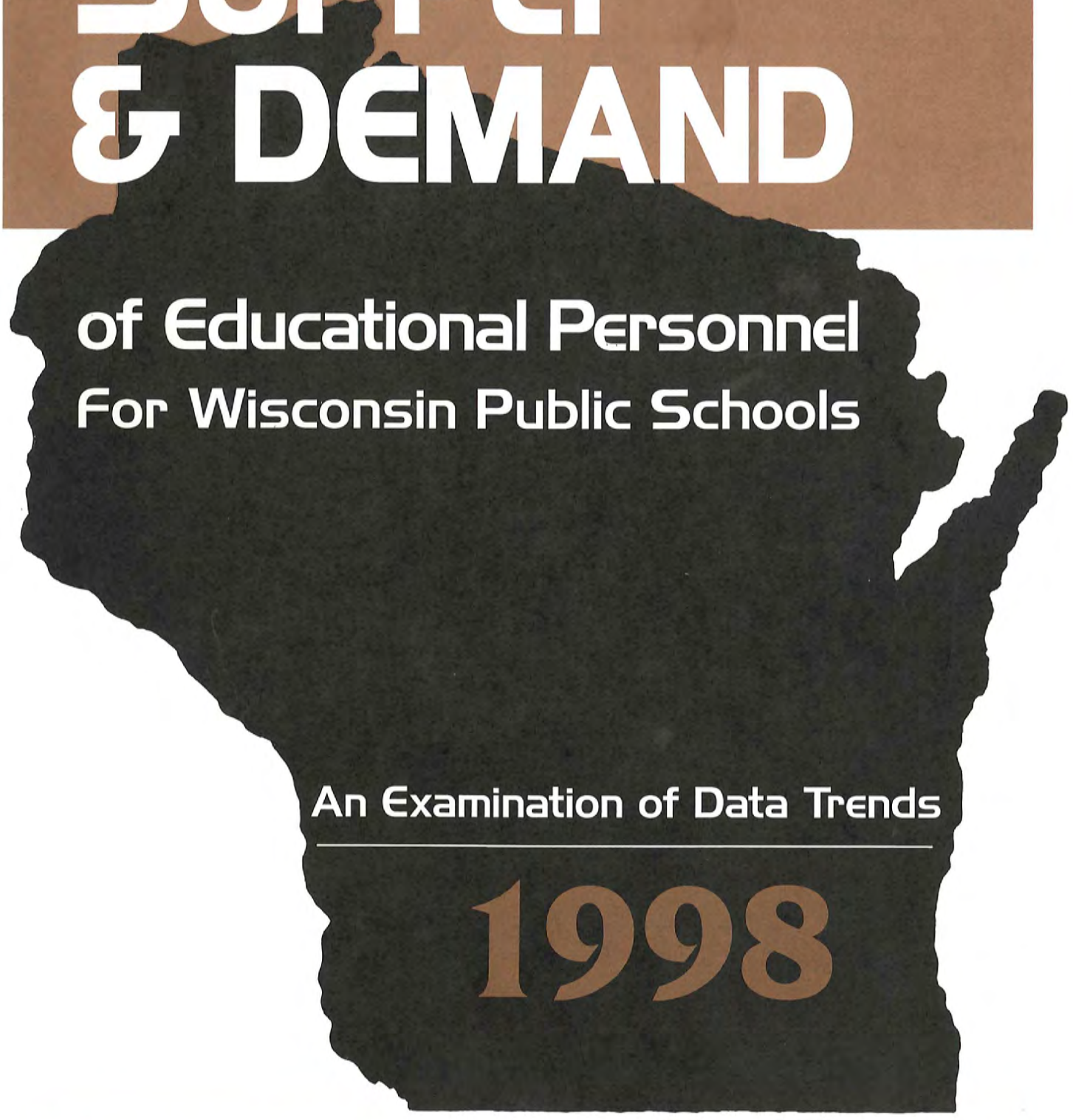
SUPPLY & DEMAND

of Educational Personnel For Wisconsin Public Schools



An Examination of Data Trends

1998

Prepared by Wisconsin Educator Supply and Demand Project
For Wisconsin Department of Public Instruction
John T. Benson, Superintendent

Supply and Demand of Educational Personnel for Wisconsin Public Schools

An Examination of Data Trends

1998

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Wisconsin Educator Supply and Demand Project
with funding from the Wisconsin Department of Public Instruction

TABLE OF CONTENTS

TABLES

FIGURES

APPENDIX

SUPPLEMENT

FOREWORD

The 1998 edition of Supply and Demand of Educational Personnel for Wisconsin Public Schools marks the 19th year that the Department of Public Instruction has published a report on education personnel demographics in this state. Begun as an analysis of staffing for special education classrooms, it has expanded over the years to include staffing needs for all Wisconsin teaching positions and administrative positions.

A special thank you is due to Paul Lauritzen, Professor Emeritus at UW-Whitewater, for his work in leading the team that prepared the 1998 report. His continued dedication to improving each edition of the report and asking the important questions for the future have been helpful beyond measure to our future planning.

The focus of this report is and always has been Wisconsin public schools. Because of this focus, there have been concerns raised about the analysis of the data and questions asked about the conclusions drawn from those data. One of the major sources of concern has been the narrow scope of placement information used; namely, placement in Wisconsin public school positions only.

Many individuals prepared as teachers in Wisconsin higher education institutions do, of course, practice and use their professional training outside of Wisconsin public schools. In order to reflect these additional opportunities and to provide a more complete picture from the perspective of higher education, this report includes a supplement prepared by a working group representing UW-System campuses. A special "thanks" to Senior Vice President David Ward for appointing this work group and for encouraging the sharing of the additional information. The complete text of the supplement prepared by this work group is included beginning on page 61.

Some of the differences identified in the UW-System prepared supplement to this report include:

- Public school placement in Wisconsin only v. private school and out-of-state employment
- Being hired under contract v. substitute teaching
- Counting individuals who complete programs v. those who complete degrees and graduate
- Maintaining a focus on state trends v. national employment trends

Representatives from placement offices at several University of Wisconsin campuses are working with UW-System administration to explore the design of a system-wide survey instrument and a uniform method of data collection for placement of education students. Aggregate data could then be incorporated in future supply and demand studies, which would provide a more comprehensive picture of professional opportunities for education students.

The Department is pleased to provide this document as a required response to federal guidelines for special education and as a partial fulfillment of s. 115.29 Wis. Stats. It is my hope that Wisconsin colleges and universities, both public and private, continue to consider the staffing needs identified in this report as a guide for program planning and development.

John T. Benson
State Superintendent

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Appreciation is expressed to the Whitewater Unified School District for serving as fiscal agent for this project.

Preface

This report presents supply and demand information about educational personnel for Wisconsin Public Schools. The complete report is available on the Wisconsin Department of Public Instruction (DPI) web page (http://www.dpi.state.wi.us/dpi/dlsis/tel/supdem98.html). The 1997 report, which contains maps of the teaching position vacancies in twelve geographical regions can be found on the web page (http://www.dpi.state.wi.us/dpi/dlsis/tel/supplyd.html). The author hopes this information is of value to those making policy decisions for the state, those administering programs at the University of Wisconsin System schools and Wisconsin's independent colleges and universities that prepare educators, and those wishing to make more informed career choices in education. This report complies with the reporting requirements of **the Individuals with Disabilities Education Act (IDEA), an amendment to PL 94-142**, which requires accurate reporting of personnel needs in special education, complete data on the status of emergency licenses, and future projections of personnel needs for the field.

This is the 19th annual report on supply and demand of educational personnel for Wisconsin Public Schools. For the first eight years, the report focused only on special education. Since that time, however, the report expanded to include supply and demand information for all teaching fields and non-teaching areas of education. This report also continues the analysis presented in previous years on the number of newly licensed teachers, the sources of newly hired teachers, and the projected future personnel needs in education. Repeated in the 1998 report is complete attrition data on educators in each subject field which will provide an information base to determine the impact of increased retirements due to the aging of the educators in this state's public schools.

Sources of data include information from Wisconsin Public School districts collected on the third Friday of September and reported to the Wisconsin Department of Public Instruction (DPI) in the Exceptional Education Enrollment Report (PI 2300), School District Staff and Teacher Personnel Report (PI 1202), and from the educator preparation institutions that provided the number of newly prepared educators eligible for licensure. The supply and demand data analyzed in past Wisconsin studies have documented a surplus of teachers seeking positions in most subject fields and shortages in several areas.

Recent years have shown considerable variation in the number of newly hired teachers in Wisconsin Public Schools. This 1997-1998 school year reversed the decline from the previous two years in the number of new hires. The projections of the employability of educators use the three-year average of newly hired teachers so that the yearly fluctuations do not cause bias in the long range analysis used in estimating future educator needs. The projection of increasing number of retirements over the next nine years musts be evaluated in light of the large reserve pool of teachers and the current high levels of preparation so that the needs of specific fields are addressed.

The major tables are at the end of the report, making the text for Chapters 1 through 5 uninterrupted. Each chapter begins with highlights of the most important findings, which are followed by supporting information and explanations.

The factors that contribute to the supply and demand of educational personnel are complex, and certain limitations are inherent in this research area. The report deals with educators employed only in Wisconsin Public Schools. Certainly, educational opportunities exist in non-public schools, and some graduates of educator preparation institutions in Wisconsin choose to work in other states. Within the parameters of this study accurate data about these educators are difficult to gather; therefore, it is likely that some errors exist. For this reason, the researcher sought to validate findings by using multiple data sources. Despite these limitations, this report provides a reasonably accurate educator supply and demand picture that will contribute to making the best qualified educators available to all children who attend Wisconsin public schools. The study includes a supplement from the University of Wisconsin System Administration from the perspective of teacher preparation programs presenting many other factors and considerations that should be considered when evaluating the prospects for teacher education students.

1. Wisconsin Educator Supply Information

Highlights of Findings

* A large supply of experienced and inexperienced teachers continues to be available during the current year for Wisconsin public schools in most subject fields.

* The largest number of new licenses were granted in elementary education, social studies and English.

* Approximately 48 percent of newly hired educators had no previous teaching experience and were trained in Wisconsin educator preparation programs.

* The number of secondary/specialty teachers prepared declined by 243, an eleven percent decline, which contributed to increased employability in many fields.

* The number of teachers prepared in special education declined by over one hundred teachers from the high of 857 recorded in the 1997 edition of this report. The largest declines were in learning disabilities and early childhood-EEN.

* Public universities continue to prepare the large majority of educators (seventy-six percent of the total) and continue on most campuses to reduce the numbers in chronically over-supplied areas such as elementary education, socials studies and English.

Program Completers: Dec. 1, 1996, to Aug. 31, 1997

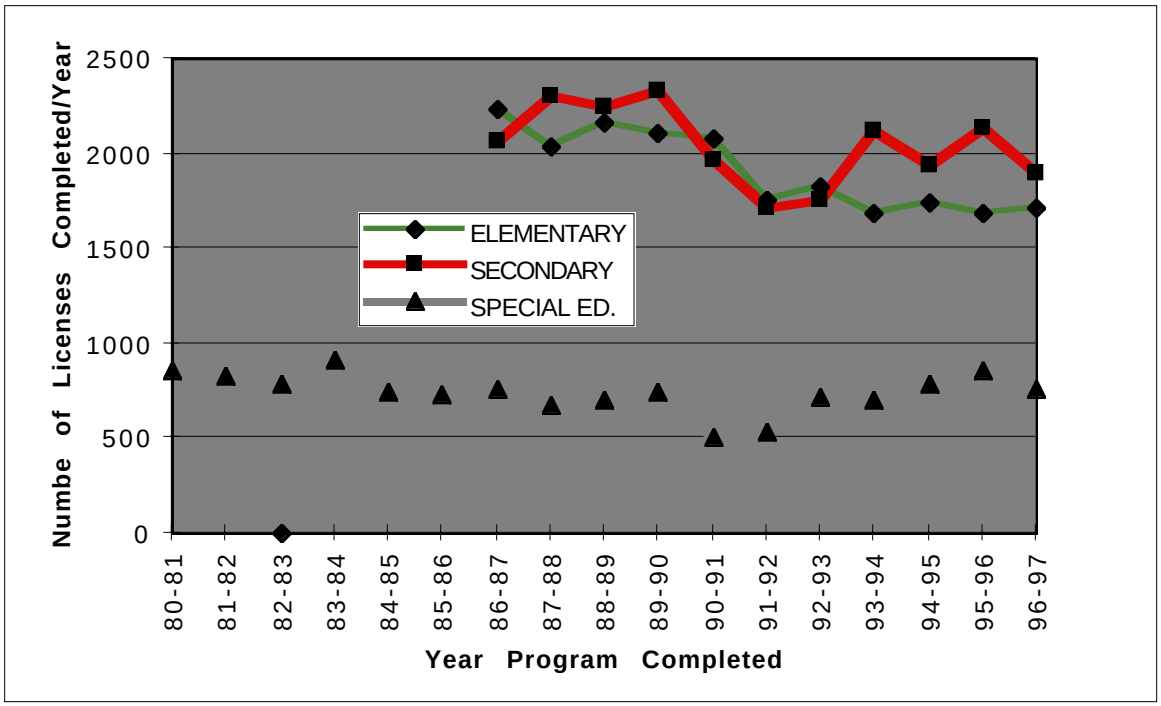
The 33 teacher preparation programs in Wisconsin were asked to provide data to the Wisconsin Department of Public Instruction (DPI) on the number of license programs completed by educators in the various subject fields and non-teaching areas between December 1, 1996, and August 31, 1997. All programs except Ripon responded to this request. The researcher grouped the licenses within each broad subject field so licensing variations within a field would not suggest a greater number of prospective teachers available (for example, elementary education included all DPI license codes from 100 through 188; music included codes 506, 511, and 515; social studies included codes 701 through 761). This grouping procedure resulted in a more accurate count of individuals licensed to teach in the various areas of each subject field (see Appendix for a complete list of DPI license codes).

In Wisconsin, high school teachers receive licensure to teach in their major and in certain minor and double major fields as well. Since educators may teach in their licensed minor, this encourages prospective teachers to obtain a minor along with their major. Thus, additional licenses at the secondary level increased the overall employability of high school teachers by approximately 4 percent (see Table 7). The situation is different for elementary education. For example, an elementary education teacher who also has a special education license would have to complete two separate programs--one in elementary education and the other in special education. Yet a teacher with an elementary license can teach at the middle school/junior high level with a minor in a subject field. Elementary education majors with a second teaching major also had a 4 percent increase in their employability by securing a position in an alternate field (Table 7). Many special education majors earned licenses in more than one field, which increased their employability by 11 percent. Most of these multiple licenses occur in special education or elementary education.

Figure 1, created from data in Table 2, details the longitudinal pattern of the number of newly prepared educators in elementary, secondary, and special education. The actual counts of the licenses earned by each training institution in 1996-1997 are presented in Tables 1.1 and 1.2. Generally, Wisconsin educator preparation institutions have graduated decreasing numbers of teachers in the field of elementary education since the 1990-1991 year, with the current trend averaging around 1700 teachers for the last four years. There was an eight percent decrease in the secondary/specialty fields with the largest decrease occurring in physical education. The downward trend in the preparation of teachers at both the elementary and secondary levels will need to be evaluated as increasing numbers of educators reach retirement age. In Figure 1, the pattern in special education shows the trends from 1981-1997. The 1992-1997 data show that for the past five years there has been a gradual increase in the preparation levels of special education teachers, with this past year showing a sharp reversal of this trend.

Figure 1

Licensure Programs Completed Over Seventeen Years



Suppliers of Newly Hired Educators With No Experience

The total head count number of newly hired teachers for Wisconsin Public Schools without experience prepared in Wisconsin educator preparation programs is shown in Tables 3.1 and 3.2 for the 1996-1997 school year. The use of the head-count in this table does inflate the numbers because each part-time individual is counted as one full position and duplicate count of individuals occurs when individuals teach in more than one subject field. The table includes individuals who may have graduated several years ago, but this is their first education position. The count of individuals is based on the position in which they are employed rather than the field in which they hold licensure. Thus, individuals who are teaching with an emergency license may be graduates of institutions that do not offer preparation in the specific field in which they are teaching. Considering that DPI issues a large number of emergency licenses in special education, this explains the discrepancy between data in Tables 3.1 and 3.2

and other tables in this study. For example, a teacher prepared in social studies may have accepted a position in special education on an emergency license. The institution that prepared the social studies teacher is credited with preparing a special education teacher even though it may not have a program in that field. These tables show the recent contribution of each teacher preparation program to the pool of newly hired teachers.

Sources of New Teachers Hired by Wisconsin Public Schools

DPI has a licensure record for each teacher who was newly hired in Wisconsin for the 1997-1998 school year. Table 4 shows the FTE breakdown of the sources of newly hired teachers by subject field. An explanation of the categories used in Table 4 follows:

* Wisconsin Newly Hired Educators without Experience designates individuals who have been trained in Wisconsin colleges and universities and have no teaching experience.

* Wisconsin Newly Hired Educators with Experience designates individuals who were prepared in Wisconsin colleges and universities and have at least one year of teaching experience and are returning to the field.

* The Experienced Educators Relocating includes all individuals who were employed in the Wisconsin Public Schools in 1996-1997 and moved to a different Wisconsin Public School district for the 1997-1998 year.

* The two out-of-state categories follow the same patterns described above except that these teachers received their preparation in states other than Wisconsin.

The data in Table 4 was based on the information school districts collected on the third Friday in September and submitted to DPI. The data in this table, when compared to similar information from previous years, have shown a similar employment pattern, with very little change from the previous year. There also was a decline in the number of teachers hired who received their preparation in other states.

Newly Hired Educators over a Five Year Period

The number of newly hired teachers in Wisconsin Public Schools during the past five years is shown in Table 5. Two different teachers, each employed 50 percent, were counted as one FTE. This has the net effect of reducing the count of the total number of educators employed when the FTE statistic is used. The data collected for Tables 5 and 7 showed that a large proportion of secondary level teachers were hired on a part-time basis.

Active Pool of Educators Seeking Positions

The pool of available educators encompasses all teacher candidates who are actively seeking employment in the public schools. The researcher initiated a study of the pool of teachers seeking positions in September 1996. Each Wisconsin Public School administrator and each Cooperative Educational Service Agency (CESA) director was sent a survey requesting the number of vacancies in each subject field that had been posted in their district or CESA for the fall term. Each administrator and director was asked to rate the number of applications received in relationship to the vacancies in each subject field. A five-category scale, which ranged from 0 for a serious shortage of candidates to 5 for 50 plus applications for each position indicating extreme oversupply, was provided on the survey. Thus, for each vacancy the researcher gathered two pieces of information--the number of applications and a rating of

that number from extreme oversupply to extreme shortage. Fourteen small districts that had incomplete data or did not respond were not included for a 97 percent return rate. These data are available in the 1997 edition of this report and graphic maps showing the employability of candidates in the large subject fields from these data are found in the 1997 DPI web site (http://www.dpi.state.wi.us/dpi/dlsis/tel/supplyd.html).

Support Personnel

School districts employ a variety of personnel to support the educational process. These personnel are an important element in the field of special education. Assessing the availability of support personnel prepared in certain categories (for example, physical therapy, occupational therapy, and speech therapy) is difficult because many of the individuals in these fields are contracted for their services by agencies outside the public schools. A more detailed measure of the employability of these educators is the data from the district survey sent to each special education administrator which is reported in the 1995 edition of this report. Also the study of the active pool of educators seeking positions presented in the 1997 edition of this report provides more updated information on the availability of candidates to fill these positions (see web site listed above).

2. Wisconsin Educator Demand Information

Highlights of Findings

* This 1997-1998 school year starts the gradual yearly increase in the number of educators reaching retirement age. This increase will continue through 2007-2008. The employability of all newly prepared educators should show a steady improvement with those fields showing a current shortage having an excellent outlook.

* The field attrition rates for 1996-1997 showed a slight increase from previous years probably due to increased retirements, with general education just 7.5% and special education 11.8%. When the transfers within education and the out-of-state mobility is taken into account the attrition rates are even lower for all fields.

* The demand for educators is affected by numerous factors, including many outside the parameters of this study, such as growth in pupil enrollment, economic trends, and state policy decisions.

* The number of available educators at the present time continues to exceed the demand in most fields because there is not a balance between those fields of need and the surplus areas.

* The percentage of candidates who find positions in Wisconsin Public Schools is slightly higher for most fields of special education. Also high were family/consumer education, English as a second language, technology education, library/media, occupational therapy, and physical therapy.

* The percentage of those prepared who find positions in Wisconsin public schools is smallest in elementary education, English, social studies, and marketing. An additional license generally enhances an educator's employment prospects--especially in special education.

* There appears to be a much larger pool of candidates for rural and suburban areas near population centers than for the large urban districts.

Availability of Full-time Positions in Wisconsin Public Schools

The 1997-1998 database permitted the tabulation of educational positions by full-time equivalents (FTE). This information makes it possible to investigate the number of educators who find full-time versus part-time employment. The availability of full-time employment is greatest in elementary and special education. On the other hand it is relatively common to find those employed as middle or high school teachers working part-time. Middle and high school programs are not self-contained and are composed of those who teach in discreet subject fields, and small districts may offer fewer sections of some subjects compared to large districts. The 1999 edition of this study will provide an analysis showing the proportion of individuals hired on a part-time basis in each subject field and the longitudinal employment pattern of these educators.

