Georgia's competency testing program has gained national recognition and has served as a model for other states planning such programs. The focus of this paper is on the Teacher Certification Test (TCT) in Administration and Supervision developed to conform to stringent legal and job-relatedness requirements. The test is required of educators seeking initial certification in this area who finished their coursework after September 1980. This study details the steps followed from goal selection through field tryout and item selection for the test. Analyses of the performance of 841 persons who took the test between September 1978 through June 1983 revealed that the pass rate on the initial testing was about 68 percent, while subsequent retakes raised the final pass rate to about 81 percent (females 84 percent, males 77 percent, blacks 46 percent, and whites 88 percent). Analyses of data from 205 persons who took the test revealed that students who completed a planned degree program and coursework in the areas of administration and supervision passed the test somewhat more readily. (MLF)
Competency Based Certification of School Administrators: The Georgia Experience

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Competency Based Certification of School Administrators:
The Georgia Experience

Abstract
Georgia has provided substantial leadership in the area of criterion-referenced tests of generic teaching competencies. The 28 content field tests were developed to conform to stringent legal and job-relatedness requirements. This study details the steps followed from goal selection thru field tryout and item selection for the administration and supervision test. Two separate analyses led to the following conclusions: 1) Final pass rate was 81% (female 84%, male 77%, black 46%, and white 88%), 2) Students who have completed a planned degree program and coursework in the areas of administration and supervision tend to pass the test somewhat more frequently.
Widespread competency testing in education has become prevalent throughout the United States. This testing has taken two tracks: the testing of educators and the testing of students. The focus of this paper is on competency testing of educators.

The administration of competency testing programs for certification purposes has become a function of many state departments of education. For some states, competency testing is firmly established. In other states, this testing is being considered or is in various stages of development. For example, Georgia, Oklahoma, Alabama, South Carolina, Florida, Arizona, Kentucky, Tennessee, Louisiana, Mississippi, Virginia, North Carolina, New Mexico, Colorado, and Arkansas have implemented competency testing programs. On the other hand, New York, West Virginia, California, Maryland, Connecticut, Pennsylvania, Texas, New Jersey, and Illinois are considering or are in the planning stages of such programs. The states of Georgia, Oklahoma, and Alabama, thru contracts with National Evaluation Systems (NES), have developed separate competency tests for most of the areas in which they issue certificates. South Carolina uses some of the National Teachers Examinations (NTE), published by Education Testing Service, and contracted with NES for other tests to cover content fields not available from the NTE.
series. Tennessee, Louisiana, Mississippi, Virginia, Arkansas, North Carolina, New Mexico, and Kentucky use the NTE. Florida, has developed one professional knowledge test which all new teachers in all fields must pass in order to be certified; however, they are presently considering and planning to develop separate content tests for different certification fields (see Flippo & Foster, 1984). Arizona developed one basic skills test that is required for certification in all fields. The Arizona test measures teachers' minimum basic skills rather than their preparation in a teaching field. In Colorado, teachers seeking certificates must take the California Achievement Test to show basic skills competency and must also pass an oral language proficiency test.

The State of Georgia's competency testing program has gained national recognition and has been generally characterized as extensive and sophisticated (Stoltz, 1981). Georgia assesses, through classroom observation, the generic teaching competencies they deem necessary for all teachers seeking certification. Additionally, Georgia administers twenty-eight separate criterion-referenced competency tests, each testing different content fields. These tests were developed to conform to rigorous legal guidelines. The job analysis procedure used for these tests are in accordance with Supreme Court decisions (Griggs v. Duke Power Company, 1971; Chance v. Board of Examiners, 1972; Albemarle Paper Company v. Moody, 1975; United States v. State of North
Carolina, 1975) regarding licensure tests and the job-relatedness of such tests, as cited in Rubinstein, McDonough, and Allen (1982), and meet the requirements of the 1978 Uniform Guidelines (EEOC, CSC, Department of Labor, & Department of Justice, 1978).

