Year-Olds in the  
Pre-Kindergarten Activity, by Skill Area, Summer Term 1989

South Carolina

Skill Area	Number Tested	Percent			
		Gained	Lost	With No Change	Not Judged
Psychomotor--Gross	109	88	0	6	6
Psychomotor--Fine	109	89	0	5	6
Cognitive--Oral	109	84	0	8	7
Cognitive--Visual	109	90	0	5	6
Cognitive--Auditory	109	84	0	7	9
Affective--Personal/ Interactional	109	88	0	6	6
Total	109				

## SOUTH DAKOTA

The regular term migrant education projects in South Dakota provided services to 45 students in pre-kindergarten through grade 12 (excluding grade 8). During the summer term, services were provided to 33 students in pre-kindergarten through grade 11 (excluding grade 9).

Services that were provided included:

### *Regular Term*

- reading;
- mathematics;
- instructional services for preschool participants;
- attendance, social work, and guidance;
- health; and
- dental.

### *Summer Term*

- reading;
- language arts;
- mathematics;
- instructional services for preschool participants; and
- pupil transportation.

South Dakota provided pre- and posttest achievement data for reading, mathematics, and language arts for the regular term. A norm-referenced test, the Stanford Achievement Test, was used. In addition, the Peabody Individual Achievement Test was given to students in grades 1 through 3. Data were reported in NCEs for an annual testing cycle. Preschoolers were administered the Boehm Test of Basic Concepts or the Utah Test of Language Development. The Test of Basic Experience II was used to evaluate children who attended the regular district kindergarten program half days (Table 82).

The summer term project was encouraged to administer teacher-made diagnostic tests. However, achievement data were not provided.



Table 82

Chapter 1 Migrant Education Achievement Results  
for Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

## South Dakota

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	3	35.7	55.7	20.0
1	3	39.4	57.2	17.8
2	2	47.9	47.6	-0.3
3	4	51.4	53.0	1.6
4	2	0.0	0.0	0.0
5	2	57.1	43.7	-13.4
6	4	53.2	46.5	-6.7
7	1	58.7	60.4	1.7
8	--	--	--	--
9	1*	*	*	*
10	3*	*	*	*
11	--	--	--	--
12	2	45.7	33.4	-12.3
Total	27			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	3	29.9	55.5	25.6
1	3	45.4	64.1	18.7
2	2	51.4	50.3	-1.1
3	4	49.1	46.1	-3.0
4	2	0.0	0.0	0.0
5	2	44.8	41.3	-3.5
6	4	54.0	45.5	-8.5
7	1	59.3	52.6	-6.7
8	--	--	--	--
9	1*	*	*	*
10	3*	*	*	*
11	--	--	--	--
12	2	57.0	44.9	-12.1
Total	27			

\* Results cannot be compared since different tests were used.

Table 82 (continued)

Language Arts

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	3	0.0	0.0	0.0
1	3	42.3	45.5	3.2
2	2	0.0	0.0	0.0
3	4	49.7	57.3	7.6
4	2	0.0	0.0	0.0
5	1	50.5	29.1	-21.4
6	4	48.7	44.2	-4.5
7	1	45.2	54.2	9.0
8	--	--	--	--
9	1*	*	*	*
10	3*	*	*	*
11	--	--	--	--
12	2	42.0	54.3	12.3
<b>Total</b>	<b>26</b>			

\* Results cannot be compared since different tests were used.

## TENNESSEE

Migrant education projects in Tennessee provided services to 116 regular term students in kindergarten through grade 12. Summer term services were provided to 266 students in pre-kindergarten through grade 10.

Services that were provided included:

### *Regular Term*

- reading; and
- mathematics.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- physical education;
- survival skills;
- art;
- computer skills;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

Two school districts provided achievement data for participants during the regular term. One school district used the Stanford Achievement Test for reading and mathematics. All the students were in the program for more than 12 weeks. Table 83 provides pretest, posttest, and gain NCEs, as well as the number tested, by subject area and grade, for participants tested on a fall-spring test cycle.

The second school district used a criterion-referenced test, the Basic Skills First Program, to measure skills acquired during the regular term. Students were in the program from 3 to 12 weeks. Table 84 provides gain scores as well as the number tested, by subject area and grade, for students tested on a fall-spring test cycle.

During the summer term, six school districts provided migrant education projects. In order to evaluate the programs that were provided for migrant students in the summer, three instruments were used. The Basic Skills First Program was used by four school districts. However, one of the four school districts used the Brigance Inventory of Basic Skills for the

lower grades. The remaining two school districts used a criterion-referenced test which was developed for the Tennessee Migrant Program. In addition, teacher-made tests were used in measuring progress in the music, art, and physical education service areas. Since the districts did not test and report achievement data in a uniform manner, the data could not be aggregated. The following tables, then, present the data as reported by the individual school districts.

Table 85 provides information from the district that used the Brigance. The table shows gains as well as the number tested, by subject area and grade, for participants tested during the summer term. The gain represents the number of objectives mastered.

Table 86 provides information from the four districts that used the Basic Skills First Program. The table shows, by grade, the number of students tested and the number of skills acquired for reading and mathematics.

Table 87 provides information for one of the two districts that used a criterion-referenced test that was developed for the Tennessee Migrant Program. The table shows, by grade, the number of students tested and the number of skills gained for reading, mathematics, language arts, physical education, art, and health.

The second district tested eight participants using the Tennessee Criterion Referenced Test, but these data could not be reported by grade since the participants were not classified by grade.

Table 83

Chapter 1 Migrant Education Achievement Results  
for Students Tested on a Fall-Spring Schedule,  
by Subject Area, 1988-89

## Tennessee

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	2	48.5	37.5	-11.0
1	3	9.4	31.9	22.5
2	2	46.8	66.6	19.8
3	11	42.9	55.7	12.8
4	12	48.1	50.8	2.7
5	5	45.0	39.8	-5.2
6	11	36.3	42.8	6.5
7	--	--	--	--
8	11	30.5	26.4	-4.1
9	5	40.2	35.5	-4.7
10	--	--	--	--
11	1	35.8	26.3	-9.5
12	12	33.6	45.5	11.9
Total	75			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	2	42.4	27.2	-15.2
1	3	18.5	28.2	9.7
2	2	47.3	76.4	29.1
3	11	47.7	60.3	12.6
4	12	47.1	55.8	8.7
5	5	46.6	57.5	10.9
6	10	47.1	44.4	-2.7
7	--	--	--	--
8	9	34.9	40.6	5.7
9	3	48.4	40.4	-8.0
10	1	17.3	13.1	-4.2
11	2	37.5	39.6	2.1
12	3	43.3	44.8	1.5
Total	63			

Table 84

Gain Scores on the Basic Skills First Objective, on a Fall-Spring Schedule, by Subject Area, 1988-89

Tennessee

Reading

Grade	Number Tested	Gain Score
K	5	1.0
1	3	1.6
2	2	2.5
3	--	--
4	3	1.7
5	1	5.0
6	2	2.5
7	--	--
8	--	--
9	--	--
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>16</b>	

Mathematics

Grade	Number Tested	Gain Score
K	5	1.6
1	3	-0.6
2	2	1.5
3	--	--
4	3	1.7
5	1	5.0
6	2	3.0
7	--	--
8	--	--
9	--	--
10	--	--
11	--	--
12	--	--
<b>Total</b>	<b>16</b>	

Table 85

Objectives Mastered (Reported by Gains) on  
the Brigance Inventory of Basic Skills,  
Summer Term, 1989

Tennessee

Reading

Grade	Number Tested	Gain Score
K	5	2.8
1	35	2.0
Total	40	

Mathematics

Grade	Number Tested	Gain Score
K	12	1.3
1	24	2.8
Total	36	

Table 86

Skills Mastered (Weighted Mean) on the Basic Skills  
First Program, Summer Term, 1989

Tennessee

Weeks in Programs	Reading		Mathematics	
	3 - 12		3 - 12	
Grade	Number Tested	Skills	Number Tested	Skills
PreK	1	2.0	1	4.0
K	11	2.7	11	3.6
1	9	2.2	9	2.7
2	3	3.4	34	3.3
3	23	2.8	25	3.4
4	24	2.5	25	2.0
5	14	1.7	15	2.5
6	22	2.1	24	2.5
7	13	1.5	13	2.4
8	6	1.4	4	1.0
9	2	2.0	2	2.0
10	1	0.0	1	0.0
Total	129		164	



Table 87

Skills Mastered on the Tennessee Criterion Referenced  
Test, Summer Term, 1989

Tennessee

Grade	Number Tested	Skills					
		Reading	Mathematics	Language Arts	P.E.	Art	Health
PreK	4	3.5	3.8	4.3	3.5	5.0	2.3
K	6	5.8	5.2	5.7	2.6	4.5	4.2
1	7	6.0	5.0	4.7	8.3	4.3	3.3
2	7	4.9	4.7	5.6	13.0	5.6	5.3
3	3	1.7	6.3	5.7	12.7	4.7	4.3
4	3	7.3	5.0	5.3	12.3	5.0	3.0
5	1	5.0	6.0	5.0	15.0	7.0	5.0
6	9	4.4	7.3	5.0	12.7	3.9	4.4
7	4	5.5	5.5	4.0	11.3	3.3	3.5
8	1	6.0	5.0	6.0	15.0	2.0	3.0
Total	45						

## TEXAS

Migrant education projects in Texas served 58,568 regular term students and 4,655 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- other instructional services (not specified)
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting services (not specified).