Educators Newly Hired by Wisconsin Public Schools

A profile of all the sources on newly hired educators without experience is shown in Table 4. When the out-of-state and Wisconsin prepared teachers are combined, the percentage of teachers who were hired without experience was 75 percent at the elementary level, was 56 percent at the secondary level, and was 59 percent in special education.

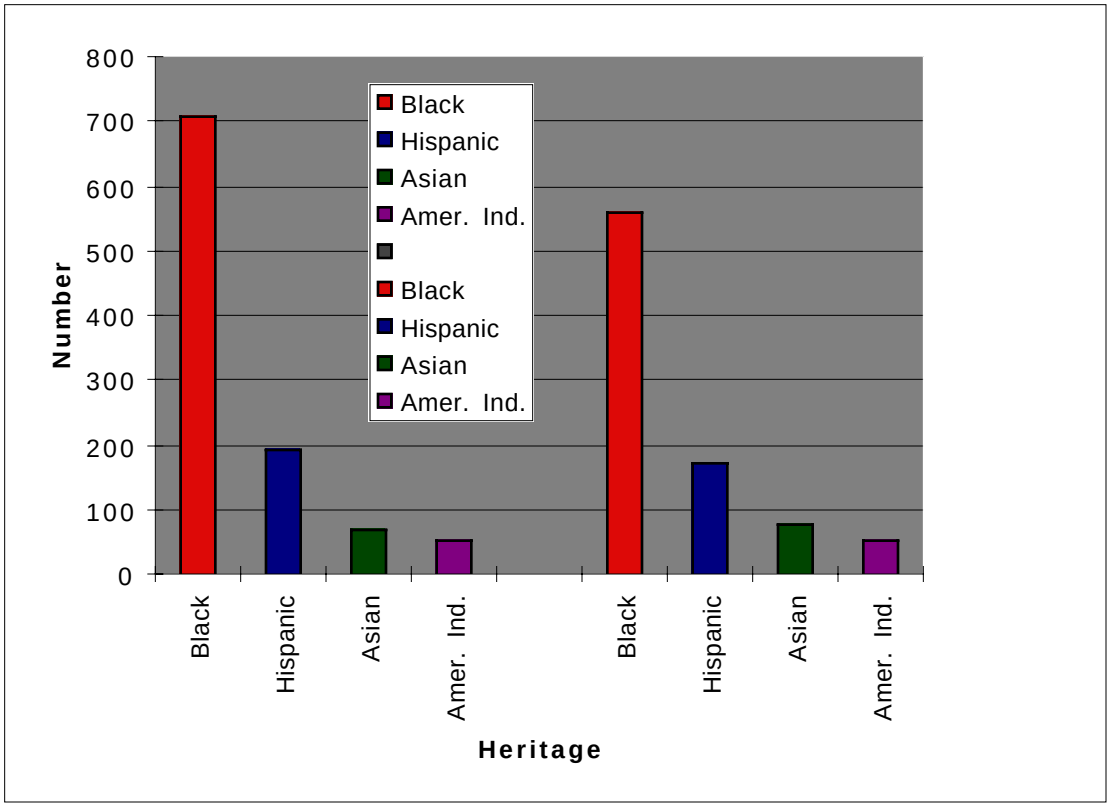
The data in Table 5 shows considerable variation in the total number of educators hired each year. Considering that the growth in the public school pupil population has been very consistent, it appears that the variations in the number of newly hired teachers are often a factor more related to the economy and state policy decisions than to any large increases in pupil population. This can be seen by the large increase in 1990-1991 due to the retirement window followed by a decrease in 1991-1992. The decrease in 1993-1994 appears to be a result of school districts being uncertain about their state funding. The increase in 1994-1995 may be the result of districts having prior knowledge of their level of state support and the rebound from the cutbacks of the previous year. Data from 1995-1996 shows a decrease in the number of newly hired teachers and this decrease continued into the 1996-1997 school year. The 1997-1998 school year had a 329 FTE increase in the number of newly hired educators, reversing the trend from the previous two years.

Ethnic Origin of Wisconsin Public School Educators

The extent to which students can identify with educators of diverse ethnic origin is an important variable in their learning experience. If the number of teachers of each ethnic heritage is proportional to the number of students with similar backgrounds, appropriate role models will be present. Figure 2 shows a graphic profile of the ethnic origin of educators in Wisconsin Public Schools.

Figure 2

TOTAL TEACHERS WITH ETHNIC ORIGIN OTHER THAN WHITE



Elementary/Special **Secondary/Specialty**

Approximately 97 percent of educators in the Wisconsin Public Schools in the 1996-1997 school year were identified as White; approximately 87 percent of the pupils were similarly identified. The percent of Black pupils was 9.3 with only 2.38 percent of the educators so identified. Two percent of the pupils were Hispanic, while only .6 percent of the educators had a similar background. Asian pupils represented only .8 percent of the pupil population while only .26 percent of the educators had the same background. The American Indian population was .6 percent of the pupils, with only .19 percent of the educators so identified. Thirty-six teachers did not identify their ethnic heritage and were not included. The extent to which Wisconsin teacher preparation programs are preparing educators of diverse ethnic background is shown in Table 6. This Table includes two years of data so that the yearly fluctuations in enrollment are reduced.

Source: Wisconsin Department of Public Instruction, Data from the 1996-1997 Staff and Teacher Personnel Report.

Employment Projections for Educators With No Experience

This report provides newly prepared teachers and those with no previous experience an estimate of their probability of employment in Wisconsin public schools by relating the current level of preparation in each subject field to the number of newly hired teachers in the state. The data in Table 7 presents the analysis for the 1997-1998 school year. Because this information is so important in describing the demand for educators in Wisconsin, a detailed explanation of the procedures used to generate the various columns of data follows.

First, the number of Wisconsin prepared teachers who earned their eligibility for new licenses the previous year (column 1) is divided into the number of newly hired Wisconsin-prepared teachers hired during the current year (column 2) in that licensing field. The result is the employment projection (column 3) of teachers who are securing their first positions in that licensing field. Many of the newly hired teachers were prepared several years prior to their first employment and are also included in this projection. Since some teachers in that same licensing field are also eligible for licenses in other teaching fields, the second calculation takes into account all the teachers who have secured employment in some other field in which they may have had an additional license. This number is shown in column 4, and the resulting percentage increase in the employment is indicated in column 5. The total of all those employed who earned that license, including those teaching in the field and individuals who secured a position in some alternative field, is shown in column 6. The employment projections (column 7) of teachers holding multiple licenses is obtained by dividing all the newly hired teachers who had a license in a specific field, even if they were teaching in an alternative area (column 6), by the number of teachers who were eligible for licenses in that field the previous year (column 1). The findings of this employment analysis have generally remained relatively constant during the past half-dozen years.

For example, a teacher eligible for a license in both elementary education and learning disabilities and who secured a position as a third-grade teacher is represented in the EL (K-8) row and is one of the 1,709 individuals indicated in column 1. This person has an employment projection in elementary education of 26 percent as indicated in column 3. This person also is counted in the learning disabilities licensing area in column 4, which indicates that 19 teachers holding a learning disabilities license secured positions in some other field. Thus, the higher employment projection of 38 percent shown in column 7 of the learning disabilities licensing field is more representative of this individual's employment outlook. Column 5 of the EL (K-8) row indicates only 4 percent of elementary education teachers had an additional license that contributed to their employment prospects. Table 7 represents one way to present the demand for educators. The actual projection of teacher needs is so complex that a single formula can lead to errors unless related variables are considered to clarify this information. Important factors to consider in the interpretation of the table include:

1. Nonpublic school and out-of-state employment opportunities are not included in these tabulations. Past data have indicated that the percentage of teachers prepared in Wisconsin who will leave to teach in other states is about the same as the percentage of those prepared in other states who come to Wisconsin to teach (Table 4). Approximately 5 percent will find positions in nonpublic schools, mainly at the elementary level (see 1990 study).

2. Many teachers, such as those in early childhood education, early childhood-exceptional educational needs, and speech and language pathology are employed by agencies that are not represented in public school data.

3. The area of reading is omitted because licensure in this field requires that the teachers also have a license in some other teaching field. A number of persons entering this field are experienced teachers transferring within a school district and would not be identified as new hires in this analysis. Thus, the need for teachers in this field can be more accurately projected by other analyses such as emergency licenses (Chapter 3) and the district survey reported in the 1997 edition of this report. The same rationale was followed for other support staff, such as school counselors, library / media specialists, and administrators. Driver education was deleted because the number of newly hired teachers was too small to draw meaningful conclusions.

4. Special education has a large number of teachers employed on emergency licenses (for example, emotional disturbance and learning disabilities). A number of these teachers have experience and consequently do not show up in the category of new hires without experience due to the limitations of the database used**.** However, these teachers cannot be included with the new hires without experience since this year's database did not permit the separation of these teachers, with the result that the projections in Table 7 are suppressed in these two fields. The number of emergency licenses in general education is relatively small and does not represent full-time teaching to the extent that it does in special education, so a correction for this factor is not warranted for most other fields.

5. To understand the employment prospects it is necessary to take into account the reserve pool and the declining number of positions in various fields. The field of early childhood-EEN has been over supplied with teachers for several years. This explains, in part, why 15 percent of the newly hired teachers were employed in other fields, largely in general elementary education programs. The severely disabled area is included in the CD field because the database does not differentiate between these two licensing areas.

The accuracy of these employability percentages is based on the stability of the pupil population, consistent levels of teacher preparation, variables influencing attrition, retirement levels, and state policy decisions. Fluctuations in these factors will impact on employability. Table 7 provides a comparison of employment opportunities in the different areas of education. It is important to note that the data in this table represents newly hired, inexperienced teachers who received their preparation prior to August 31, 1997, and were employed during the 1997-1998 school year. Table 9 is a three-year average of the data in Table 7 which smoothes out the yearly fluctuations in the employability of newly hired teachers, and thus is, to an extent, a more accurate projection of the employment prospects in Wisconsin Public Schools. The data in this table demonstrates large differences in the demand for teachers in the various licensing categories. In recent years, from as few as 15 percent to as many as 80 percent of educators prepared in Wisconsin have secured positions in Wisconsin's Public Schools at some time during their life. The percentage varies considerably for different fields.

Attrition

Teacher attrition is one variable that is traditionally included in predicting the demand for teachers. There are many complex factors to consider when computing attrition statistics. The following are a few of the concerns that can influence the accuracy of this procedure.

1. Attrition statistics that consider combined categories of teachers (e.g. all secondary teachers) will be lower than rates for individual categories (e.g. mathematics or science teachers alone) since transfers between fields will not be taken into account. Similarly, data on an individual school district will reflect correspondingly higher attrition rates since any teacher leaving the district to be employed in any other state district will count in the attrition figure. Also, state attrition figures do not take into account the movement of teachers to other states and thus are inflated to a small extent.

2. The calculation of an attrition statistic involves using the head count of teachers in two successive years of personnel data. Caution must be taken not to use this same head count in the projection of personnel needs since projections are more accurate if based on a full-time equivalent (FTE) statistic. For example, not using an FTE statistic would inflate the need of teachers in early childhood programs since many are employed only half-time.

3. Major state policy decisions, such as a retirement window or a change in state school funding, can have a short-term impact on any attrition statistic.

4. A factor that can inflate the attrition statistics occurs when economic factors cause school districts to reduce their staffs. If the resulting attrition figure is then applied during this period of decreasing staffing, the result is an inflated projection which may not accurately reflect the current employment outlook. Economic impact would also affect the pupil-teacher ratio if districts reacting to fiscal pressures release teachers.

Longitudinal Attrition Rates in Wisconsin Public Schools

The data on teacher attrition from 1986-1987 through 1996-1997 in general and special education are presented in Table 8.1. Various factors influencing the attrition rate are reflected in these data. In 1989-1990 there was a rise in the rate due to a retirement window. This was followed by a decrease in 1990-1991 when the number retiring was sharply reduced. Higher attrition in some years may reflect teacher layoffs due to tighter fiscal restraints. The rates for 1994-1995 showed a sharp increase which may be due to difficulties in validating certain data in the DPI 1994-1995 School Staff and Teacher Report. Data from the past few years have indicated that the state attrition rate for general education has been stabilizing around 6 percent with the special education area being 11 percent. Since previous years did not take into account the high transfer rate of special education teachers to general education the rate for these years appears inflated compared to the state exit rates. The 1996-1997 state exit attrition rate for elementary education was 5.3 percent, secondary education was 5.9 percent, and special education was 6.2 percent. The high rate of transfer of special education teachers to general education fields is a variable in the higher special education field attrition rate. Table 8.2 also provides information on the mobility of teachers between fields within the State of Wisconsin.

A complete analysis of the attrition in each subject field at five-year intervals to project the effect of retirement of future educator needs is presented in Tables 9.1 through 9.31. This analysis was conducted by merging the 1996-1997 data base with the 1997-1998 personnel data to identify six variables related to the projection of retirement levels by individual subject field. The six variables include: the total number of educators in 1997-1998, the number who left during that year, the attrition for different age cohorts, the total number for the previous year, the percent of

new educators, and the number of new educators. The data is presented in Figure 3 which graphically shows the four oldest age categories of educators in various subject fields. The total number of educators for each of the subject fields represented in Figure 3 can be found in Table 9.

The greatest impact of increased retirement will occur as we approach the school year 2006-2007 when the cohort of teachers whose current ages range 47-52 (Table 10) represent the largest age segment of the teaching population. This cohort of teachers in has the highest number of potential retirees in the current teaching force. The higher attrition in the field of special education and the relatively younger ages of those teachers suggests that there will not be a concern about increased retirement in the foreseeable future in special education. The interpretation of these data by individual subject field is included in Chapter 5 of this report.

Projected Total Number of Retirements in the Wisconsin Public Schools.

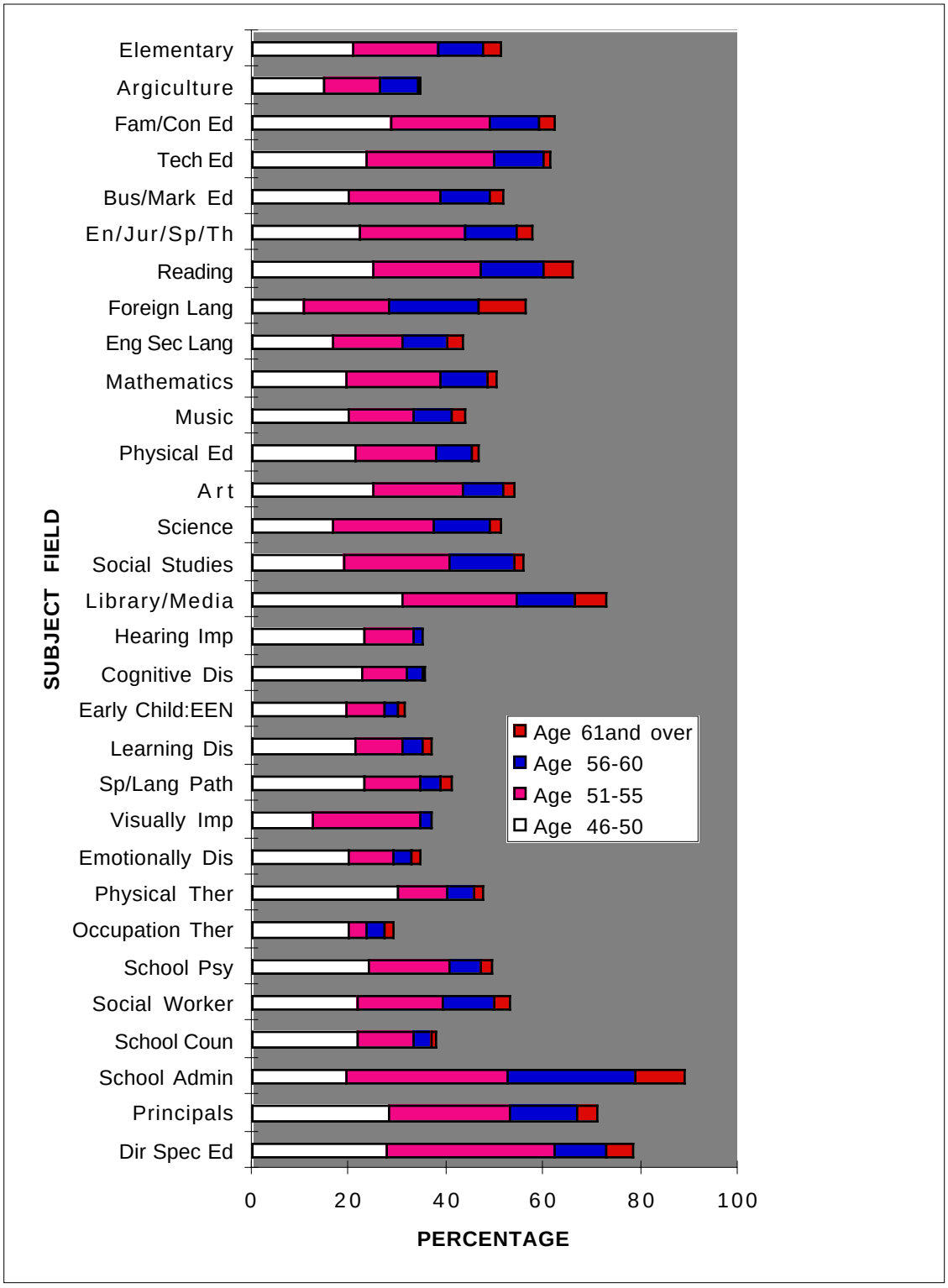
The data in Table 10 shows the total number of educators by birth year, their attrition by birth year, and the number of new hires by corresponding birth year. These data were obtained by merging the 1996-1997 data file with the 1997-1998 file, providing the basis in Table 11 to project the number of educators retiring in each age cohort for the next twelve years. The birth year 1925 included all the educators at this age and older (8). The analysis in Table 11 did not include educators whose birth year preceded 1925 since their numbers (4) would have little impact.

The procedure followed in Table 11 permits a projection of the increasing number of currently employed educators who will be reaching retirement age until the school year 2011-2012. The majority of educators tend to start retiring about age 55 and the retirement of others continues through their seventies. The rationale for using the birth year 1942 as the first year in the cohort of the projection is that the number of newly hired educators drops below the number of the retirees at this age point. Table 11.1 shows the birth year of those educators from 1958 through 1924 who are employed for the 1997-1998 school year. Those who are likely to retire after the 1997-1998 school year are represented by the group designated in the lower half of Table 11.1, first section. The next group, representing the educators likely to retire after the 1998-1999 school year, is shown in the lower half of Table 11.1, middle section. It is the same group of educators that were employed in the 1997-1998 school year, but the age is moved back one year so it represents the potential retirees in the year 1998-1999. This process is continued through Table 11.5, which will project the number of retirees until the school year 2011-2012 by the yearly aging of the current teaching force and correcting for newly hired educators in the for the next fourteen years.

