# OUTCOMES IN SPECIAL EDUCATION:
## WHAT WE KNOW AND HOW WE COULD KNOW MORE

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## EXECUTIVE SUMMARY

At legislative direction in the 1994 Supplemental Appropriations Act, the Washington State Institute for Public Policy is assessing the feasibility of doing a longitudinal study of educational outcomes for students in special education. A longitudinal study allows the tracking of a population over some period of time in order to document changes in that population. Conducting such a study in the field of K-12 education will be complicated and costly. In Washington State, we have had only limited experience with this approach.

This report provides a summary of what is known from the research literature on outcomes for special education students **who graduate from high school** in the U.S. and in Washington State. Professor Eugene Edgar and his associates at the College of Education/Experimental Education Unit of the University of Washington have carried out path-breaking research in this area over the past decade. For the Institute project, they have summarized their research on high school graduates from three school districts in Washington and national research on educational outcomes for such graduates.

### What Are Outcomes for the Nation?

- **School Completion:** Special education students graduate from high school at a rate lower than their non-disabled peers. While the graduation rate for all students is 83 %, the rate is 66 % for students with learning disabilities and 48 % for students with behavior disabilities.

- **Employment:** Five years after graduation from high school, employment rates are comparable for graduates with learning disabilities (71 %) and non-disabled students (69 %), but lower for students with behavior disabilities (47 %).

- **Independent Living:** Five years after high school graduation, fewer learning disabled (44 %) and behaviorally disabled (40 %) graduates are living independently from their parents than are their non-disabled peers (60 %).

- **Postsecondary Education: Attendance.** Five years after high school graduation, fewer learning disabled and behaviorally disabled (30 % each) graduates have attended postsecondary education or training programs than have their non-disabled peers (68 %).

- **Other Patterns:** Apart from these outcomes, very little is known about the progress of special education students **during** their school years. Some information is available on where students receive their education; more students every year receive their education in regular classrooms.

**What Are Outcomes for Washington State?** From research on student outcomes from three school districts in Washington State, the following is known:

- Students with learning and behavior disabilities **graduate** from high school at rates lower than those for non-disabled students: 60 % and 50 % respectively, compared to 81 % for non-disabled students.

- **Employment** rates, 5 years after high-school graduation, are comparable for learning disabled and non-disabled graduates (79 % and 78 %), but lower for those with behavior disabilities (43 %).

- **Independent Living** rates, 5 years after high school graduation, are 66 % for non-disabled, 64 % for those with learning disabilities and 71 % for those with behavior disabilities. These patterns for special education graduates are higher than those for the nation.

- **Postsecondary education** attendance rates, 5 years after high school graduation, are 92 % for non-disabled, 71 % for those with behavior disabilities, and 63 % for those with learning disabilities. These patterns for special education graduates are higher than those for the nation, possibly reflecting the metropolitan nature of these school districts.

- **Other Patterns:** Postsecondary attendance rates are relatively high, although postsecondary graduation rates are substantially lower. Special education graduates are more likely to be enrolled in vocational and community college programs; their non-disabled peers are more likely to be enrolled in four-year institutions.

**Options for further study:** If work were to begin on a longitudinal system for collecting information on special education outcomes, the University of Washington team suggests these directions:

- Any system for assessing outcomes in special education should be part of an educational data system for the entire K-12 system.

- Any such system should:

  - collect data at the school district level.
  - summarize data at regional and state levels.
  - follow cohorts of students *over time* (longitudinal).
  - collect basic demographic student data.
  - collect data on types of educational services provided.
  - measure and assess student achievement regularly.
  - monitor school completion rates.
  - track post-school outcomes for 5 years.

## I. INTRODUCTION: PURPOSE OF THE PAPER

This paper offers a review of existing national data on special education services, similar data from Washington State, and recommendations for a data collection model that states could implement to collect longitudinal data on the effectiveness of special education in the public schools. No national or state level data adequately address this issue. Despite the enormous resources supporting special education, policymakers and program developers lack information about the effectiveness of the specific services provided, comparisons of service delivery models, and the costs of various programs now in place. Hence they are vulnerable to making decisions based on conventional practices, pressure from advocacy groups, or untested ideas for change. If a system were in place that longitudinally monitored students in special education regarding services received and the outcomes of these services, policymakers and program developers would be able to make decisions based on consistent data regarding program models and the cost of services.

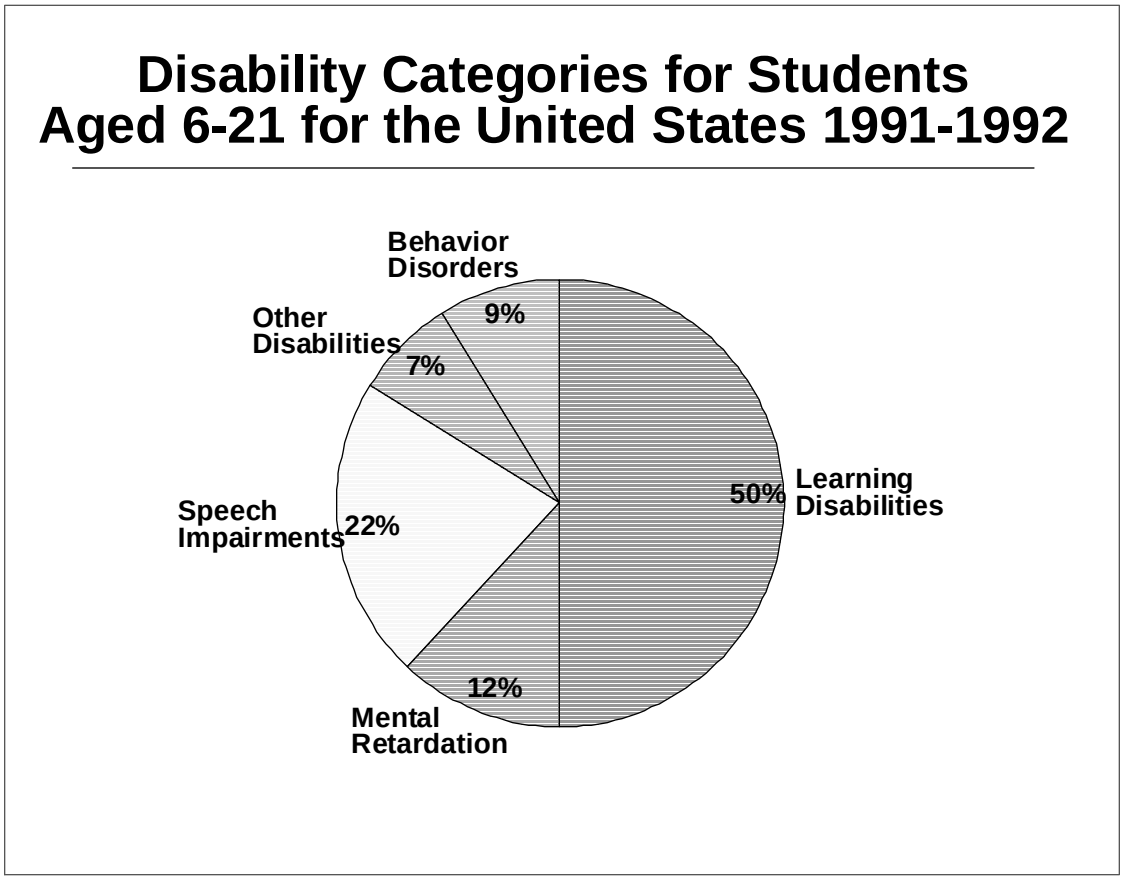
## II. NATIONAL DATA ON SPECIAL EDUCATION OUTCOMES

This section draws on several large national surveys of special education (i.e., the 15th Annual Report to Congress, the SRI National Longitudinal Transition Study [Wagner, et al., 1993], papers of the National Center on Educational Outcomes [NCEO]), and several key studies from different geographic regions reported in the professional literature. The information in some parts of the report is more detailed than in others. This reflects the unevenness of information available from all sources about the questions we address.

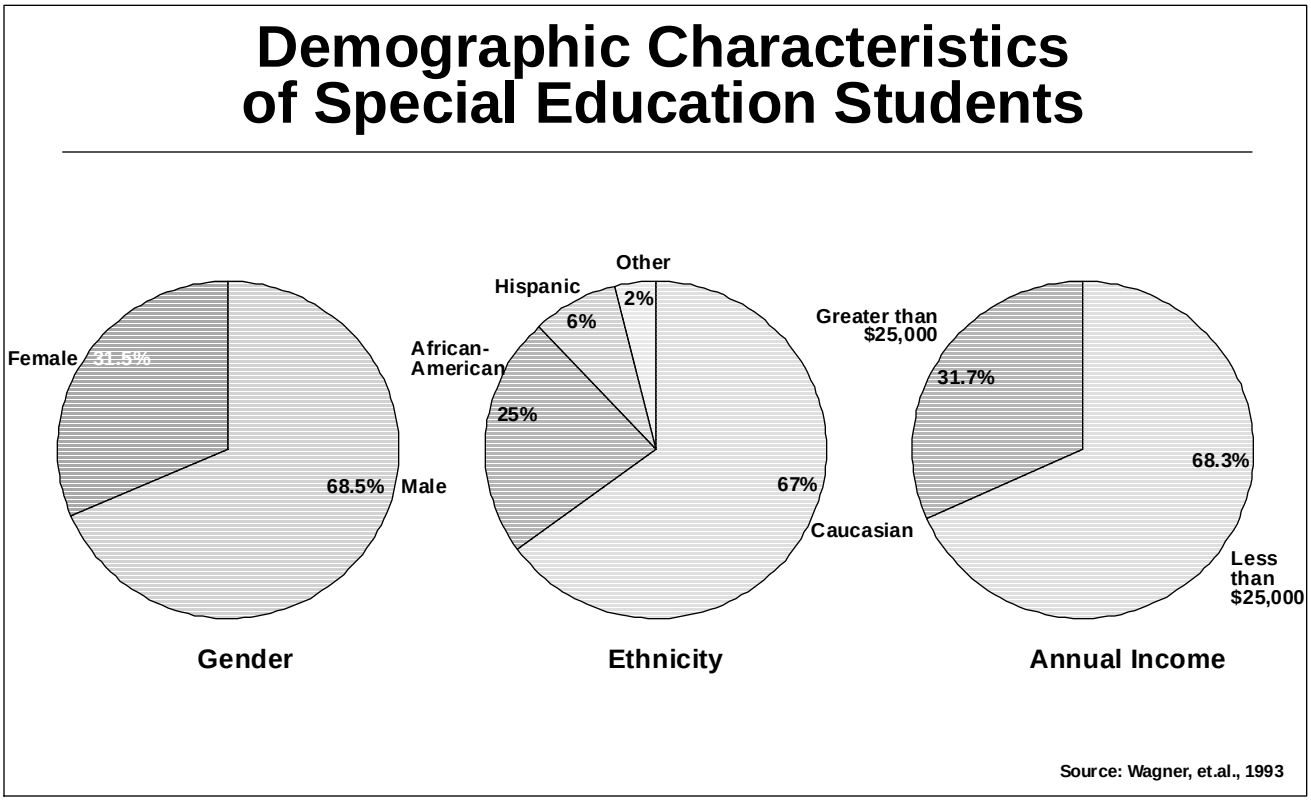
**A. Who is currently being served in special education?**