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- other instructional services (not specified)
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting services (not specified).

Texas provided pre- and posttest achievement data for reading and mathematics for the regular term. Data were reported in NCEs for the annual and fall-spring testing cycles (Tables 88 and 89).

Achievement data were not provided for the summer term.

Table 88

Chapter 1 Migrant Education Achievement Results for  
Students Tested on an Annual Schedule,  
by Subject Area, 1988-89

Texas

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	1,716	37.5	37.6	0.1
3	2,657	35.6	35.8	0.2
4	2,811	33.4	34.9	1.5
5	2,919	32.5	32.6	0.1
6	2,961	31.1	32.7	1.6
7	2,650	28.1	29.4	1.3
8	2,564	30.0	29.6	-0.4
9	1,667	27.1	29.2	2.1
10	965	29.8	30.0	0.2
11	650	31.1	33.1	2.0
12	409	29.5	31.2	1.7
Total	21,969			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	803	51.3	50.2	-1.1
3	1,269	47.2	46.0	-1.2
4	1,374	42.7	44.2	1.5
5	1,646	41.2	44.7	3.5
6	1,540	43.3	44.2	0.9
7	1,040	40.9	39.7	-1.2
8	1,061	38.3	36.3	-2.0
9	820	35.3	37.5	2.2
10	594	37.1	39.5	2.4
11	360	39.3	41.2	1.9
12	182	38.4	40.5	2.1
Total	10,689			

Table 89

Chapter 1 Migrant Education Achievement Results for  
Students Tested on a Fall-Spring Schedule, by  
Subject Area, 1988-89

## Texas

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	141	33.6	40.4	6.8
3	39	26.6	33.9	7.3
4	42	26.3	32.2	5.9
5	44	22.8	28.9	6.1
6	20	22.1	26.4	4.3
7	26	28.4	33.5	5.1
8	25	27.0	31.1	4.1
9	20	33.1	36.2	3.1
10	19	28.5	32.9	4.4
11	10	31.8	34.2	2.4
12	11	32.6	34.5	1.9
Total	397			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	99	35.9	56.3	20.4
3	16	29.4	38.2	8.8
4	21	32.0	37.8	5.8
5	29	26.5	31.6	5.1
6	15	29.1	40.6	11.5
7	14	30.9	35.2	4.3
8	15	31.8	38.2	6.4
9	18	34.2	39.1	4.9
10	18	29.9	35.6	5.7
11	11	32.4	35.4	3.0
12	11	30.8	33.0	2.2
Total	267			

## UTAH

Utah's migrant education projects served 1,327 summer term students in pre-kindergarten through grade 12. Utah did not offer a regular term program.

Services that were provided included:

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- social studies;
- science;
- geography;
- art;
- physical education;
- music;
- computers;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- medical services; and
- welfare services.

The Wide Range Achievement Test, a norm-referenced test, was used during the summer term. Participants were tested in reading, spelling, and arithmetic. Data were reported as raw scores.

Table 90 provides average pre- and posttest scores, and the difference between pre- and posttest scores, as well as the number tested, by subject area and grade, for participants tested during the summer of 1989.

Table 90

WRAT-R Data for the Migrant Education Program,  
by Subject Area, Summer Term 1989

Utah

Reading

Grade	Number of Students Who Took Posttest	Pretest Average Raw Scores	Posttest Average Raw Scores	Difference Between Pre-Post Raw Scores
PreK	5	13.2	13.6	0.4
K	74	14.0	22.0	8.0
1	88	28.1	33.6	5.5
2	64	33.4	38.6	5.2
3	77	39.0	40.8	1.8
4	56	38.4	42.9	4.5
5	53	30.1	37.8	7.7
6	37	38.5	49.6	11.1
7	24	37.5	49.8	12.3
8	9	36.1	42.3	6.2
9	4	47.5	61.8	14.3
10	2	30.5	49.5	19.0
11	--	--	--	--
12	--	--	--	--
Total	493			

Table 90 (continued)

Spelling

Grade	Number of Students Who Took Posttest	Pretest Average Raw Scores	Posttest Average Raw Scores	Difference Between Pre-Post Raw Scores
PreK	5	10.2	14.8	4.6
K	74	23.8	28.6	4.8
1	88	26.9	30.6	3.7
2	64	30.5	35.6	5.1
3	77	32.8	45.2	12.4
4	56	29.9	36.9	7.0
5	53	24.8	32.2	7.4
6	37	31.1	35.5	4.4
7	24	27.3	29.5	2.2
8	9	34.9	40.0	5.1
9	4	41.8	51.3	9.5
10	2	16.5	14.0	-2.5
11	--	--	--	--
12	--	--	--	--
Total	493			

Arithmetic

Grade	Number of Students Who Took Posttest	Pretest Average Raw Scores	Posttest Average Raw Scores	Difference Between Pre-Post Raw Scores
PreK	5	2.8	14.4	11.6
K	74	21.7	27.9	6.2
1	88	33.8	38.0	4.2
2	64	35.9	40.5	4.6
3	77	37.5	42.4	4.9
4	56	35.2	38.0	2.8
5	53	40.2	44.0	3.8
6	37	27.4	37.4	10.0
7	24	32.2	34.4	2.2
8	9	31.0	33.1	2.1
9	4	55.3	58.5	3.2
10	2	13.0	21.5	8.5
11	--	--	--	--
12	--	--	--	--
Total	493			

## VERMONT

Vermont's migrant education projects provided services to 817 regular students in pre-kindergarten through grade 12. The summer term projects served 258 students in pre-kindergarten through grade 11.

Services that were provided included:

### *Regular Term*

- reading;
- vocational/career education;
- secondary tutorial services;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

### *Summer Term*

- reading;
- vocational/career education;
- secondary tutorial services;
- attendance, social work, and guidance;
- nutrition; and
- pupil transportation.

Achievement data were not provided for the regular or summer term.



## VIRGINIA

The migrant education projects in Virginia provided services to 566 regular term students in pre-kindergarten through grade 12. Services were also provided to 561 summer term students in pre-kindergarten through grade 12 (excluding grade 11).

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- art;
- music;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation;
- vision and hearing screenings; and
- clothing.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- art;
- music;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition;
- pupil transportation; and
- vision and hearing screenings.

In the regular term, achievement data were provided by project, but could not be aggregated statewide because the information was not reported in a uniform manner. Three projects administered a criterion-referenced test; all three districts tested in reading, and one district tested in reading and mathematics. A total of 120 participants were tested in reading, 57 in mathematics and 20 in language. (Table 91)

In the summer term, participants were tested in reading and mathematics using the Curriculum Referenced Test of Mastery. Table 92 provides pre- and posttest, and gain NCEs as well as the number tested, by subject area and grade, for students tested during the summer term.

Table 91

Summary of District Level Achievement Information  
for the Regular Term, 1988-89

Virginia

District	Number Tested in Reading	Number Tested in Mathematics	Number Tested in Language	Data Reported by Grade Level	Type of Data Reported
A	23	0	20	Yes	Average Raw Score Gain (reading) and Average Standard Score Equivalent (language)
B	40	0	0	No	Pretest, Posttest, and Gain Average Percentile
C	57	57	0	Yes	Pretest and Posttest Average Grade Level
D <sup>a/</sup>	0	0	0	No	--
Total Number Tested	120	57	20		

a/ Participants tested only for English as a Second Language.