The statistical procedures followed in Table 11 included both the attrition by birth year and the rounded number of new hires by birth year (the new hires were rounded to smooth out chance variations in the yearly number of new hires by birth year). The rounding process involved adding the numbers of new hires in a given year with those one year above and below, with the average being the rounded figure. The attrition statistics were not rounded since there appeared to be a definite pattern of retirements related to specific birth years. The 1997-1998 projection was determined by multiplying the attrition of each birth year times the individual birth years from 1942 through 1925 and totaling these products (1256 educators shown at the bottom of column 4 in Table 11.1). The procedure for each subsequent year was to determine the returning cohort by subtracting the projected number of retirees, aging this cohort by one year by dropping the figure one row in the table, multiplying these staff by the corresponding birth year attrition, and then adding to this product the corresponding new hires for that birth year. An example from Table 11.1 for the 1998-1999 school year, using as a model the 1942 birth year, would be to take the total staff for the 1997-1998 school year (1777, column 3) born in 1942 and subtracting the projected retirees (174, column 4) to obtain the returning staff in 1998-1999 (2002, column 5). The projected retirees for the 1998-1999 school year who were born in 1942 are found by adding to the returning

Figure 3

Graphic Presentation of the Percentages of Educators over the Age of 45 by Subject Field in Four Age Cohorts

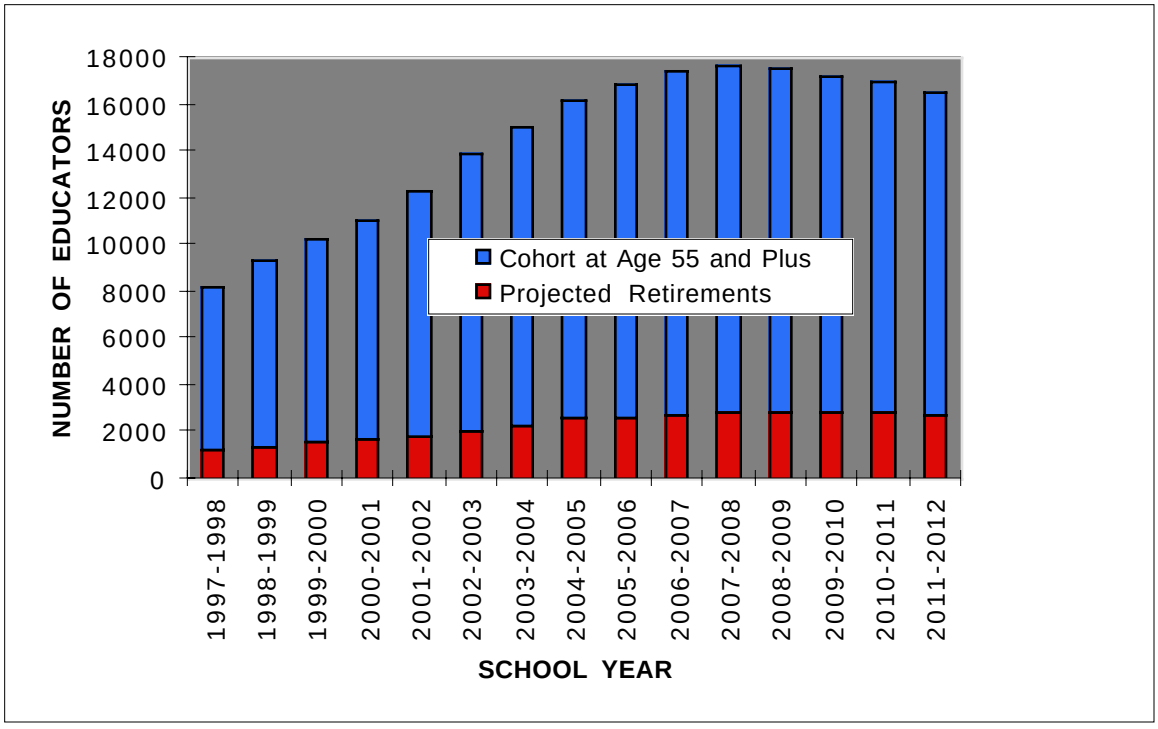


staff the rounded new hires (30, column 6) for that birth year followed by multiplying this sum (3032, column 7) by the attrition for this birth year (9.8 percent, column 8), with the resulting product of 199 (column 9)projected retirees for that birth year. The total retirees are found by adding the projected retirees in each of the advanced birth years from 1943 through 1925 for a total projected number of 1408 (bottom figure in column 9, Table 11.1). Table 12 uses the data from Table 11 to show the increasing / decreasing number of educators who could retire due to the aging of the current teaching population. The data in Table 12 includes the projected number of total educators in each year of the analysis, the number at age 55 plus, the change from the previous year, the percentage of change, and the total number of educators projected to retire. Figure 4 is the visual graphic of the data in Table 12.

The data in this report confirm that there will be a gradual increase in the number of educators eligible to retire. This higher level of retirements will continue for a period of 12 years, with declining levels starting after a period of about 13 years. The cohort of educators in the 2007-2008 school year declines in number for the first time since the 1996-1997 year. The data in Table 10 indicates that this decline will continue for several years. The birth years of 1952 through 1958 (Table 10) show a sharp decline in the number of total staff which accounts for the declining number of retirees starting in the school year 2009-2010, and a trend which will continue for a period of several years. This decline lags behind the reduction in the cohort of educators at the ages of 55 plus because the reduction occurs first at the younger ages in the retirement cohort where the attrition rate is lower compared to the higher attrition seen at the older age levels (see Figure 4).

Figure 4

Projected Number of Educators to Retire from the School Year 1997-1998 through 2011-2012



The different tables have two data bases (since different statistics require different analyses). The FTE statistic is more accurate in understanding the number of educators in each field, and the head count is more appropriate to use in determining attrition statistics. There are no significant differences in the two data bases in that the population of educators analyzed in this study were of an age where few were employed less than full-time. The head count for the cohort of educators over 54 was only 3.0 percent larger and the 60-and-over cohort was only 3.5 percent larger. The high proportion of older educators who are employed on a full-time basis is in contrast to the large number of newly hired secondary teachers who receive only part-time positions.

The DPI data base used in this analysis was relatively complete. All districts reported data for the 1997-1998 school year. A small error factor was that a total of 145 of the teachers that stayed, 169 that left, and 80 that were new had either two different birth years on the records or no birth year reported. These educators could not be included in the analysis.

Projecting the Number of Newly Prepared Education Personnel Needed for the Next Five Years

Attrition statistics have been used in the past projection of the future need for educators in Wisconsin and have resulted in inaccurate projections. This has occurred because of policy decisions relating to a retirement window and changes in fiscal policies relating to the funding of school districts. The projection used in this report will follow the new-hires model.

The new-hires model is similar to the analysis shown in Table 7 except that the numbers in the tables are averaged over a three-year period to reduce the effect of yearly fluctuations in the data (Table 13). The advantage of this approach is that many of the error factors that can influence the outcome of the traditional design occur to a lesser extent in this model. The procedure followed in this model is to merge the total state database for the given year and the previous year and identify all the newly-hired inexperienced teachers for the given year. There are many advantages to this methodology that make it worthy of consideration. There is no need to find the attrition for each subject field since this is a variable in the figure that represents the number of new hires. Also, any enrollment fluctuations, economic factors, or state policy decisions are reflected in the new-hires statistic. The averaging over three years reduces the effect of any one-year surge or decline. Any identifiable and predictable changes in these variables can be incorporated in the new projection to increase the accuracy of this methodology. The projections used in this report will not require modifications in the methodology because there is no evidence that there has been a change in the pupil-teacher ratio, state fiscal policies have stabilized, and the enrollment increase has averaged only 0.2 percent over the past several years.

The number of additional personnel that will be needed for Wisconsin's Public Schools in future years largely depends on enrollment projections. Past reports have carefully analyzed several variables (birth rate statistics, private school enrollment, and changes in the state's public school enrollment) to measure their impact on future educator needs. These analyses are not included in this 1998 report since past studies have shown these variables to be relatively stable and thus have not influenced the projections.

The National Center for Educational Statistics (1998) provides a state assessment of the projected public school enrollment through the year 2008; during this period a slight decline in the Wisconsin K-12 public school enrollment is anticipated. A figure showing these data is included in the 1997 edition of this report and is not included in this 1998 edition since the projection remains the same. It should be noted that Wisconsin has the largest decline in enrollment in the

northern and western areas of the state while most southeastern districts are showing an increase in pupil enrollment.

The data that most accurately projects the number of new teachers that need to be trained each year is seen in Column 8 of Table 13. This number represents the average number of new inexperienced Wisconsin prepared teachers hired by Wisconsin Public Schools in their teaching field over the past three years. A proportion of newly prepared teachers choose not to enter teaching, leave the state for employment, are geographically restricted , or accept employment in non-public schools or as substitute teachers. To account for these factors the state must prepare more teachers than the minimal number shown in Column 8 of Table 13. This adjustment can be made by dividing the number of newly prepared teachers by 50 percent, which will increase the numbers to account for these factors. This percentage is based on the professional judgment of the researcher to determine a realistic projection of the number of teachers that should be prepared to meet the needs of the state. The effect of this procedure results in the preparation of two teachers for each position that has been traditionally filled by new inexperienced teachers. Such factors as the cost of teacher preparation, the loss of professional status of educators as the result of the surplus of qualified teachers, and the needs of school administrators for an adequate pool of candidates were taken into consideration in making this professional judgment.

3. Emergency License Information

Highlights of Findings

* More emergency licenses are issued in the fields of emotional disturbance and learning disabilities than any other areas.

* After increasing steadily since 1985-86, the number of emergency licenses issued in special education reached a high of 1149 in 1991-92. Since then it has steadily declined to this year's total of 878.

* The continued large number of emergency licenses in special education is, in part, related to the large number of special education teachers who transfer to general education.

* Emergency licenses issued in general education tend to be in the fields of reading, English as a second language, bilingual education, and science.

* Most emergency licenses are issued in general education due to part-time assignments. For example, a licensed biology teacher may be assigned to teach one section of chemistry.

Background

An emergency-licensed teacher (ELT) receives licensure from the Wisconsin Department of Public Instruction (DPI) at the request of a school district. The district must provide evidence that a fully licensed educator was not available for the position. In most cases the department issues emergency licenses for a one-year period. During that one-year period, the ELT must complete six credits from an approved preparation program in the field of the emergency license.

In some instances, the DPI issues emergency licenses in areas when personnel are available in a field but, due to the circumstances described by the district, the exception is considered justifiable. For example, at the elementary level, specialized programs such as bilingual education, foreign language immersion schools, and public Montessori schools may require elementary education emergency licenses issued beyond the specialty training that the program requires. At the secondary level most emergency licenses authorize teachers to teach one or more classes outside of their licensure area and do not typically represent full-time teaching assignments.

Reading and English as a second language (ESL) are the areas in which the greatest number of emergency licenses are issued in general education. Requirements for licensed reading teachers in Title I programs exacerbate the shortages in reading. Increased student diversity requires more licensed ESL and bilingual teachers.

In special education most emergency licenses are granted for programs for students with emotional disturbance and learning disabilities. In addition to factors affecting all license areas, certain special education fields face the impact of either program growth or higher attrition, either of which creates a greater demand for emergency licenses. Teachers in multicategorical (MC) programs (programs serving children in two disability areas) are required to be certified in each area of disability found in the children served in their programs. As a result, teachers with one special education license also may be required to apply for an emergency license for employment in a multicategorical program. Many of the new emergency licenses issued this year to educators teaching cognitively and learning disabled students were for MC programs. A small number of emergency licenses are issued to individuals who teach in private or in residential schools serving students with disabilities.

Special Education

Table 14 presents the total number of teachers teaching with emergency licenses in Wisconsin Public schools from 1989 through 1998. The total number was derived by adding the number of one-year permits to the number of one-year specials and three-year licenses for each license area. Permits are issued to individuals who possess a degree outside the field of education.

The information in Table 14.2 shows the total number of emergency licenses issued in each categorical area and the longitudinal trends in each area. The special education decrease in 1997-1998 was greatest in the field of teaching children identified as emotionally disturbed.

A DPI project, Special Education Licensure for Emergency Certified Teachers (SELECT), was designed to reduce the number of emergency licenses for educators working with students with learning disabilities and emotional disturbance. The impact of SELECT and similar federally funded projects is difficult to assess since many factors impact on the shortage of teachers. The decrease, seen again this year in emergency licenses, and the lower attrition rate in these fields are positive. The large proportion of special education teachers who transfer to general education remains a significant contributor to the number of emergency licenses in special education (Table 8.2).

The data in Table 14.2 presents the total number of special education teachers on emergency licenses in public schools over a 10-year time span. Interpreting the percentage increases and decreases in emergency licenses is complicated for several reasons, including administrative policy decisions regarding the issuance of emergency licenses, fluctuations in the numbers and sizes of special education programs, and changes in the supply of teachers for various subject areas. The emergency licenses in the cognitive and learning disabilities area may in part be attributed to the larger number of these teachers being employed in MC programs.

Previous editions of this report documented what was evident again in this 1998 analysis: that the majority of special education teachers with emergency licenses come from those fields of general education with the largest surplus of teachers. The analysis of the new emergency licenses in 1995-96 showed that almost half of the total new licenses for teachers in emotional disturbance programs went to males. This discrepancy between the gender balance in this field and the gender balance showing a large proportion of males with new emergency licenses was first reported in the 1996 edition of this report.

4 Employment Outlook by Individual Subject Field

Highlights of Findings

* During the 1997-1998 school year there was a 6 percent overall average increase in the employability of teachers in full-time positions from the 1996-1997 school year, in part due to the initial increase in retirements.

* Several fields, all having a shortage of teachers, have excellent employment prospects. These include agriculture, family/consumer education, emotional disturbance, speech and language pathology, and technology education.

* Other areas continue to have a large supply of teachers, especially seen in elementary education, social studies, physical education, and English.

Background

The data used for the employment outlooks for various teaching fields and non-teaching areas are based on all the sources presented in previous chapters. These include the data on the supply of educators (Chapter 1), the demand for educators (Chapter 2), and the number of emergency licenses issued in various areas of education (Chapter 3). The data from the survey sent to each public school district and CESA in the state reported in the 1997 edition of this study and presented as maps graphically showing demand for educators in the state was considered in the projections. Since different sources of information are used in the recommendations, it is normal to expect some variations in the data. The researcher, with review by the advisory committee, makes the determination of the relevant weight of each source in formulating the final recommendations. The data from the related services survey presented in the 1995 edition of this report contributed to the recommendation of the employment outlook of this chapter. Employability for each subject field and non-teaching area was determined using the following scale:

Excellent-	Chances of employment are high in almost all geographical areas. Teachers even with limited mobility should find full-time employment.
Good-	Most educators are able to find a position. This is especially true for those willing to relocate.
Average-	Educators who are patient, willing to relocate, and actively seeking positions should, in time, secure employment.
Poor-	The supply of educators seeking positions exceeds the vacancies. Many educators will not be able to secure a position.
Very Poor-	The supply of educators considerably exceeds the vacancies. Individuals seeking positions will have little chance for employment in the Wisconsin Public Schools.

Those areas with an extreme shortage of applicants have an excellent rating, slight shortage a good rating, normal supply an average rating, slight oversupply a poor rating, and extreme oversupply a very poor rating. The employability descriptions assigned to the various fields or areas are based on the multiple information sources.

An important factor in determining the recommendations for each subject field is the evaluation of the fluctuation seen in the data due to state policy decisions or the effects of the economy. This past year (1997-1998) there was a slight increase in the employment of teachers**.** It can be expected that there will be a continued slight increase in employability as the aging of the teaching staff will cause a gradual increase in the retirement levels. The data in Table 9, which presents the number of educators

and the attrition by age categories, is considered in the recommendations of this chapter. These statistics are taken into account in making the employment projections in this 1998 report. The averages of the employment projections over a three-year period are found in Table 13. This corrects to an extent the yearly fluctuations in new hires and is also considered in the projections of this chapter. The most accurate indicator of the employment outlook for each individual subject field over the past three years is shown in Column 9 of Table 13.

Employment Outlook by Subject Field and Non-teaching Areas

Employment projections by subject field and non-teaching areas are based on the different areas of investigation previously described. Past reports have been relatively stable in these projections. More teachers are available for a given year than the number prepared by Wisconsin colleges and universities in that year. Approximately half of the newly hired teachers are inexperienced teachers prepared in Wisconsin; the remaining are relocating teachers, those prepared out-of-state, and those returning after an interruption in their careers. Further, a large reserve pool of candidates exists for most subject areas.

A district may hire a person to teach at the middle school level in the area of mathematics, science, social studies, or English who is licensed as an elementary teacher (1-8) or licensed in that secondary subject area. Therefore, data on middle school vacancies and the supply of teachers for these programs are more difficult to analyze. The reader is cautioned to note these problems in assessing the needs of educators at the middle school level. Some tables are based on the subject taught, which would include teachers with an elementary or secondary license who are teaching at the middle/junior high school level, while other tables are based on the license held by the teacher. These differences affect the counts in the various tables.

Elementary Education

A total of 1,709 education students completed licensure programs in the areas of elementary education and early childhood in Wisconsin during the 1996-1997 school year (Table 1). A total of 444 full-time equivalent positions in elementary education were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The number of newly hired elementary teachers, including those experienced teachers returning to the field and those from other states, totaled 597 (Table 4). For the past several years, newly prepared teachers with elementary education licenses have had a very poor chance of securing an elementary education position in the Wisconsin Public Schools. The 1997 data from the district administrators responding to the employability survey had an overall rating of 1.3 in elementary education, indicating that the number of applications for each position was the highest of all subject fields. Table 7 shows that the career employment projection for the 1997-1998 school year for Wisconsin-prepared, inexperienced teachers with a single elementary license was 26 percent. About 11 percent of Wisconsin-prepared inexperienced teachers find out-of-state teaching employment and an additional 5 percent find positions in private schools, as indicated by the placement offices reported in the 1990 edition of this report. This would increase the overall employment projections.

Teachers hired in elementary positions often have licenses in other fields, which may increase their employability if the other fields are in demand. However, data in Table 7 show that only 4 percent of the teachers prepared in elementary education are hired in areas where they have additional licenses. Licenses in most general education fields have only a slight effect on the employability of elementary teachers while licensees in reading and ESL tend to improve an individual's chances of finding a position. A license in the area of learning disabilities in special education was especially influential in improving an elementary teacher's employability .

The attrition rate for elementary education teachers is predictably greater for the younger teachers and for those nearing retirement. The field attrition rate for elementary teachers in 1996-1997 was 6.9

percent. The increase in projected retirements shown in this table will have only a modest impact on the employability of teachers in this field. The relatively few emergency licenses that are issued in elementary education (Table 15.1) are for specialized educational programs and do not indicate a shortage of teachers..

OUTLOOK: **Very Poor** The data in this report substantiates previous studies that demonstrate there continues to be a large surplus of teachers for all elementary positions. The outlook will improve in the future if the number of newly prepared teachers is reduced due to enrollment limits in elementary education at the Wisconsin colleges and universities. Increased projected retirement levels will only slightly reduce the surplus of elementary education teachers.

Secondary/Special Subject Fields

The secondary/special subject fields show a different employment picture than other fields of education. The licensing requirements often restrict the flexibility of teachers to find full-time positions since at the secondary level many smaller school districts offer only one or two sections of most subject fields. Many of the vacancies have unusual combinations of licensure requirements which eliminated many candidates from being eligible for consideration. Since these individual fields are relatively small, compared say to elementary education, for example, teachers applying for these positions must be more willing to relocate to different geographical areas of the state. Typical of the specialty subject fields (art, music, physical education, family consumer education, technology education) is that few of the teachers have additional licenses (teaching minors), which restricts their flexibility to teach in other fields. These factors in part explain the higher attrition rates found in these areas and the larger proportion of teachers hired on a part-time basis.

Agriculture

Nineteen individuals completed licensure in the area of agriculture in Wisconsin during the 1996-1997 school year (Table 1). A total of 13 full-time equivalent positions in agriculture were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Of the 13, ten were new, inexperienced, Wisconsin prepared teachers (Table 7). Generally, agriculture teachers have not held additional licenses, and many are employed outside of education. The average 1997 survey rating from district administrators was 4.5, which indicates a need for more candidates. Few new teachers had licenses to teach in other areas of education. The data in Table 5 indicate that the number of newly hired teachers in this field has been declining for the past few years. The attrition rate report was 6.4 percent (Table (9.2). Only a small number of teachers are over the age of 51, as shown in this table. This statistic indicates that retirement will have minimal impact on the need for teachers for some years.

OUTLOOK: **Average to Good** This is a small teaching field with a low level of teacher preparation. The slight rise in the number of newly hired teachers in this field suggests that the previous decline in this teaching field has stabilized. Teacher preparation and the needs of the field seem to be in balance.

Family/Consumer Education

Eighteen people completed licensure in the area of family and consumer education in Wisconsin during the 1996-1997 school year (Table 1). A total of 11 full-time equivalent positions in family/consumer education were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The number of teachers hired each year has varied over the past several years, declining again in 1997-1998. (Table 5). The current employment outlook for new, inexperienced teachers in family and consumer education was 61 percent for 1997-1998 (Table 7). Only one new hire had a teaching license in another field. The data in the 1997 survey sent to district administrators was high for both the middle and high school positions, suggesting a shortage of candidates for this field. The attrition rate was 6 percent (Table 9.3). This table also shows a

moderate need for additional teachers due to increased retirements in the near future. The current level of teacher preparation in this field has declined to the extent that it is now in balance.

OUTLOOK: **Good** The employment outlook for this field has been varied in the past several years. The "good" rating reflects an improved employment outlook for teachers in this field.

Technology Education

Thirty-six individuals completed licensure in the area of technology education in Wisconsin during the 1996-1997 school year (Table 1). A total of 20 full-time equivalent positions in technology education were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The number of new positions for 1997-1998 was 55 down from a high of 70 in 1994-1995 (Table 5). The 1997-1998 employment rate for newly prepared teachers in Wisconsin Public Schools in this field was 58 percent (Table 7). The 1997 survey returned by school district administrators indicated that there was a severe shortage of candidates for most positions. Only one inexperienced teacher in this field had a license in other fields of education. This teaching area has many employment opportunities in other states and outside the field of education. The attrition rate was 5.8 percent (Table 9.4). An adequate supply of technology educators for Wisconsin may be affected if graduates are not willing to relocate, since as of 1997-1998 there has been only one teacher preparation program in the state. The fact that this field currently has a shortage of educators will cause the increase in retirements to aggravate the need for additional preparation of teachers.

OUTLOOK: **Excellent** The number being prepared is not currently in balance with the educational needs of the state. Considering the employability of individuals in other fields and the anticipated increase in retirements, there is a need for an increase in the preparation of teachers in this field in light of the projected increase in educators reaching retirement age.

Business/Marketing Education

Thirty people completed business licensure and 20 completed a marketing credential in Wisconsin during the 1996-1997 school year (Table 1). A total of 13 full-time equivalent positions in business/marketing education were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Wisconsin Public Schools hired 13 new, Wisconsin-prepared inexperience teachers in full-time equivalent positions in business, and three were hired in marketing during the 1997-1998 school year (Table 7). The employment rating for 1997-1998 shown in Table 7 was 43 percent for business education educators but only 15 percent for marketing teachers. The administrators' rating from the survey showed that business candidates were in short supply across the state. The combined attrition was 6.8 percent (Table 9.5). This table shows that the impact of retirement will have a moderate effect on the future need for educators in this field. Currently, newly prepared teachers with only a marketing education license have little chance of employment in Wisconsin Public Schools. Those majoring in business education enjoy better employment prospects; this is the basis for the "good" rating of this field. A few business/marketing education teachers have licenses in other fields, with several teaching computer science. Individuals prepared as teachers in business education do have excellent opportunities for employment outside of education.

