Based on Texas Education Agency data, the study examined the incidence of handicapped Hispanics with systematic implications for manpower planning. Incidence figures are analyzed in terms of trends from 1974-1979 in special education services to Hispanics, demographics, variables affecting service incidence (policy/law, litigation, lack of assessment personnel, inadequate procedures, lack of bilingual personnel, bilingual education, increased awareness, and manpower needs). Noted among findings are that large percentages of emotionally disturbed, auditorially handicapped, and visually handicapped students are not receiving services; there has been a decrease in level of services to Hispanics who are mentally retarded or speech handicapped; the 1980 census showed Hispanics to be the fastest growing language minority in this country; and there has been an increase in litigation and a growing trend toward malpractice suits directed at individuals participating in identification, placement, and teaching processes resulting in real damages to minority children. A five step plan for determining manpower needs is outlined and applied to project manpower needs for exceptional Hispanic students. Tables with statistical data are provided. (SB)
INCIDENCE OF EXCEPTIONALITY AMONG HISPANICS:
IMPLICATIONS FOR MANPOWER PLANNING

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."
In 1978-1979, there were 741,981 Hispanics in Texas public schools; 82,393 were labeled handicapped. Because Hispanics comprised 26 percent of the general student population and 25 percent of the handicapped population, it would appear that special education programs had reached parity; representation of Hispanics in special education was consonant with this group's representation in the general student population. However, when the number of Hispanic students served by special education programs is compared with traditionally accepted incidence figures for handicapping conditions, serious questions surface relative to parity, labels, placements, and service delivery for exceptional Hispanics.

This is the first known study examining incidence of handicapped Hispanics with systematic implications for manpower planning. While the study is specific to one state, the procedures and planning models utilized are generally applicable.

The professional literature indicates that minority children are over-represented in classes for the handicapped and especially in classes for the mentally retarded. For example, Dunn (1968) postulated that minority children constitute 60 to 80 percent of children enrolled in this country's special education programs. In a comprehensive study of special education placement procedures in Riverside, California, Mercer (1976) found three times more Mexican American children and two and one-half times more Blacks than would be expected from their percentage of representation.
in the population qualified for classes for the mentally retarded.
Contrary to the literature, Texas Hispanics are under-represented in all categories of handicapping conditions with the exception of learning disabilities.

Mackie's (1965) traditional incidence figures are used in Table A to project the number of Hispanic students expected in each handicapping category. For example, the Mackie incidence of learning disabled in the general population is two percent. Applying this two percent figure to the number of Hispanics in Texas schools, one would expect 14,840 Hispanics to be labeled learning disabled. However, Texas Education Agency data report 43,502 learning disabled Hispanics, an incidence of 5.9 percent. The incidence of 5.9 percent exceeds the 2 percent incidence by 293 percent.

Interestingly, overrepresentation in learning disabilities is contradictory to literature which indicates that minority children are less likely to be placed in this category (Franks, 1971). Data in Table A also illustrates the following:

1. Seventy-eight percent of all exceptional Hispanics are served in learning disabilities and speech, hearing, and language programs.
2. Several categories reflect a large percentage of children not receiving services. For example, 86 percent of the expected number of emotionally disturbed Hispanics are not receiving services, 75 percent of the auditorially handicapped, and 47 percent of the visually handicapped.
3. The larger number of Hispanic students diagnosed as learning disabled raises serious questions of equity and accuracy of diagnostic processes.

4. Compared to white, non-Hispanic students, there is a disproportionate representation of Hispanics in programs for the mentally retarded. Of the 38,381 mentally retarded students in Texas, 37 percent were white, non-Hispanic, yet, white non-Hispanics comprised 58 percent of the student population. Hispanics comprised 16 percent of the student population but 28 percent of the mentally retarded population.

5. The category of speech handicap came closest to expected levels of service. Eighty percent of the expected number of students were identified.

Trends in Special Education Services to Hispanics

Table B presents service incidence figures for Texas Hispanics in special education from 1974-1979. Hispanics have been underrepresented in all categories of handicapping conditions, with the exception of learning disabilities, since 1974. However, there has been a steady increase in almost all handicapping categories indicating a growing concern and acceptance of service obligations by local education agencies.