All data reported in this section concern the 1991-1992 school year as reported in the 15th Annual Report to Congress. During that year nearly 5 million students, birth to age 21, received special education services, including 66,495 infants and toddlers (0-2 years) and 422,226 children from 3 to 5 years old. Students from 6 to 21 years old totalled 4,505,448.

During the 1991-1992 school year, 10.02% of the student population, ages 6 to 21, received special education services. Most (50.2%) were labeled learning disabled and 9% were labeled seriously emotionally disturbed (i.e., behavior disorders).

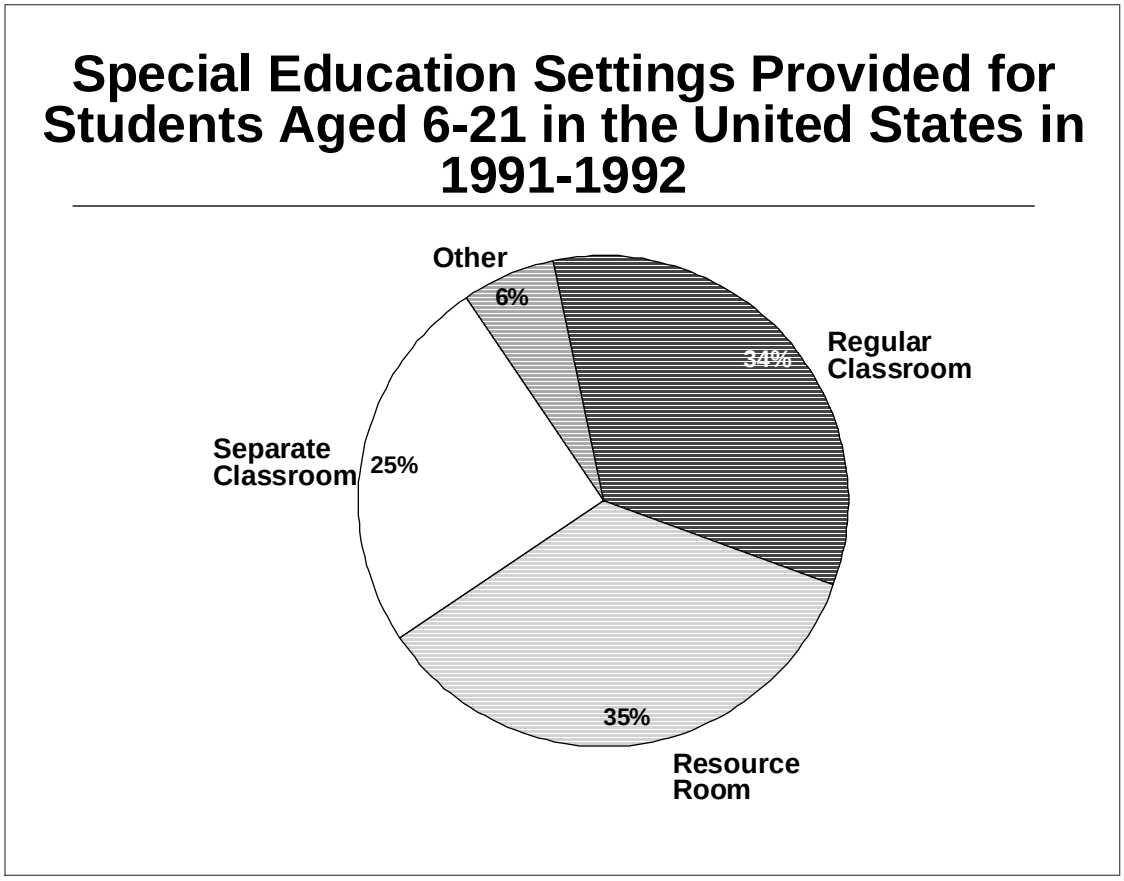


Several demographic categories show significant differences between the special education population and the general education population: gender, ethnicity, family income, and educational level of the family. **Gender.** In special education, 68.5% of students are male as compared to 49.8% in general education. **Ethnicity.** African Americans make up 14% of the general education population and 24.2% of the special education population. **Family income.** More students with disabilities (68.3%) live in families whose income is less than $25,000 than do their non-disabled peers (38.8%). **Educational level of the family.** Students with disabilities are more likely to live in a home where the head of the household is not a high school graduate than is the general population of youth (41% and 25.6%, respectively).



**B. Where and in what type of programs are students served?**

Few data are available on the types of services special education students receive, such as type of instruction, type of curriculum, levels of support offered in the regular classroom. The only information reported is the location of these services. Most (94.4%) of the students receiving special education services received them in the regular school, and 69.3% received services in the general education classroom more than 40% of the time. Approximately 4% of students received services in separate schools, 0.8% in residential facilities, and 0.6% at home.



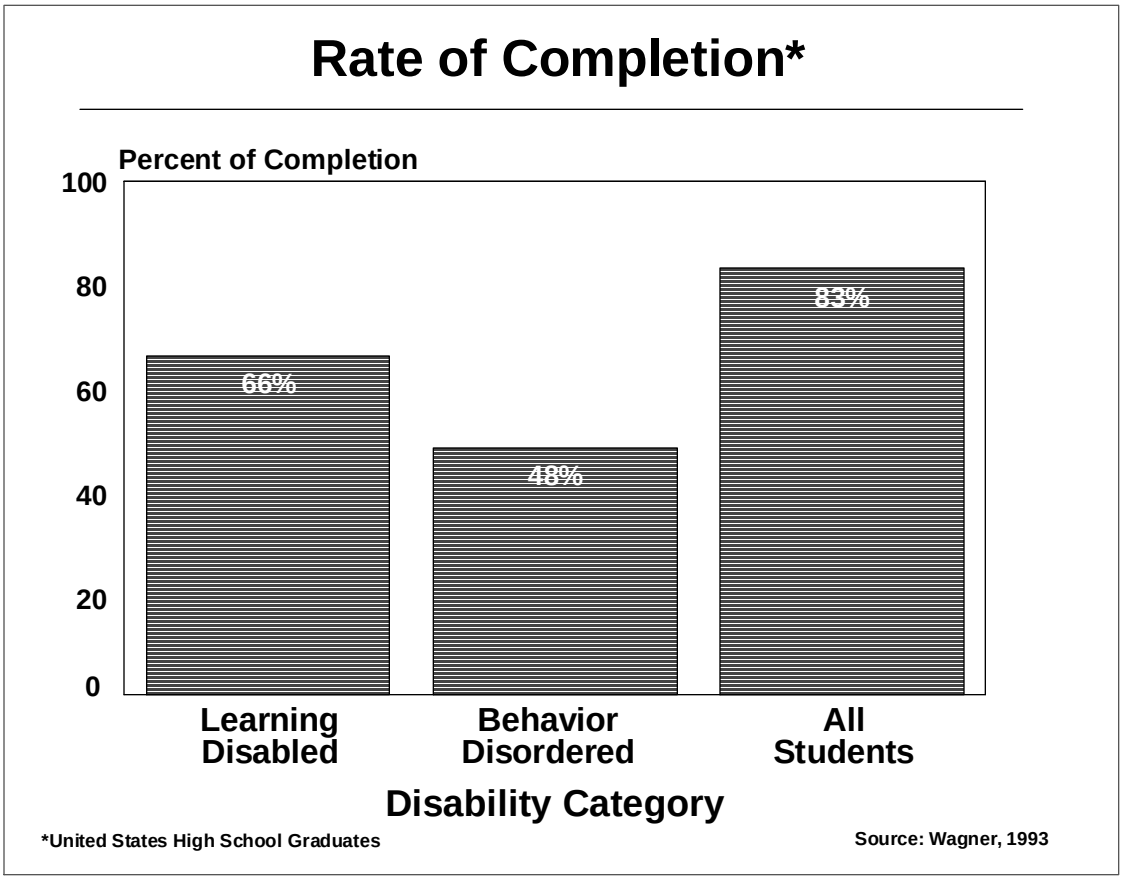

**C. What are their in-school outcomes?**

There are no consistent national data available to answer this question. The National Center on Educational Outcomes (NCEO, 1993) found that between 40% and 50% of students with disabilities are excluded from national testing.

**D. Who completes or drops out of school?**

Data on school completion (graduation with a high school diploma) and dropouts are difficult to ascertain. Data collection problems abound, such as the lack of common definitions of dropouts and high school diplomas, the movement of students between school districts, and the difficulty schools have keeping data on exit reasons for students who change schools (Rumberger, 1987).