OUTLOOK: **Good** This recommendation is based on the area of business education, excluding the marketing licensing area. The marketing license alone has very limited employment opportunities in the public schools. With business education graduates having a wide range of employment opportunities outside public education, most graduates would have little difficulty securing employment. The "good" rating is consistent with the rating in the 1997 edition of this report.

English/Journalism/Speech/Theater

Two hundred forty-two people completed licensure in the areas of English/journalism/speech/theater in Wisconsin during the 1996-1997 school year (Table 1). A total of 63 full-time equivalent positions in this field were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools

(Table 4) for the 1997-1998 school year. The number of newly hired teachers in 1997-1998 increased by 35 over the previous year (Table 5). Twenty-six percent of those newly licensed in this field secured a teaching position in English, and this increased by five percent for teachers who are also licensed and employed in other fields (Table 7). The 1997 survey from district administrators at the high school level indicated that there was a surplus of candidates for vacancies. The attrition rate was 6.2 percent (Table 9.6). With the current surplus of teachers the projected increase in retirements will have little impact in this field. The discrepancy in the number of teachers in Table 4 and in Table 7 occurs because in Table 7 the count is the FTE number of teachers by position**.** Currently this licensure area has a more than adequate supply of teachers. The present employment outlook for teachers is very poor, and the future outlook shows little improvement as long as the number being prepared remains high. It is important to remember that positions at the middle school level include candidates with either elementary education or secondary subject area licenses.

OUTLOOK: **Poor** This rating has remained "very poor" to "poor" for the past several years. The rating this year was the result of some improvement in the 1997-1998 employability.

Reading

One hundred eighty-one individuals completed licensure in the area of reading in Wisconsin during the 1996-1997 school year (Table 1). Employment projections are more difficult to analyze for reading compared to other teaching fields because qualification in reading is an "add on" license. That is, an educator must be licensed in another field before licensing in reading will be granted. The 1997 survey data returned from the district administrators had an average rating of 3.9, indicating a moderate shortage. The attrition was 6.8 percent (Table 9.7). The consistent yearly data on emergency licenses (163) indicate a shortage of teachers in this field (Table 15.1). The impact of future retirements will result in an increase in the demand for reading teachers. Many teachers are hired from personnel within the district, making it more difficult for those seeking new positions in this area to find employment.

OUTLOOK: **Average to Good** The rating has been consistently "average" to "good" over the past several years.

Foreign Language

Starting with the 1996-97 school year, the DPI required that foreign language instruction be available to all public school students in grades 7 and 8. During the past several years the number of newly-hired foreign language teachers has shown considerable variation (Table 5), with the greatest demand in 1997-1998 (over 75 percent) being for teachers of Spanish. One hundred sixty-one people completed licensure in the area of foreign languages in Wisconsin during the 1996-1997 school year (Table 1).). A total of 36 full-time equivalent positions in this field were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. An additional 5 teachers with licenses in foreign languages and other fields were employed in such positions as elementary education, English, and English as a second language (Table 7). Twenty-two percent obtained positions in their licensing area of foreign language, and this increased to 25 percent when employment in an additional licensure field was included. The attrition rate was 7.2 percent (Table 9.8). Future retirements will have only a modest effect in this field. Note that the discrepancy in the number of teachers in Table 4 and in Table 7 occurs because in Table 4 the count is the number of teachers by position, which includes elementary education teachers with an elementary minor teaching foreign languages at the middle/junior high level. This is a good field for elementary education majors to obtain a minor in.

OUTLOOK: **Average to Good**

The current outlook is "good" in Spanish. "Average" for candidates in other foreign languages than Spanish will need to be more mobile in securing a position.

English as a Second Language and Bilingual Education

Thirty-seven individuals completed licensure in the area of English as a second language (ESL) in Wisconsin during the 1996-1997 school year (Table 1). Wisconsin Public Schools hired 18 new, Wisconsin-prepared teachers (Table 3) for the 1997-1998 school year. All of the newly hired teachers without experience in ESL positions had additional licenses. An indicator of the shortage of licensed teachers is the large number (72) of emergency licenses issued in ESL. An additional 91 were issued in bilingual education (Table 15.1). The attrition rate for ESL teachers was 7 percent (Table 9.9). Increased retirements will have only a modest impact in this field. This attrition rate is in part a reflection of the mobility of the population served. The employment outlook for teachers in this field is largely based on demographic trends, which generally indicate that increasing numbers of students will require the services of teachers prepared in this field. Following national and state trends, English as a second language continues to be in demand. The employment outlook for bilingual education is also good--especially for those prepared in Spanish.

OUTLOOK: **Good** Teachers with an add-on license in this area of preparation will find increased employability in other fields. Additional teachers need to be prepared in this field.

Mathematics

One hundred seventy-two individuals completed licensure in mathematics in Wisconsin during the 1996-1997 school year (Table 1). A total of 48 full-time equivalent positions in mathematics were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Twenty-eight percent of the newly prepared teachers with mathematics licenses found employment in their field in Wisconsin Public Schools (Table 7). This increased to 32 percent when the teachers that have licenses in additional fields secured positions. The 1997 survey from the district administrators gave mathematics a rating indicating an average number of applications for positions. The employment prospects for mathematics teachers in Wisconsin remains inconsistent with the public perception of a great need. Media stories portray the field of mathematics education as having a shortage of teachers. However, past Wisconsin data have frequently indicated that the job outlook in mathematics was poor. At the middle/junior high school level large number of teachers with an elementary license and a mathematics minor find employment, reducing the need for teachers prepared with a major or minor at the secondary level. The data in Table 13 show that there has been a low demand for math teachers over the past three years. The attrition rate for mathematics teachers was 6.1 percent (Table 9.10). This table indicates that the increased retirements will have only a modest impact on employability in this field.

OUTLOOK: **Average** Based on the available data the employment outlook is realistic and suggests that the current levels of preparation are adequate to meet the needs of this state.

Music

One hundred thirty-three people completed licensure in music in Wisconsin during the 1996-1997 school year (Table 1). A total of 36 full-time equivalent positions in music were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Twenty-seven percent of the newly prepared teachers with music licenses secured positions in the Wisconsin Public Schools (Table 7). Two of the teachers had additional licenses in a second field. The three-year average data on employability (Table 9) suggests a low average rate. The attrition rate was 6.1 percent (Table 9.11). Future retirements will have only a modest effect on the need for new teachers..

OUTLOOK: **Average** The rating is similar to the 1997 rating with slightly improved employability due to increased retirements.

Physical Education

One hundred and fifty people completed licensure in the area of physical education in Wisconsin during the 1996-1997 school year (Table 1). A total of 60 full-time equivalent positions in physical education were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The employment outlook for inexperienced teachers in physical education is 40 percent and the outlook for teachers having additional licenses increases to 41 percent in the Wisconsin Public Schools (Table 7). The attrition rate was 5 percent (Table 9.12). Future retirements will have little impact. The reserve pool of teachers in this field includes a relatively large number of teachers. The 1997 district survey indicated an excess in the number of applications for positions. Based on the response from many districts in Wisconsin, some teachers apply for each opening across this state--often 100 or more. The low attrition figure for this field also reduces employment opportunities for new teachers.

OUTLOOK: **Poor** The outlook improved to "poor" for the first time since this report was initiated. This improvement is based on the reduced number of teachers being prepared, a factor which has improved the employment outlook.

Health

The area of health is closely tied to physical education because many teachers in these fields are licensed in both areas. Most of the teachers hired for these positions were given part-time teaching assignments. The health license improves, to only a small extent, the employability of teachers with licenses in other fields. The 1997 district survey rating was "low" to "average" which indicates a low demand for teachers in this field.

OUTLOOK: **Poor** The employment outlook in these related fields will remain at a low level as long as the number of newly prepared teachers remains high.

Art

One hundred and twenty-one individuals completed licensure in the area of art in Wisconsin during the 1996-1997 school year (Table 1). A total of 38 full-time equivalent positions in art were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Thirty-one percent of the newly prepared teachers secured art positions, and another two percent found positions in other fields in which they had licensure (Table 7). The 1997 rating from the district survey showed average employability of applicants for positions. The attrition rate was 51 percent (Table 9.13). Retirement will have only a modest effect on the current employment outlook. There appears to be a large reserve pool of potential teachers in this field.

OUTLOOK: **Poor to Average** This rating remained the same from the previous year. The rating has fluctuated from "poor" to "average" over the past several years.

Science

Science has drawn considerable national attention as a field with a perceived shortage of teachers. This is due, at least in part, to magazine articles that describe shortages of science teachers. While some studies have been done on this topic, some confusion still exists regarding the employment prospects for science teachers. Wisconsin data have consistently contradicted the perceived shortage. This year for the fourth time the rating has been "average". Future retirements will gradually increase the demand for teachers.

Science is the only secondary field, other than specialty fields, in which a teacher has previously been required to have a major to be eligible to teach in Wisconsin. This is a major reason why 83 emergency licenses were issued (Table 14.1). One hundred and eighty-one people completed licensure in Wisconsin during the 1996-1997 school year (Table 1). A total of 50 full-time equivalent positions in science were

filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The projected employment outlook for teachers licensed only in science is 28 percent. For science teachers with additional licenses, the rate increases by 4 percent in the Wisconsin Public Schools (Table 7). The most common additional licensing area for science teachers was mathematics. The 1997 district survey indicated a shortage in several of the science fields in large part because only part-time positions were offered to the candidates and often the position required an unusual combination of licensure. The attrition rate reported was 6.7 percent (Table 9.14).

In high schools, teaching in some science areas (e.g., chemistry and physics) is often a part-time assignment. This makes the employment prospects appear better than they really are. The number of positions at the middle school level includes candidates with either elementary or secondary licenses.
OUTLOOK: **Average** The employment outlook for this field is "average" for teachers in Wisconsin Public Schools.

Social Studies

Three hundred thirty-two people completed licensure in the area of social studies in Wisconsin during the 1996-1997 school year (Table 1). A total of 57 full-time equivalent positions in social studies were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The employment projection for social studies positions in the Wisconsin public schools is 17 percent, the lowest rating of all subject fields. Teachers with additional licenses in social studies increase their employment prospects to 26 percent (Table 7). The 1997 district survey confirmed the poor employability with one of the lowest ratings given. The attrition rate for teachers in this field was 7 percent (Table 9.15). Future retirements will not be a factor in improving employability of teachers since there is a large surplus of teachers for this field.

OUTLOOK: **Very Poor** The data in this and previous reports indicate that social studies has the greatest surplus of teachers of all education fields.

Library/Media

Fifty-eight people completed library/media licensure in Wisconsin during the 1996-1997 school year (Table 1). The employability rating for this field is more difficult to determine since the new hires data does not accurately reflect the trends in this field. The attrition rate reported was 7 percent (Table 9.15). Retirement will significantly increase the demand for teachers in library/media, with the largest impact taking place after the year 2000. Data from the 1997 district-wide survey of the number of applications in relationship to vacancies indicated a demand for library/media specialists in many areas of the state. If anything, the number being prepared could be increased because this field does not have a large reserve pool of potential applicants. In addition, the field of library/media has changed in the past few years as technology has been introduced into libraries on a large scale (for example, computerized catalogues, databases on CD-Roms, etc.). These factors tend to make those with a background in technology more employable.

OUTLOOK: **Good** The employment outlook for library/media personnel is "good" considering the current level of preparation and the projected increase in retirements..

Special Education

The field of special education has faced a critical shortage of teachers both nationally and in Wisconsin. The decline in the number of educators being prepared is a cause for concern, and the continued large number of emergency licenses being issued suggests that this shortage will continue in select areas of special education for some time. Factors still indicate a stronger demand than most other areas of education, in part because of the higher attrition rate and in part because of the number of special education teachers who transfers to general education.

Hearing Impaired

Two people completed licensure in the area of hearing impaired in Wisconsin during the 1996-1997 school year (Table 1). A total of three full-time equivalent positions in hearing impaired were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The employment prospect for newly prepared teachers with a hearing impaired license being employed in their field is best projected over the past three years because of the small number of educators in this field. Table 13 shows that the Wisconsin employability of new inexperienced educators in this field over the past three years has averaged 100 percent. The attrition rate for teachers in this field was 5.8 percent (Table 9.17). Teachers who are mobile will be less restricted in securing employment because only a few available positions exist in this low incidence disability area. Data suggests that the number of teachers being prepared could be increased to better meet the state's needs.

OUTLOOK: **Good to Excellent** Teachers prepared in this field who are mobile have an excellent chance of securing employment. This year's rating is consistent with the past year.

Cognitive Disability

One hundred fifteen people completed licensure in the area of cognitive disabilities (CD) in Wisconsin during the 1996-1997 school year (Table 1). For this report the mild/moderate and the severely handicapped areas are combined. A total of 44 full-time equivalent positions in cognitive disabilities were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Thirty-eight percent of the new, Wisconsin-prepared teachers without experience secured positions in the CD field, while 8 percent found positions in fields in which they held an additional license (Table 7). Many of these teachers had licenses in other special education fields, which increased their employability (many finding positions in multicategorical programs). The large number of emergency licenses issued--123 (Table 15.1)-- reflects the fact that many of these licenses are for multicategorical programs and do not necessarily indicate a severe shortage in the field. The 1996-1997 attrition rate for teachers in this field (Table 9.18) was 7.4 percent, which in part reflects the movement of these teachers to other fields of special education. In the past this field has been oversupplied with teachers. The reserve pool of teachers seeking positions has declined and the number of children served in these program areas has also declined. Retirement will have minimal impact on the demand for teachers in any of the special education fields.

OUTLOOK: **Average** This field was impacted by the multicategorical licensing requirements. This is evident by the number of individuals licensed in this field who are on emergency licenses and employed in this program area.

Early Childhood: EEN

Eighty-five individuals completed licensure in the area of Early Childhood: Exceptional Educational Needs (EC:EEN) in Wisconsin during the 1996-1997 school year (Table 1). A total of 18 full-time equivalent positions in early childhood:EEN were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The employment prospects for newly prepared teachers in Wisconsin Public Schools with EC:EEN licensure in their field is 18 percent. For those with additional licenses the employment prospects are 36 percent (Table 7). The attrition rate for teachers in this field (Table 9.19) was 6.3 percent. It is difficult to assess the staffing needs for public school programs when data are not available to show the need for teachers employed in the birth-to-three age group. The available data do not indicate an additional need for teachers, yet, according to the data from the administrators' survey reported in 1997, a geographic imbalance exists, with shortages in some rural areas of Wisconsin. The increased emphasis on programs for preschool children identified as EC:EEN may increase the number of teachers needed. The employment outlook for teachers in this field is poor for employment in the public schools. Retirement will not be a factor in the demand for teachers in the near future.

OUTLOOK: **Poor to Average** The past outlook was poor and this new projection is slightly higher, based on the improved three-year average (Table 9) and the need for educators in certain geographical areas and non-public school programs. Teachers who are mobile have a greater chance of employment.

Learning Disabilities

Two hundred thirty-eight people completed licensure in the area of learning disabilities (LD) in Wisconsin during the 1996-1997 school year (Table 1). A total of 72 full-time equivalent positions in learning disabilities were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. The prospects for newly prepared, LD teachers without experience to be employed in learning disabilities is 30 percent in Wisconsin Public Schools (Table 7). The attrition rate for teachers was 9.5 percent (Table 9.20). The 1997 district survey showed an average rating in most regions of this state. Some shortage of teachers for children with learning disabilities may exist at the secondary level and in northern and western rural areas.

OUTLOOK: **Average** The current outlook is "average" for teachers in this field. Teachers with multiple licenses have increased employability. This year's rating is the same as the 1997 rating.

Speech and Language Pathology

Ninety-two people completed licensure in the area of speech and language pathology (S/L) in Wisconsin during the 1996-1997 school year (Table 1). The special education field attrition rate for speech therapists was 4.6 percent (Table 9.21). The total number of emergency licenses issued was 58 (Table 15.1), indicating a shortage in some areas. A large proportion of speech and language pathologists are employed outside of education, therefore increasing the demand for pathologists to work in public schools. The best indicators of the employment outlook for this field are found in the data from the related services survey presented in the 1995 edition of this report and the survey sent to district administrators in September 1996. These two surveys showed that there is a serious shortage of personnel in this field. The reserve pool analysis in the 1996 report showed some areas with only a slight shortage. The need is greatest in the northern and western rural areas of Wisconsin.

OUTLOOK: **Good to Excellent** The geographical mobility of therapists is the main determinant in the "good to excellent" rating of this field.

Visually Impaired

There is limited data available in this field since Wisconsin does not prepare teachers in this area. This is the smallest teaching category in special education. A concern is the high attrition rate of 11.1 percent reported in Table 9.22 of this report, indicating a high turnover of teachers. Four new teachers for the visually impaired were hired in 1997-1998 (Table 4). The 1997 district administrators' survey gave the highest ratings in special education to the visually impaired category, indicating a serious shortage of personnel in this field**.**

OUTLOOK: **Excellent** Wisconsin will need to increase its out-of-state recruitment effort to meet the future needs of this state. Based on the survey data this is an improved recommendation from the previous year.

Emotional Disturbance

Two hundred and twenty-two people completed licensure in the area of emotional disturbance (ED) in Wisconsin during the 1996-1997 school year (Table 1). A total of 54 full-time equivalent positions in learning disabilities were filled by Wisconsin prepared inexperienced teachers in the Wisconsin Public Schools (Table 4) for the 1997-1998 school year. Wisconsin Public Schools hired 54 new Wisconsin-prepared inexperienced teachers in full-time equivalent positions in emotional disturbance during the 1997-1998 school year (Table 7). But the employment percentage (Table 7) is not a good indicator of the employment outlook since it does not reflect the large number of new teachers entering the field with emergency licenses. The 1997 district survey produced a "good" rating. Few teachers are hired outside

of their licensed field (Table 7). This high level of employability is evident in the large number of teachers employed on emergency licenses (404) (Table 15.1). The special education field attrition rate for teachers was 7.6 percent (Table 9.23).

OUTLOOK: **Excellent to Good** The data demonstrates the critical need for increasing the number of teachers prepared to work with children identified as emotionally disturbed. The emergency license data indicates this field has the greatest shortage of teachers.

Related Services

Related services are relatively difficult areas to investigate primarily because of limitations in the database. Nonetheless, these fields are an important part of the educational services provided in Wisconsin, and the following information will lend some insight into the employment prospects for these fields. The data collected in the 1995 edition of this report is presented as a supplement to the 1998 data since a separate analysis was not done for this report.

School Audiologist

This field is relatively new for this state, (effective July 1, 1994), which accounts for the small number of individuals and limitations of the database. Very few districts had identified vacancies.

OUTLOOK: **Average** This rating is based on the time in months to fill the vacancies and the number of applicants for each position for this new field.

Educational Interpreter

Based on the survey results indicating time to fill the vacancies and the number of applications received, a general picture of the personnel status of this field was determined. A cause for concern is that many of the candidates did not have adequate educational training for the field.

OUTLOOK: **Average** This rating is based on the time in months to fill the vacancies and the number of applicants for each position in this new field.

Physical Therapists

The recommendation is based on the related services survey and the district survey data in the 1997 report. That survey showed that the need for physical therapist was greatest of all the related services, and overall indicated a shortage more severe than in any other field. Many districts contract people outside of education for this service. Data collected in previous years has consistently indicated a critical shortage of personnel in this field. The survey reported in the 1995 edition of this study showed that there is a severe shortage of physical therapists in all areas of the state. The attrition rate reported was low-- 4.3 percent (Table 9.24). Retirements will be moderate in the near future. The comments on the survey from the respondents consistently indicated that the field of physical therapy had the most critical shortage of personnel of any related service area.

OUTLOOK: **Excellent** All the data sources support the recommendation that the employment opportunities are excellent for this field in the public schools.

Physical Therapist Assistant

The availability of licensing for this field is new for the state, effective July 1, 1993, which accounts for the small numbers of individuals in the field and the limitations of the database.

OUTLOOK **Excellent** This recommendation is in part driven by the critical shortage of physical therapists, which should increase the demand for assistants.

Occupational Therapists

The recommendation presented is based on the related services survey and the 1997 district survey data. As with physical therapy, many individuals in this field secure positions outside of education. The attrition was 6 percent (Table 9.25). This field has the second highest rating in the related services area, indicating a severe shortage of personnel.

OUTLOOK: **Good to Excellent** There is a shortage of occupational therapists for programs serving children with disabilities.

Occupational Therapist Assistant

The availability of licensing for this field is relatively new for the state, effective July 1, 1993, which accounts for the relatively small numbers of individuals in the field and the limited data.

OUTLOOK: **Good** There is a moderate shortage of occupational therapist assistants.

School Psychologists

Sixty-seven people completed licensure in Wisconsin during the 1996-1997 school year (Table 1). The data presented here are based on the 1995 related services survey and the 1997 district survey. The district survey showed that there was a high average number of candidates available for positions. During the 1997-1998 school year 25 school psychologists were hired in the public schools (Table 3). The attrition reported was only 3.7 percent (Table 9.26). Retirements will be moderate in future years. The available data suggests that the current level of preparation is adequate to meet the needs of the state.

