The dramatic increase in the number of births after World War II, the "baby boom," lasted until the early 1960s. Another surge in births was recorded in 1977, the start of the baby boom echo. However, the number of births is not expected to decline again, with long-range projections indicating a rising number of births over the coming decades.

Seven critical issues demand the attention of educational policymakers as the effects of the baby boom are explored:

1. There may be no short-term solutions in school districts that face the problem of rising enrollments;
2. The majority of the young people who make up the baby boom echo will be teenagers in 1997;
3. States are meeting the challenges of increasing enrollment with varying degrees of success;
4. A growing body of research has linked student achievement and behavior to physical building conditions and overcrowding;
5. Academic standards cannot be raised by continuing the historic pattern of lowering teacher standards in times of rising enrollments;
6. A new consensus needs to be formed that crosses generational lines so that all Americans see their local schools as centers of the community; and
7. The rising number of young people attending high school will have a profound impact on the nation's system of higher education. There are many implications for the future, centering on the preparation of teachers, the improvement of facilities, alternative schedules and learning environments, and attentiveness to the problems increasing enrollment brings. (Contains two figures.) (SLD)
What Do We Know

The Impact of the Baby Boom Echo

A special report issued by the Laboratory for Student Success
The Mid-Atlantic Regional Educational Laboratory at Temple University Center for Research in Human Development and Education

LSS
Background
The dramatic increase in the number of births after World War II, nicknamed the “baby boom,” lasted through the early 1960s. At its peak in 1957, there were 4.3 million recorded births. That number dropped to 3.1 million in the early 1970s.

Another surge in births was recorded in 1977—the start of the “baby boom echo”—and reached 4.1 million in 1990. In contrast to the previous baby boom, however, the number of births is not projected to decline but to remain fairly stable at around 4 million. Long-range projections indicate a rising number of births over the coming decades—from 4.2 million in 2010 to 4.6 million in 2020.

As these figures show, it is clear that the increase in the number of young people filling this nation’s classrooms will be a defining feature of American education for many years to come. This report seeks to describe What We Know about the impact of the increasing number of teenagers in our schools who make up “the baby boom echo.” In particular, it delineates seven critical issues that demand our attention as we explore the effects of the baby boom echo on the future of the American education system.

4 There may be no short-term solutions in school districts that face the long-term problem of rising enrollments.
Unlike the previous baby boom, which lasted from 1947 until 1961, there will be no sharp decline in student enrollment after 2007. Instead, the student population will plateau at a much higher level as the number of births stabilizes. This finding suggests that many school districts may not be able to adequately meet the needs of their student population by simply buying more portables, or double-shifting students.

2 The majority of young people who make up the baby boom echo will be teenagers.
During the last decade, elementary schools faced the most pressure in terms of enrollment increases. In 1997, however, that pattern is expected to change, with elementary school enrollment projected to grow by less than 1%, from 37.8 million to 38 million.

In contrast, secondary school enrollment is expected to increase dramatically. During the next 10 years, a 13% increase in high school enrollment is expected as 1.7 million young people enter high school nationwide (see Figure 1).

The simultaneous decrease in elementary school enrollment and dramatic increase in high school enrollment has many implications. High schools cost more to build than elementary schools (an average of $15.3 million vs. $6.3 million), and require more space and land. In addition, recruitment of qualified teachers will continue to be a problem, as will the need for more guidance counselors and related staff as schools re-double their efforts to help young people stay away from drugs. Further, since many teachers and administrators find it difficult to get to know students in large schools, discipline may be more of a problem. More importantly, the increased number of young people may cause those teenagers requiring extra attention to simply get lost in the shuffle.

What is the impact on the mid-Atlantic region?
Projected percent change in enrollment in public secondary schools in the mid-Atlantic region for fall 1997 and fall 2007:

DC: Increase of 10 to 20%
DE: Increase of 10 to 20%
MD: Increase of 10 to 20%
NJ: Increase of 10 to 20%
PA: Increase of less than 10%
States are meeting the challenge of overcrowded schools with varying success.

To address the problems related to rising enrollments, states are putting bond issues on voter ballots to support school construction, authorizing localities to raise their sales taxes, leasing portable and new facility space, and considering the extension of the school year. Many local districts are also trying to pass bond issues and raise local taxes. However, while some states, such as Georgia and North Carolina, have shown strong support of bond issues and tax increases, others, such as Alabama and Illinois, have not.

A growing body of research has linked student achievement and behavior to physical building conditions and overcrowding.

Research has shown that decaying physical building conditions can affect the learning, health, and morale of both school staff and students. Furthermore, since class space is limited (and threatens to become even more so as student enrollment rises over the next decade), overcrowding in the classroom makes it difficult for students to concentrate on their lessons, and limits the amount of time teachers can spend on anything beyond the barest minimum of required material.

We cannot expect to raise academic standards by continuing our historic pattern of lowering teacher standards in times of rising enrollments.

Not all high schools face teacher shortages; many school districts with rapidly increasing student enrollments, especially those in large cities, face an incredible demand for qualified teachers. During the next decade, the number of K-12 public and private classroom teachers is expected to rise from 2.99 million to 3.34 million. And while the number of elementary school teachers is expected to increase only 5% between 1997 and 2007, the number of secondary school teachers is projected to increase by 14%.

When schools face teacher shortages, they often are forced to hire teachers who are not fully qualified. Approximately 13% of teachers lack full certification in their main assignments. Thirty-six percent of public school teachers nationwide whose main teaching assignments are in English, foreign languages, mathematics, science, or social studies have neither an undergraduate major or minor in the subjects they teach. In their other assignment fields, only about half are fully certified.