Rationale

Since Georgia has been a leader in the field of competency testing and has served as a model for other states planning such programs (e.g., Oklahoma, Alabama, South Carolina, and West Virginia), it seemed appropriate to take a close look at their test development process, test content, and analyses of related performance factors. The focus of this paper will be on one of the Georgia certification tests. The Teacher Certification Test (TCT) in Administration and Supervision is required of educators seeking initial certification in this area who finished their coursework after September, 1980.

Two major objectives provided the basis for this paper and were as follows:

1. Provide a detailed background and discussion of the procedures followed by Georgia in the development of the TCT in Administration and Supervision.

2. Present analyses of data related to the performance experience of educators taking the test.
Test Development

The Georgia Department of Education contracted with National Evaluation Systems (NES) in 1978 to develop the administration and supervision test. This examination was to be used to certify three categories of administrators and supervisors: 1) building level administrators; 2) district-wide instructional supervisors; and 3) school district central office staff (superintendents, assistant superintendents, and curriculum coordinators.) The steps used in this test development were essentially the same as the process used to develop all of the Georgia Certification Tests.

Goal/Topic Selection and Review

An outline of content topics was prepared by NES using textbooks, articles, and telephone interviews with 15 Ad Hoc Committee members. The committee was drawn from each of the three job categories, and the membership included blacks and females (protected groups), and whites and males. This committee reviewed the topic outline as a group and identified 151 topics that covered the content knowledge and skills deemed necessary for entry level administrators and supervisors.

Objective Development

NES generated an objective for each topic in the outline. These objectives were sent to independent content
experts in the field who reviewed them for topic-objective match, content accuracy, and bias.

A second Ad Hoc Committee of 14 members (10 of which also attended the first meeting) met and reviewed the 151 objectives to determine if the objectives fit the topic, were accurate and well-constructed, and were written at the appropriate level. By consensus, objectives were approved, changed, or deleted. One hundred and seventeen objectives, covering seven content areas were finally adopted.

Job Analysis Survey

Five hundred and fifty-nine administrators were asked to rate the job-relatedness of each objective. Job-relatedness was defined as 1) time spent and 2) extent of essentiality. A multi-stage sampling design was used. Fifty practitioners from each congressional district in Georgia were targeted to ensure geographical distribution. Five school districts in each congressional district were randomly selected and asked to send rosters of eligible practitioners (master's level certification in administration and supervision and at least 3 years experience) from their district. Principals and assistant principals were selected so as to have equal representation from elementary, middle, and secondary schools. Seventy-sever percent of the sample were from building level administration, 15% from district-wide supervision, and 8% from central office administration.
Phone calls and follow-up letters encouraged responses. Three hundred and seventy-two responses were received (67% of the sample) and 367 were usable.

The results of the job analysis provided the basis for classifying the objectives into three categories: 1) preferred, 2) acceptable, and 3) not job-related. In order to ensure content validity, the field was divided into seven subareas to facilitate an adequate representation of all content areas.

By mail, the Ad Hoc Committee was asked to indicate the preferred and acceptable objectives that should be used for item writing, and to indicate any not job-related objectives that dealt with content which was expected to be emerging in importance in the future. NES selected those 82 objectives for item writing which the committee members had ranked highest.

Item Development

Items were written for each objective by NES, and the Ad Hoc Committee reviewed the items on the basis of item/content match, content accuracy, bias, and minimum competency. Five hundred and forty-six items were prepared for field testing.

Field Tryout

Ninety administration and supervision graduate students and 132 practitioners with up to 3 years experience participated in the field tryout. Two types of analyses were per-
formed on the results. The first focused on item relationships and the second focused on the impact of the items upon protected groups.

**Content Validity/Minimum Cutoff Determination**

The review panel of content experts consisted of 18 faculty members from Georgia schools of education and eight Georgia public school administrative and supervisory personnel. Each item was rated as valid or not valid on its content validity and judged on whether or not it reflected the minimum content knowledge an administrator or supervisor needed in order to function in Georgia public schools. The panel was provided with the results of the field tryout to help judge the second factor.