The number of youth in the general population who graduate from school is estimated to be 83% (Wagner, 1993). In contrast, only 66% of students with learning disabilities and 48% of students with behavior disorders complete school through graduation (Wagner, 1993).



Wehman (1992), based on a review of seven studies reporting dropout rates in different regions of the country, reports the average dropout rate among students with learning disabilities to be 38% (or a completion rate of 62%). Johnson and Rusch (1993) report that students in special education were twice as likely as general education students to drop out of school. The safest assumption is that youth labeled as learning disabled and emotionally disturbed (seriously behaviorally disordered) **fail** to graduate from high school at a higher rate than that of the non-disabled population.

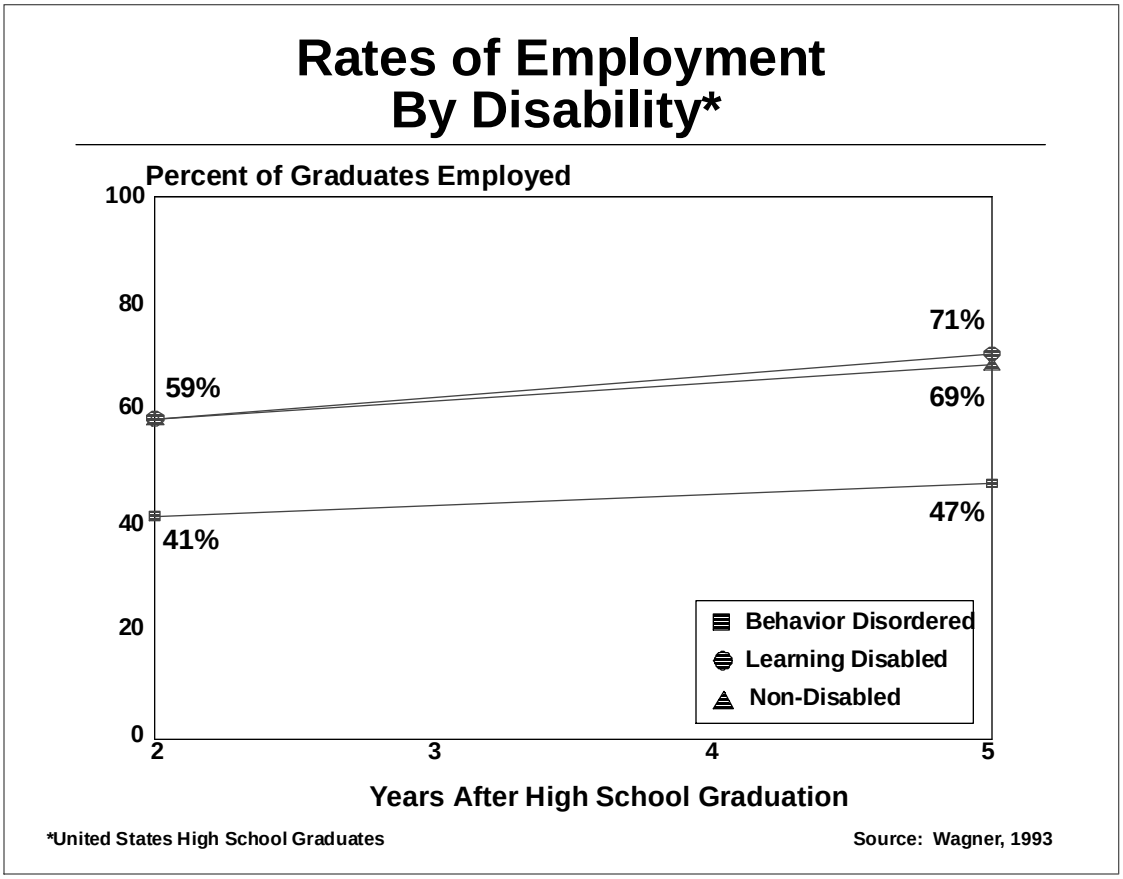
### E. What are post-school outcomes?

Many national studies have addressed the question of post-school outcomes for special education students.[1] In the following sections we first establish a benchmark at the beginning of each section based on the most recent report from the National Longitudinal Transition Study[2] (NLTS) (Wagner et al., 1993). This benchmark will then be compared with information from other studies across the nation that report information on employment and earnings, postsecondary schooling, and independent living by disability and by gender. Data are not available on the impact of ethnicity, social class, and setting (urban vs. rural) on post-school outcomes.

**(1) Employment**

**Employment by disability category**

At two years after graduation, both learning disabled (LD) graduates and non-disabled graduates are employed at the same rate of 59%, compared to the 41% rate of graduates with behavior disorders (BD). By 5 years after graduation the LD employment rate is 71%, the non-disabled rate is 69%, and the BD rate is 47%.



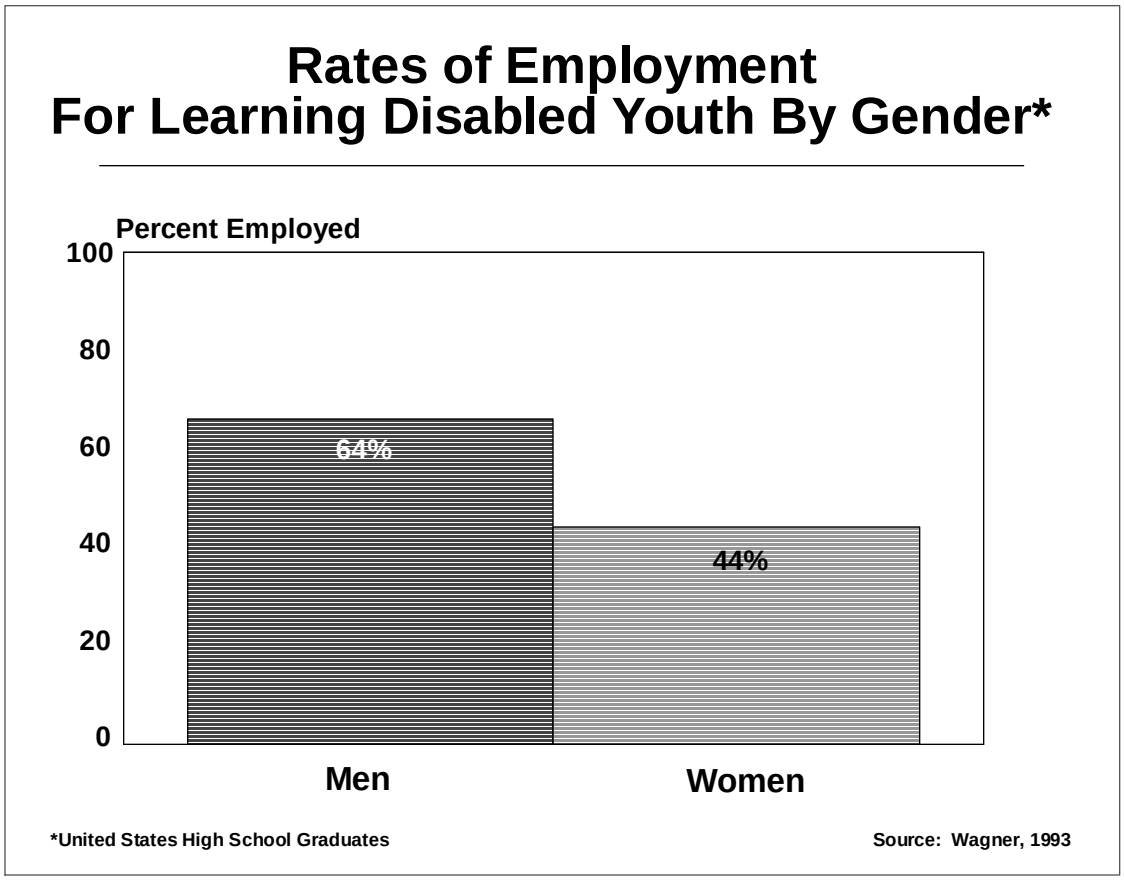

Employment rates, combining all youth with learning and behavior disabilities, showed over half competitively employed after being out of school 3 to 5 years.

**Earnings by disability category**

Wagner et al., (1993), report hourly wage rates and state that the average yearly income for youth with disabilities is less than $12,000 per year. Data are not available on earnings by disability category or gender.