It must be noted that there has been a decrease in level of services to Hispanics who are mentally retarded or speech handicapped. The decline in service incidence has been most dramatic in the mental retardation category. Since 1974, service has decreased by 27 percent.
Demographic Questions Related to Incidence

Data in Tables A and B raise several questions related to exceptional Hispanic students in special education programs.

1. Why are Hispanics under-represented in special education?
2. Why are Hispanics over-represented in learning disabilities programs?
3. What characteristics of the organization of schools contribute to over- and under-representation?
4. Which perceptions, prejudices, expectations, and biases of school personnel contribute to over- and under-representation?
5. What parent actions contribute to over- and under-representation?
6. How can search and find efforts be modified, or improved, to increase identification of exceptional Hispanics?
7. What assessment instruments and procedures are used to test and place Hispanic students in special education programs?
8. Who conducts assessments and interprets assessment data relative to Hispanic students (e.g. bilingual assessment personnel versus monolingual assessment personnel assisted by interpreters)?
9. What analysis framework/model is used to interpret children's performance relative to State-Education Agency eligibility criteria?
10. How does the analysis framework/model compare with that used with white, non-Hispanic students?
11. What are the characteristics of Hispanics in each of the categories of handicapping conditions (e.g., what types of children are classified as mentally retarded, emotionally disturbed, etc.)?

12. What cultural, social, linguistic, economic variables, etc. are examined in diagnostic procedures? What weight is given such variables in determining handicapping conditions?

13. Who is responsible for diagnosis, placement, and instruction? To what extent are bilingual education and/or English as a second language personnel interacting with special education diagnostic and instructional personnel?

14. What are the levels of Spanish language proficiency among exceptional Hispanics? How is language dominance and proficiency determined?

These questions must be addressed in order to increase both the level and appropriateness of services for exceptional Hispanic students.

Demography

Population trends in Texas schools underscore the critical need to focus attention upon this population. Texas schools have experienced a decline in the white non-Hispanic student population but an increase in the Hispanic population. As can be seen in Table C, in the past five years, the white non-Hispanic student population declined by approximately 20,000 students while the Hispanic student population increased by 85,000. With the 1980 census showing Hispanics to be the fastest growing language minority in this country, the school population growth trend in Texas will
Except for Hispanics

continue. Additionally, recent Texas court decisions mandate that children of undocumented workers be educated (Doe vs. Plyler, 1980) and that bilingual education be expanded through twelfth grade (U.S. vs. Texas, 1981). These court decisions may result in even greater increases in the number of Hispanic students in Texas schools and thus an additional demand for trained personnel to serve the needs of Hispanics in both regular and special education programs.

Variables Affecting Service Incidence

Since the 1960's, there has been a growing recognition that language minority children need special assistance if they are to have an opportunity to succeed in school. However, school districts oftentimes find themselves at a loss as to how to tailor programs and services to meet the unique needs of these students. Special education programs must not only meet the child's special education needs, but these services must also be appropriate to the child's linguistic, cultural, and other background characteristics. The complexity of this task may, in and of itself, contribute to over- and under-representation of Hispanics in special education. Several other variables may affect service incidence, including the following:

Policy/law. The Education for All Handicapped Children Act (P.L. 94-142) was passed in 1975. Increased levels of services may have resulted from the requirement that procedures be implemented to identify the unserved and inadequately served. This law no doubt played a part in
decline of services in some categories as it called for the mildly handicapped to be maintained in regular education programs if at all possible. Additionally, the law included protections against discriminatory practices in the provision of special education services.

Litigation. Recently, there has been an increase in litigation and a growing trend toward malpractice suits directed at individuals who have participated in identification, placement, and teaching processes resulting in real damages to minority children. The decline in service incidence for mentally retarded Hispanics may reflect that school districts are becoming reluctant to identify handicapped minority children for fear that they will not be able to defend diagnostic procedures or prescriptions. These children may therefore be deprived of a free, appropriate education in the least restrictive environment in an effort to avoid litigation.

Lack of Assessment Personnel. There is a lack of assessment personnel who can test the child in his/her dominant language and interpret performance in light of the child's linguistic and cultural characteristics.

Inadequate Procedures. Hispanic children have not been identified for special education classes because of inadequate procedures to identify handicapping conditions or to determine when academic failure is due to linguistic and cultural characteristics.