OUTLOOK: **Average** The employment outlook for this field is "average", with geographical mobility a factor in employment.

School Social Worker

The recommendation presented is based on the related services survey and the 1997 district survey. Twenty-four people completed licensure in Wisconsin during the 1996-1997 school year (Table 1). The attrition was a high 4.4 percent (Table 9.27). The 1997 district survey showed an "average" need for candidates in this field.

OUTLOOK: **Average** Based on the data available, an adequate supply of school social workers is available to serve the children in public schools with geographical mobility being a factor in employment.

Registered Nurse

The recommendation presented is based on the related services survey alone. The data suggests that an adequate supply of registered nurses is available for the public schools.

OUTLOOK: **Average**

School Counselors

One hundred forty-three people completed licensure in Wisconsin during the 1996-1997 school year (Table 1.1). The attrition was 6 percent (Table 9.28). Future retirements will have only a moderate effect. The 1997 district survey points to an average rating in terms of candidates available in this field.

OUTLOOK: **Average** The number of counselors being prepared meets the needs.

School Administrators

District Administrators

Thirteen people completed licensure in the area of district administrator in Wisconsin during 1996-1997 (Table 1.1). The data in Table 4 indicated 26 administrative positions were filled in the 1997-1998 school year. The 1997 district survey showed that there were 21 vacancies and the rating for these vacancies was in the high average range, suggesting an adequate supply of candidates. The attrition for this field was a high 12.3 percent (Table 9.29). The projected future retirements will significantly increase the demand for personnel in this field.

OUTLOOK: **Good** Based on the projected high retirement levels, the number of administrators prepared will need to be increased to meet the needs of the field.

Principals

Two hundred and six people completed a principal program in Wisconsin during the 1996-1997 school year (Table 1). The large number of people prepared far exceeds the employment opportunities. It may be that many licensed teachers who complete a principal license may choose not to seek an administrative position. The 1997 district survey showed that there were 108 vacancies listed at the elementary level and 81 at the secondary level. The rating given both the elementary and secondary principal positions was very similar and in the low average range. The attrition was 6.7 percent (Table 9.30). Retirements will increase the employability of educators in this field.

OUTLOOK: **Average to Good** The outlook for becoming a principal has been poor to average for many years. This year's improvement is based on the projected retirements. The outlook would be poorer were it not for the fact that many individuals with this licensure apparently do not seek positions.

Director of Special Education

Twenty-three new licenses were reported earned in 1996-1997 (Table 1.1)**.** Table 4 indicated that 28 directors of special education were hired in 1997-1998. The 1997 district survey showed that there were 29 vacancies . This same survey gave a good rating of employability based on the number of applicants for each position. The attrition was 6.3 percent (Table 9.31). The retirement data shows that this field had the second highest projected loss of personnel of any educational field.

OUTLOOK: **Good to Excellent** Based on the limited data available there will be an increased shortage of licensed directors of special education.

5. Summary And Recommendations

The following summary and recommendations represent the researcher's judgments based on experience in working with the data. The researcher hopes these recommendations will facilitate the informed use of the findings. The projected gradual increase over the next eleven years in the cohort of educators selecting retirement will increase the employability of those seeking positions in the public schools. In this light, the data in this report represent an opportunity to carefully study the preparation of teachers in Wisconsin. The current large surplus of educators in many subject areas will continue to exist in Wisconsin unless teacher preparation programs continue their effort to control enrollment in those fields with the greatest surplus and provide incentives to attract prospective teachers to the fields of need. The data in this report indicate that three of the state supported schools are showing success in preparing teachers from diverse ethnic backgrounds. These and other campuses should be encouraged to continue efforts to recruit minority teachers.

The licensed educators prepared by the Wisconsin teacher training programs are competent professionals who deserve the opportunity to practice their careers in settings that reflect their earned competency and support their potential contribution to society. The quality of individuals entering the teaching force is, to a large extent, based on competition from other fields. Economic incentives offered by business, computer science, medicine, law, and other professions might limit the number of people with the required abilities and skills entering the field of education. The supply of educators remains, to an extent, a function of the attractiveness of the profession. The problems of the large proportion of education positions only offering part-time employment, the large surplus of teachers in many fields, and the state support of private schools with lower salaries and lack of training standards are strong disincentives to attract competent candidates. Also there is concern that pupils with challenging learning needs would face discrimination when they are not given the same opportunity to participate or they receive instruction from less than qualified teachers. These factors have a more negative impact on the quality of education in Wisconsin than any positive gains seen by the legislative decision to provide funding for select pupils in private schools. Thus it is imperative that all educators be provided every means of support so that the intrinsic value of teaching continues to attract quality individuals while meeting the personnel needs of those areas with a shortfall of personnel

The perception persists, supported by the national media, that there are good employment opportunities in education. The data in this report and past studies have shown that this is not true for full-time positions in many fields of education in Wisconsin Public Schools. The large reserve pool of teachers that exists in this state will moderate any immediate shortfall that might occur with increased retirements. It is important that the findings of this report be communicated to prospective teachers by disseminating the information about employment opportunities so as to facilitate their career decisions and allow market conditions to help alleviate shortages in certain fields. Students should be encouraged to select fields where shortages exist and be willing to teach in urban areas.

New is a supplement from the University of Wisconsin System Administration which presents information from the University System Placement Offices. The employment projections of these data present a higher employability figure because included as employed in education are the part-time positions counted as head-count, non-public and private school employment, substitute teachers, teacher aides, and those employed in out-of-state positions.

Wisconsin Institutions of Higher Education, in collaboration with the Wisconsin Department of Public Instruction, should develop/design incentives to encourage students to chose teaching fields where shortages of teachers exist. It is hoped that the University of Wisconsin System will encourage its campuses to expand enrollment and add programs in the areas of shortages referred to in this report.

Over the past several years, the information provided in this report has helped to clarify our understanding of the educator supply and demand picture for Wisconsin Public Schools. The researcher

believes these diverse inquiries will provide information useful in a variety of contexts to improve the quality of educational opportunities offered for Wisconsin children.

6. Supporting Data

Table 1.1

Number of Program Completers, Wisconsin State Universities, 1996-1997 *

PROGRAM	UW-Eau Claire	UW-Green Bay	UW-La Crosse	UW-Madison	UW-Milwaukee	UW-Oshkosh	UW-Parkside	UW-Platteville	UW-River Falls	UW-Stevens Pt.	UW-Stout	UW-Superior	UW-Whitewater	TOTAL SYSTEM	TOTAL PRIVATE	**GRAND TOTAL**
Elementary																
80-188 Elementary	90	44	128	148	175	115	28	21	110	144	81	48	113	1245	464	1709
Secondary/Speciality																
200 Agriculture	0	0	0	0	0	0	0	2	17	0	0	0	0	19	0	19
210-215 Family/Cons. Ed.	0	0	0	1	0	0	0	0	0	10	7	0	0	18	0	18
220-235, 293-299 Tech. Ed.	0	0	0	0	0	0	0	3	0	0	33	0	0	36	0	36
250-251 Business Ed.	3	0	0	0	0	0	0	0	0	0	1	2	18	24	6	30
285 Marketing	0	0	0	0	0	0	0	0	0	0	20	0	0	20	0	20
300,310,320,325 English	20	9	16	17	15	10	5	10	17	21	0	2	20	162	80	242
315-317 Reading	7	0	11	5	14	25	0	4	12	11	0	4	9	102	79	181
350-390 Foreign Language	10	7	5	22	16	10	5	9	3	18	0	0	11	116	45	161
395 English as a 2nd Lang.	1	3	0	0	10	0	0	0	0	16	0	0	0	30	7	37
400-430 Math	17	4	7	23	11	9	1	12	12	8	0	3	15	122	50	172
500-515 Music	16	8	6	5	10	5	1	5	8	15	0	3	13	95	38	133
530-536 Physical Education	7	0	30	5	1	17	0	7	13	22	0	7	23	132	18	150
550 Art	8	4	7	12	13	10	1	2	6	12	15	3	6	99	22	121
600-637 Science	13	5	8	26	17	6	1	8	15	31	0	4	16	150	31	181
700-761 Social Studies	22	9	18	20	23	18	3	24	21	25	0	8	11	202	130	332
900-905 Instr. Lib. Media	5	0	0	11	24	3	0	0	0	0	0	1	14	58	0	58
Total Secondary/Speciality	129	49	108	147	154	113	17	86	124	189	76	37	156	1385	506	1891
Special Education																
805 Hearing Impaired	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	2
806 Cog. Dis.	17	0	0	5	12	16	0	0	0	17	16	0	14	97	18	115
808 EC:EEN	27	0	0	6	8	7	0	0	0	10	0	0	16	74	11	85
811 Learning Disabilities	39	0	1	4	26	50	0	0	11	33	0	7	47	218	20	238
820 Speech/Language Path	3	0	0	25	7	4	0	0	13	18	0	0	7	77	15	92
830 Emotional Disturbance	13	0	5	12	29	48	0	0	0	20	0	14	43	184	38	222
Total Special Education	99	0	6	52	84	125	0	0	24	98	16	21	127	652	100	752
Related Services																
963-967 School Counselor	0	0	0	13	40	17	0	20	12	0	22	12	2	138	5	143
50 School Social Worker	0	0	0	4	20	0	0	0	0	0	0	0	0	24	0	24
62 School Psychologist	0	0	9	3	11	0	0	0	5	0	5	8	20	61	6	67
Total Related Services	0	0	9	20	71	17	0	20	17	0	27	20	22	223	11	234
Administration																
03 District Administrator	0	0	0	7	9	0	0	0	0	0	0	1	0	17	0	17
51 Principal	0	0	0	33	31	0	0	0	0	0	0	35	0	99	107	206
80 Dir. of Sp. Ed./Pup. Ser.	0	0	0	2	10	0	0	0	0	0	0	10	1	23	1	24
Total Administration	0	0	0	42	50	0	0	0	0	0	0	46	1	139	108	247
Total Program	318	93	251	409	534	370	45	127	275	431	200	172	419	3644	1189	4833

* The numbers in Tables 1.1 and 1.2 include individuals with an initial license and any other earned license.

Source: Bureau for Teacher Education, Licensing and Placement, Department of Public Instruction, as reported by the Wisconsin public teacher preparation programs, 1998.

Table 1.2

Program Completers, Wisconsin Independent Colleges and Universities, 1996-1997 *

PROGRAM **	Alverno	Beloit	Cardinal Stritch	Carroll College	Carthage	Concordia	Edgewood	Lakeland	Lawrence	Maranatha Baptist	Marian	Marquette	Mt. Mary	Mt. Senario	Northland	Ripon ***	Silver Lake	St. Norbert	Viterbo	Wisconsin Lutheran	TOTAL PRIVATE	TOTAL UW SYSTEM	GRAND TOTAL
Elementary																							
80-188 Elem.	61	4	61	32	28	17	27	20	0	2	31	42	1	16	10	7	26	54	16	9	464	1245	1709
Secondary/Speciality																							
200 Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19
Fam/Cons. Ed.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18
Techology Educ.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	36
250-251 Bus. Ed.	0	0	0	0	0	3	1	1	0	0	0	0	1	0	0	0	0	0	0	0	6	24	30
285 Marketing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20
Eng./Jour./Speech	8	6	5	2	5	13	5		8	0	2	12	5	0	0	1	1	6	1	0	80	162	242
315-317 Reading	0	0	34	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	79	102	181
Foreign Language	0	1	2	5	3	1	6	1	5	0	1	10	1	0	0	3	0	6	0	0	45	116	161
Eng. as 2nd Lang.		6	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	30	37
400-430 Math	2	0	5	4	1	9	5	4		3	1	8	1	2	1	0	0	4	0	0	50	122	172
500-515 Music	4	0	0	1	2	0	0	1	14	0	2	0	0	0	1	2	0	5	5	1	38	95	133
530-536 Phy. Ed.	0	0	0	5	9	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	18	132	150
550 Art	6	2	0	0	0	0	0	0	2	0	1	0	1	0	0	0	3	2	5	0	22	99	121
600-637 Science	1	0	0	0	0	3	9	1	5	0	3	4	0	0	1	0	0	3	0	1	31	150	181
Social Science	10	10	6	9	10	10	14	6	8	1	2	14	9		3	0	3	14	1		130	202	332
Instr. Lib. Med.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	58
Tot. Sec/Speciality	31	25	52	26	31	42	40	14	43	5	12	48	18	2	6	6	7	40	56	2	506	1385	1891
Special Education																							
805 Hearing Imp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
806 Cog. Dis.	0	0	15	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	18	97	115
808 EC:EEN	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	2	0	11	74	85
811 Learning Dis.	0	0	8	0	4	0	1	0	0	0	0	0	0	0	0	0	7	0	0	0	20	218	238
Sp./Lang. Path.	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	15	77	92
830 Emot. Dist.	0	0	22	0	1	0	2	0	0	0	0	0	0	0	0	0	13	0	0	0	38	184	222
Total Special Educ.			49		6		7					15					23				100	652	752
Related Services																							
School Counselor	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	5	138	143
Sch. Soc. Worker	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	24
62 School Psy.	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	6	61	67
Total Related Ser.											1	10									11	223	234
Administration																							
03 District Adm.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	13
51 Principal	0	0	16	0	0	6	16	0	0	0	59	10	0	0	0	0	0	0	0	0	107	99	206
Dir.Sp.Ed./Pup.Ser.	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23	23
Total Adm.			16			6	17				59	10									82	139	221
Total Program	92	29	178	58	65	65	91	34	43	7	103	125	19	18	16	13	56	94	72	11	1189	3644	4833

* The numbers in Tables 1.1 and 1.2 include individuals with an initial license and any other earned license.

** Some licensing codes were deleted due to space limitations. Please refer to Table 1.1 for a more complete listing.

*** Ripon did not submit data for this 1998 report so the figures in this table represnt the data submitted for 1997.

Source: Bureau for Teacher Education, Licensing and Placement, Department of Public Instruction, as reported by Wisconsin private teacher preparation programs, 1998.

Table 2

Number of Program Completers by Level/Speciality, 1980-1997

YEAR	ELEMENTARY	SECONDARY	SPECIAL ED.
80-81	Data Not Collected		861
81-82			826
82-83			780
83-84			919
84-85			738
85-86			733
86-87	2234	2070	765
87-88	2034	2308	678
88-89	2166	2250	707
89-90	2101	2333	742
90-91	2076	1966	505
91-92	1760	1709	530
92-93	1829	1754	718
93-94	1688	2121	709
94-95	1738	1939	793
95-96	1680	2134	857
96-97	1709	1891	752

Source: Bureau for Teacher Education, Licensing, and Placement, Department of Public Instruction as Reported by Wisconsin Teacher Preparation Programs, 1980-1997.

Table 3.1

The Head Count Number of Educators Prepared in Wisconsin State Universities and Newly Hired by Wisconsin Public Schools in 1997-1998 *

PROGRAM	Institution															
	UW-Eau Claire	UW-Green Bay	UW-La Crosse	UW-Madison	UW-Milwaukee	UW-Oshkosh	UW-Parkside	UW-Platteville	UW-River Falls	UW-Stevens Point	UW-Stout	UW-Superior	UW-Whitewater	TOTAL UW SYSTEMS	TOTAL PRIVATE	GRAND TOTAL
Elementary																
80-188 Elementary	14	10	28	45	63	24	5	16	8	31	14	5	38	301	96	397
Secondary/Middle																
200 Agriculture	0	0	0	2	0	0	0	0	9	0	1	0	0	12	0	12
210-215 Family/Cons. Ed.	0	0	0	0	0	0	0	0	0	4	9	0	0	13	3	16
220-235,293-299Tech.Ed.	0	0	1	0	0	1	0	0	2	3	14	0	2	23	3	26
250-251 Business Ed.	3	0	0	0	0	0	0	0	1	1	2	2	14	23	5	28
300,310,320,325 English	7	5	8	9	5	12	2	5	2	7	0	1	13	76	34	110
315-317 Reading	2	1	4	2	6	4	1	0	2	1	0	0	2	25	5	30
350-390 Foreign Language	5	3	4	7	6	6	2	2	2	5	0	1	4	47	16	63
395 English as a 2nd Lang.	2	4	2	0	4	0	0	0	0	2	0	0	1	15	3	18
400-430 Math	12	3	7	12	6	12	0	6	4	6	0	2	9	79	26	105
500-515 Music	5	3	3	3	4	3	1	4	2	6	0	2	6	42	10	52
530-536 Physical Educ.	1	0	18	2	4	13	0	6	7	10	0	1	10	72	9	81
550 Art	4	2	3	12	11	3	1	1	0	3	2	1	2	45	6	51
600-637 Science	9	2	3	15	6	8	0	3	3	14	0	2	8	73	23	96
700-761 Social Studies	9	2	5	12	17	4	5	4	5	8	0	2	9	82	21	103
900-905 Instr. Lib. Media	1	0	3	3	2	2	0	0	1	1	0	1	1	15	3	18
Total Secondary/Middle	60	25	61	79	71	68	12	31	40	71	28	15	81	642	167	809
Special Education																
805 Hearing Impaired	0	0	0	0	3	0	0	0	0	0	0	0	0	3	1	4
806 Cog. Dis.	5	2	2	4	2	9	0	0	0	3	5	0	3	35	8	43
808 EC:EEN	8	0	0	4	5	1	0	0	0	5	2	0	6	31	5	36
811 Learning Disabilities	10	0	3	6	10	15	0	0	0	14	2	0	17	77	12	89
820 Speech/Language Path.	2	0	0	7	5	5	0	0	0	8	0	0	3	30	3	33
830 Emotional Disturbance	7	2	7	8	6	10	1	0	0	2	0	0	8	51	13	64
Total Special Education	32	4	12	29	31	40	1	0	0	32	9	0	37	227	42	269
Related Services																
963-967 School Counselor	0	0	0	4	3	2	0	5	1	0	3	2	0	20	2	22
50 School Social Worker	0	0	0	1	12	0	0	0	0	0	0	0	0	13	1	14
62 School Psychologist	0	0	4	1	4	0	0	0	1	0	2	2	7	21	4	25
Total Related Services	0	0	4	6	19	2	0	5	2	0	5	4	7	54	7	61
Total Program	106	39	105	159	184	134	18	52	50	134	56	24	163	1224	312	1536

* Total includes part-time positions and duplicate count of individuals who are teaching in two different subject fields.

Source: Wisconsin Educator Supply and Demand Project, 1998. Data from the School Staff and Teacher Personnel Report.

Table 3.2

The Head Count Number of Educators Prepared in Wisconsin Independent Schools and Universities and Newly Hired by Wisconsin Public Schools in 1997-1998 *

PROGRAM **	Institution																				
	Alverno	Beloit	Cardinal Stritch	Carroll College	Carthage	Concordia	Edgewood	Lakeland	Lawrence	Marian College	Marquette Univ.	Mt. Mary	Mt. Senario	Northland	Ripon	Silver Lake	St. Norbert	Viterbo	TOTAL PRIVATE	TOTAL UW SYSTEMS	GRAND TOTAL
Elementary																					
Elementary	19	1	10	3	2	3	6	3	0	6	14	5	1	2	2	3	16	0	96	301	397
Sec./Middle																					
200 Agriculture	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	12
Fam./Cons. Ed.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	3	13	16
Technology. Educ	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	23	26
Business Ed.	1	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	0	0	5	23	28
Eng./Jour/Sp.	4	3	2	1	1	1	3	2	2	0	6	1	0	0	3	0	5	0	34	76	110
315-317 Read.	1	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	1	5	25	30
Foreign Lang.	0	0	1	3	2	0	3	0	0	2	0	2	0	0	2	0	1	0	16	47	63
Eng. 2nd Lang.	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3	15	18
400-430 Math	8	0	2	0	1	0	0	2	0	1	2	1	1	0	1	2	4	1	26	79	105
500-515 Music	0	0	0	1	1	0	1	0	1	0	0	1	0	0	0	0	4	1	10	42	52
Physical Educ.	0	0	0	1	3	2	0	0	0	0	0	0	0	1	2	0	0	0	9	72	81
550 Art	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	6	45	51
600-637 Sci.	3	0	1	4	0	0	3	2	1	1	5	0	0	0	1	0	2	0	23	73	96
Social Studies	3	0	2	1	0	1	2	2	0	2	2	1	0	0	0	1	4	0	21	82	103
Inst Lib Media	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	15	18
Tot. Sec./Mid.	22	5	10	13	8	6	12	11	5	7	18	6	1	1	12	4	21	5	167	642	809
Special Education																					
805Hearing Imp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	4
806 Cog. Dis.	1	0	3	0	0	1	0	2	0	0	0	0	0	0	1	0	0	0	8	35	43
808 EC:EEN	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5	31	36
811 Learn. Dis.	2	0	0	2	1	0	0	0	0	1	0	0	0	1	0	4	0	1	12	77	89
Sp./Lang Path.	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	3	30	33
830 Emot. Dist.	1	0	0	0	1	1	0	2	0	1	1	1	0	0	2	2	1	0	13	51	64
Tot. Spec. Educ.	4	0	6	2	2	2	2	4	0	2	3	1	0	1	5	6	1	1	42	227	269
Related Services																					
School Counselor	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	20	22
50 Soc. Worker	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	14
62 School Psy.	0	0		0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	4	21	25
Tot. Rel. Ser.	0	0	1	0	0	0	0	0	0	0	4	0	0	0	2	0	0	0	7	54	61
Total Program	45	6	27	18	12	11	20	18	5	15	39	12	2	4	21	13	38	6	312	1224	1536

* Total includes part-time positions and duplicate count of individuals who are teaching in two different subject fields.