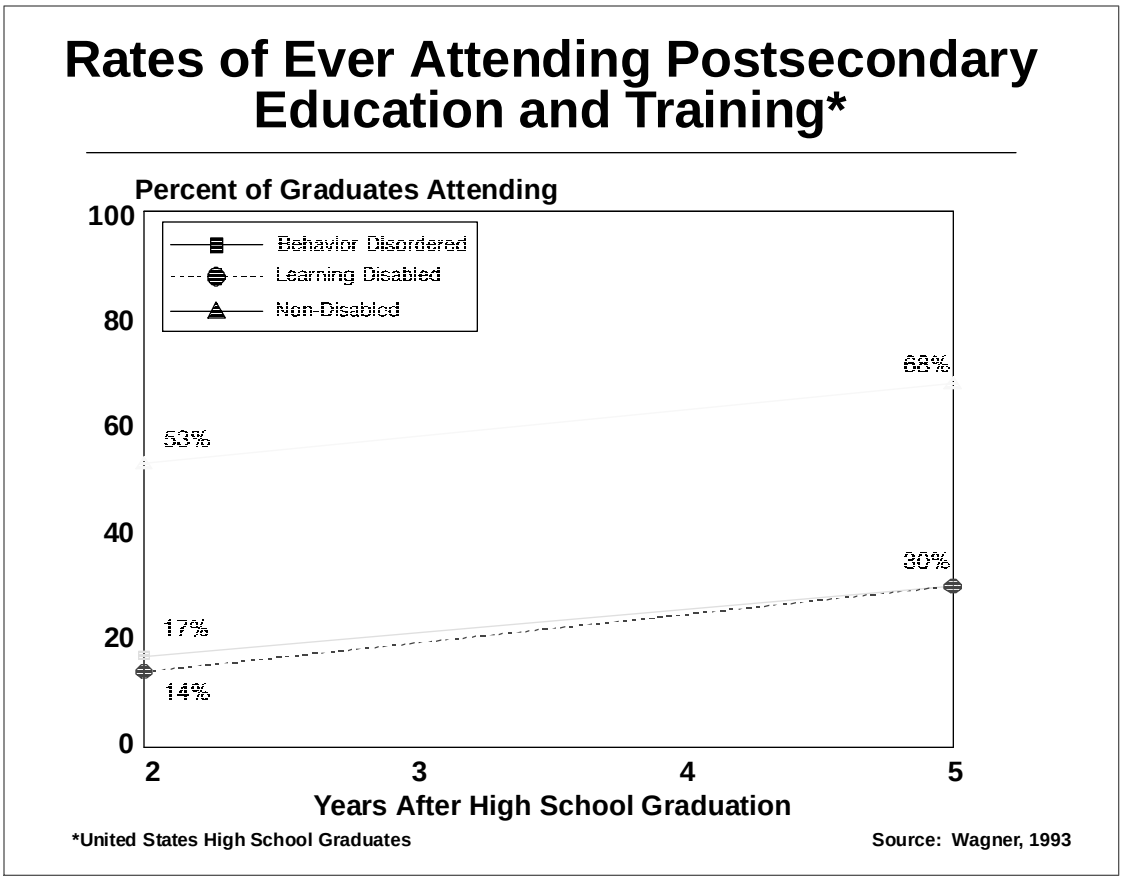
**Employment and gender**

One of the most consistent findings throughout national studies is the reported difference in the employment rates following graduation of males and females with disabilities. Women have consistently lower rates than men. Wagner et al., (1993), report the employment rate for men with learning disabilities as 64% and for women with LD as 44% at 3 to 5 years out. Other studies show similar trends.

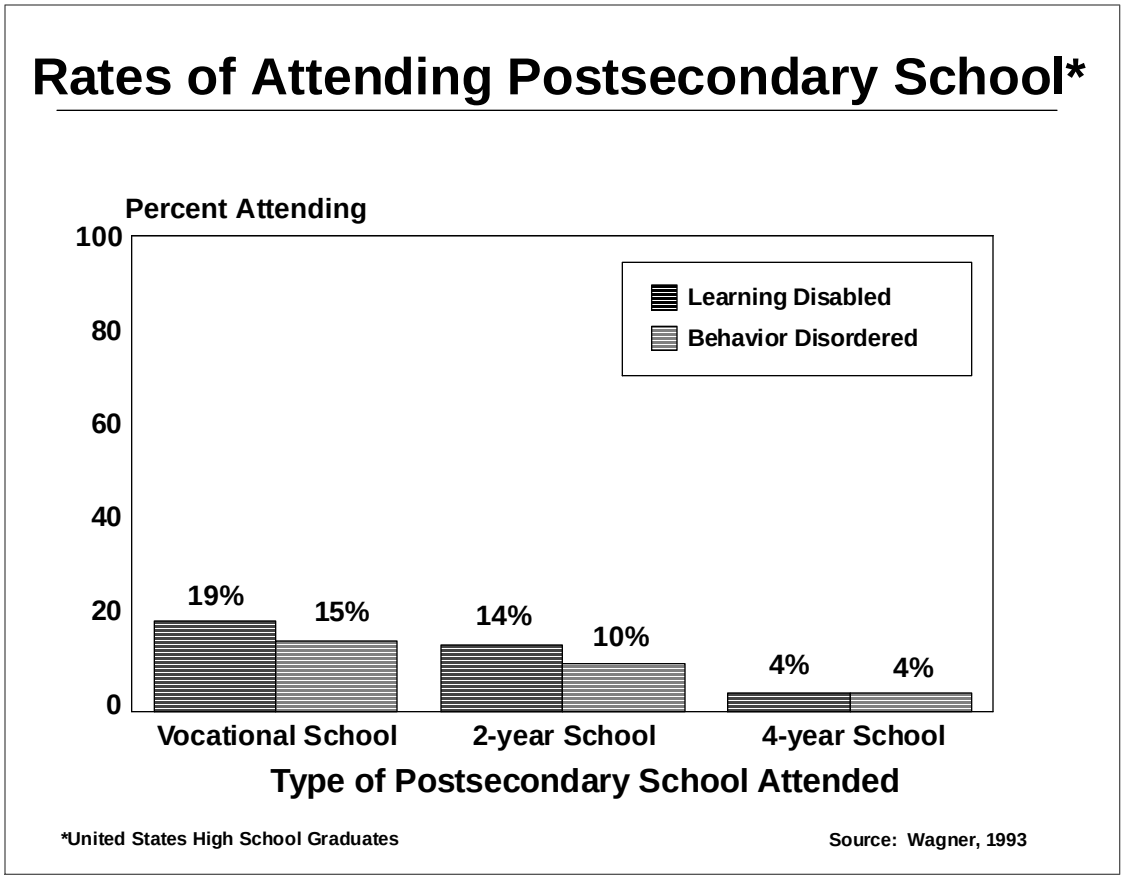


**(2) Postsecondary school attendance**

At 5 years after graduation, 30% of youth with learning and behavior disabilities have attended some form of postsecondary training as compared to 68% of non-disabled youth (Wagner et al., 1993).



High school graduates in special education who attend postsecondary education are more likely to have attended vocational schools or community colleges than four-year institutions.

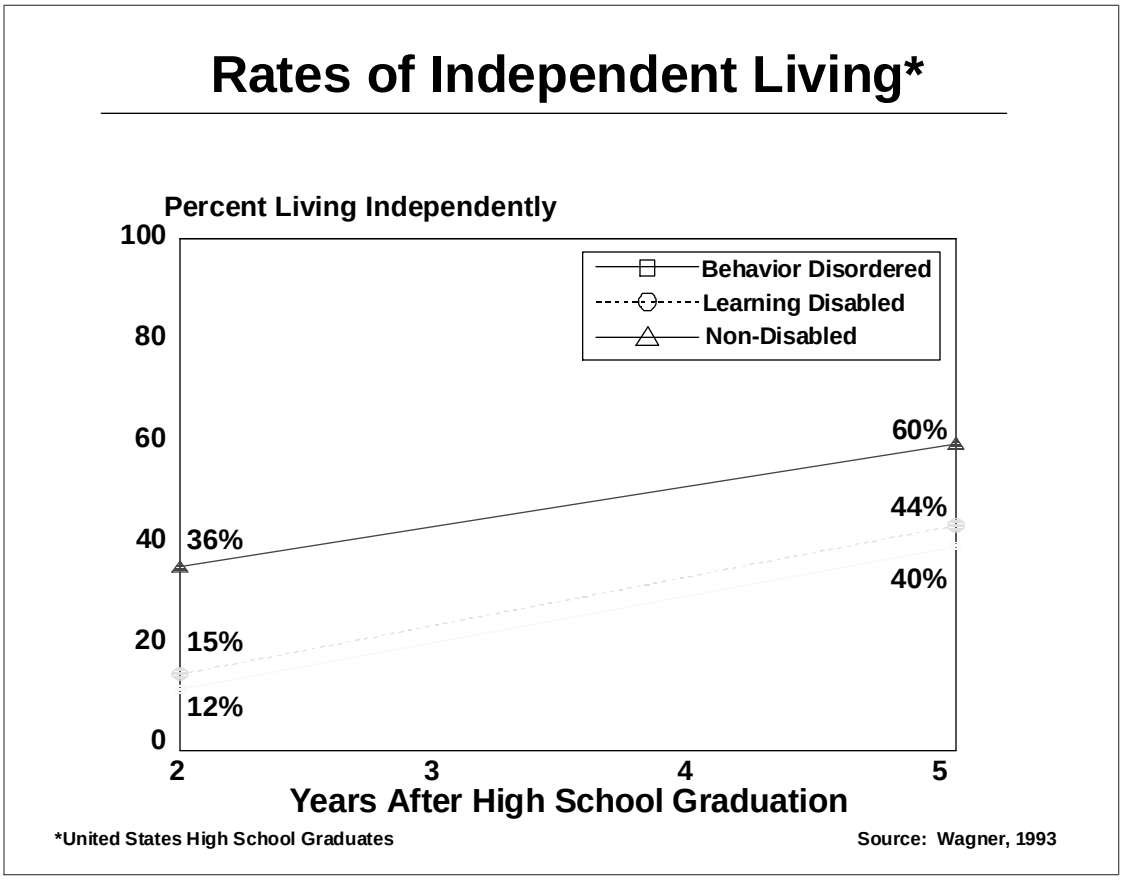



**Gender differences in postsecondary program attendance**

There appear to be few major differences in the attendance rates in postsecondary education programs between men and women with disabilities.