Table 92

Chapter 1 Migrant Education Achievement Results,  
by Subject Area, Summer Term 1989

Virginia

Reading

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	27	21.0	38.0	17.0
3	12	26.0	64.0	38.0
4	20	28.0	45.0	17.0
5	7	17.0	46.0	29.0
6	9	37.0	49.0	12.0
7	--	--	--	--
8	--	--	--	--
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>75</b>			

Mathematics

Grade	Number Tested	NCE		
		Pretest	Posttest	Gain
K	--	--	--	--
1	--	--	--	--
2	27	14.0	32.0	18.0
3	12	26.0	53.0	27.0
4	20	29.0	50.0	21.0
5	7	22.0	52.0	30.0
6	9	49.0	56.0	7.0
7	--	--	--	--
8	--	--	--	--
9	--	--	--	--
10	--	--	--	--
11	--	--	--	--
12	--	--	--	--
<b>Total</b>	<b>75</b>			

## WASHINGTON

Migrant education projects in Washington served 11,810 regular term students and 3,608 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- oral language;
- reading;
- language arts;
- mathematics;
- readiness;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

### *Summer Term*

- oral language;
- reading;
- language arts;
- mathematics;
- readiness;
- attendance, social work, and guidance;
- health;
- dental;
- nutrition; and
- pupil transportation.

During workshops in the early fall of 1988, school district representatives were asked to submit test data following established state guidelines. As of January 1990, the MSRTS in Sunnyside, Washington reported that 41 school districts had submitted achievement test results as follows: 7,109 student achievement test results for fall 1988, 5,208 students for spring 1989, and 1,992 (entered as of January 1990), students for fall 1989. It is the goal of the state education agency and MSRTS to begin the process of matching pre- and posttest achievement test results and be able to report achievement test gains for those students so identified for the 1989-90 migrant report.

Washington has a statewide assessment program. In 1988 and 1989, the Metropolitan Achievement Test was administered to all students in grades 4, 8, and 10 during the month of October. State-level results were prepared for the general student population and for select student subgroups. Tests were administered in reading, mathematics, and language arts. Small numbers of Chapter 1 migrant students were tested in the fall testing of 1988 and 1989 as a part of the state program. Specifically, the results of the fall 1988 testing revealed that approximately 370 (4th grade), 54 (8th grade), and 34 (10th grade) migrant students had achievement test scores for reading, mathematics, and language arts. Since this number of students is less than 5 percent of the Chapter 1 migrant students, their achievement test results cannot be considered as representative of the migrant student population in the state of Washington.

Achievement data were not provided for the summer term.

## WEST VIRGINIA

During the regular term, migrant education projects in West Virginia served 21 students in kindergarten through grade 8 (excluding grade 6 and grade 7). Forty-six students in pre-kindergarten through grade 7 (with the exception of kindergarten) were provided services during the summer term.

Services that were provided included:

### *Regular Term*

- reading;
- mathematics;
- attendance, social work, and guidance;
- pupil transportation; and
- other supporting services (not specified).

### *Summer Term*

- English to students of limited English background;
- reading;
- mathematics;
- vocational/career education;
- health;
- dental;
- nutrition;
- pupil transportation; and
- other supporting services (not specified).

Achievement data were not provided for the regular or the summer term.

## WISCONSIN

Wisconsin's migrant education projects provided services to 618 regular term students and 882 summer term students in pre-kindergarten through grade 12.

Services that were provided included:

### *Regular Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- computer literacy;
- elementary and secondary tutorial services;
- instruction for preschool and handicapped participants;
- PASS (Portable Assisted Study Sequence);
- vocational/career education;
- art;
- music;
- field trips;
- attendance, social work, and guidance;
- dental;
- nutrition;
- pupil transportation;
- at-risk services; and
- needs assessment.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- computer literacy;
- secondary tutorial services;
- instruction for preschool participants;
- PASS (Portable Assisted Study Sequence);
- multicultural education;
- art;
- music;
- field trips;
- attendance, social work, and guidance;
- dental;
- nutrition;
- pupil transportation; and
- health.

For summer term participants, Wisconsin used point-in-time testing for reading, language arts, and mathematics. The 3R's classroom edition was used.

Table 93 provides the number of students making progress toward proficiency on competencies and the number tested, by subject area, for the summer of 1989.

Competency judgments, made by the teacher however he/she deems appropriate, were also provided for the summer of 1989. Teachers could use a variety of competency tests, such as criterion-referenced tests, teacher-developed tests, an evaluation of student work samples, or observation. Summer testing for competency occurred no more than five times during the summer term, i.e., approximately once a week (Table 94).

Achievement data were not provided for the regular term.

Table 93

Number of Students Making Progress Toward Proficiency on Competencies, Summer Term 1989

Wisconsin

Subject	Number Tested	Number of Competencies			
		0	1 or 2	3 or 4	5 or More
Reading	533	68	124	201	140
Mathematics	542	66	153	208	115
Language Arts	525	66	124	208	127
Early Childhood	70	0	7	12	51
Total	1,670				

Table 94

Number of Students Achieving Proficiency on Competencies, Summer Term 1989

Subject	Number Tested	Number of Competencies			
		0	1 or 2	3 or 4	5 or More
Reading	533	453	54	20	6
Mathematics	542	457	31	47	7
Language Arts	525	443	49	22	11
Early Childhood	70	59	10	0	1
Total	1,670				



## WYOMING

Wyoming's regular term migrant education projects served one student in grade 4. Summer term projects served 525 students in pre-kindergarten through grade 10.

Services that were provided included:

### *Regular Term*

- health; and
- dental.

### *Summer Term*

- English to students of limited English background;
- reading;
- language arts;
- mathematics;
- vocational/career education;
- instruction for preschool participants;
- attendance, social work, and guidance;
- dental;
- nutrition;
- pupil transportation; and
- computer literacy.

Wyoming provided skills acquired (total and average) achievement data for the summer term for psychomotor skills, cognitive skills, affective skills, (preschool program) language arts, reading, and mathematics. Table 95 provides total skills acquired as well as the number tested, by subject area and age range, for participants tested during the summer of 1989.

Achievement data were not provided for the regular term.

Table 95

Skills Acquired, by Subject Area, Summer Term 1989

Wyoming

Subject Area	Age Range	Number Tested	Total Skills Acquired	Average Number of Skills Acquired
Psychomotor Skills	Birth through 4	210	5,805	27.6
Cognitive Skills	Birth through 4	210	6,241	29.7
Affective Skills	Birth through 4	210	4,157	19.7
Language Arts	5-17	360	5,950	16.5
Reading	5-17	360	4,770	13.3
Mathematics	5-17	360	6,006	16.7

## APPENDIX A -- METHODOLOGY

The U.S. Department of Education (ED) received State Performance Reports for 1988-89 in the winter of 1990.

Westat, contracted by the Office of Policy and Planning, Planning and Evaluation Service (PES) to prepare the data files, review, correct, and summarize the State Performance Reports, performed edit checks on the participation information and reviewed the achievement information provided by the SEAs. The purpose of the edit checks was to flag potential problems, not to claim that the information was necessarily in error.

The edit process for the participation data focused on examining the information submitted for 1988-89, and highlighting year-to-year changes that appeared to be unusually high.

Westat subsequently prepared state-by-state listings of the information submitted by the SEAs, highlighting any data items that were identified through the edit process, and sent them to the SEAs for their review.

Westat staff then placed telephone calls to each SEA to elicit their response. In several instances, SEAs revised data for either 1987-88 or 1988-89.<sup>13</sup> However, in most cases, either the SEA responded that the information had been reviewed and was correct, or the SEA offered explanations for data items highlighted by the review process.

For the achievement data, SEAs were asked to verify or clarify Westat staff's understanding of the information that had been provided to ED.

At the conclusion of this process, Westat entered the revisions into the Chapter 1 migrant education data base and produced two documents for ED--a State Feedback Report for each SEA and this summary report entitled *A Summary of State Chapter 1 Migrant Education Program Participation and Achievement Information for 1988-89, Volume 1: Participation and Volume 2: Achievement*.

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<sup>13</sup>To the extent states revised their figures, the numbers found in this report will not correspond with those found in previous documents displaying State Performance Report information.