Lack of Bilingual Personnel. Once the child is identified as handicapped, federal legislation requires the development of individualized education programs (I.E.P.'s) to help the child achieve his/her greatest potential. For many limited and non-English speakers, provision of an
appropriate education cannot be realized because of the lack of bilingual special education personnel. Therefore, fewer Hispanics are provided special education services.

Bilingual Education. Since 1968, there has been an increase in the availability of bilingual education programs for children of limited English language proficiency. Decline in service incidence for the mentally retarded may indicate that bilingual education programs have become alternatives to special education placements. Placement in such programs is made in the hope that putting the child in a class with a teacher who speaks his/her language will, in and of itself, remedy deficit condition(s). Bilingual educators often find that they do not have the necessary training to determine whether a child is handicapped or to provide educational interventions which will help handicapped students achieve their potential. Further, teachers are at a loss as to how to prevent inappropriate placement of exceptional children in their classes.

Increased Awareness. Decline in service incidence in the category of speech handicaps may be attributed to increased understanding of the nature of the second language acquisition and awareness of the influence of native language development on the development of English language skills. Speech pathologists may be less likely to categorize as disorders those speech and language errors which have been determined to be characteristic of Spanish speakers who learn English as a second language.

Manpower Needs

The discussion of over- and under-representation of Hispanic children in special education has been attributed to several factors:
1. Lack of trained personnel who can appropriately assess handicapping conditions when children are linguistically and culturally diverse;

2. Lack of school district personnel able to defend assessment procedures, placement decisions, or educational plans;

3. Lack of trained instructional personnel to deliver special education services that meet the needs of the child not only in terms of the handicapping condition but that also reflect an understanding of how the child's language and culture affect performance;

4. Lack of personnel who can distinguish when the child's behavior is due to his/her linguistic or cultural characteristics and when that behavior/achievement is because of a deficit or handicapping condition which would qualify the student for special education services.

These problems cannot be resolved until training is provided to school district personnel who serve children who have limited English language proficiency or who are themselves bilingual. Such training must be focused at two levels: (1) preparation of special education and general education personnel at the preservice level and (2) training of special education and general education personnel currently employed by local education agencies. The dimensions of these training needs are focused by reports of school administrators, school personnel officers, and institutions of higher education which indicate an almost nonexistent number of appropriate personnel who can provide service to exceptional Hispanic
Exceptional Hispanics

children. Practically no hard data exists on the numbers of appropriately
tained personnel, except to say that the market is void of such persons.
Agencies which tabulate statistics related to professional personnel
characteristically refer inquiries to other agencies, which in turn refer
inquiries to yet other agencies. Such searches pinpoint that the numbers
of such personnel are so small that agencies either do not acquire such
statistics or do not have information sources which can provide data on
such small numbers.

Because of the paucity of data relative to current supply of
bilingual special education personnel, manpower planning data relative to
personnel needed to serve exceptional Hispanics has not been developed.
Coleman's (1970) manpower planning model provided a system to project per-
sonnel needs in different categories in the future. This system includes
five steps (Corcoran and Shirley, 1978):

1. State Plan Guidelines

A determination is made of those guidelines from the state plan
for special education which are specifically related to personnel needs. An example would be the formula which allocates a
specific number of special education personnel eligible for
receiving state funds based on average daily attendance in a
school district. Another example might be guidelines indicating
teacher-pupil ratios, appropriate class size, etc.

2. Gross Manpower Requirements

Total numbers of personnel needed by certification category are
determined by applying current guidelines (e.g., a teacher of
deaf-blind children will operate in a classroom serving x-number of deaf-blind children) to enrollment figures as they are projected for each of five years into the future. Since this step determines gross manpower requirements, figures produced in this step might be thought of as "ideal," i.e. the number of personnel needed if all Hispanic exceptional children were being served statewide in appropriate programs.

3. **Data Relative to Existing Manpower**

Numbers of existing manpower by categories are multiplied by a growth-rate (positive or negative) based on a simple trendline analysis to determine a "projected existing personnel" for each of five years into the future. These figures would represent the personnel expected to exist in a given year and would account for attrition rates, personnel-in-training with availability dates, and personnel entering special education positions from other than institutions in Texas the immediate past year.