**Item Selection**. Criteria for item selection were applied in the following order:

1. If a significant number of reviewers judged the item to be valid, it was retained.

2. Items with extremely low item/test or item/objective reliabilities were deleted.

3. Job relatedness and proportional coverage of content domain were assessed.

4. If segments of the test displayed an adverse impact upon protected groups, alternative items were sought.

5. Appropriateness for testing in terms of content significance, readability, and overlap of content coverage was assessed. The best 400 items were selected with
additional items classified as "acceptable" for inclusion in the item pool for future testing.

Setting the minimum cutoff score. The minimum cutoff (passing) score was established on an item by item basis. The total accumulation of contributing items represents the level at which applicants must perform. Applicants need not perform in a specific manner on each item, since each item contributes its minimum cut-off rating anonymously to the total test score.

Content of the Test

The Georgia Teacher Certification Test (TCT) in Administration and Supervision was divided into seven subareas as a result of the procedures discussed in the previous sections. The objectives developed from the outline were then organized according to the respective subareas prior to the development of actual items for the test. Each of the seven subareas are described briefly in the sections that follow:

Overview of Leadership in Education

There were ten objectives developed for this subarea. The overall purpose was to deal with general principles related to being an educational administrator. The objectives cover leadership concepts such as authority derivation, policy formulation, delegation of authority, functions and tasks of school administrators, implementing changes, and ethics of educational administration and supervision.
Organizational and Legal Structure in Education

There were 12 objectives developed for this subarea. The overall purpose was to deal with the various components of the school organizational structure as well as the legal considerations important to school administrators. The objectives cover concepts such as landmark court decisions, Civil Rights legislation, Georgia Fair Dismissal Law, state and federal regulations, certification, functions of the Georgia State Department of Education, and the structure and governance of local school systems.

Management of School Operations

There were 14 objectives developed for this subarea. The overall purpose was to deal with the various considerations related to the management of a school. The objectives cover concepts such as financial sources, budgeting and accounting, scheduling activities, space utilization, security, effects of physical environment, transportation, and food services.

Personnel Management

There were 23 objectives developed for this subarea. The overall purpose was to deal with the various administrative considerations related to the students and staff of a school. The objectives cover concepts such as services for students, health requirements, attendance requirements, student records, special needs students (Public
law 94-142), teacher certification requirements, management of classified and auxiliary personnel, hiring and removal of staff, and staff evaluation.

**Instructional Supervision**

There were 22 objectives developed for this subarea. The overall purpose was to deal with the various considerations related to the supervision and management of the instructional program of school. The objectives cover concepts such as approaches to instructional supervision, basic teaching models, grouping students, teaching/learning resources, staff development, and assessment of teaching performance.

**Curriculum Development**

There were nine objectives developed for this subarea. The overall purpose was to deal with the various considerations related to the curriculum of a school. The objectives cover concepts such as procedures for curriculum development, goal analysis, selection of curriculum activities, organizing content, and evaluation of the curriculum.

**Social Issues in School Administration**

There were 12 objectives developed for this subarea. The overall purpose was to deal with the various considerations related to cultural and social concerns that may affect the school. The objectives cover concepts such as student
rights and recognition, student discipline, student organizations, social problems, public relations, and community participation.

**Analyses of Examinee Performance**

There have been a variety of analyses of the TCT data for persons seeking certification in administration and supervision. Data from two separate studies are presented in the sections that follow.

**Pass Rate Patterns**

The pass rate for the TCT in Administration and Supervision for the eight testing times from September 1978 thru June 1983 are shown in Tables 1 and 2. Analyses were based on the performance of 841 different persons who took the test during that time. Table 1 contains analyses related to pass rates on the examinees first attempt. Some of the 841 examinees took the test more than once. The analyses shown in Table 2 are based on the final pass rate after one or more attempts.