In addition, many school districts face shortages of certified teachers in particular fields. In a 1996 survey by Recruiting New Teachers, Inc., 85% of urban districts reported an immediate need for special education teachers; 69% for science teachers; 67% for math teachers; and 64% for bilingual education teachers. Because of the dramatic increase in high school enrollment, shortages of qualified teachers in specific subject areas can be expected to grow worse over the next decade.

A new consensus needs to be formed that crosses generational lines so that all Americans see their local schools as “centers of the community.”

During the next decade, thousands of new schools will be built and thousands more remodeled in an effort to accommodate rising student enrollments and to replace or modernize the more than a third of the nation’s existing schools that are currently over 50 years old. Since schools are built in approximately 50- to 60-year cycles, this represents a historic opportunity to design schools for the new millennium where several generations of children will be educated in technology-rich, personalized learning environments that are open to—and even the hub of—the community.

To ensure that these 21st century schools are not large, impersonal buildings with designs from the early 20th century, education and civic leaders need to reach out to the community in an effort to propose that school buildings can have multi-purpose use and be “centers of the community” for Americans of all ages.

The rising number of young people attending high school will have a profound impact on this nation’s system of higher education.

Currently, 65% of high school graduates are attending college—a new national record. In the coming decade, a 21% increase in the number of full-time college students is projected (see)

<table>
<thead>
<tr>
<th>State</th>
<th>Projected Enrollment</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>18,000 to 20,000</td>
<td>11.1%</td>
</tr>
<tr>
<td>DE</td>
<td>33,000 to 39,000</td>
<td>18.2%</td>
</tr>
<tr>
<td>MD</td>
<td>232,000 to 263,000</td>
<td>13.4%</td>
</tr>
<tr>
<td>NJ</td>
<td>328,000 to 374,000</td>
<td>14.0%</td>
</tr>
<tr>
<td>PA</td>
<td>559,000 to 752,000</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

Delaware and New Jersey are two of the top 15 states with the largest projected percent increases in enrollment in grades 9-12 in public schools between fall 1997 and fall 2007.

Maryland and New Jersey are two of the top 15 states with the largest projected enrollment increases in grades 9-12 in public schools between fall 1997 and fall 2007.
Figure 2). This increase in both the demand for a college education and the number of young people seeking to go to college gives this nation's system of higher education a unique opportunity to play a powerful role in the current effort to raise standards at the secondary school level. By raising their own standards for admission, colleges and universities can send a powerful message that they expect nothing less than the best in applicants.

Implications for the Future
During the next decade, many school districts may not be able to adequately meet the needs of the increasing student population. Thus, between 1997 and 2007:

- The preparation of qualified secondary teachers must become a policy priority at the local, state, and national levels.
- More high schools will need to be built and/or remodeled as technology-rich, personalized learning environments that meet the needs of students in the 21st century.
- The nation may have to redouble its efforts to support the increasing number of young people so as to avoid problems of discipline and substance abuse.
- Schools will need to focus in particular on young people who require special attention in the classroom who are at risk of “getting lost in the shuffle” of overcrowded schools.
- Alternative schedule arrangements will need to be considered, including split schedules and year-round schooling.
- Alternative learning environments will need to be considered, including school-within-a-school and education in settings other than the traditional school.
- School authorities must study their own enrollment projections at least 10 years into the future in an effort to project staffing and facility requirements.
- Colleges and universities will need to respond to the increasing number of full- and part-time students by maintaining high standards for admission, attracting quality teacher candidates, and designing a demanding curriculum for the 21st century.

What is the impact on the mid-Atlantic region?

High school graduates of public and private schools in the mid-Atlantic region from 1996-97 to 2006-07:

DE: 6,000 to 7,000; percent change of 16.5
DC: 3,000 to 3,000; percent change of -7.1
NJ: 63,000 to 79,000; percent change of 25.5
PA: 106,000 to 125,000; percent change of 18.6
MD: 41,000 to 53,000; percent change of 28.9
The Laboratory for Student Success (LSS) is one of 10 Regional Educational Laboratories established by the Office of Educational Research and Improvement (OERI) of the U.S. Department of Education. The LSS is comprised of an interdisciplinary team of experienced, talented, and practice-sensitive researchers, practitioners, and staff joined in the common cause of promoting student success.

The Laboratory for Student Success aims to provide assistance to schools in the mid-Atlantic region, including Delaware, Maryland, New Jersey, Pennsylvania, and Washington, DC, in their efforts to make significant improvements in achieving student success. The LSS scope of work is grounded in the belief that all children have the capacity to learn, including and especially those who, for whatever reason, are at risk of academic failure. With this in mind, the LSS has two major programs—Services to the Field and Applied Research and Development—that seek to: (a) discover ways to build on student potential and resilience; (b) expand the knowledge base on what helps students succeed; and (c) determine how newly developed knowledge can best be put into action in the classrooms.

**Services to the Field**

The Laboratory for Student Success Services to the Field component features four outreach services that not only gather and share information on the research base and state-of-the-art classroom practices, but also work with practitioners and professionals to use these success strategies in their schools and school districts. The four outreach services include: State-of-the-Art Seminars, What Works Workshops, Advanced Study Institutes, and On-site Professional Development and Technical Assistance.

**Applied Research and Development**

The Laboratory for Student Success researchers focus on a broad-based program of research and development that aims to: (a) identify effective educational practices and policies that are currently in use; (b) develop new strategies for efficacious classroom instruction; (c) design and implement caring school environments that foster educational resilience; and (d) demonstrate the feasibility and efficacy of a coherent and coordinated system of service delivery that connects families, schools, and communities in the service of children and youth.

**Information**

For more information about the Laboratory for Student Success, contact Cynthia Smith, Director of Information Services, at 800-892-5550, or access the LSS website at http://www.temple.edu/LSS.


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