** Some licensing codes were deleted because of space liminations. See Table 3.1 for a more complete l

Source: Wisconsin Educator Supply and Demand Project, 1998. Data from the School Staff and Teacher Personnel Report

Table 4

Sources of Newly Hired Teachers by FTE in Wisconsin Public Schools 1997-1998

	Wis. Newly Hired Educ. Without Experience		Wisconsin Experienced Educators Returning		Experienced Educators Relocating		Out-of-State Educators Without Experience		Out-of State Educators With Experience		**Total**
050 Elem. Ed. K-8	**371**	**62%**	**54**	**9%**	**78**	**13%**	**61**	**10%**	**33**	**6%**	**597**
Sec/Spec. Areas *											
200 Agriculture	10	77%	2	15%	1	8%	0	0%	0	0%	13
210-215 Family/Con Ed	12	44%	6	22%	6	22%	0	0%	3	11%	27
220-325,291-99 Tec Ed	19	35%	10	18%	18	33%	4	7%	4	7%	55
250-251 Bus. Ed/Mark.	16	33%	5	10%	21	43%	6	12%	1	2%	49
Eng/Jour/Speech/Drama	81	49%	23	14%	39	24%	14	9%	7	4%	164
315-317 Reading	16	31%	11	22%	14	27%	5	10%	5	10%	51
350-390 Foreign Lang	43	49%	11	13%	21	24%	10	11%	3	3%	88
305 Eng. as a Sec. Lang.	12	52%	4	17%	2	13%	3	13%	2	9%	23
400-430 Math	77	48%	26	16%	32	20%	14	9%	13	8%	162
500-515 Music	36	32%	16	14%	38	34%	11	10%	11	10%	112
530-536, 910 P.E./Hea.	58	55%	9	9%	26	25%	8	8%	4	4%	105
550 Art	39	63%	6	10%	10	16%	5	8%	2	3%	62
600-637 Science	69	48%	18	13%	34	24%	14	10%	9	6%	144
700-761 Social Science	68	54%	11	9%	30	24%	11	9%	6	5%	126
Sec./Spec. Total	**556**	**47%**	**158**	**13%**	**292**	**25%**	**105**	**9%**	**70**	**6%**	**1181**
Special Education											
805 Hearing Disability	3	19%	1	6%	5	31%	5	31%	2	13%	16
806-807 Cognitive Dis.	43	52%	10	12%	13	16%	14	17%	3	4%	83
808 Early Childhood Dis.	19	53%	4	11%	10	28%	1	3%	2	6%	36
811 Learning Disability	75	50%	19	13%	29	19%	16	11%	11	7%	150
825 Visual Disabilities	0	0%	0	0%	3	75%	1	25%	0	0%	4
830 Emotional Dist.	57	47%	21	17%	30	25%	11	9%	3	2%	122
84 Speech/Lang. Path.	29	53%	7	13%	13	24%	3	5%	3	5%	55
Special Educ. Total	**226**	**48%**	**62**	**13%**	**103**	**22%**	**51**	**11%**	**24**	**5%**	**466**
Related Services											
54 School Counselor	19	27%	10	14%	28	40%	6	9%	7	10%	70
55 Psychologist	21	47%	4	9%	18	40%	2	4%	0	0%	45
59 Phy. Therapist **	3	43%	1	14%	1	14%	2	29%	0	0%	7
63 Occ. Therapist **	9	69%	0	0%	1	8%	1	8%	2	15%	13
Related Ser. Total	**52**	**39%**	**15**	**11%**	**48**	**36%**	**11**	**8%**	**9**	**7%**	**135**
Adm. Areas											
05,06 Administrator	1	4%	2	8%	20	77%	1	4%	2	8%	26
51 Principal	21	18%	5	4%	81	68%	4	3%	9	8%	120
80 Dir. of Special Ed.	2	7%	1	4%	19	68%	5	18%	1	4%	28
Adm. Total	**24**	**14%**	**8**	**5%**	**120**	**69%**	**10**	**6%**	**12**	**7%**	**174**
GRAND TOTAL	**1229**	**48%**	**297**	**12%**	**641**	**25%**	**238**	**9%**	**148**	**6%**	**2553**

* Some licensing codes were deleted because of space liminations. See Table 3.1 for comparison.

** OT and PT numbers do not account for the individuals hired through contracted services.

Source: Wisconsin Educator Supply / Demand Project, 1998. Data from the Staff and Teacher Personnel Report

Table 5

Number of Newly Hired Educators by FTE from 1993-1994 through1997-1998

	93-94	94-95	Change	95-96	Change	96-97	Change	97-98	Change
Elementary Education									
050 Elem. Ed. K-8)	**696**	**961**	**265**	**589**	**-372**	**503**	**-86**	**597**	**94**
Sec/Spec. Areas									
200 Agriculture	14	20	6	23	3	16	-7	13	-3
210-215 Family/Con Ed	32	50	18	23	-27	37	14	27	-10
220-325,291-99 Tech Ed	47	70	23	44	-26	50	6	55	5
250-251 Business Ed	46	54	8	35	-19	39	4	49	10
Eng/Jour/Speech/Drama	143	217	74	140	-77	129	-11	164	35
315-317 Reading	75	95	20	75	-20	51	-24	51	0
350-390 Foreign Lang	98	150	52	64	-86	87	23	88	1
305 Eng. as a Sec. Lang.	29	40	11	22	-18	20	-2	23	3
400-430 Math	174	228	54	115	-113	124	9	162	38
500-515 Music	154	174	20	93	-81	99	6	112	13
530-536, 910 P.E./Hea.	93	134	41	82	-52	85	3	105	20
550 Art	61	86	25	51	-35	53	2	62	9
600-637 Science	165	227	62	139	-88	138	-1	144	6
700-761 Social Science	107	158	51	89	-69	85	-4	126	41
Sec./Spec. Total	**1238**	**1703**	**465**	**995**	**-708**	**1013**	**18**	**1181**	**168**
Special Education									
805 Hearing Disability	13	13	0	14	1	11	-3	16	5
806-807 Cognitive Dis.	76	121	45	62	-59	70	8	83	13
808 Early Childhood Dis.	47	66	19	38	-28	29	-9	36	7
811 Learning Disability	199	201	2	181	-20	130	-51	150	20
825 Visual Disabilities**	5	7	2	7	0	5	-2	4	-1
830 Emotional Dist**.	188	186	-2	222	36	105	-117	122	17
84 Speech/Lang. Path.	91	101	10	43	-58	68	25	55	-13
Special Educ. Total	**619**	**695**	**76**	**567**	**-128**	**418**	**-149**	**466**	**48**
Related Services									
55 Psychologist	41	54	13	28	-26	29	1	45	16
59 Phy. Therapist *	26	10	-16	7	3	6	-1	7	1
63 Occ. Therapist *	19	13	-6	12	-1	11	-1	13	2
Related Ser. Total	**86**	**77**	**-9**	**47**	**-30**	**46**	**-1**	**65**	**19**
GRAND TOTAL	**2639**	**3436**	**797**	**2198**	**-1238**	**1980**	**-218**	**2309**	**329**

* Contracted therapists are employees who may not be identified in the state database.

** A comparison cannot be made since the new emergency licenses in the LD and Ed areas were not included in the 1996-1997 data.

Source: Wisconsin Educator Supply and Demand Project, 1997. Data from the Staff and Teacher Personnel Report.

Table 6

New Minority Teachers from Wisconsin Teacher Preparation Institutions Hired in the Wisconsin Public Schools in the 1996-1997 and 1997-1998 School Year

Training Inst.

Private	**Elem. Females**	**Elem. Males**	**Sec. Females**	**Sec. Males**	**Spec. Ed. Females**	**Spec. Ed. Males**	**TOTAL**
Alverno	9		1		9		19
Beloit							0
Cardinal Stritch	3	1	3	1	3	1	12
Carroll	1		1	4			6
Carthage							0
Concordia				1			1
Dominican				1			1
Edgewood							0
Lakeland	3	3	2	1			9
Lawrence			1				1
Maranatha							0
Marquette	3	1	4	2		1	11
Mount Mary	1		1				2
Northland					1		1
Mount Senario		1					1
Parkside			1		1		2
Ripon						1	1
Silver Lake							0
St. Norbert	3						3
Viterbo							0
Wis. Lutheran							0
State Univ.							
UW-Eau Claire			2	1		1	4
UW-Green Bay							0
UW-La Crosse			2	2			4
UW-Madison	9	2	5	4		1	21
UW-Milwaukee	22	3	16	5	5	2	53
UW-Oshkosh	2				1		3
UW-Platteville			1				1
UW-River Falls							0
UW-Stevens Pt.	1		2				3
UW-Stout				1		1	2
UW-Superior				2			0
UW-Whitewater	10		6	7	3		26
Unknown, 0999	8		2	3	1		14
Two Year Total	**75**	**11**	**50**	**35**	**24**	**8**	**201**

Source: Wisconsin Teacher Supply and Demand Project, 1998. Data from the School Staff and Teacher Personnel Report.

Table 7

Employment Rates for Wisconsin Prepared Teachers First Hired by Wisconsin Public Schools by FTE

	Programs Completed by teachers	Employed in License Field 1997-98*		Employed in Other License Field		Total Employed Including Multiple Fields 1997-98	
	1996-97	Number	Percent	Number	Percent	Number	Percent
ELEMENTARY EDUCATION	1	2	3	4	5	6	7
100-188 EL (K-8)	1,709	444	26%	60	4%	504	29%
SECONDARY EDUCATION							
200 Agriculture	19	10	53%	1	5%	11	58%
210-215 Family/Con. Ed.	18	11	61%	1	6%	12	67%
220-235,293-299 Tec. Ed.	36	20	56%	1	3%	21	58%
250-251,Business	30	13	43%	0	0%	13	43%
285 Marketing Education	20	3	15%	0	0%	3	15%
300, 310, 320, 325							
Eng/Journ/Speech/Drama	242	63	26%	12	5%	75	31%
350-390 Foreign Language	161	36	22%	5	3%	41	25%
400-430 Math	172	48	28%	7	4%	55	32%
500-515 Music	133	36	27%	2	2%	38	29%
530-536 Phy. Ed.	150	60	40%	2	1%	62	41%
550 Art	121	38	31%	2	2%	40	33%
600-637 Science	181	50	28%	7	4%	57	31%
700-761 Social Studies	332	57	17%	28	8%	85	26%
SECONDARY TOTAL	1,615	445	28%	68	4%	513	32%
SPECIAL EDUCATION *							
805 Hearing Disabilities	2	3	150%	0	0%	3	150%
806-807 Cognitive Dis.	115	44	38%	9	8%	53	46%
808 Early Childhood	85	18	21%	13	15%	31	36%
811 Learning Disabilities**	238	72	30%	19	8%	91	38%
830 Emotional Disturbance**	222	54	24%	31	14%	85	38%
SPECIAL ED. TOTAL	662	191	29%	72	11%	263	40%
GRAND TOTAL	**3,986**	**1,080**	**27%**	**200**	**5%**	**1,280**	**32%**

* The number of individuals employed in each licensing field will differ from other tables since in this analysis the counts are by licenses earned rather than by subject position code.

** The numbers of newly hired teachers in learning disabilities and emotional disturbance do not reflect the large number of new emergency licenses in these fields, which depresses these count

Source: Wisconsin Educator Supply and Demand Project, 1998. Data from various DPI sources.

Table 8.1

Field Attrition Rates of Wisconsin Teachers for 1986-1997 *

	87-88	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96
General Ed.	6.0%	6.9%	8.0%	4.8%	5.9%	7.8%	6.4%	11.5%	6.5%
Special Ed.	9.3%	9.1%	8.7%	6.8%	8.3%	14%	10.9%	14.6%	8.4%
								* *	

Table 8.2

State Exit Attrition Rates and Field Transfers of Wisconsin Teachers for 199

Field * **	**State Exit Attrition**	**Transfers to Special Educ.**	**Trans. Within General Educ.**
Elementary	5.3 %	47	314
Secondary	5.9 %	34	245
Total General	5.7 %	81	559

Special Educ.	**State Exit**	**Special in Field**	**Trans. to Gen.**	**Trans. w/in Sp. Ed.**
EarlyChild. EC:EEN	6.2%	9.6%	19	5
Cognitive Dis.	6.6%	12.4%	25	33
Learning Dis.	4.9%	9.6%	64	35
Emotional Dis.	8.1%	15.8%	40	54
Total Special in CD, EC:EEN, LD, & ED	6.2%	11.8%	148	127

* Prior to 1991-92, the ELT's in special education were not included.

** During the 1993-1994 year the data base was not verified; this would inflate the attrition figure for the 1994-1995 year.

*** The variations in the attrition rates are consistent considering the fields included in each analysis. Those limited to a specific field will always be higher than those that combine areas. The 11.8 percent rate for special education represents the high transfer rate within special education while the state exit rate represents teachers who are not employed in the Wisconsin Public Schools, which results in a lower rate.

Source: Wisconsin Teacher Supply and Demand, 1998

Table 9

Subject Field Attrition, Numbers Employed, and New Hires by Age Cohorts

Table 9.1 Elementary Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	160	2399	2777	2096	2625	4255	3567	1863	627	136	20505
Number Left	18	181	157	94	59	78	59	258	160	56	1120
Attrition	.113	.075	.057	.045	.022	.018	.017	.138	.255	.412	.055
Total 97-98	441	2672	2803	2156	2696	4266	3550	1623	468	81	20756
% New	68.0%	16.9%	6.8%	7.0%	4.9%	2.5%	1.5%	1.3%	0.9%	1.2%	6.8%
Number New	300	452	192	150	133	106	52	21	4	1	1411

Table 9.2 Agriculture

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	13	48	35	53	47	44	34	24	1	0	299
Number Left	1	2	1	4	2	1	1	6	1	0	19
Attrition	.077	.042	.029	.075	.043	.023	.029	.250	1.000	.000	.064
Total 97-98	22	53	37	51	45	45	34	20	1	0	308
% New	50.0%	13.2%	8.1%	5.9%	0.0%	8.9%	2.9%	10.0%	0.0%	0.0%	10.1%
Number New	11	7	3	3	0	4	1	2	0	0	31

Table 9.3 Family/Consumer Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	3	34	47	92	174	265	190	93	26	5	929
Number Left	0	3	1	7	9	7	6	17	4	2	56
Attrition	.000	.088	.021	.076	.052	.117	.032	.183	.154	.400	.060
Total 97-98	17	40	47	99	171	271	192	78	22	3	940
% New	82.4%	27.5%	4.3%	12.1%	5.8%	4.1%	3.6%	3.8%	0.0%	0.0%	7.4%
Number New	14	11	2	12	10	11	7	3	0	0	70

Table 9.4 Technology Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	8	83	109	125	210	326	359	139	22	2	1383
Number Left	1	4	4	4	10	14	7	26	9	1	80
Attrition	.125	.048	.037	.032	.048	.043	.019	.187	.409	.500	.058
Total 97-98	30	97	114	137	210	329	363	115	15	1	1411
% New	76.7%	18.6%	8.8%	11.7%	4.8%	5.2%	3.0%	1.7%	13.3%	0.0%	7.7%
Number New	23	18	10	16	10	17	11	2	2	0	109

Table 9.5 Business/Marketing Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	7	111	142	138	164	232	220	115	28	7	1164
Number Left	2	9	10	4	7	5	6	18	15	3	79
Attrition	.286	.081	.070	.029	.043	.022	.027	.157	.536	.429	.068
Total 97-98	26	128	144	141	163	234	217	100	14	4	1171
% New	80.8%	18.8%	9.7%	7.8%	4.3%	3.4%	0.9%	3.0%	7.1%	0.0%	7.8%
Number New	21	24	14	11	7	8	2	3	1	0	91

Table 9.6 English/Journalism/Speech/Theater

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	51	548	449	346	446	958	944	449	114	20	4325
Number Left	6	52	30	12	12	23	19	71	40	3	268
Attrition	.118	.095	.067	.035	.027	.024	.020	.158	.351	.150	.062
Total 97-98	143	614	473	352	468	956	947	388	74	19	4434
% New	66.4%	20.7%	11.6%	9.1%	7.1%	3.5%	2.5%	1.8%	0.0%	0.0%	9.2%
Number New	95	127	55	32	33	33	24	7	0	0	406

Table 9.7 Reading

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	7	121	165	148	260	516	446	265	103	28	2059
Number Left	2	13	13	11	12	13	14	33	23	6	140
Attrition	.286	.107	.079	.074	.046	.060	.031	.125	.223	.214	.068
Total 97-98	19	151	170	145	277	535	460	236	82	22	2097
% New	78.9%	26.5%	12.4%	9.7%	7.2%	5.6%	5.4%	1.3%	0.0%	9.1%	8.1%
Number New	15	40	21	14	20	30	25	3	0	2	170

Table 9.8 Foreign Language

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	44	311	238	147	50	189	323	331	147	32	1812
Number Left	5	32	18	13	4	6	9	12	19	12	130
Attrition	.114	.103	.076	.088	.080	.032	.028	.036	.129	.375	.072
Total 97-98	93	331	247	158	52	190	326	332	133	21	1883
% New	62.4%	18.1%	11.3%	15.8%	17.3%	5.8%	4.3%	4.5%	3.8%	9.5%	12.1%
Number New	58	60	28	25	9	11	14	15	5	2	227

Table 9.9 English as a Second Language/Bilingual Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	39	37-33	32 -	
Total 96-97	4	63	67	60	50	72	62	39	10	3	430
Number Left	0	2	7	4	4	6	1	3	3	0	30
Attrition	.000	.032	.104	.067	.080	.083	.016	.077	.300	.000	.070
Total 97-98	19	74	69	59	52	69	66	36	7	2	453
% New	84.2%	29.7%	17.4%	11.9%	17.3%	4.3%	3.0%	5.6%	0.0%	0.0%	16.1%
Number New	16	22	12	7	9	3	2	2	0	0	73

Table 9.10 Mathematics

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	58	550	568	397	444	788	790	404	54	20	4073
Number Left	3	44	23	14	9	18	19	93	20	6	249
Attrition	.052	.080	.040	.035	.020	.023	.024	.230	.370	.300	.061
Total 97-98	151	646	607	425	471	779	802	314	39	15	4249
% New	.669	.181	.102	.078	.070	.026	.017	.016	.051	.067	.091
Number New	101	117	62	33	33	20	14	5	2	1	388

Table 9.11 Music

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	35	309	299	373	475	519	354	209	55	20	2648
Number Left	7	34	24	20	12	16	5	27	13	3	161
Attrition	.200	.110	.080	.054	.025	.060	.014	.129	.236	.150	.061
Total 97-98	85	328	299	369	485	519	358	183	43	17	2686
% New	.671	.171	.087	.051	.054	.039	.025	.011	.023	.000	.080
Number New	57	56	26	19	26	20	9	2	1	0	216

Table 9.12 Physical Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	13	329	434	465	570	721	566	241	48	5	3392
Number Left	0	26	20	13	16	7	7	56	21	2	168
Attrition	.000	.079	.046	.028	.028	.010	.012	.232	.438	.400	.050
Total 97-98	68	389	439	471	571	720	565	187	30	4	3444
% New	.779	.211	.057	.055	.032	.015	.011	.011	.067	.250	.066
Number New	53	82	25	26	18	11	6	2	2	1	226

Table 9.13 Art

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	7	131	169	213	343	471	344	156	37	10	1881
Number Left	0	7	14	9	10	12	13	21	7	3	96
Attrition	.000	.053	.083	.042	.029	.025	.038	.135	.189	.300	.051
Total 97-98	29	169	173	218	351	470	337	135	30	6	1918
% New	75.9%	26.6%	9.8%	6.9%	4.6%	2.8%	1.5%	0.7%	0.0%	0.0%	7.0%
Number New	22	45	17	15	16	13	5	1	0	0	134

Table 9.14 Science

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	36	420	487	344	413	584	725	406	76	6	3497
Number Left	1	39	20	20	18	11	12	91	19	3	234
Attrition	.028	.093	.041	.058	.044	.019	.017	.224	.250	.500	.067
Total 97-98	102	511	532	353	424	589	724	322	58	4	3619
% New	69.6%	24.3%	10.9%	5.7%	6.4%	2.9%	1.4%	1.6%	3.4%	25.0%	9.3%
Number New	71	124	58	20	27	17	10	5	2	1	335

Table 9.15 Social Studies

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	23	416	437	316	375	667	773	475	73	6	3561
Number Left	2	51	26	16	11	13	18	85	25	1	248
Attrition	.087	.123	.059	.051	.029	.046	.023	.179	.342	.167	.070
Total 97-98	85	513	460	325	374	678	767	397	48	4	3651
% New	69.4%	25.7%	9.3%	8.9%	4.0%	3.2%	1.4%	0.8%	0.0%	0.0%	8.6%
Number New	59	132	43	29	15	22	11	3	0	0	314