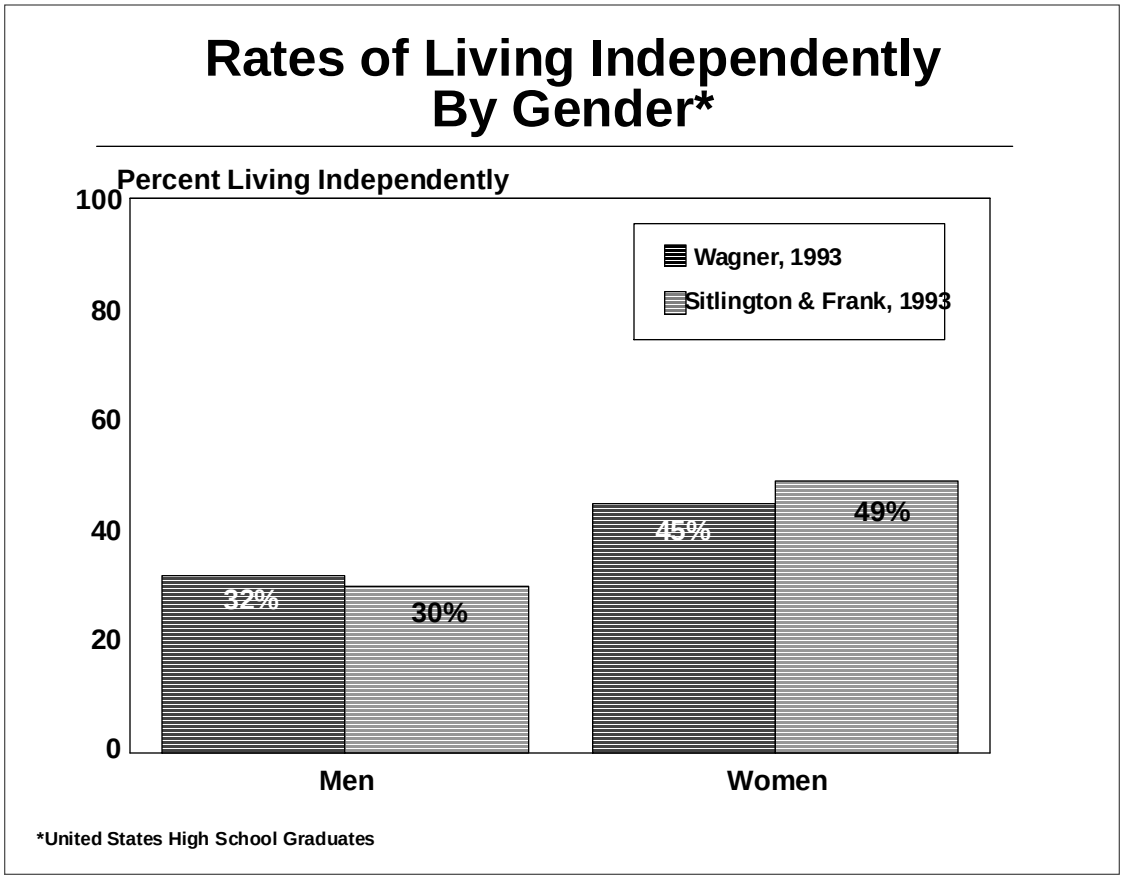
**(3) Independent living**

Independent living means living in a household independent of one's parents. At 5 years from graduation, 44% of the youth with learning disabilities and 40% of the youth with behavior disabilities are living independently, as compared to 60% of the non-disabled youth.



**Gender and independent living**

Nationally, female high school graduates with disabilities have higher rates of independent residence than do males with disabilities. A possible explanation for this difference is that females tend to get married at an earlier age than males.




**(4)Summary of post-school status findings**. On the whole, youth with learning disabilities and serious behavior disorders appear to be making a relatively satisfactory adjustment to adult life when compared to their non-disabled peers when they graduate from high school. However, special education students have a higher dropout rate.

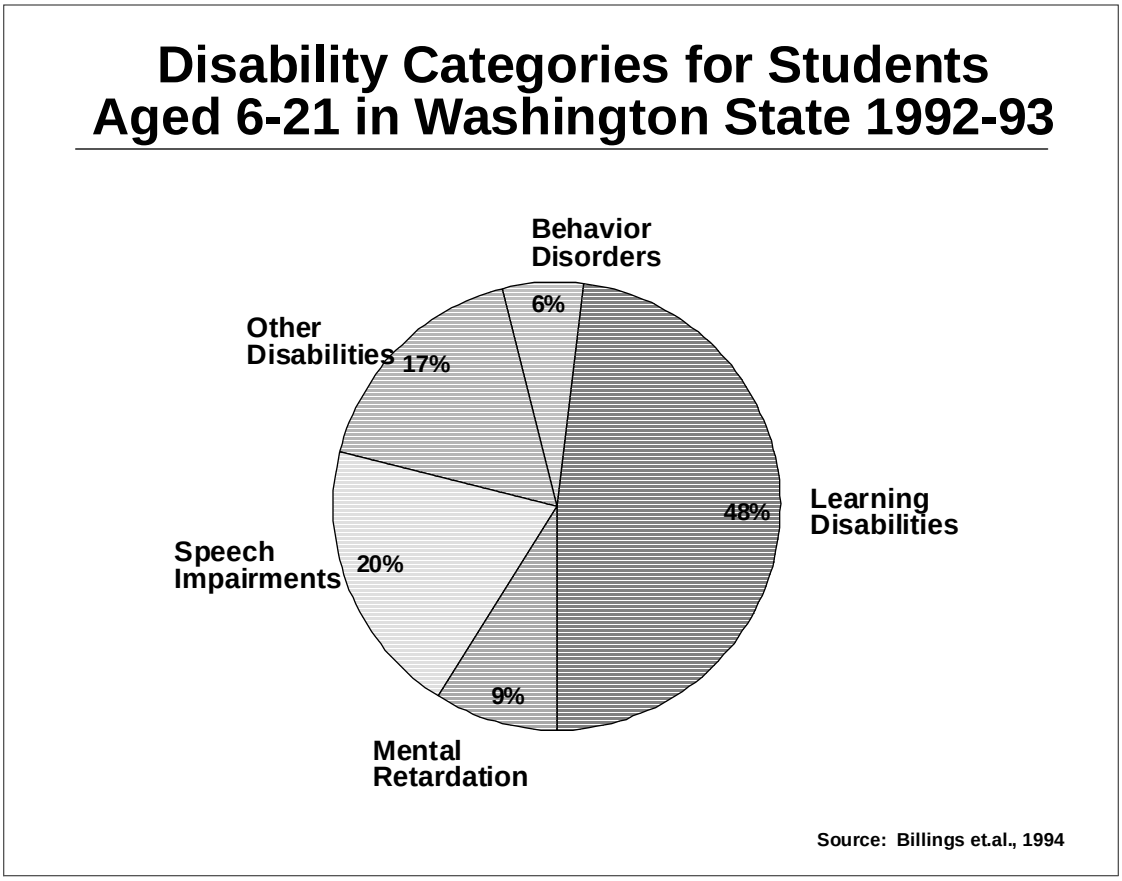
The major discrepancy is attendance at and graduation from postsecondary education programs. This indicates that the gap between these groups will probably grow as the effects of postsecondary education begin to show in the quality of life at a later age. There are some indications that young women with learning disabilities are faring less well than their male counterparts. We have presented data only on youth with learning and behavior disabilities. In general, youth with various levels of mental retardation are doing significantly less well than other disabled youth discussed in this paper. However, the data about youth with hearing, vision, or physical disabilities are somewhat similar to the data found within this report.

## III. WASHINGTON STATE DATA ON SPECIAL EDUCATION OUTCOMES

Data from this section come from the OSPI Annual Report for the 1992-93 School Year (Billings et al., 1994) and The First Decade Project at the University of Washington (Edgar, 1994b). As with the data from the national level, information on outcomes in special education is quite limited.

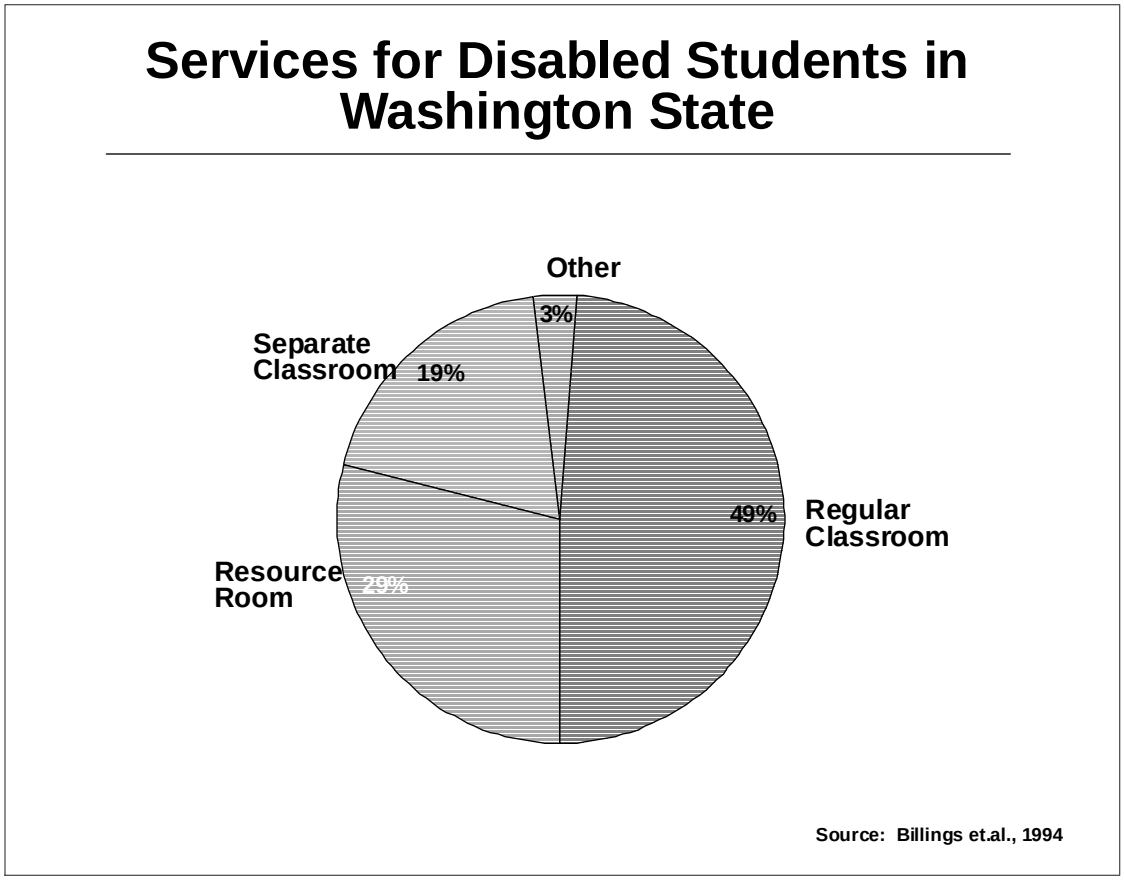
### A. Who is currently being served in special education in Washington State?