An examination of Tables 1 and 2 led to the following conclusions:

1. Pass rate on the initial testing was about 68% while subsequent retakes raised the final pass rate to about 81%.

2. Females consistently have a higher pass rate than males (e.g., female 84% and male 77% after retakes).

3. Blacks have a low pass rate (46% after retakes) compared to whites (88% after retakes).
Passing Related to Other Variables

In an attempt to determine if there was any relationship between passing the TCT and other selected variables, extensive analyses of data from 205 students were conducted. The subjects were students with academic files at various Georgia colleges and universities for whom TCT scores were also available. Crosstabulations were conducted using TCT data (e.g., pass or fail) and the following variables:

1. Received masters degree at reporting institution
2. Graduate major was Educational Administration or Supervision,
3. Took course(s) in Supervision.
4. Took course(s) in Educational Administration, and
5. Took course(s) in Curriculum.

Table 3 shows the analyses related to passing or failing the TCT and each of the variables listed above. Based on these analyses, the following conclusions were generated:

1. Students who received their masters degree from the reporting school had a greater pass rate (10% higher) than those who got their masters degree elsewhere.
2. Students who had a major in administration or supervision had a greater pass rate (17% higher) than those who had a different major in their masters degree work.
3. Students with course(s) in Supervision had a slightly greater pass rate (4% higher) than those who had no course in Supervision. (Note: "No course" N = 28.)
4. Students with course(s) in Administration had a greater pass rate (26% higher) than those who had no courses in Administration. (Note: "No course" N = 14).

5. Students with course(s) in Curriculum had a greater pass rate (11% higher) than those who had no courses in Curriculum.

**Discussion of Analyses**

The analyses reported above have certain implications for persons involved with educational administration, training educational administrators, or the certification of educational administrators. In Georgia, and various other locations, the question of the relationship of competency testing to on-the-job performance is a mute issue. The test discussed herein is in place and was developed using procedures designed to counter issues related to the legalities. One could logically argue that the test is serving its designated function thru procedures (such as no limit on retakes) designed to give everyone who is qualified ample opportunity to pass. The data show that the TCT does discriminate (32% first try fail rate) while ultimately a substantial percent (81%) pass.

The evidence related to the contribution of graduate level programs and coursework suggests a person is likely to do somewhat better on the TCT after having completed a planned degree program in the areas of administration and/or supervision. However, the data also show that a large
percentage pass the TCT who do not fall in this category so that a clear generalization is not possible. It may be that those who pass the TCT tend to be more skilled in taking tests. It may also be that the courses taught do not always relate to the material covered by the test. Certain aspects of education are rather philosophical in nature so that a student's views and knowledge may be circumscribed to a degree by the stance of the instructors and writers he or she has experienced.

How much influence we wish to let the TCT exert on the college and university curriculum is another consideration. Educators generally argue strongly against this kind of influence and are naturally resistant to outside pressures which may impinge academic prerogatives.

The existence of teacher certification testing programs such as we have in Georgia provides an impetus for a further examination of issues such as those discussed above. Continuing analyses of the test development procedures and the factors affecting students' performance are needed.

While there appears to be a definite trend toward more competency testing in education, caution should be used to insure that the application of such programs are careful, appropriate, and a positive contribution to excellence.
References

Albermarle Paper Co. v. Moody 95 S. CT. 2362 (1975)


TABLE 1
Pass Rate on Initial Testing by Sex and Race
(Sept. 1978 - June 1983)

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Count</th>
<th>Pass Count</th>
<th>%</th>
<th>Fail Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>361</td>
<td>234</td>
<td>65%</td>
<td>126</td>
<td>35%</td>
</tr>
<tr>
<td>Female</td>
<td>481</td>
<td>339</td>
<td>71%</td>
<td>141</td>
<td>29%</td>
</tr>
<tr>
<td>Black</td>
<td>145</td>
<td>41</td>
<td>29%</td>
<td>101</td>
<td>71%</td>
</tr>
<tr>
<td>White</td>
<td>694</td>
<td>528</td>
<td>76%</td>
<td>163</td>
<td>24%</td>
</tr>
<tr>
<td>Total</td>
<td>841</td>
<td>574</td>
<td>68%</td>
<td>267</td>
<td>32%</td>
</tr>
</tbody>
</table>
TABLE 2