Table 9.16 Library/Media

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	6	51	60	95	204	473	356	183	87	14	1529
Number Left	0	7	4	8	5	14	9	23	29	4	103
Attrition	.000	.137	.067	.084	.025	.030	.025	.126	.333	.286	.067
Total 97-98	12	52	78	112	223	494	364	166	59	10	1570
% New	41.7%	13.5%	16.7%	14.3%	6.7%	6.5%	3.6%	3.0%	1.7%	0.0%	6.8%
Number New	5	7	13	16	15	32	13	5	1	0	107

Table 9.17 Hearing Impaired

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	3	36	30	30	46	52	22	5	0	0	224
Number Left	2	2	1	2	4	2	0	0	0	0	13
Attrition	.667	.056	.033	.067	.087	.038	.000	.000	.000	.000	.058
Total 97-98	4	44	32	27	42	52	22	5	2	0	230
% New	75.0%	22.7%	9.4%	7.4%	2.4%	5.8%	4.5%	0.0%	100.0%	0.0%	10.9%
Number New	3	10	3	2	1	3	1	0	2	0	25

Table 9.18 Cognitive Disability

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	27	189	189	230	274	317	128	46	11	1	1412
Number Left	3	19	20	14	15	21	3	6	3	0	104
Attrition	.111	.101	.106	.061	.055	.066	.023	.130	.273	.000	.074
Total 97-98	65	221	179	241	272	321	136	44	10	3	1492
% New	64.6%	21.3%	8.4%	11.6%	8.1%	8.7%	4.4%	11.4%	0.0%	66.7%	13.1%
Number New	42	47	15	28	22	28	6	5	0	2	195

Table 9.19 Early Childhood:EEN

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	16	104	115	124	164	146	60	21	7	3	760
Number Left	2	13	8	7	3	7	3	2	1	2	48
Attrition	.125	.125	.070	.056	.018	.212	.050	.095	.143	.667	.063
Total 97-98	37	120	107	120	164	147	56	20	7	1	779
% New	59.5%	22.5%	1.9%	2.5%	3.0%	4.1%	5.4%	5.0%	14.3%	0.0%	9.0%
Number New	22	27	2	3	5	6	3	1	1	0	70

Table 9.20 Learning Disabilities

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	43	406	359	386	621	608	288	110	42	12	2875
Number Left	1	23	25	30	24	22	9	11	4	3	152
Attrition	.023	.057	.070	.078	.039	.036	.031	.100	.095	.250	.053
Total 97-98	112	456	363	390	635	638	291	106	42	10	3043
% New	61.6%	18.9%	11.6%	10.0%	7.6%	8.6%	5.8%	3.8%	11.9%	0.0%	12.0%
Number New	69	86	42	39	48	55	17	4	5	0	365

Table 9.21 Speech and Language Pathology

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	10	147	195	260	354	379	189	69	26	8	1637
Number Left	4	14	15	11	12	7	3	3	5	1	75
Attrition	.400	.095	.077	.042	.034	.018	.016	.043	.192	.125	.046
Total 97-98	21	171	197	262	362	380	188	68	22	7	1678
% New	71.4%	22.2%	8.6%	6.5%	5.8%	3.4%	2.1%	2.9%	4.5%	0.0%	7.6%
Number New	15	38	17	17	21	13	4	2	1	0	128

Table 9.22 Visually Impaired

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	1	4	8	11	27	10	18	2	0	0	81
Number Left	1	0	2	1	4	1	0	0	0	0	9
Attrition	1.000	.000	.250	.091	.148	.100	.000	.000	.000	.000	.111
Total 97-98	0	5	7	13	23	10	21	2	1	0	82
% New	0.0%	20.0%	14.3%	23.1%	4.3%	10.0%	9.5%	0.0%	100.0%	0.0%	12.2%
Number New	0	1	1	3	1	1	2	0	1	0	10

Table 9.23 Emotionally Disturbed

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	21	205	273	301	321	335	159	67	24	6	1712
Number Left	1	17	21	26	20	19	8	13	4	1	130
Attrition	.048	.083	.077	.086	.062	.093	.050	.194	.167	.167	0.076
Total 97-98	51	229	278	304	319	328	161	57	19	5	1751
% New	66.7%	21.0%	15.5%	12.8%	7.5%	7.6%	8.7%	10.5%	10.5%	20.0%	13.5%
Number New	34	48	43	39	24	25	14	6	2	1	236

Table 9.24 Physical Therapy

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	1	10	14	23	50	56	19	10	3	0	186
Number Left	0	0	1	1	1	3	0	2	0	0	8
Attrition	.000	.000	.071	.043	.020	.054	.000	.200	.000	.000	.043
Total 97-98	3	15	15	28	51	55	19	9	3	0	198
% New	66.7%	33.3%	13.3%	21.4%	3.9%	3.6%	0.0%	11.1%	0.0%	0.0%	10.1%
Number New	2	5	2	6	2	2	0	1	0	0	20

Table 9.25 Occupational Therapist

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	0	28	36	61	88	59	12	10	5	1	300
Number Left	0	7	1	7	1	1	1	0	0	0	18
Attrition	.000	.250	.028	.115	.011	.017	.083	.000	.000	.000	.060
Total 97-98	3	26	37	61	95	63	13	10	5	1	314
% New	100%	19.2%	8.1%	11.5%	8.4%	7.9%	15.4%	0.0%	100.0%	0.0%	12.1%
Number New	3	5	3	7	8	5	2	0	5	0	38

Table 9.26 School Psychologist

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	0	86	95	100	144	201	138	54	18	3	839
Number Left	0	6	2	5	6	5	1	1	3	2	31
Attrition	.000	.070	.021	.050	.042	.025	.007	.019	.167	.667	.037
Total 97-98	5	107	101	100	146	203	142	52	15	2	873
% New	100%	25.2%	8.9%	5.0%	5.5%	4.9%	2.8%	0.0%	0.0%	50.0%	7.9%
Number New	5	27	9	5	8	10	4	0	0	1	69

Table 9.27 Social Worker

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	2	29	44	70	87	107	87	52	13	4	495
Number Left	1	2	2	3	1	3	1	6	2	1	22
Attrition	.500	.069	.045	.043	.011	.290	.011	.115	.154	.250	.044
Total 97-98	2	43	46	70	91	107	88	46	11	3	507
% New	50.0%	37.2%	8.7%	7.1%	5.5%	4.7%	2.3%	0.0%	0.0%	0.0%	7.5%
Number New	1	16	4	5	5	5	2	0	0	0	38

Table 9.28 School Counselor

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	1	162	220	309	505	418	222	70	13	3	1923
Number Left	0	8	13	8	15	10	31	22	7	2	116
Attrition	.000	.049	.059	.026	.030	.024	.140	.314	.538	.667	.060
Total 97-98	1	184	227	311	512	414	192	48	7	4	1900
% New	0.0%	14.7%	6.6%	1.9%	2.9%	1.4%	0.5%	0.0%	14.3%	75.0%	3.9%
Number New	0	27	15	6	15	6	1	0	1	3	74

Table 9.29 School Administrators

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	0	1	3	6	46	99	170	135	43	10	513
Number Left	0	1	0	2	3	5	10	18	16	8	63
Attrition	.000	.000	.333	.065	.051	.059	.133	.372	.800	.800	.123
Total 97-98	0	0	4	8	48	110	176	126	28	2	502
% New	0.0%	0.0%	12.5%	0.0%	7.3%	4.5%	5.6%	0.0%	0.0%	0.0%	4.8%
Number New	0	0	0	1	0	8	8	7	0	0	24

Table 9.30 Principals

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	0	8	109	188	377	661	585	321	79	13	2341
Number Left	0	0	5	5	10	32	27	54	19	6	158
Attrition	.000	.000	.046	.027	.027	.048	.046	.168	.241	.462	.067
Total 97-98	0	29	145	222	401	669	569	276	63	8	2382
% New	0.0%	34.5%	9.0%	6.3%	4.2%	5.1%	3.0%	2.2%	7.9%	12.5%	4.9%
Number New	0	10	13	14	17	34	17	6	5	1	117

Table 9.31 Director of Special Education

1998 Age	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66 +	Total
Birth Year	77-73	72-68	67-63	62-58	57-53	52-48	47-43	42-38	37-33	32 -	
Total 96-97	0	1	7	15	28	66	81	26	9	4	237
Number Left	0	0	1	0	0	4	3	2	2	3	15
Attrition	.000	.000	.143	.000	.000	.470	.037	.077	.222	.750	.063
Total 97-98	0	2	6	18	35	74	92	27	8	2	264
% New	0.0%	0.0%	0.0%	5.6%	20.0%	14.9%	10.9%	14.8%	12.5%	50.0%	13.3%
Number New	0	0	0	1	7	11	10	4	1	1	35

Source: Wisconsin Teacher Supply and Demand Project, 1998. Data from the School Staff and Teacher Personnel Reports.

TAble 10

Number of Staff Headcount by Birth Year, Retained Staff, Exiting Staff, Attritic New Hires, and Rounded New Hires

Birth Year	Total Staff 1996-97	Stayed 1996-97	Left 1996-97	Exit 97 Attrition	Total Staff 1997-98	New Hires	Rounded New Hires
1958	1501	1431	70	4.66%	1558	127	122
1957	1701	1647	54	3.17%	1763	116	116
1956	1751	1701	50	2.86%	1805	104	106
1955	2100	2036	64	3.05%	2133	97	105
1954	2125	2060	65	3.06%	2173	113	105
1953	2293	2229	64	2.79%	2333	104	113
1952	2575	2518	57	2.21%	2640	122	116
1951	3053	2958	95	3.11%	3080	122	116
1950	3011	2937	74	2.46%	3040	103	106
1949	3052	2977	75	2.46%	3069	92	95
1948	3057	2985	72	2.36%	3075	90	92
1947	3152	3091	61	1.94%	3185	94	85
1946	2787	2721	66	2.37%	2791	70	69
1945	2181	2132	49	2.25%	2174	42	50
1944	2122	2078	44	2.07%	2115	37	39
1943	2082	2022	60	2.88%	2061	39	33
1942	1943	1753	190	9.78%	1777	24	30
1941	1448	1270	178	12.29%	1297	27	27
1940	1213	952	261	21.52%	981	29	26
1939	899	710	189	21.02%	733	23	21
1938	805	654	151	18.76%	666	12	14
1937	577	449	128	22.18%	457	8	10
1936	440	331	109	24.77%	342	11	8
1935	368	235	133	36.14%	239	4	6
1934	202	134	68	33.66%	136	2	4
1933	159	116	43	27.04%	123	7	4
1932	124	65	59	47.58%	68	3	4
1931	67	48	19	28.36%	49	1	2
1930	50	35	15	30.00%	36	1	1
1929	24	18	6	25.00%	19	1	1
1928	22	15	7	31.82%	17	2	2
1927	13	7	6	46.15%	9	2	1
1926	12	12	0	0.00%	12	0	1
1925	10	6	4	40.00%	6	0	0
1924	3	3	0	0.00%	3	0	0
1923	1	1	0	0.00%	1	0	0
Totals	8380		1566		6971	157	

Source: Wisconsin Educator Supply and Demand Project, 1998. Data from the School Staff and Teacher Personnel Reports for 1996-1997 and 1997-1998.

Table 11

Projected Retirements for Years 1997-1998 through 2012

Table11.1 Years 1997-1998 through 1999-2000

Birth Year	Att. %	Staff 97-98	Ret. 98	Staff Retur.	New Hir.	Staff 98-99	Att. %	Ret.	Staff Retur.	New Hir.	Staff 99-00	Att. %	Ret.
1958	4.7	1558	73	1485	116	1601	3.2	51	1551	106	1657	2.9	47
1957	3.2	1763	56	1707	106	1813	2.9	52	1761	105	1866	3.1	57
1956	2.9	1805	52	1753	105	1858	3.1	57	1802	105	1907	3.1	58
1955	3.1	2133	65	2068	105	2173	3.1	66	2106	113	2219	2.8	62
1954	3.1	2173	66	2107	113	2220	2.8	62	2158	116	2274	2.2	50
1953	2.8	2333	65	2268	116	2384	2.2	53	2331	116	2447	3.1	76
1952	2.2	2640	58	2582	116	2698	3.1	84	2614	106	2720	2.5	67
1951	3.1	3080	96	2984	106	3090	2.5	76	3014	95	3109	2.5	76
1950	2.5	3040	75	2965	95	3060	2.5	75	2985	92	3077	2.4	73
1949	2.5	3069	75	2994	92	3086	2.4	73	3013	85	3098	1.9	60
1948	2.4	3075	73	3002	85	3087	1.9	60	3028	69	3097	2.4	73
1947	1.9	3185	62	3123	69	3192	2.4	76	3117	50	3167	2.3	71
1946	2.4	2791	66	2725	50	2775	2.3	62	2712	39	2751	2.1	57
1945	2.3	2174	49	2125	39	2164	2.1	45	2119	33	2152	2.9	62
1944	2.1	2115	44	2071	33	2104	2.9	61	**1999-2000 Ret. Proj.**				
1943	2.9	2061	59	**1998-1999 Ret. Proj.**					2044	30	2074	9.8	203
1997-1998 Ret. Proj.				2002	30	2032	9.8	199	1833	27	1860	12.3	229
1942	9.8	1777	174	1603	27	1630	12.3	200	1430	26	1456	21.5	313
1941	12.3	1297	159	1138	26	1164	21.5	250	913	21	934	21.0	196
1940	21.5	981	211	770	21	791	21.0	166	625	14	639	18.8	120
1939	21.0	733	154	579	14	593	18.8	111	482	10	492	22.2	109
1938	18.8	666	125	541	10	551	22.2	122	429	8	437	24.8	108
1937	22.2	457	101	356	8	364	24.8	90	274	6	280	36.1	101
1936	24.8	342	85	257	6	263	36.1	95	168	4	172	33.7	58
1935	36.1	239	86	153	4	157	33.7	53	104	4	108	27.0	29
1934	33.7	136	46	90	4	94	27.0	25	69	4	73	47.6	35
1933	27.0	123	33	90	4	94	47.6	45	49	2	51	28.4	15
1932	47.6	68	32	36	2	38	28.4	11	27	1	28	30.0	8
1931	28.4	49	14	35	1	36	30.0	11	25	1	26	25.0	7
1930	30.0	36	11	25	1	26	25.0	7	20	2	22	31.8	7
1929	25.0	19	5	14	2	16	31.8	5	11	1	12	46.2	6
1928	31.8	17	5	12	1	13	46.2	6	7	0	7	0.0	0
1927	46.2	9	4	5	0	5	0.0	0	5	0	5	100.	5
1926	0.0	12	0	12	0	12	100.	12			8674		1548
1925	100.	10	10			7877		1408					
Total		6971	1256										

Table 11.2

Years 2000-2001 through 2002-2003

Staff Retur.	New Hir.	Staff 2001	Att. %	Ret.	Staff Retur.	New Hir.	Staff 2002	Att. %	Ret.	Staff Retur.	New Hir.	Staff 2003	Att. %	Ret.
1609	105	1714	3.1	52	1662	105	1767	3.1	54	1713	113	1826	2.8	51
1809	105	1914	3.1	59	1855	113	1968	2.8	55	1914	116	2030	2.2	45
1848	113	1961	2.8	55	1906	116	2022	2.2	45	1978	116	2094	3.1	65
2158	116	2274	2.2	50	2224	116	2340	3.1	73	2267	106	2373	2.5	58
2223	116	2339	3.1	73	2266	106	2372	2.5	58	2314	95	2409	2.5	59
2371	106	2477	2.5	61	2416	95	2511	2.5	62	2449	92	2541	2.4	60
2653	95	2748	2.5	68	2680	92	2772	2.4	65	2707	85	2792	1.9	54
3033	92	3125	2.4	74	3051	85	3136	1.9	61	3075	69	3144	2.4	75
3004	85	3089	1.9	60	3029	69	3098	2.4	73	3025	50	3075	2.3	69
3038	69	3107	2.4	74	3033	50	3083	2.3	69	3014	39	3053	2.1	63
3023	50	3073	2.3	69	3004	39	3043	2.1	63	2980	33	3013	2.9	87
3095	39	3134	2.1	65	3069	33	3102	2.9	89	**2002-2003 Ret. Proj.**				
2694	33	2727	2.9	79	**2001-2002 Ret. Proj.**					3013	30	3043	9.8	298
2000-2001 Ret. Proj.					2648	30	2678	9.8	262	2417	27	2444	12.3	300
2090	30	2120	9.8	207	1913	27	1940	12.3	238	1701	26	1727	21.5	372
1871	27	1898	12.3	233	1665	26	1691	21.5	364	1327	21	1348	21.0	283
1631	26	1657	21.5	357	1300	21	1321	21.0	278	1044	14	1058	18.8	198
1143	21	1164	21.0	245	919	14	933	18.8	175	758	10	768	22.2	170
738	14	752	18.8	141	611	10	621	22.2	138	483	8	491	24.8	122
519	10	529	22.2	117	412	8	420	24.8	104	316	6	322	36.1	116
383	8	391	24.8	97	294	6	300	36.1	108	192	4	196	33.7	66
329	6	335	36.1	121	214	4	218	33.7	73	145	4	149	27.0	40
179	4	183	33.7	62	121	4	125	27.0	34	91	4	95	47.6	45
114	4	118	27.0	32	86	4	90	47.6	43	47	2	49	28.4	14
79	4	83	47.6	39	44	2	46	28.4	13	33	1	34	30.0	10
38	2	40	28.4	11	29	1	30	30.0	9	21	1	22	25.0	5
37	1	38	30.0	11	27	1	28	25.0	7	21	2	23	31.8	7
20	1	21	25.0	5	16	2	18	31.8	6	12	1	13	46.2	6
20	2	22	31.8	7	15	1	16	46.2	7	9	0	9	0.0	0
15	1	16	46.2	7	9	0	9	0.0	0	9	0	9	100.	9
7	0	7	0.0	0	7	0	7	100.	7			11798		2063
7	0	7	100.	7			10490		1866					
		9381		1701										

Table 11.3

Years 2003-2004 through 2005-2006

Staff Retur.	New Hir.	Staff 2004	Att. %	Ret.	Staff Retur.	New Hir.	Staff 2005	Att. %	Ret.	Staff Retur.	New Hir.	Staff 2006	Att. %	Ret.
1775	116	1891	2.2	42	1849	116	1965	3.1	61	1904	106	2010	2.5	49
1985	116	2101	3.1	65	2036	106	2142	2.5	53	2089	95	2184	2.5	54
2028	106	2134	2.5	52	2082	95	2177	2.5	54	2123	92	2215	2.4	52
2315	95	2410	2.5	59	2351	92	2443	2.4	58	2385	85	2470	1.9	48
2350	92	2442	2.4	58	2384	85	2469	1.9	48	2421	69	2490	2.4	59
2481	85	2566	1.9	50	2516	69	2585	2.4	61	2524	50	2574	2.3	58
2738	69	2807	2.4	67	2740	50	2790	2.3	63	2728	39	2767	2.1	57
3070	50	3120	2.3	70	3050	39	3089	2.1	64	3025	33	3058	2.9	88
3005	39	3044	2.1	63	2981	33	3014	2.9	87	**2005-2006 Ret. Proj.**				
2990	33	3023	2.9	87	**2004-2005 Ret. Proj.**					2927	30	2957	9.8	289
2003-2004 Ret. Proj.					2936	30	2966	9.8	290	2676	27	2703	12.3	332
2926	30	2956	9.8	289	2667	27	2694	12.3	331	2363	26	2389	21.5	514
2745	27	2772	12.3	341	2431	26	2457	21.5	529	1929	21	1950	21.0	410
2143	26	2169	21.5	467	1702	21	1723	21.0	362	1361	14	1375	18.8	258
1356	21	1377	21.0	289	1088	14	1102	18.8	207	895	10	905	22.2	201
1056	14	1070	18.8	201	869	10	879	22.2	195	684	8	692	24.8	171
859	10	869	22.2	193	676	8	684	24.8	169	515	6	521	36.1	188
598	8	606	24.8	150	456	6	462	36.1	167	295	4	299	33.7	101
370	6	376	36.1	136	240	4	244	33.7	82	162	4	166	27.0	45
205	4	209	33.7	70	139	4	143	27.0	39	104	4	108	47.6	51
130	4	134	27.0	36	98	4	102	47.6	48	53	2	55	28.4	16
108	4	112	47.6	53	59	2	61	28.6	17	43	1	44	30.0	13
50	2	52	28.4	15	37	1	38	30.0	11	27	1	28	25.0	7
35	1	36	30.0	11	19	1	20	25.0	5	15	2	17	31.8	5
24	1	25	25.0	6	19	2	21	31.8	7	14	1	15	46.2	7
16	2	18	31.8	6	12	1	13	46.2	6	7	0	7	0.0	0
15	1	16	46.2	7	9	0	9	0.0	0	9	0	9	100.	9
7	0	7	0.0	0	7	0	7	100.	7			14240		2618
9	0	9	100.	9			13625		2473					
		12813		2279										