In Washington State, students between the ages of 3 and 21 are eligible and guaranteed a free education designed to meet their needs. The latest report shows that during the 1992-93 school year, 95,605 students were enrolled in Special Education. This represented 10.75% of the total Washington State public school enrollment (889,692). The total school age special education population in Washington is 9.5%. Preschool children numbered 11,260 and students aged 6 to 21 years old totalled 84,345. The majority of these students in Washington are learning disabled (48%) and speech/language impaired (20%).



**B. What type of services are these students receiving?**

Data are not available on specific types of interventions or programs that are provided to the special education students other than the location of these services. Students in special education are receiving services in four types of classroom situations. These include the regular classroom, a resource room, a separate class, or some other type of setting which may be a residential facility, nonpublic agency, or homebound/hospital care.



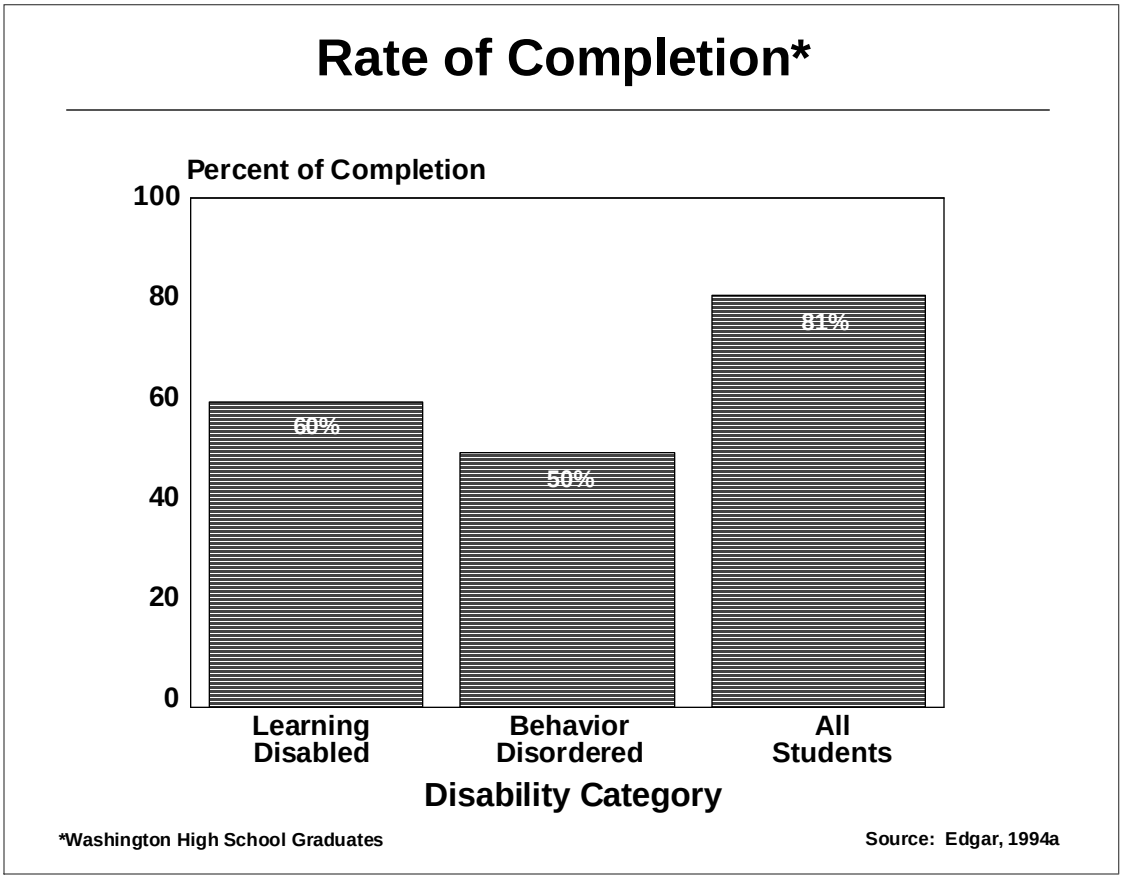

**C. What are the in-school student outcomes?**

No data are available on the overall academic achievement of Washington students in special education.

## D. Who completes school?

Data are not available on the percentage of school completers in special education on a statewide basis. Two recent studies in Washington State shed some light on this issue. Blackorby, Edgar, and Kortering (1991) report the school completion rate for students with learning disabilities was 60% in an urban setting.

In a second study (Edgar, 1994a) from two suburban school districts, the completion rate for students with learning disabilities was 65% and for students with behavior disabilities 50%.

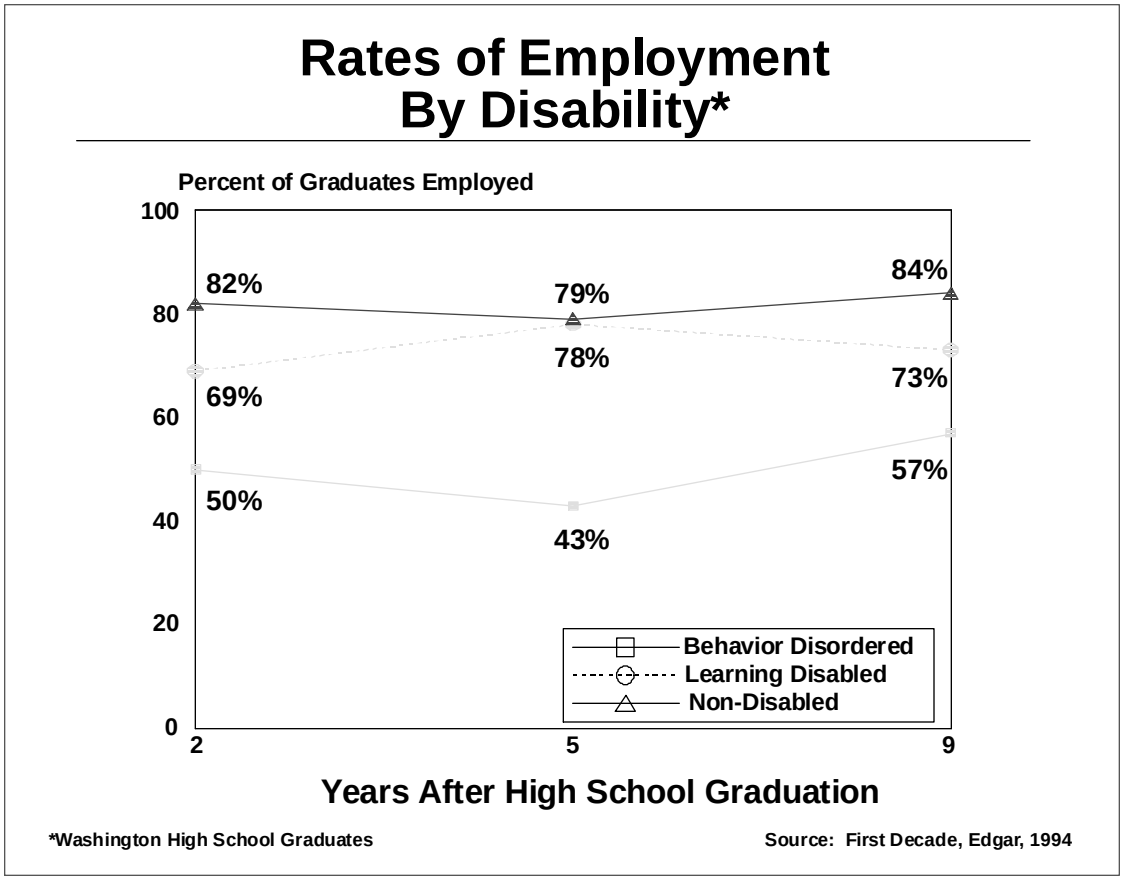



## E. What are post school outcomes?

The data presented in this section are from the First Decade Project which is a study of 3 school districts in Washington that followed all special education graduates and a random sample of non-disabled graduates in the 1985 and 1990 graduating classes (Edgar, 1994b).

**(1) Employment**

At 2 years after graduation, youth with learning disabilities were employed at a rate of 69%, youth with behavior disabilities at 50%, and non-disabled youth at 82%. By 9 years after graduation these rates increased to 73% for LD youth, 57% for BD youth, and 84% for non-disabled graduates.