Cummulative Pass Rate from Initial Testing and Retakes
by Sex and Race
(Sept. 1978 - June 1983)

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Count</th>
<th>Pass Count</th>
<th>%</th>
<th>Fail Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>361</td>
<td>278</td>
<td>77%</td>
<td>83</td>
<td>23%</td>
</tr>
<tr>
<td>Female</td>
<td>481</td>
<td>405</td>
<td>84%</td>
<td>76</td>
<td>16%</td>
</tr>
<tr>
<td>Black</td>
<td>145</td>
<td>66</td>
<td>46%</td>
<td>79</td>
<td>54%</td>
</tr>
<tr>
<td>White</td>
<td>694</td>
<td>611</td>
<td>88%</td>
<td>83</td>
<td>12%</td>
</tr>
<tr>
<td>Total</td>
<td>841</td>
<td>685</td>
<td>81%</td>
<td>156</td>
<td>19%</td>
</tr>
</tbody>
</table>
### Table 3
Passing or Failing the TCT Related to Selected Variables

#### Received Masters at Reporting School

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<tr>
<th>N</th>
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<th>No</th>
<th>% Yes</th>
<th>% No</th>
<th>Yes</th>
<th>No</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>88</td>
<td>30</td>
<td>118</td>
<td>100</td>
<td>78</td>
<td>67</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Fail</td>
<td>25</td>
<td>15</td>
<td>40</td>
<td>100</td>
<td>22</td>
<td>33</td>
<td>100</td>
<td>100</td>
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</tbody>
</table>

\[X^2 = 2.14, \ p < .144\]

#### Majored in Administration or Supervision

<table>
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<tr>
<th>N</th>
<th>Yes</th>
<th>No</th>
<th>% Yes</th>
<th>% No</th>
<th>Yes</th>
<th>No</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>55</td>
<td>34</td>
<td>89</td>
<td>100</td>
<td>82</td>
<td>65</td>
<td>100</td>
<td>100</td>
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<tr>
<td>Fail</td>
<td>12</td>
<td>18</td>
<td>30</td>
<td>100</td>
<td>18</td>
<td>35</td>
<td>100</td>
<td>100</td>
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</tbody>
</table>

\[X^2 = 4.33, \ p < .037\]

#### Took Courses(s) in Supervision

<table>
<thead>
<tr>
<th>N</th>
<th>Yes</th>
<th>No</th>
<th>% Yes</th>
<th>% No</th>
<th>Yes</th>
<th>No</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>132</td>
<td>20</td>
<td>152</td>
<td>100</td>
<td>75</td>
<td>71</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Fail</td>
<td>45</td>
<td>8</td>
<td>53</td>
<td>100</td>
<td>25</td>
<td>29</td>
<td>100</td>
<td>100</td>
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</table>

\[X^2 = .042, \ p < .841\]

#### Took Course(s) in Administration

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<th>% Yes</th>
<th>% No</th>
<th>Yes</th>
<th>No</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>145</td>
<td>7</td>
<td>152</td>
<td>100</td>
<td>76</td>
<td>50</td>
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<td>Fail</td>
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<td>7</td>
<td>53</td>
<td>100</td>
<td>24</td>
<td>50</td>
<td>100</td>
<td>100</td>
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</table>

\[X^2 = 4.57, \ p < .032\]
Took Course(s) in Curriculum

<table>
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<tr>
<th>N</th>
<th>I yes</th>
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<th>%</th>
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<th>I</th>
<th>%</th>
<th>I yes</th>
<th>I no</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>95</td>
<td>57</td>
<td>152</td>
<td>I</td>
<td>79</td>
<td>68</td>
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<td>62</td>
<td>38</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Fail</td>
<td>26</td>
<td>27</td>
<td>53</td>
<td>I</td>
<td>32</td>
<td>21</td>
<td>I</td>
<td>51</td>
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<tr>
<td></td>
<td>121</td>
<td>84</td>
<td>205</td>
<td>I</td>
<td>100</td>
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<td>I</td>
<td>I</td>
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\[ x^2 = 2.93, \ p < .0904 \]