**APPENDIX B -- ACHIEVEMENT INFORMATION FOR STATES  
REPORTING PRE/POST NORM REFERENCED NORMAL CURVE  
EQUIVALENT RESULTS, BY GRADE AND STATE**

This appendix presents tabular displays of achievement information by grade for those states that provided data for the regular term using a norm referenced pre/post model and normal curve equivalent results. For each grade, the number tested, the pretest NCE score, the pretest percentile, the posttest NCE score, the posttest percentile, and the gain NCE are presented.

The tables are provided in the following order:

- Table B.1 -- participants tested on an annual test cycle in reading;
- Table B.2 -- participants tested on an annual test cycle in mathematics;
- Table B.3 -- participants tested on a fall-spring test cycle in reading; and
- Table B.4 -- participants tested on a fall-spring test cycle in mathematics.

Table B.1.

Chapter 1 Migrant Education Reading Achievement Results  
for Students Tested on an Annual Cycle -- 1988-89

Kindergarten						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	--	--	--	--	--	--
Alaska	--	--	--	--	--	--
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	--	--	--	--	--	--
Louisiana	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Oregon	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--
South Dakota	3	35.7	24	55.7	60	20.0
Texas	--	--	--	--	--	--
Total (weighted)	3	35.7	24	55.7	60	20.0
Grade 1						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	--	--	--	--	--	--
Alaska	--	--	--	--	--	--
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	6	32.7	20	36.5	26	3.8
Louisiana	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Oregon	7	17.7	6	50.0	50	32.3
Pennsylvania	--	--	--	--	--	--
South Carolina	45	40.8	33	51.6	53	10.8
South Dakota	3	39.4	30	57.2	63	17.8
Texas	--	--	--	--	--	--
Total (weighted)	61	37.3	27	50.2	50	12.9

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Table B.1. (cont'd)

Grade 2						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	57	52.5	54	51.7	53	-0.8
Alaska	159	32.2	19	25.8	12	-6.4
Colorado	3	57.0	63	49.0	48	-8.0
Florida	237	37.0	26	36.0	25	-1.0
Georgia	29	37.2	27	39.6	31	2.4
Louisiana	243	38.6	29	39.2	30	0.6
Maine	104	47.2	44	49.9	49	2.7
Mississippi	91	49.6	49	43.1	37	-6.5
New Jersey	27	32.8	20	40.2	32	7.4
New Mexico	22	23.9	10	28.8	15	4.9
Oklahoma	43	53.1	55	53.2	56	0.1
Oregon	40	27.4	14	35.2	24	7.8
Pennsylvania	21	34.3	22	35.7	24	1.4
South Carolina	19	63.5	74	47.4	45	-16.1
South Dakota	2	47.9	46	47.6	45	-0.3
Texas	1,716	37.5	27	37.6	27	0.1
Total (weighted)	2,813	38.4	29	38.1	28	-0.3
Grade 3						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	61	47.3	44	44.0	39	-3.3
Alaska	151	25.7	12	25.0	11	-0.7
Colorado	2	38.0	28	60.0	68	22.0
Florida	416	34.6	23	36.0	25	1.4
Georgia	34	37.3	27	34.4	23	-2.9
Louisiana	232	41.3	34	45.2	41	3.9
Maine	104	51.9	53	53.5	56	1.6
Mississippi	104	40.7	33	40.9	33	0.2
New Jersey	36	37.0	26	46.8	44	9.8
New Mexico	10	33.7	22	37.0	26	3.3
Oklahoma	37	46.0	42	45.2	41	-0.8
Oregon	144	41.5	34	42.6	36	1.1
Pennsylvania	23	30.0	17	36.2	25	6.2
South Carolina	8	54.2	58	47.9	46	-6.3
South Dakota	4	51.4	52	53.0	55	1.6
Texas	2,657	35.6	24	35.0	25	0.2
Total (weighted)	4,023	36.5	26	37.1	27	0.6

Table B.1. (cont'd)

Grade 4						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	58	53.3	56	51.5	52	-1.8
Alaska	173	22.7	9	23.2	10	0.5
Colorado	2	31.2	18	46.7	43	15.5
Florida	408	34.8	23	35.0	23	0.2
Georgia	20	33.5	21	32.0	19	-1.5
Louisiana	143	41.6	34	41.5	34	-0.1
Maine	114	53.2	56	49.7	49	-3.5
Mississippi	103	42.1	35	43.8	38	1.7
New Jersey	22	33.9	22	39.5	30	5.6
New Mexico	14	30.9	18	34.3	22	3.4
Oklahoma	38	44.2	39	46.6	43	2.4
Oregon	162	42.4	35	42.3	35	-0.1
Pennsylvania	32	33.7	22	37.7	28	4.0
South Carolina	--	--	--	--	--	--
South Dakota	2	0.0	0	0.0	0	0.0
Texas	2,811	33.4	21	34.9	23	1.5
Total (weighted)	4,102	34.9	23	35.9	25	1.0
Grade 5						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	57	43.1	37	41.2	33	-1.9
Alaska	155	19.9	7	21.6	8	1.7
Colorado	6	50.8	51	47.4	45	-3.4
Florida	371	33.7	22	34.0	22	0.3
Georgia	34	35.9	25	34.1	22	-1.8
Louisiana	213	35.7	24	39.5	30	3.8
Maine	111	52.3	54	50.4	50	-1.9
Mississippi	93	38.1	28	37.8	28	-0.3
New Jersey	25	35.3	24	39.8	31	4.5
New Mexico	8	24.8	11	22.1	9	-2.7
Oklahoma	37	44.1	39	43.2	37	-0.9
Oregon	138	41.5	34	41.0	33	-0.5
Pennsylvania	34	36.5	26	37.1	27	0.6
South Carolina	--	--	--	--	--	--
South Dakota	2	57.1	63	43.7	38	-13.4
Texas	2,919	32.5	20	32.6	20	0.1
Total (weighted)	4,203	33.6	21	33.8	22	0.2

Table B.1. (cont'd)

Grade 6						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	51	40.3	32	43.8	38	3.5
Alaska	170	20.4	8	22.6	9	2.2
Colorado	4	48.6	47	44.9	40	-3.7
Florida	288	31.7	19	33.0	21	1.3
Georgia	18	34.4	23	34.7	23	0.3
Louisiana	165	40.4	32	45.2	41	4.8
Maine	101	49.0	48	48.8	47	-0.2
Mississippi	77	38.2	28	39.6	31	1.4
New Jersey	23	35.9	25	37.1	27	1.2
New Mexico	10	30.8	18	38.1	28	7.3
Oklahoma	39	38.7	29	42.9	36	4.2
Oregon	134	41.2	33	41.1	33	-0.1
Pennsylvania	25	34.7	23	34.0	22	-0.7
South Carolina	--	--	--	--	--	--
South Dakota	4	53.2	56	46.5	43	-6.7
Texas	2,961	31.1	18	32.7	20	1.6
Total (weighted)	4,070	32.3	20	33.9	22	1.6
Grade 7						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	45	38.2	28	37.7	28	-0.5
Alaska	154	21.0	8	22.1	9	1.1
Colorado	1	5.0	1	49.0	48	44.0
Florida	104	30.7	18	32.0	19	1.3
Georgia	15	37.4	27	37.3	27	-0.1
Louisiana	181	40.9	33	42.7	36	1.8
Maine	102	52.5	54	55.4	60	2.9
Mississippi	28	41.4	34	45.8	42	4.4
New Jersey	20	35.8	25	43.2	37	7.4
New Mexico	5	40.4	32	41.6	34	1.2
Oklahoma	14	34.8	23	34.1	22	-0.7
Oregon	100	40.7	33	41.6	34	0.9
Pennsylvania	12	30.9	18	38.2	28	7.3
South Carolina	--	--	--	--	--	--
South Dakota	1	58.7	66	60.4	69	1.7
Texas	2,650	28.1	14	29.4	16	1.3
Total (weighted)	3,432	30.0	17	31.4	18	1.4



Table B.1. (cont'd)