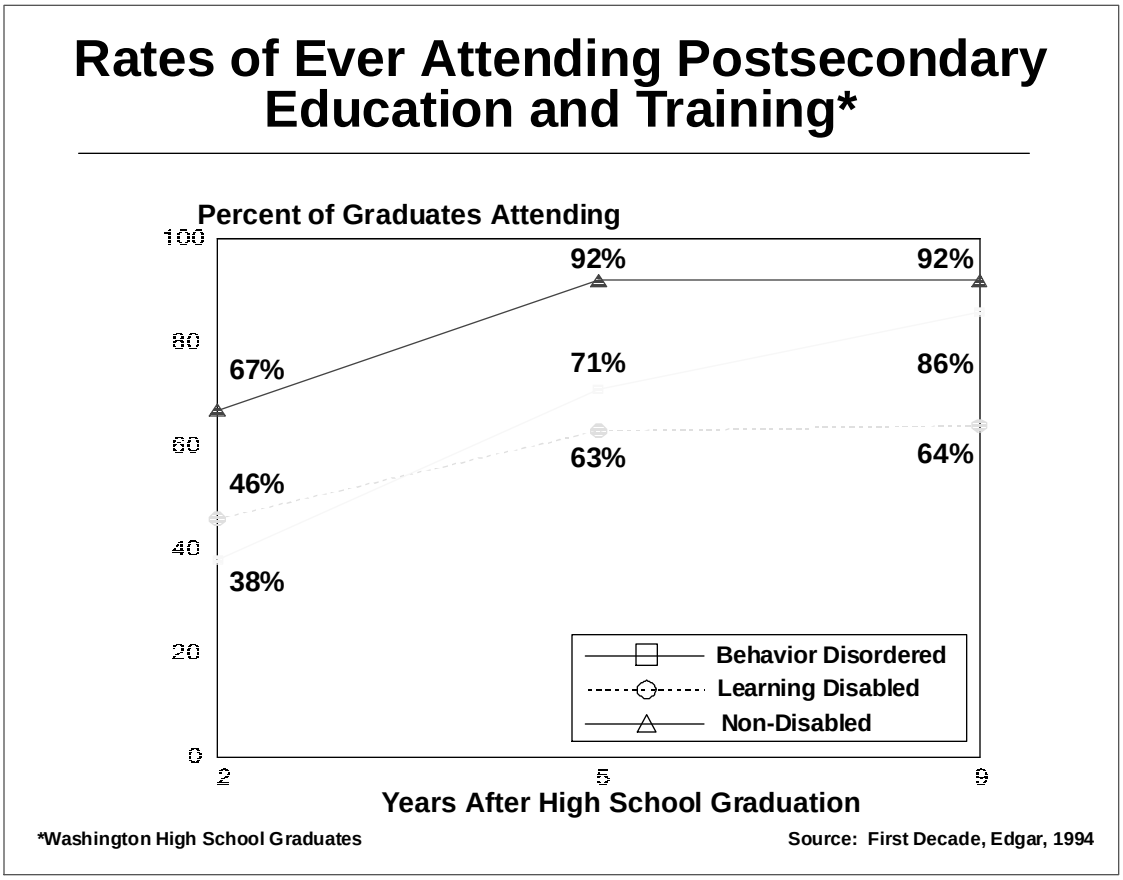



**Employment and gender**

An analysis of employment rates by gender for these same graduates revealed few significant differences.

**(2) Postsecondary education**

Nine years after graduation, 64% of the youth with learning disabilities, 86% of the youth with behavior disabilities, and 92% of the non-disabled youth had attended some form of postsecondary education program.




**Gender differences in postsecondary education**

Data on postsecondary education by gender indicate little difference in attending postsecondary programs for men and women.

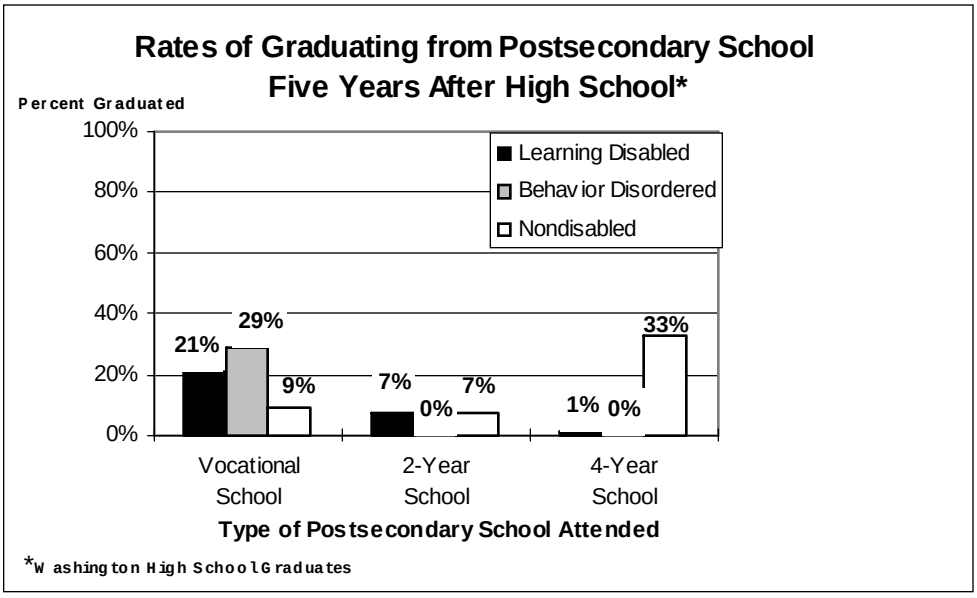
**Postsecondary education: graduation**

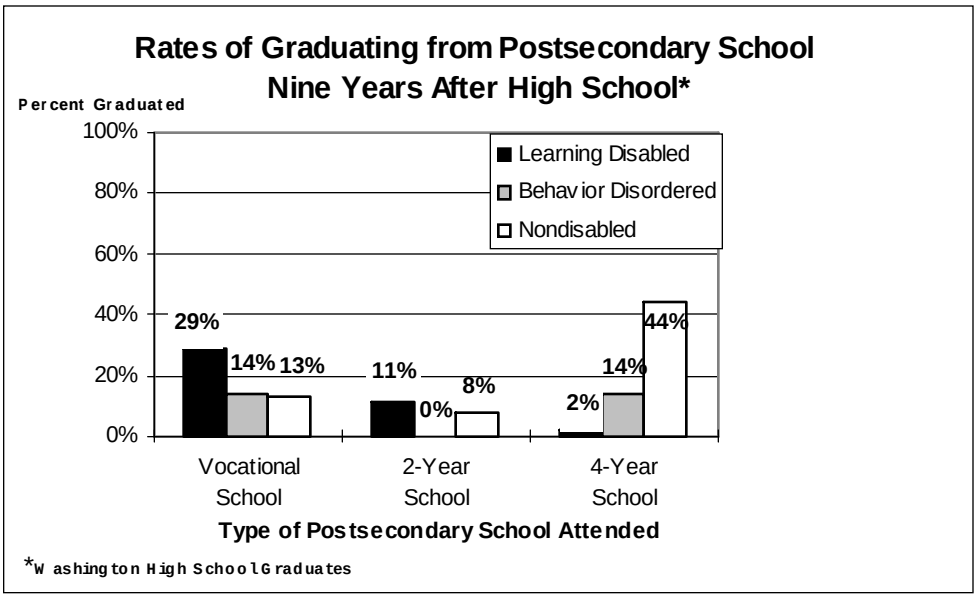
Data from 9 years after graduation indicate that 42% of the LD youth, 29% of the SBD youth, and 66% of the non-disabled youth had graduated from some form of postsecondary education program.

| A COMPARISON OF RATES OF GRADUATING FROM POST-SECONDARY EDUCATION AND TRAINING FOR WASHINGTON HIGH SCHOOL GRADUATES | | |
|---|---|---|
| **Disability Category** | **Percent Who Graduated *Five Years* After High School** | **Percent Who Graduated *Nine Years* After High School** |
| Learning Disabled | 29% | 42% |
| Behavior Disordered | 29% | 29% |
| Non-Disabled | 49% | 66% |

**Type of program**

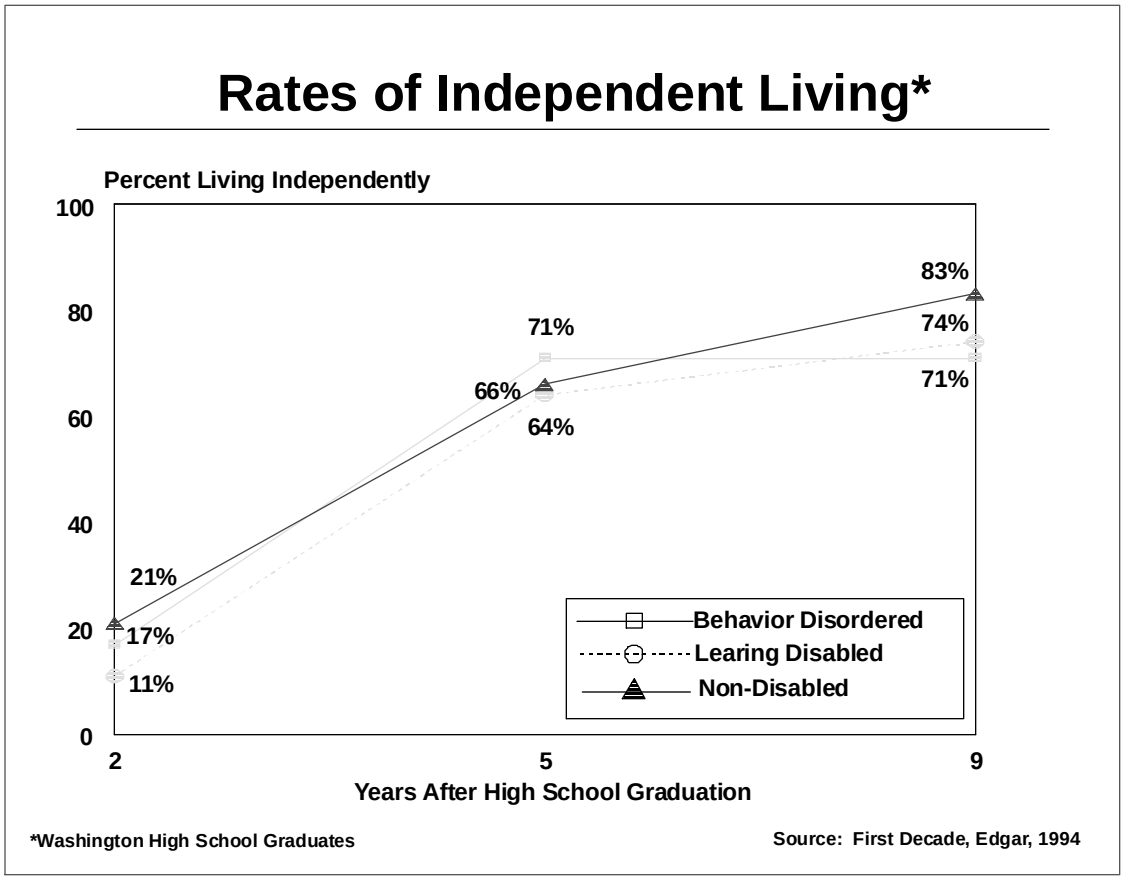
There was a difference in the types of programs these graduates had completed. High school graduates with learning and behavior disabilities who went on to complete postsecondary education were more likely to have completed vocational programs or community college than four-year institutions. The reverse pattern prevailed for non-disabled graduates.