4. **NET difference = Manpower Needs**

Step number four represents the process of calculating needs by subtracting "projected existing personnel" from gross manpower requirements according to a common needs assessment formula, the discrepancy model:

\[
\text{Gross Manpower Requirements} - \text{Projected Existing Personnel} = \text{Manpower Needs for the Future}
\]
5. Development of Programs

Based on figures yielded in Step #4 (calculating by categories of specific kinds of personnel) the organization (Texas Education Agency) undertakes the development of programs designed to meet future needs for manpower in special education in Texas. Two broad categories of program development might be as follows:

A. In-service Training

Development of programs with local and regional education agencies to retrain existing personnel for roles in special education where demand is greater than supply.

B. Pre-service Training

Articulation with training institutions in Texas to develop (or to cut back) programs which train personnel in specific categorical areas.

In the following sections, this model is used to project manpower needs for exceptional Hispanic students.

Determining Guidelines and Enrollment

Table D reflects the largest number of children in a particular category that can be served by one teacher. This approach yields the most conservative projection possible, that is, the minimum number of teachers needed.

Insert Table D about here
Exceptional Hispanics

These figures represent actual teacher-pupil ratios in Texas for the 1972-1973 school year, the last year for which such figures are available.

Projected State Enrollments in Special Education

Projection of total enrollment of Hispanics in special education is based on a simple growth factor relative to total school Average Daily Attendance (ADA). (See Table E and F.)

Projected Enrollments by Handicapping Condition

Based on a growth factor of 3.8 percent the projected Hispanic student enrollment for 1979-1984 is given in Table F.

Percent of "Full Capacity" Services

Full capacity means all expected handicapped students are identified and served. According to Mackie (1965) exceptional students would comprise 11.2 percent of the student population.

As has been noted, if only combined incidence figures for handicapping conditions are inspected, it appears that the state is providing services to the expected number of handicapped Hispanic students (11-12 percent as seen in Table G). However, examination of the service incidence figures indicates underrepresentation in all categories with the exception of learning disabilities. Manpower projections must be sensitive to
increased ability to identify the unserved and to decrease overrepresentation in learning disabilities categories. Therefore, while figures suggest the greatest personnel needs to be for the learning disabled and speech handicapped, it is important that the characteristics of students placed in such programs be examined to determine whether the need is determined by inappropriate identification, placement or based upon a real handicapping condition. Additionally, manpower projections must address both an increase in enrollment and an increase in services provided.

Table H projects the number of exceptional Hispanic students who would be served in 1979-1984 based on the concept of full capacity.

Gross Manpower Needs:

Manpower needs for handicapped Hispanics were determined by dividing the number of Hispanic students projected in each categorical area by the corresponding teacher-pupil ratio. Table I gives projected manpower needs to 1983-1984.

Gross manpower requirements to serve Hispanic exceptional children indicate a critical need for Institutions of Higher Education to dramatically emphasize bilingual special education personnel programs to meet the critical shortage. (See Table J.)
Steps 3, 4, and 5 of Coleman's model could not be completed because of missing data. For example, there is little data available about existing bilingual special education personnel in each categorical area. Therefore, it is not possible to determine the exact magnitude of discrepancy between supply and demand. There is also a lack of data relative to projected attrition based on factors such as maternity leave, retirement, death, or relocation. Data is not available to determine "personnel becoming available." However, the fact that no data is available supports the conclusion that the discrepancy is great. Training units of the educational enterprise must be informed and supported in their efforts to address the critical manpower needs associated with serving handicapped Hispanics.
REFERENCES


Doe v. Plyler, 628 f.2d 448, 456-57 (5th Cir. 1980).


& N. N. Wagner *Chicanos: Social and Psychological Perspectives*

*U.S. v. Texas, Civil Action 5281, 5th Circuit, U.S. District Court,*
Tyler Division, Jan. 9, 1981.
Table A

Summary of Special Education Service Incidence for Hispanics in Texas for 1978-1979