Grade 8						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	41	26.3	13	30.0	17	3.7
Alaska	101	22.7	9	20.7	8	-2.0
Colorado	--	--	--	--	--	--
Florida	69	29.4	16	29.0	15	-0.4
Georgia	6	35.8	25	31.3	18	-4.5
Louisiana	123	48.6	47	49.6	49	1.0
Maine	95	51.3	52	51.8	53	0.5
Mississippi	28	38.0	28	38.0	28	0.0
New Jersey	18	33.9	22	41.7	34	7.8
New Mexico	3	35.7	24	36.0	25	0.3
Oklahoma	14	35.4	24	33.5	21	-1.9
Oregon	109	41.2	33	42.1	35	0.9
Pennsylvania	13	27.1	13	28.2	15	1.1
South Carolina	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--
Texas	2,564	30.0	17	29.6	16	-0.4
Total (weighted)	3,184	31.6	19	31.3	18	-0.3
Grade 9						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	44	33.4	21	36.4	25	3.0
Alaska	88	24.9	11	23.3	10	-1.6
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	6	42.5	36	32.0	19	-10.5
Louisiana	47	42.9	36	43.3	37	0.4
Maine	29	45.3	41	41.9	35	-3.4
Mississippi	3	24.5	11	22.3	9	-2.2
New Jersey	1	46.0	42	40.0	31	-6.0
New Mexico	1	30.0	17	39.0	30	9.0
Oklahoma	17	40.2	32	38.8	29	-1.4
Oregon	36	41.4	34	45.8	42	4.4
Pennsylvania	3	12.8	3	26.5	13	13.7
South Carolina	8	33.8	22	34.2	22	0.4
South Dakota	1	--	--	--	--	--
Texas	1,667	27.1	13	29.2	16	2.1
Total (weighted)	1,951	28.2	15	30.0	17	1.8

Table B.1. (cont'd)

Grade 10						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	15	27.3	14	30.4	17	3.1
Alaska	50	26.8	13	27.6	14	0.8
Colorado	2	41.9	35	43.0	37	1.1
Florida	--	--	--	--	--	--
Georgia	1	46.0	42	59.0	66	13.0
Louisiana	14	41.0	33	44.5	39	3.5
Maine	48	49.4	48	51.4	52	2.0
Mississippi	4	13.7	4	21.6	8	7.9
New Jersey	2	84.5	94	52.5	54	-32.0
New Mexico	2	23.0	10	33.5	21	10.5
Oklahoma	4	57.2	63	53.7	57	-3.5
Oregon	43	45.3	41	44.9	40	-0.4
Pennsylvania	--	--	--	--	--	--
South Carolina	2	31.5	19	34.4	23	2.9
South Dakota	3	--	--	--	--	--
Texas	965	29.8	16	30.0	17	0.2
Total (weighted)	1,155	31.2	18	31.6	19	0.4
Grade 11						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	8	26.5	13	29.7	16	3.2
Alaska	38	21.7	8	19.6	7	-2.1
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	--	--	--	--	--	--
Louisiana	17	42.2	35	47.0	44	4.8
Maine	37	45.8	42	49.9	49	4.1
Mississippi	1	5.4	1	6.7	2	1.3
New Jersey	3	42.0	35	48.3	46	6.3
New Mexico	2	29.5	16	32.0	19	2.5
Oklahoma	7	31.9	19	30.9	18	-1.0
Oregon	20	40.8	33	35.2	24	-5.6
Pennsylvania	--	--	--	--	--	--
South Carolina	1	21.8	9	21.8	9	0.0
South Dakota	--	--	--	--	--	--
Texas	650	31.1	18	33.1	21	2.0
Total (weighted)	784	31.8	19	33.5	21	1.7

Table B.1. (cont'd)

Grade 12						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	--	--	--	--	--	--
Alaska	48	23.5	10	23.8	10	0.3
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	--	--	--	--	--	--
Louisiana	1	46.0	42	56.0	61	10.0
Maine	30	48.0	46	52.3	54	4.3
Mississippi	2	14.6	4	12.1	3	-2.5
New Jersey	1	49.0	48	31.0	18	-18.0
New Mexico	--	--	--	--	--	--
Oklahoma	4	31.9	19	34.9	23	3.0
Oregon	10	48.9	48	48.1	46	-0.8
Pennsylvania	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--
South Dakota	2	45.7	41	33.4	21	-12.3
Texas	409	29.5	16	31.2	18	1.7
Total (weighted)	507	30.5	17	32.1	19	1.6

Table B.2.

Chapter 1 Migrant Education Mathematics Achievement Results  
for Students Tested on an Annual Cycle -- 1988-89

## Kindergarten

State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	--	--	--	--	--	--
Alaska	--	--	--	--	--	--
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	--	--	--	--	--	--
Louisiana	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Oregon	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--
South Dakota	3	29.9	17	55.5	60	25.6
Texas	--	--	--	--	--	--
Total (weighted)	3	29.9	17	55.5	60	25.6

## Grade 1

State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	--	--	--	--	--	--
Alaska	--	--	--	--	--	--
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	6	36.8	26	58.0	64	21.2
Louisiana	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--
New Jersey	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Oregon	4	23.8	10	58.0	64	34.2
Pennsylvania	--	--	--	--	--	--
South Carolina	45	40.7	33	47.7	45	7.0
South Dakota	3	45.4	41	64.1	74	18.7
Texas	--	--	--	--	--	--
Total (weighted)	58	39.4	30	50.3	50	10.9

Table B.2. (cont'd)

Grade 2						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	146	53.2	56	53.6	56	0.4
Alaska	127	33.9	22	32.1	19	-1.8
Colorado	3	82.0	93	66.0	77	-16.0
Florida	25	38.4	29	42.0	35	3.6
Georgia	25	44.4	39	50.4	50	6.0
Louisiana	208	50.0	50	48.8	47	-1.2
Maine	96	50.2	50	52.4	54	2.2
Mississippi	51	44.8	40	47.2	44	2.4
New Jersey	21	44.5	39	44.0	38	-0.5
New Mexico	11	29.2	16	41.2	33	12.0
Oklahoma	51	51.6	53	52.0	53	0.4
Oregon	30	33.6	21	40.5	32	6.9
Pennsylvania	10	39.8	31	43.4	37	3.6
South Carolina	19	53.2	56	57.0	63	3.8
South Dakota	2	51.4	52	50.3	50	-1.1
Texas	803	51.3	52	50.2	50	-1.1
Total (weighted)	1,628	48.8	47	48.6	47	-0.2
Grade 3						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	131	56.8	62	45.9	42	-10.9
Alaska	127	30.6	17	34.6	23	4.0
Colorado	2	67.0	79	61.0	70	-6.0
Florida	39	34.1	22	39.0	30	4.9
Georgia	33	47.5	45	38.9	29	-8.6
Louisiana	229	44.7	40	48.5	47	3.8
Maine	100	52.0	53	53.1	55	1.1
Mississippi	63	50.1	50	48.5	47	-1.6
New Jersey	31	59.2	66	63.9	74	4.7
New Mexico	23	22.2	9	31.3	18	9.1
Oklahoma	59	52.6	55	51.1	52	-1.5
Oregon	130	48.3	46	49.6	49	1.3
Pennsylvania	13	36.9	26	46.7	43	9.8
South Carolina	8	51.6	53	53.7	57	2.1
South Dakota	4	49.1	48	46.1	42	-3.0
Texas	1,269	47.2	44	46.0	42	-1.2
Total (weighted)	2,261	46.7	43	46.2	42	-0.5

Table B.2. (cont'd)

Grade 4						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	105	46.0	42	48.4	47	2.4
Alaska	148	28.1	14	27.0	13	-1.1
Colorado	2	24.3	11	45.6	41	21.3
Florida	24	36.5	26	39.0	30	2.5
Georgia	19	43.3	37	42.0	35	-1.3
Louisiana	165	46.1	42	49.5	49	3.4
Maine	107	53.7	57	54.5	58	0.8
Mississippi	55	43.1	37	44.4	39	1.3
New Jersey	19	48.2	46	50.8	51	2.6
New Mexico	28	24.9	11	39.0	30	14.1
Oklahoma	66	47.3	44	50.0	50	2.7
Oregon	143	49.9	49	44.4	39	-5.5
Pennsylvania	8	33.5	21	38.9	29	5.4
South Carolina	--	--	--	--	--	--
South Dakota	2	0.0	0	0.0	0	0.0
Texas	1,374	42.7	36	44.2	39	1.5
Total (weighted)	2,265	42.9	36	44.2	39	1.3
Grade 5						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	137	50.4	50	55.7	60	5.3
Alaska	143	25.1	11	27.6	14	2.5
Colorado	6	59.9	68	53.0	55	-6.9
Florida	43	34.6	23	36.0	25	1.4
Georgia	27	38.4	29	38.7	29	0.3
Louisiana	175	40.1	32	46.7	43	6.6
Maine	98	51.4	52	50.0	50	-1.4
Mississippi	59	45.1	40	48.2	46	3.1
New Jersey	28	52.1	54	52.5	54	0.4
New Mexico	23	29.7	16	43.8	38	14.1
Oklahoma	63	46.4	43	40.8	33	-5.6
Oregon	132	43.8	38	44.7	40	0.9
Pennsylvania	5	36.8	26	35.9	25	-0.9
South Carolina	--	--	--	--	--	--
South Dakota	2	44.8	40	41.3	34	-3.5
Texas	1,646	41.2	33	44.7	40	3.5
Total (weighted)	2,587	41.4	34	44.5	39	3.1