**(3) Independent living**

Two years after high school graduation, 11% of the youth with learning disabilities, 17% of the youth with behavior disabilities, and 21% of the non-disabled youth were living independently. By 9 years after graduation these rates were 74% for LD youth, 71% for SBD youth, and 83% for non-disabled youth.



**(4) Summary of post-school status findings.**

High school graduates from three school districts with learning and behavior disabilities in Washington are making a reasonable adjustment to adult life when compared to their non-disabled peers. However, special education students have a higher dropout rate. This is true for both men and women. Because the non-disabled graduates have also achieved a much higher graduation rate from postsecondary education programs we believe the differences in life outcomes will increase in the coming years. Further, the data in this report do not reflect the post-school status of youth in the various categories of mental retardation. Their outcomes are less positive.

## IV. OVERVIEW OF DATA SYSTEMS IN OTHER STATES

Most of the current research on state systems to measure special education outcomes is done by the National Center for Educational Outcomes (NCEO) at the University of Minnesota. Their primary mission is to promote a "national discussion of educational goals and indicators that include students with disabilities" (NCEO, 1994, p. 1). During the past 3 years, NCEO worked with state and federal education agencies to develop a comprehensive conceptual model of educational outcomes and has produced documents that identify these outcomes and their indicators.

This model contains 6 domains of educational outcomes with 77 projected indicators for obtaining outcome data. Appendix A shows their conceptual model and indicators. Based on the conceptual model, NCEO is now working on a model with a set of outcomes and indicators for six developmental levels: ages 3 and 6, grades 4, 8, and 12, and post-school level. Outcomes and indicators have been established for ages 3 and 6 and post-school level. NCEO is currently developing outcomes and indicators for grades 4, 8 and 12.

For the past 3 years, NCEO has conducted a national survey of state activities assessing educational outcomes. State directors of special education were surveyed in 1990 and asked to provide information on data collection systems within their state. The 1993 report contains information on all 50 states and 9 territories receiving special education funds. The survey contains questions addressing 7 major areas: (1) federally reported data; (2) outcomes assessments; (3) inclusion of students with disabilities in state assessments; (4) state needs; (5) practices, programs, and plans related to outcomes; (6) nontraditional assessments; and (7) state activities in selected outcomes areas.

The following chart includes NCEO data from 13 states whose data collection systems might serve as examples for Washington. The data fall into category 5 above (practices, programs, and plans related to outcomes). We report on the five assessment areas that are most useful for addressing the outcome areas we raise in this report: academic, post-school, vocational skills, functional living, and attitudes.

The overview provided in the chart shows very serious gaps in the data systems of all states. Of the 13 states, only Maryland collects data in the targeted areas. Washington State collects data in only one area.

## SUMMARY OF PROGRESS IN ASSESSING SPECIAL EDUCATION OUTCOMES: 13 STATES

| State | Academic | Post School | Voc. Skills | Funct. Living | Attitudes |
|---|---|---|---|---|---|
| **IA** | | Students with LD, BD, & mild MR are followed 1, 3, & 5 years. | | | |
| **ID** | 11th grade Test of Achievement of Proficiency.6th grade ITBS | Students with disabilities are followed 3 years post high school. | | | |
| **IL** | 3, 6, 8, & 10 grades Illinois Goal Assessment Program for math, reading, & writing.4, 7, & 11 grade Illinois Goal Assessment Program for science & Social Studies. | | | | |
| **KY** | 4, 8, & 12 Assessment data collected using variety of measures. | Kentucky Instructional Results and Information System is given to all students. | | Successful transition to adult life outcome indicator for all students. | |

| State | Academic | Post School | Voc. Skills | Funct. Living | Attitudes |
|---|---|---|---|---|---|
| **MD** | Grades 3, 5, & 8 Comprehensive test of Basic Skills and Maryland School Performance Assessment Program. Grades 9 - 12 Functional tests in math reading, writing, & citizenship | Statewide High School Graduate Follow up System administered to all students. | Grades 8 12 collects data on vocational programs. | Outcomes are measured through Life Skills Curricular Framework. | Parent, teacher and student data in Maryland School Performance Report. |
| **MN** | | | | | |
| **NC** | In process of developing tests for grades 3 12 which will replace CAT. | Data are collected from students enrolled in Vocational Education. | | | |
| **OR** | Grades 3, 5, 8, & 11 are given statewide tests in reading, math, writing, & language arts. | Grade 12 and 2 years post school data are obtained. | Data are collected from all students with disabilities | | |
| **PA** | Grades 5, 8, & 11 school based assessment for reading and math.Grades 6 & 9 school based assessment for writing. | | Data are collected from all students with disabilities | | |

| State | Academic | Post School | Voc. Skills | Funct. Living | Attitudes |
|---|---|---|---|---|---|
| **SD** | Grades 4, 8, & 11<br>SAT | | | | |
| **VT** | Grades 4 & 8<br>Portfolio Assessment | Students with disabilities<br>Post secondary questionnaire | | | |
| **WA** | **Grades 4, 8, & 11**<br>**Metropolitan Achievement Test.** | | | | |
| **WS** | Grade 3 State developed reading test.<br>Grade 8 ACT 8th grade EXPLORE<br>Grade 10 10th grade PLAN | | | | |

## V. OPTIONS FOR ASSESSING OUTCOMES IN SPECIAL EDUCATION

### A. What should happen next?

The current data collection systems used by states (including Washington) do not enable them to collect data that can answer the most basic questions concerning the outcomes of special education. As shown in this report, data are missing on the most fundamental issues regarding the kind of education students receive and the progress they make during their school years.

Any system developed for evaluating special education programs should be a component of an overall educational data system. Evaluating special education programs alone, without a comparable database on non-disabled students from the same school district, cannot provide usable information for either policymakers or program developers.

Given the extensive work of the National Center on Educational Outcomes at Minnesota and especially the work on systems developed by other states and a study guide for developing new systems, we suggest that the next phase of this project include on-site consultation from Martha Thurlow, the Assistant Project Director of NCEO.

### B. Questions that should be asked in a longitudinal study

A number of questions need to be addressed in order to monitor the effectiveness of current special education services and to make decisions about programs in special education. Data to answer these questions should be collected at the local school district level and summed at the state level. They should be collected in ways that permit analysts to follow cohorts of students over time, and to measure changes within the same group of students as well as outcomes (both in school and post-school) related to different types of students and different types of programs they receive.

Any model for collecting longitudinal data on special education students in Washington State should include the following elements:

1. **Demographic data:** gender, disability category, birth date, date of entry into special education, date of exit from special education, some form of socioeconomic measure of the family (e.g., free lunch status). These data need to be stored under a system that will allow analysts to follow students who move from district to district. Perhaps the student's social security number and a school district number would suffice.

2. **Types of program services the student has received:** This component is very important because it will allow for data analysis based on program type by student disability by outcomes. For example, is an inclusive program better than a segregated program for the same level student? Without program type information the data system will have limited use. Developing codes that can accommodate many program variables is a major stumbling block to the process. However, it will need to be addressed.

3. **Student in-school outcomes:** Yearly data need to be maintained on student outcomes in school. Whenever possible, these outcomes should be the same as those for students not in special education. Some of these variables include: attendance, achievement test data, alternative assessment data (portfolio data), and, when possible, engagement in the school environment. The data need to be stored by student and by year so that longitudinal analyses are possible.

4. **Completion of school:** Data need to be maintained to determine school completion and school dropout. The dropout data will be difficult to maintain because many students drop out of school only to return, often to a different school, and graduate. Alternatively, they drop out again and then enter a different program. While completion data are fairly easy to collect, data on students who do not complete school are much more difficult to compile.

5. **Post-school outcomes:** The prevailing view is that special education graduates are faring poorly as young adults. This view is not wholly accurate: some special education graduates are doing quite well and others are not. Schools need to track their graduates to determine their post-school status. These data can serve as important markers of special education effectiveness. Methodological flaws in follow-up studies (noted earlier) suggest the need for more rigorous data collection. Data on the classic variables of employment and attendance at and graduation from postsecondary schools are the easiest to collect, but leave unanswered many other questions about quality of life, life satisfaction, citizenship skills, and the relationship of the school program to eventual life outcomes. These latter questions are difficult to answer without a comprehensive data collection program.

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**** For Appendix A "Developing a Model of Educational Outcomes", please contact WSIPP.***

## *ENDNOTES*

[1] There are a number of concerns about these studies. **First**, almost all have used telephone interviews with key informants (parents) to obtain the data. This method, while cost effective, does not allow for data collection on qualitative issues such as quality of life, competence of the youth with the disability, or the views and attitudes of the former student. Thus, available data focus on questions of "status" such as employment, attendance at and graduation from postsecondary education programs, and living arrangement (independent or dependent). **Second**, all the reported studies have had a serious problem with missing data -- that is, subjects who were not located or refused to participate in the study. Most studies reach less than 70% of the original number of subjects, and for some questions (earnings) the reported data usually represent less than half of the subjects. Regardless of these cautions, we believe that the existing data are valuable in providing a beginning view of the post-school status of special education students.

[2] The NLTS database includes more than 8,000 youth with disabilities, all of whom were 13 to 21, in special education in the 1985-86 school year. Data were collected for the NLTS study in 1987, 1989, and 1990. LD represented 55% of the sample, and SBD 10%.