<table>
<thead>
<tr>
<th>Type of Handicap</th>
<th>Mackie's Traditionally Accepted Incidence</th>
<th>Expected No.* of Handicapped Hispanics</th>
<th>Total Being Served</th>
<th>% of Expected No. Being Served</th>
<th>Current Service Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visually Handicapped</td>
<td>.10</td>
<td>742</td>
<td>438</td>
<td>59%</td>
<td>.06</td>
</tr>
<tr>
<td>Hearing Impaired</td>
<td>.60</td>
<td>4,452</td>
<td>1,115</td>
<td>25%</td>
<td>.15</td>
</tr>
<tr>
<td>Orthopedically Handicapped and Other Health Impaired</td>
<td>.50</td>
<td>3,710</td>
<td>2,767</td>
<td>75%</td>
<td>.37</td>
</tr>
<tr>
<td>Mentally Retarded</td>
<td>2.50</td>
<td>18,550</td>
<td>10,782</td>
<td>58%</td>
<td>1.40</td>
</tr>
<tr>
<td>Emotionally Disturbed</td>
<td>2.00</td>
<td>14,840</td>
<td>2,108</td>
<td>14%</td>
<td>.28</td>
</tr>
<tr>
<td>Learning Disabled</td>
<td>2.00</td>
<td>14,840</td>
<td>43,502</td>
<td>293%</td>
<td>5.90</td>
</tr>
<tr>
<td>Speech Handicapped</td>
<td>3.50</td>
<td>25,969</td>
<td>20,684</td>
<td>80%</td>
<td>2.80</td>
</tr>
</tbody>
</table>

NOTE: These figures are based on the Texas Education Agency's Fall survey of general student population and the report of all special education students, including students contracted to approved non-public schools for 1978-1979. The Hispanic student population was 741,981.

*These figures are based on Mackie's (1965) traditional Incidence figures.
### Table B

**Trends in Service Incidence for Exceptional Hispanics in Texas**

Represented by Percentage Served

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VH</td>
<td>27.9</td>
<td>35.5</td>
<td>45.6</td>
<td>53.3</td>
<td>59.0</td>
</tr>
<tr>
<td>HI</td>
<td>17.0</td>
<td>22.1</td>
<td>23.9</td>
<td>26.8</td>
<td>25.0</td>
</tr>
<tr>
<td>MR</td>
<td>85.0</td>
<td>77.2</td>
<td>72.6</td>
<td>66.1</td>
<td>58.1</td>
</tr>
<tr>
<td>OH</td>
<td>61.5</td>
<td>55.9</td>
<td>67.2</td>
<td>71.17</td>
<td>74.6</td>
</tr>
<tr>
<td>ED</td>
<td>9.7</td>
<td>10.0</td>
<td>11.6</td>
<td>12.3</td>
<td>14.2</td>
</tr>
<tr>
<td>LD</td>
<td>240.0</td>
<td>257.0</td>
<td>271.0</td>
<td>279.0</td>
<td>293.0</td>
</tr>
<tr>
<td>SH</td>
<td>91.3</td>
<td>77.6</td>
<td>86.1</td>
<td>87.4</td>
<td>79.6</td>
</tr>
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</table>
### Table C

#### Population Trends among Hispanic and White Students in Texas Public Schools

<table>
<thead>
<tr>
<th>Year</th>
<th>Total School Population</th>
<th>White</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974-1975</td>
<td>2,785,296</td>
<td>1,687,231</td>
<td>657,123</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(60.6%)</td>
<td>(23.6%)</td>
</tr>
<tr>
<td>1975-1976</td>
<td>2,812,888</td>
<td>1,683,505</td>
<td>680,820</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(59.8%)</td>
<td>(25.2%)</td>
</tr>
<tr>
<td>1976-1977</td>
<td>2,839,864</td>
<td>1,685,958</td>
<td>700,656</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(59.4%)</td>
<td>(24.7%)</td>
</tr>
<tr>
<td>1977-1978</td>
<td>2,856,361</td>
<td>1,687,828</td>
<td>721,846</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(58.8%)</td>
<td>(25.3%)</td>
</tr>
<tr>
<td>1978-1979</td>
<td>2,867,254</td>
<td>1,667,978</td>
<td>741,981</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(58.2%)</td>
<td>(25.9%)</td>
</tr>
<tr>
<td>Category</td>
<td>Teacher</td>
<td>Pupils</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>VH</td>
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<td>11</td>
<td></td>
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<td>AH</td>
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<td>COHI</td>
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</tr>
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<td>ED</td>
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<td>LLD</td>
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</tr>
<tr>
<td>SH</td>
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<td>68</td>
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