Table B.2. (cont'd)

Grade 6						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	120	48.4	47	49.4	48	1.0
Alaska	151	26.7	13	28.1	14	1.4
Colorado	4	54.0	57	53.6	56	-0.4
Florida	29	31.3	18	35.0	23	3.7
Georgia	14	39.5	30	40.6	32	1.1
Louisiana	138	45.0	40	48.8	47	3.8
Maine	95	48.1	46	51.3	52	3.2
Mississippi	47	47.1	44	48.4	47	1.3
New Jersey	24	50.0	50	53.9	57	3.9
New Mexico	19	29.1	16	27.4	14	-1.7
Oklahoma	51	44.9	40	45.0	40	0.1
Oregon	128	45.2	41	46.9	44	1.7
Pennsylvania	7	35.2	24	36.9	26	1.7
South Carolina	--	--	--	--	--	--
South Dakota	4	54.0	57	45.5	41	-8.5
Texas	1,540	43.3	37	44.2	39	0.9
Total (weighted)	2,371	42.8	36	44.1	39	1.3
Grade 7						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	141	49.4	48	47.6	45	-1.8
Alaska	143	25.6	12	26.9	13	1.3
Colorado	1	23.0	10	22.0	9	-1.0
Florida	29	30.0	17	30.0	17	0.0
Georgia	8	37.6	27	41.6	34	4.0
Louisiana	157	48.5	47	49.8	49	1.3
Maine	98	50.9	51	52.5	54	1.6
Mississippi	47	43.3	37	49.4	48	6.1
New Jersey	16	45.0	40	71.1	84	26.1
New Mexico	24	13.6	4	28.9	15	15.3
Oklahoma	36	28.4	15	30.4	17	2.0
Oregon	99	47.4	45	45.3	41	-2.1
Pennsylvania	1	35.1	24	45.8	42	10.7
South Carolina	--	--	--	--	--	--
South Dakota	1	59.3	67	52.6	55	-6.7
Texas	1,040	40.9	33	39.7	31	-1.2
Total (weighted)	1,841	41.2	33	41.2	33	0.0

Table B.2. (cont'd)

Grade 8						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	66	44.5	39	45.7	41	1.2
Alaska	107	28.9	15	24.5	11	-4.4
Colorado	--	--	--	--	--	--
Florida	18	32.4	20	33.0	21	0.6
Georgia	4	44.0	38	33.0	21	-11.0
Louisiana	117	56.5	62	58.7	66	2.2
Maine	92	53.4	56	53.9	57	0.5
Mississippi	45	43.5	37	44.5	39	1.0
New Jersey	13	51.3	52	58.2	65	6.9
New Mexico	29	20.3	7	24.3	11	4.0
Oklahoma	19	43.5	37	40.8	33	-2.7
Oregon	108	47.7	45	47.2	44	-0.5
Pennsylvania	2	44.9	40	39.5	30	-5.4
South Carolina	--	--	--	--	--	--
South Dakota	--	--	--	--	--	--
Texas	1,061	38.3	29	36.3	25	-2.0
Total (weighted)	1,681	40.6	32	39.3	30	-1.3
Grade 9						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	26	30.3	17	36.7	26	6.4
Alaska	93	28.0	12	24.3	11	-1.7
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	6	32.3	20	40.7	33	8.4
Louisiana	47	51.9	53	61.5	70	9.6
Maine	25	44.4	39	42.0	35	-2.4
Mississippi	3	31.8	19	25.0	11	-6.8
New Jersey	2	48.0	46	57.5	64	9.5
New Mexico	--	--	--	--	--	--
Oklahoma	19	45.7	41	44.8	40	-0.9
Oregon	37	45.0	40	43.1	37	-1.9
Pennsylvania	--	--	--	--	--	--
South Carolina	8	46.7	43	39.7	31	-7.0
South Dakota	1	--	--	--	--	--
Texas	820	35.3	24	37.5	27	2.2
Total (weighted)	1,087	35.9	25	37.8	28	1.9

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Table B.2. (cont'd)

## Grade 10

State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	29	34.4	23	39.3	30	4.9
Alaska	64	28.8	15	30.0	17	1.2
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	1	46.0	42	32.0	19	-14.0
Louisiana	19	41.6	34	52.9	55	11.3
Maine	44	49.6	49	51.1	52	1.5
Mississippi	1	32.0	19	41.0	33	9.0
New Jersey	2	94.0	98	79.0	91	-15.0
New Mexico	--	--	--	--	--	--
Oklahoma	9	59.5	67	57.0	63	-2.5
Oregon	42	49.0	48	50.5	51	1.5
Pennsylvania	--	--	--	--	--	--
South Carolina	2	45.8	42	45.8	42	0.0
South Dakota	3	--	--	--	--	--
Texas	594	37.1	27	39.5	30	2.4
Total (weighted)	810	38.0	28	40.4	32	2.4

## Grade 11

State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	4	63.8	74	52.5	54	-11.3
Alaska	40	24.6	11	24.4	11	-0.2
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	--	--	--	--	--	--
Louisiana	20	53.5	56	58.8	66	5.3
Maine	37	47.5	45	52.2	54	4.7
Mississippi	2	20.5	8	44.5	39	24.0
New Jersey	3	49.3	48	36.7	26	-12.6
New Mexico	--	--	--	--	--	--
Oklahoma	10	41.7	34	37.0	26	-4.7
Oregon	23	48.6	47	40.7	33	-7.9
Pennsylvania	--	--	--	--	--	--
South Carolina	1	35.8	25	36.5	26	0.7
South Dakota	--	--	--	--	--	--
Texas	360	39.3	30	41.2	33	1.9
Total (weighted)	500	39.9	31	41.3	34	1.4

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Table B.2. (cont'd)

Grade 12						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Alabama	4	38.6	29	37.9	28	-0.7
Alaska	51	24.4	11	23.0	10	-1.4
Colorado	--	--	--	--	--	--
Florida	--	--	--	--	--	--
Georgia	--	--	--	--	--	--
Louisiana	8	57.8	64	55.6	60	-2.2
Maine	28	44.6	39	49.1	48	4.5
Mississippi	--	--	--	--	--	--
New Jersey	1	52.0	53	65.0	76	13.0
New Mexico	--	--	--	--	--	--
Oklahoma	5	44.1	39	45.0	40	0.9
Oregon	10	49.8	49	45.6	41	-4.2
Pennsylvania	--	--	--	--	--	--
South Carolina	--	--	--	--	--	--
South Dakota	2	57.0	63	44.9	40	-12.1
Texas	182	38.4	29	40.5	32	2.1
Total (weighted)	291	37.7	28	39.0	30	1.3

Table B.3.