Table 11.4

Years 2006-2007 through 2008-2009

Staff Retur.	New Hir.	Staff 2007	Att. %	Ret.
1961	95	2056	2.5	51
2130	92	2222	2.4	52
2163	85	2248	1.9	44
2422	69	2491	2.4	59
2431	50	2481	2.3	56
2516	39	2555	2.1	53
2709	33	2742	2.9	79
2006-2007 Ret. Proj.				
2970	30	3000	9.8	293
2668	27	2695	12.3	331
2371	26	2397	21.5	516
1875	21	1896	21.0	399
1540	14	1554	18.8	292
1117	10	1127	22.2	250
704	8	712	24.8	176
521	6	527	36.1	190
333	4	337	33.7	113
198	4	202	27.0	55
121	4	125	47.6	59
57	2	59	28.4	17
40	1	41	30.0	12
31	1	32	25.0	8
21	2	23	31.8	7
12	1	13	46.2	6
8	0	8	0.0	0
7	0	7	100.	7
		14755		2732

Staff Retur.	New Hir.	Staff 2008	Att. %	Ret.
2005	92	2097	2.4	49
2170	85	2255	1.9	44
2204	69	2273	2.4	54
2432	50	2482	2.3	56
2425	39	2464	2.1	51
2502	33	2535	2.9	73
2007-2008 Ret. Proj.				
2663	30	2693	9.8	263
2707	27	2734	12.3	336
2364	26	2390	21.5	514
1881	21	1902	21.0	400
1497	14	1511	18.8	284
1262	10	1272	22.2	282
877	8	885	24.8	219
536	6	542	36.1	196
337	4	341	33.7	115
224	4	228	27.0	62
147	4	151	47.6	72
66	2	68	28.4	19
42	1	43	30.0	13
29	1	30	25.0	7
24	2	26	31.8	8
16	1	17	46.2	8
7	0	7	0.0	0
8	0	8	100.	8
		14847		2806

Staff Retur.	New Hir.	Staff 2009	Att. %	Ret.
2048	85	2133	1.9	41
2211	69	2280	2.4	54
2220	50	2270	2.3	51
2426	39	2465	2.1	51
2413	33	2446	2.9	70
2008-2009 Ret. Proj.				
2462	30	2492	9.8	244
2430	27	2457	12.3	302
2398	26	2424	21.5	522
1876	21	1897	21.0	399
1502	14	1516	18.8	284
1228	10	1238	22.2	275
990	8	998	24.8	247
666	6	672	36.1	243
346	4	350	33.7	118
226	4	230	27.0	62
166	4	170	47.6	81
79	2	81	28.4	23
48	1	49	30.0	15
30	1	31	25.0	8
22	2	24	31.8	8
18	1	19	46.2	9
9	0	9	0.0	0
7	0	7	100.	7
		14664		2845

Table11.5

Years 2009-2010 through 2011-2012

Staff Retur.	New Hir.	Staff 2007	Att. %	Ret.	Staff Retur.	New Hir.	Staff 2008	Att. %	Ret.	Staff Retur.	New Hir.	Staff 2009	Att. %	Ret.
2092	69	2161	2.4	51	2110	50	2160	2.3	49	2111	39	2150	2.1	45
2226	50	2276	2.3	51	2225	39	2264	2.1	47	2217	33	2250	2.9	65
2218	39	2257	2.1	47	2210	33	2243	2.9	65	**2011-2012 Ret. Proj.**				
2414	33	2447	2.9	70	**2010-2011 Ret. Proj.**					2179	30	2209	9.8	216
2009-2010 Ret. Proj.					2377	30	2407	9.8	235	2171	27	2198	12.3	270
2376	30	2406	9.8	235	2324	27	2351	12.3	289	2062	26	2088	21.5	449
2248	27	2275	12.3	280	1995	26	2021	21.5	435	1586	21	1607	21.0	338
2155	26	2181	21.5	469	1712	21	1733	21.0	364	1368	14	1382	18.8	259
1902	21	1923	21.0	404	1519	14	1533	18.8	288	1245	10	1255	22.2	278
1498	14	1512	18.8	284	1228	10	1238	22.2	275	964	8	972	24.8	241
1232	10	1242	22.2	275	967	8	975	24.8	241	733	6	739	36.1	267
963	8	971	24.8	241	730	6	736	36.1	266	470	4	474	33.7	160
751	6	757	36.1	274	483	4	487	33.7	164	323	4	327	27.0	89
429	4	433	33.7	146	287	4	291	27.0	79	212	4	216	47.6	103
232	4	236	27.0	64	172	4	176	47.6	84	92	2	94	28.4	27
168	4	172	47.6	82	90	2	92	28.4	26	66	1	67	30.0	20
89	2	91	28.4	26	65	1	66	30.0	20	46	1	47	25.0	12
58	1	59	30.0	18	41	1	42	25.0	11	32	2	34	31.8	11
35	1	36	25.0	9	27	2	29	31.8	9	20	1	21	46.2	10
23	2	25	31.8	8	17	1	18	46.2	8	10	0	10	0.0	0
17	1	18	46.2	8	10	0	10	0.0	0	10	0	10	100.	10
10	0	10	0.0	0	10	0	10	100.	10			13752		2759
9	0	9	100.	9			14216		2804					
		14356		2831										

Source: Wisconsin Educator Supply and Demand Project, 1998. Data from the School Staff and Teacher Personnel Reports, 1996-1997 and 1997-1998.

Table 12

Changing Retirement Totals from 1997-1998 through 2011-2012

Twenty Year Interval	Year	No.Educ. at Age 55+*	Change from Previous Year	Percent Change	Projected No. to Retire **
A	1997-1998	6971			1256
B	1998-1999	7877	906	13.00%	1408
C	1999-2000	8674	797	10.12%	1548
D	2000-2001	9381	707	8.15%	1701
E	2001-2002	10490	1109	11.82%	1866
F	2002-2003	11798	1308	12.47%	2063
G	2003-2004	12813	1015	8.60%	2279
H	2004-2005	13625	812	6.34%	2473
I	2005-2006	14240	615	4.51%	2618
J	2006-2007	14755	515	3.62%	2732
K	2007-2008	14847	92	0.62%	2806
L	2008-2009	14664	-183	-1.23%	2845
M	2009-2010	14356	-308	-2.10%	2831
N	2010-2011	14216	-140	-0.98%	2804
O	2011-2012	13752	-464	-3.26%	2759
					33989

* Number of educators based on the DPI 1997-1998 School and Staff Personnel Report

** The actual size of the future teaching force is not known and any significant increase would also increase the number of retirees. Since most new hires tend to be younger in age, these errors should be minimal during the next few years.

Source: Wisconsin Educator Supply and Demand Project, 1998.

Table 13

Employment Rates for Wisconsin Prepared Teachers First Hired by Wisconsin Public Schools for 1994-1995 through1997-1998

	Programs Completed by Teachers				Employed in Licensed Field					Total Employed in Licensed Field Plus Multiple Fields				
	Year 94-5	Year 95-6	Year 96-7	Mean	Year 95-6	Year 96-7	Year 97-8	Mean	%	Year 95-6	Year 96-7	Year 97-8	Mean	%
ELEM EDUC. *	**1**	**2**		**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Elem (K-8)	1738	1680	1709	1139	352	400	444	399	35%	391	386	504	427	37%
SEC EDUC														
Agriculture	16	29	19	15	7	9	10	9	58%	10	10	11	10	69%
Family/Con. Ed.	22	16	18	13	8	12	11	10	82%	8	12	12	11	84%
Tech. Ed.	42	24	36	22	19	17	20	19	85%	19	18	21	19	88%
Business	46	31	30	26	11	21	13	15	58%	14	19	13	15	60%
Marketing Educ	33	31	20	21	1	2	3	2	9%	2	3	3	3	13%
Eng/Jo/Sp/Dr	252	281	242	178	59	59	63	60	34%	88	77	75	80	45%
Foreign Lang	120	153	161	91	32	33	36	34	37%	51	41	41	44	49%
Math	183	175	172	119	44	34	48	42	35%	56	44	55	52	43%
Music	153	131	133	95	31	37	36	35	37%	32	37	38	36	38%
Phy. Ed.	163	233	150	132	36	46	60	47	36%	41	52	62	52	39%
Art	85	119	121	68	28	30	38	32	47%	31	31	40	34	50%
Science	151	181	181	111	51	46	50	49	44%	62	53	57	57	52%
Social Studies	318	360	332	226	35	48	57	47	21%	73	76	85	78	35%
SEC. TOTAL	1584	1764	1615	1116	362	394	445	400	36%	487	473	513	491	44%
SPEC. EDUC.														
Hearing Dis	4	6	2	3	3	4	3	3	100%	3	4	3	3	100%
Cognitive Dis.	104	125	115	76	28	34	44	35	46%	42	48	53	48	62%
Early Child	119	107	85	75	20	18	18	19	25%	24	33	31	29	39%
Learn Dis**	278	298	238	192	127	75	72	91	48%	155	102	91	116	60%
Emot Dis**	175	229	222	135	172	41	54	89	66%	198	68	85	117	87%
SP. ED. TOT.	680	765	662	482	350	680	191	407	84%	422	255	263	313	65%
TOTAL	4002	4209	3986	2935	1064	1474	1080	1206	41%	1300	1114	1280	1231	42%

* The licensing codes for individual subject fields are available in Appendix A.

** The new emergency licenses in the fields of LD and ED were added to the number of new hires without experience in 1994-95 and 1995-96 to correct for the error caused by the high number of emergency licenses. This was not done in 1996-1998, which suppresses the number of new hires in learning disabilities and emotional disturbance without experience for these years.

Source: Wisconsin Educator Supply and Demand Project, 1998. Data from various DPI sources.

Table 14.1

Number of Emergency Licenses Issued in Wisconsin for 1989-1998

	89-0	90-1	91-2	92-3	93-4	94-5	95-6	96-7	97-8
Elementary									
080 Elem.(Nursery)	1	3	3	18	16	Merged	Merged	Merged	Merged
100-166 Elem. (K-8)	61	97	99	86	79	109	123	110	110
Total Elementary	62	100	102	104	95	109	123	110	110
Secondary Education									
200 Agriculture	0	1	2	2	3	2	3	4	4
210-215 Fam./Con. Ed.	7	16	5	17	23	12	3	6	9
220 Tech Educ.	7	9	10	11	11	23	27	42	55
250-251 Business Ed.	1	2	4	9	4	5	4	5	12
285 Marketing Educ.	1	3	1	2	4	1	2	2	3
300,310,320.325 Eng.									
Jour., Speech & Theater	28	24	24	16	22	25	30	37	44
315-317 Reading	123	154	163	173	162	154	136	125	159
350-390 Foreign Lang.	35	51	47	64	61	52	44	58	78
395 Eng. as Sec. Lang	90	88	78	79	59	64	63	60	72
23, 28,33,36,44,49									
Bilingual Education	No Data	55	87	91	No Data	86	85	83	91
400-430 Math	31	30	32	29	26	29	37	36	44
450-455 Driv./Saf. Ed.	12	20	19	21	22	12	31	36	41
500-515 Music(K-12)	20	30	29	23	21	30	16	30	34
530-536 Phy. Educ.	5	8	8	5	10	9	9	10	11
910 Health	25	29	23	23	15	23	18	19	21
550 Art (K-12)	8	11	11	14	7	7	11	11	12
600-637 Science	49	48	49	65	69	71	63	78	83
700-761 Social Stud.	50	56	48	57	41	38	31	38	42
900-905 Inst. Lib. Med.	23	30	37	32	26	24	28	39	52
Total Secondary/Middle	515	665	677	733	606	667	641	719	867
Special Education									
805 Hearing	4	1	2	4	3	4	6	3	2
806 Cog. Dis.	46	71	68	71	89	98	110	104	123
807 Severely Hand.	6	7	8	13	Merged	Merged	Merged	Merged	Merged
808 Early Childhood *	69	75	91	102	80	62	63	58	43
811 Learn. Disability	320	354	338	354	252	224	245	225	243
820 Speech/Language	37	41	39	30	27	37	53	56	58
825 Visual Disability	3	5	2	4	2	1	5	8	5
830 Emot. Disturbed	517	595	619	561	521	511	551	486	404
Total Special Education	1002	1149	1167	1139	974	937	1033	940	878
Related Services									
963-967 School Couns.	36	50	42	40	35	41	52	50	54
50 Social Worker	No Data	18	7	8	No Data	11	12	5	9
62 School Psychologist	No Data	0	0	2	No Data	12	10	7	2
Total Related Services	36	68	49	50	35	64	74	62	65
Grand Total	1615	1962	1995	2026	1710	1777	1871	1831	1920

* Early Childhood EEN numbers have increased because they include "birth to 3" teachers who are not in public school programs.

Source: Bureau for Licensing, Wisconsin Department of Public Instruction, 1998.

Table 14.2

Number of Special Education Teachers with Emergency Licenses in Wisconsin Public Schools, 1987-1997

	1988-9	1989-0	1990-1	1991-2	1992-3	1993-4	1994-5	1995-6 *	1996-7 *	1997-8 *
HI	2	2	0	3	1	2	5	1	1	2
CD	34	36	59	60	49	61	70	79	75	106
EC:EEN	66	72	83	76	64	56	38	37	33	37
LD	264	303	301	274	251	219	202	238	204	209
S/L	25	39	44	34	25	15	37	45	49	50
VI	1	1	5	3	1	2	1	2	7	4
ED	405	431	493	509	486	469	510	476	443	347
TOTAL**	797	884	985	959	877	824	863	878	812	755

* The new computerized data base did not permit the separation of emergency licenses held by teachers in the public schools and those held by teachers in Child Caring Institutions and private programs. The average difference for the past three years in the total number of emergency licenses each year and the number of licenses issued to teachers in public schools was determined and this correction factor was applied to the 1996-1998 data so that an approximate comparison could be made.

** Total will not match the total of emergency licenses (Table 14.1) issued since it does not include teachers in child caring institutions and others not in the public school system.

Source: Data from the records of Bureau for Teacher Licensing and Placement.

Appendix

License Codes: Wisconsin Department of Public Instruction

Position Codes

03	Superintendent
08	School Business Manager
10	Director of Instruction
51	Principal
50	School Social Worker
61	Provisional School Psychologist
62	School Psychologist
65	Local Vocational Education Coord.
75	School Nurse
80	Director of Special Education and Pupil Services
91	Instructional Library Media Supervisor

Elementary License Grade Level Codes

083	Pre-K - Grade 3
086	Pre-K - Grade 6
088	Pre-K - Grade 8
116	Grade 1-6
118	Grade 1-8

Special Codes

200	Agriculture
210	Family and Consumer Education
220	Technology Education
250	Business Education
265	Typewriting
285	Marketing Education
300	English
310	Journalism
316	Reading Teacher
317	Reading Specialist
320	Speech (Academic)
325	Theater
350	Latin
355	French
360	Italian
365	Spanish
370	German
375	Japanese
385	Russian
390	Other Foreign Languages
395	English as a Second Language
400	Mathematics
405	Computer Science
450	Driver Education
455	Safety Education
506	Instrumental Music
511	Choral Music
515	General Music
530	Physical Education
536	Dance
540	Coaching
550	Art
601	Broadfield Science
605	Biology/Life Science
610	Chemistry
615	Environmental Studies
621	Science (6-9)
625	Physics
635	Earth/Space Science
637	Physical Science
701	Broadfield Social Studies
702	Anthropology
710	Economics
715	Geography
725	History
730	Philosophy
735	Political Science
740	Psychology
745	Sociology
760	Other Social Studies
761	Afro-American Studies
805	Hearing Impaired
806	Mild Moderate Cognitive
807	Severely Handicapped
808	Early Childhood: EEN
811	Learning Disabilities
820	Speech/Language Pathology
822	Audiology
830	Emotional Disturbance
859	Adaptive Education
860	Adaptive Physical Education
901	Initial Instructional Library-Media Specialist
902	Instructional Library Media Specialist
903	Instrucitonal Technology
910	Health
966	School Counselor
967	School Counselor-Bilingual

Supplement: University of Wisconsin System Statement

The Supply and Demand of Educational Personnel for Wisconsin Public Schools serves as a useful tool in documenting the supply and demand for educational personnel in Wisconsin public schools. The kind of data it collects and reports, and the conclusions reached from that data, serve the department in a variety of ways. However, while this information serves the specific purpose of the department and its clients, it is important to note that, from the perspective of teacher preparation programs, many other factors and considerations must be taken into account when evaluating the prospects for teacher preparation students.

The University of Wisconsin System Placement Office Reports differ in the kinds of data collected, when the data are collected, and in the methods of collecting the data. The following chart shows some of the more significant differences.

University of Wisconsin System Placement Chart

	DPI Supply/Demand for Educ. Personnel	UW System Placement Offices
WHO	Program completers *	Graduates in UW system teacher preparation *
	1. FTE in Wisconsin Public Schools 2. Head count of newly hired teachers 3. Out-of-state teachers hired in the public schools 4. Teachers transferring within the public schools	1. Full-time teachers (public & private) 2. Part-time teachers (public & private) 3. Substitute teachers (public and private)
HOW	1. Data submitted from Wisconsin Public Schools and IHE's to the Wis. Dept. of Public Instruction 2. Review of emergency licenses 3. Survey sent to each Wisconsin Public School District providing information for maps showing need in different geographical areas of the state 4. Analysis of applications for positions to assess the reserve pool and provide personal information about the job search	1. Graduates are surveyed
WHERE	1. Wisconsin Public Schools	1. Wisconsin public and private schools 2. Out-of-state schools 3. Private and parochial schools 4. Graduate schools 5. Day Care centers 6. Non-education employment
WHAT	1. Number of teachers completing programs 2. Newly-hired educators in Wisconsin Public Schools 3. Reserve pool of educators based on Wisconsin hiring trends	1. Number of graduates 2. Graduates employed in a variety of educational and non-educational fields and locations 3. Employment prospects based on state and national trends

* *Program completers* are defined as individuals who have completed a degree or program (may be a post-baccalaureate program) at a Wisconsin college or university (IHE) that leads to both an initial or additional license to teach in Wisconsin. *Graduates* are defined as individuals who have received a BA or BS degree from a UW institution.

As the chart indicates, the DPI report is quite different from the UW Placement Reports. For example, in the DPI report:

* employment data from school districts are a “snapshot” taken on the third Friday in September;
* data are collected of “program completers” or licensees (including new and additional licenses) in addition to graduates from teacher preparation program;
* data include only public schools in Wisconsin; private or parochial schools, social service agencies, programs such as Head Start, day care centers, out-of-state placements, non-educational employment, and graduate schools are not reported.

Given the differences between *Program Completers and Graduates*, it is important that the supply and demand data in this report not be used to draw conclusions about the educational prospects of graduates from teacher preparation programs in Wisconsin. The population of Program Completers includes graduates, but is larger due to individuals receiving multiple or additional licenses. Furthermore, Program Completers may be: (1) individuals already employed in a school district; (2) practicing teachers gaining additional licenses; or (3) individuals receiving initial certification after graduation from another institution.

Data collected by placement offices at teacher preparation programs provide information about graduates that reflects a different perspective on the employment prospects. Graduates of teacher preparation programs who are willing to relocate find employment opportunities within Wisconsin and throughout the United States. UW-Madison reports that in 1996-1997 25% of its graduates accepted out-of-state teaching jobs. In For the same year, UW-River Falls reports that 35% of its graduates found educational employment outside of Wisconsin. The 1997 report *Teacher Supply and Demand in the United States*, from the American Association for Employment in Education, reported that data "reflect an improved employment market for nearly all certification areas." that "no education field is determined to have considerable surplus of teachers," and "the next five to seven years will show dramatic increase in new teacher hiring." Furthermore, education graduates are frequently employed both in and out-of-state at private and parochial schools, day care centers, or immediately proceed to graduate school after completing their initial degree. Again, the DPI report is limited to employment in Wisconsin Public Schools.

Readers of the report must also keep in mind steps taken by teacher preparation programs to address the over-supply of teachers in certain fields and the under-supply in others (within the State of Wisconsin). In areas of teacher shortages, data from UW placement officers demonstrate a significantly high placement rate for graduates in programs such as special education (81% of those reporting in 1996-97), technology education (88% of those reporting in 1996-97) and mathematics/computing (90% of those reporting in 1996-97). In special education--an area with a shortage of teachers--many teacher education programs have developed intensive programs allowing teachers to obtain a special education license at an accelerated pace. In the over-supplied area of elementary education, UW schools of education have limited enrollment in their programs. Some institutions report turning away as many as 50% of the applicants for their elementary education programs. Moreover, enrollments in elementary education programs throughout the UW System have been declining since 1990, while enrollments in special education have been increasing.

Upon admission into teacher preparation programs, students are advised of employment prospects within Wisconsin, areas of shortage and surplus, and the geographic distribution of employment prospects. In spite of this counseling, it must be noted that if students meet all criteria for admission, and there are spaces available in the program, many cannot be dissuaded from pursuing a degree in teacher education in spite of reportedly poor employment prospects. Education remains a very popular degree at most UW institutions. In the 1995-96 academic year education degrees accounted for approximately 14% of all degrees conferred at UW System institutions.

In conclusion, readers of this report are asked to keep in mind the specific uses and restricted interpretation that one can make from the data contained in it. While teacher preparation programs acknowledge a problem with over-supply in certain fields, when one accounts for out-of-state placements, educational employment in the private sector, and other factors, the educational prospects for teachers remains encouraging.