## Chapter 1 Migrant Education Reading Achievement Results for Students Tested on a Fall-Spring Schedule -- 1988-89

Kindergarten						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	14	20.5	8	40.9	33	20.4
Louisiana	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
Tennessee	2	48.5	47	37.5	27	-11.0
Texas	--	--	--	--	--	--
Total (weighted)	16	24.0	10	40.5	32	16.5
Grade 1						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	30	29.5	16	47.5	45	18.0
Louisiana	--	--	--	--	--	--
Maine	34	58.2	65	62.9	73	4.7
Mississippi	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
Tennessee	3	9.4	2	31.9	19	22.5
Texas	--	--	--	--	--	--
Total (weighted)	67	43.2	37	54.6	58	11.4
Grade 2						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	293	31.0	18	44.0	38	13.0
Colorado	53	34.9	23	39.4	30	4.5
Louisiana	93	30.9	18	35.5	24	4.6
Maine	36	46.5	43	50.6	51	4.1
Mississippi	--	--	--	--	--	--
Oklahoma	13	44.0	38	50.0	50	6.0
Pennsylvania	26	41.6	34	44.8	40	3.2
Tennessee	2	46.8	44	66.6	78	19.8
Texas	141	33.6	21	40.4	32	6.8
Total (weighted)	657	33.4	21	42.2	35	8.8

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Table B.3. (cont'd)

Grade 3						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	236	26.0	12	38.0	28	12.0
Colorado	51	32.8	20	39.3	30	6.5
Louisiana	87	31.3	18	38.1	28	6.8
Maine	35	46.0	42	51.6	53	5.6
Mississippi	1	34.0	22	37.0	26	3.0
Oklahoma	16	32.6	20	35.7	24	3.1
Pennsylvania	29	35.7	24	40.9	33	5.2
Tennessee	11	42.9	36	55.7	60	12.8
Texas	39	26.6	13	33.9	22	7.3
Total (weighted)	505	30.2	17	39.3	30	9.1
Grade 4						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	181	34.0	22	40.0	31	6.0
Colorado	49	38.0	28	40.1	32	2.1
Louisiana	58	33.4	21	38.1	28	4.7
Maine	39	49.3	48	54.1	57	4.8
Mississippi	1	31.0	18	53.0	55	22.0
Oklahoma	14	29.8	16	40.2	32	10.4
Pennsylvania	13	34.2	22	44.8	40	10.6
Tennessee	12	48.1	46	50.8	51	2.7
Texas	42	26.3	13	32.2	19	5.9
Total (weighted)	409	35.3	24	40.8	33	5.5
Grade 5						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	222	30.0	17	35.0	23	5.0
Colorado	37	33.1	21	36.9	26	3.8
Louisiana	80	38.0	28	41.3	34	3.3
Maine	40	50.4	50	50.4	50	0.0
Mississippi	3	34.0	22	35.0	23	1.0
Oklahoma	20	34.3	22	40.3	32	6.0
Pennsylvania	16	34.8	23	44.2	39	9.4
Tennessee	5	45.0	40	39.8	31	-5.2
Texas	44	22.8	9	28.9	15	6.1
Total (weighted)	467	33.2	21	37.6	27	4.4

Table B.3. (cont'd)

Grade 6						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	136	33.0	21	42.0	35	9.0
Colorado	20	35.2	24	30.0	17	-5.2
Louisiana	58	31.6	19	38.2	28	6.6
Maine	34	45.7	41	49.4	48	3.7
Mississippi	5	38.0	28	35.0	23	-3.0
Oklahoma	19	39.5	30	47.6	45	8.1
Pennsylvania	6	36.1	25	47.9	46	11.8
Tennessee	11	36.3	25	42.8	36	6.5
Texas	20	22.1	9	26.4	13	4.3
Total (weighted)	309	34.2	22	40.7	33	6.5
Grade 7						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	56	32.0	19	44.0	38	12.0
Colorado	16	33.7	22	31.6	19	-2.1
Louisiana	20	28.8	15	28.4	15	-0.4
Maine	31	45.8	42	50.0	50	4.2
Mississippi	4	35.0	23	42.0	35	7.0
Oklahoma	2	51.2	52	62.9	73	11.7
Pennsylvania	6	25.4	12	34.7	23	9.3
Tennessee	--	--	--	--	--	--
Texas	26	28.4	15	33.5	21	5.1
Total (weighted)	161	33.9	22	40.1	32	6.2
Grade 8						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	48	42.0	35	55.0	59	13.0
Colorado	28	36.4	25	32.8	20	-3.6
Louisiana	18	42.9	36	43.9	38	1.0
Maine	29	44.5	39	45.7	41	1.2
Mississippi	2	31.0	18	21.0	8	-10.0
Oklahoma	1	23.0	10	29.9	17	6.9
Pennsylvania	10	31.3	18	44.7	40	13.4
Tennessee	11	30.5	17	26.4	13	-4.1
Texas	25	27.0	13	31.1	18	4.1
Total (weighted)	172	37.8	28	42.2	35	4.4

Table B.3. (cont'd)

Grade 9						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	9	35.5	24	28.9	15	-6.6
Louisiana	7	29.4	16	32.9	20	3.5
Maine	9	46.2	42	52.7	55	6.5
Mississippi	2	35.0	23	37.0	26	2.0
Oklahoma	--	--	--	--	--	--
Pennsylvania	2	24.6	11	44.5	39	19.9
Tennessee	5	40.2	32	35.5	24	-4.7
Texas	20	33.1	21	36.2	25	3.1
Total (weighted)	54	35.6	24	37.6	27	2.0
Grade 10						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	4	28.1	14	27.6	14	-0.5
Louisiana	3	32.0	19	29.7	16	-2.3
Maine	4	69.2	81	68.0	80	-1.2
Mississippi	2	32.0	19	33.0	21	1.0
Oklahoma	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
Tennessee	--	--	--	--	--	--
Texas	19	28.5	15	32.9	20	4.4
Total (weighted)	32	34.1	22	36.3	25	2.2
Grade 11						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	5	31.0	18	35.6	24	4.6
Louisiana	6	44.6	39	46.3	43	1.7
Maine	3	45.1	40	41.0	33	-4.1
Mississippi	1	31.0	18	34.0	22	3.0
Oklahoma	1	6.7	2	1.0	1	-5.7
Pennsylvania	--	--	--	--	--	--
Tennessee	1	35.8	25	26.3	13	-9.5
Texas	10	31.8	19	34.2	22	2.4
Total (weighted)	27	35.2	24	36.4	25	1.2

Table B.3. (cont'd)

Grade 12

State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	1	26.0	12	16.0	5	-10.0
Louisiana	4	33.3	21	40.4	32	7.1
Maine	4	55.3	60	52.9	55	-2.4
Mississippi	1	31.0	18	28.0	14	-3.0
Oklahoma	2	36.0	25	33.6	21	-2.4
Pennsylvania	--	--	--	--	--	--
Tennessee	12	33.6	21	45.5	41	11.9
Texas	11	32.6	20	34.5	23	1.9
Total (weighted)	35	35.6	24	40.3	32	4.7

Table B.4.

## Chapter 1 Migrant Education Mathematics Achievement Results for Students Tested on a Fall-Spring Schedule -- 1988-89

Kindergarten						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	4	25.7	12	30.6	17	4.9
Louisiana	--	--	--	--	--	--
Maine	--	--	--	--	--	--
Mississippi	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
Tennessee	2	42.4	35	27.2	14	-15.2
Texas	--	--	--	--	--	--
Total (weighted)	6	31.3	18	29.5	16	-1.8
Grade 1						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	23	33.0	21	44.4	39	11.4
Louisiana	--	--	--	--	--	--
Maine	31	55.7	60	59.4	67	3.7
Mississippi	--	--	--	--	--	--
New Mexico	--	--	--	--	--	--
Oklahoma	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
Tennessee	3	18.5	6	28.2	15	9.7
Texas	--	--	--	--	--	--
Total (weighted)	57	44.6	39	51.7	53	7.1
Grade 2						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	196	49.0	48	65.0	76	16.0
Colorado	34	41.5	34	47.3	44	5.8
Louisiana	63	38.8	29	44.4	39	5.6
Maine	26	49.6	49	55.0	59	5.4
Mississippi	--	--	--	--	--	--
New Mexico	12	34.3	22	32.0	19	-2.3
Oklahoma	11	52.2	54	52.8	55	0.6
Pennsylvania	--	--	--	--	--	--
Tennessee	2	47.3	44	76.4	89	29.1
Texas	99	35.0	25	56.3	61	20.4
Total (weighted)	443	43.8	38	57.0	63	13.2



Table B.4. (cont'd)

Grade 3						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	165	46.0	42	56.0	61	10.0
Colorado	26	41.9	35	44.4	39	2.5
Louisiana	57	34.9	23	44.3	39	9.4
Maine	31	51.1	52	53.3	56	2.2
Mississippi	1	37.0	26	37.0	26	0.0
New Mexico	3	39.6	31	44.2	39	4.6
Oklahoma	20	43.0	37	46.7	43	3.7
Pennsylvania	6	37.6	27	43.0	37	5.4
Tennessee	11	47.7	45	60.3	68	12.6
Texas	16	29.4	16	38.2	28	8.8
Total (weighted)	336	43.1	37	51.2	52	8.1
Grade 4						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	144	43.0	37	51.0	51	8.0
Colorado	29	42.0	35	48.8	47	6.8
Louisiana	41	35.3	24	43.7	38	8.4
Maine	27	43.5	37	56.1	61	12.6
Mississippi	1	37.0	26	37.0	26	0.0
New Mexico	11	33.0	21	46.2	42	13.2
Oklahoma	7	33.1	21	34.9	23	1.8
Pennsylvania	3	25.7	12	59.3	67	33.6
Tennessee	12	47.1	44	55.8	60	8.7
Texas	21	32.0	19	37.8	28	5.8
Total (weighted)	296	40.5	32	49.0	48	8.5
Grade 5						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	181	40.0	31	47.0	44	7.0
Colorado	24	39.8	31	48.9	48	9.1
Louisiana	57	39.8	31	45.0	40	5.2
Maine	36	50.1	50	51.5	52	1.4
Mississippi	3	35.0	23	36.0	25	1.0
New Mexico	9	27.9	14	42.3	35	14.4
Oklahoma	18	39.3	30	43.5	37	4.2
Pennsylvania	3	27.3	14	45.5	41	18.2
Tennessee	5	46.6	43	57.5	64	10.9
Texas	29	26.5	13	31.6	19	5.1
Total (weighted)	365	39.5	30	45.8	42	6.3

Table B.4. (cont'd)

Grade 6						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	102	37.0	26	46.0	42	9.0
Colorado	13	37.2	27	41.2	33	4.0
Louisiana	41	28.2	15	32.9	20	4.7
Maine	31	55.7	60	55.2	59	-0.5
Mississippi	5	42.0	35	39.0	30	-3.0
New Mexico	9	32.7	20	30.1	17	-2.6
Oklahoma	15	31.8	19	40.5	32	8.7
Pennsylvania	2	28.8	15	30.2	17	1.4
Tennessee	10	47.1	44	44.4	39	-2.7
Texas	15	29.1	16	40.6	32	11.5
Total (weighted)	243	37.4	27	43.1	37	5.7
Grade 7						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	49	36.0	25	49.0	48	13.0
Colorado	16	39.9	31	38.1	28	-1.8
Louisiana	16	43.3	37	43.6	38	0.3
Maine	19	52.6	55	51.6	53	-1.0
Mississippi	4	41.0	33	44.0	38	3.0
New Mexico	4	40.5	32	50.3	50	9.8
Oklahoma	3	46.0	42	46.1	42	0.1
Pennsylvania	3	28.0	14	34.2	22	6.2
Tennessee	--	--	--	--	--	--
Texas	14	30.9	18	35.2	24	4.3
Total (weighted)	128	39.7	31	45.3	41	5.6
Grade 8						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	35	49.0	48	58.0	64	9.0
Colorado	23	38.4	29	43.1	37	4.7
Louisiana	12	46.7	43	50.7	51	4.0
Maine	23	49.5	49	50.7	51	1.2
Mississippi	2	33.0	21	26.0	12	-7.0
New Mexico	4	32.0	19	45.5	41	13.5
Oklahoma	3	28.5	15	27.5	14	-1.0
Pennsylvania	2	29.4	16	28.0	14	-1.4
Tennessee	9	34.9	23	40.6	32	5.7
Texas	15	31.8	19	38.2	28	6.4
Total (weighted)	128	42.4	35	47.7	45	5.3

Table B.4. (cont'd)

Grade 9						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	13	26.0	12	32.7	20	6.7
Louisiana	7	36.0	25	41.3	34	5.3
Maine	6	46.2	42	47.3	44	1.1
Mississippi	--	--	--	--	--	--
New Mexico	6	35.7	24	37.7	28	2.0
Oklahoma	2	44.7	40	50.6	51	5.9
Pennsylvania	--	--	--	--	--	--
Tennessee	3	48.4	47	40.4	32	-8.0
Texas	18	34.2	22	39.1	30	4.9
Total (weighted)	55	35.1	24	39.1	30	4.0
Grade 10						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	2	36.1	25	30.8	18	-5.3
Louisiana	3	31.3	18	53.7	57	22.4
Maine	1	61.0	70	62.0	71	1.0
Mississippi	--	--	--	--	--	--
New Mexico	6	37.3	27	41.2	33	3.9
Oklahoma	--	--	--	--	--	--
Pennsylvania	--	--	--	--	--	--
Tennessee	1	17.3	6	13.1	4	-4.2
Texas	18	29.9	17	35.6	24	5.7
Total (weighted)	31	32.5	20	38.3	29	5.8
Grade 11						
State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	--
Colorado	5	22.9	9	16.3	5	-6.6
Louisiana	6	47.8	45	56.0	61	8.2
Maine	1	32.0	19	32.0	19	0.0
Mississippi	--	--	--	--	--	--
New Mexico	3	35.3	24	39.0	30	3.7
Oklahoma	1	21.5	8	17.3	6	-4.2
Pennsylvania	--	--	--	--	--	--
Tennessee	2	37.5	27	39.6	31	2.1
Texas	11	32.4	20	35.4	24	3.0
Total (weighted)	29	34.2	22	36.3	25	2.1

Table B.4. (cont'd)

Grade 12

State	Number Tested	Pretest NCE	Pretest Percentile	Posttest NCE	Posttest Percentile	Gain NCE
Arkansas	--	--	--	--	--	
Colorado	1	44.0	38	22.0	9	-22.0
Louisiana	4	46.7	43	53.3	56	6.6
Maine	3	53.0	55	56.0	61	3.0
Mississippi	--	--	--	--	--	--
New Mexico	1	46.0	42	47.0	44	1.0
Oklahoma	2	37.7	28	41.9	35	4.2
Pennsylvania	--	--	--	--	--	--
Tennessee	3	43.3	37	44.8	21	1.5
Texas	11	30.8	18	33.0	39	2.2
Total (weighted)	25	39.2	30	41.3	34	2.1

## APPENDIX C -- A DESCRIPTION OF NORM-REFERENCED AND CRITERION-REFERENCED TESTING

### NORM-REFERENCED TESTS<sup>14</sup>

Norm-referenced tests (NRTs) are commonly used in evaluating educational treatments because these tests provide the evaluator with a kind of quasi-control or comparison group. An NRT is one that has been given to a group of individuals (or a representative sample from the group) in order to establish test score norms for the group. The norms reflect the distribution of scores made by the individuals in the norming sample on each part of the test.

Any test for which normative data have been collected can be considered an NRT. Usually, however, the term refers to commercially published achievement tests. The major publishers collect test scores from nationally representative samples of students and provide the test user with tables of means, standard deviations, and other properties of the norm-group score distributions. Alternatively, a state, school district, or other agency may collect test scores from local students and calculate the norms for this group. In any case, the scores of the norm group provide standards against which various treatment groups can be compared.

### CRITERION-REFERENCED TESTS<sup>15</sup>

Criterion-referenced tests (CRTs) are often used for diagnostic and prescriptive purposes. As such, they should be highly focused on clearly defined curriculum or learning units. An ancillary objective for this type of instrument is that the test items relating to each learning unit should discriminate maximally between students who have been instructed in the area and those who have not. Test items should not be selected because they discriminate among pupils at any one point in time (the general practice in norm-referenced test development).

Several different types of criterion-referenced tests are available. There is a continuum of criterion-referenced tests which ranges from those which appear to be quite similar to norm-referenced tests to those which are very different. At the former extreme are prepackaged instruments with different levels suitable for students at different grade or achievement levels. Such tests are usually organized and scored by objective, but it is

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<sup>14</sup>From Fagon, Barbara M., and Donald P. Horst. "Selecting a Norm-Referenced Test: ESEA Title I Evaluation and Reporting System." RMC Research Corporation, Mountain View, California, 1976.

<sup>15</sup>From Tallmadge, Kasten G. "Criterion-Referenced Tests: ESEA Title I Evaluation and Reporting System." RMC Research Corporation, Mountain View, California, 1976.

common practice to administer the entire instrument both as a pretest and as a posttest, regardless of whether or not all of the objectives in the test were covered in the instructional treatment.

At the other extreme are build-your-own types of instruments where groups of items are provided by objective. These groups of items may be referred to as mini-tests. The teacher (or evaluator) can then construct a "maxi-test" which exactly matches a particular program of instruction by assembling the mini-tests that correspond to the objectives taught. With this type of instrument, individual objectives or small groups of objectives are usually posttested shortly after instruction on them has been completed. Presumably, once mastery of an objective has been demonstrated, no further testing of it is required.

### **LOCALLY-DEVELOPED MEASURES**

Locally-developed measures are tests developed by school districts or teachers to assess student progress.



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