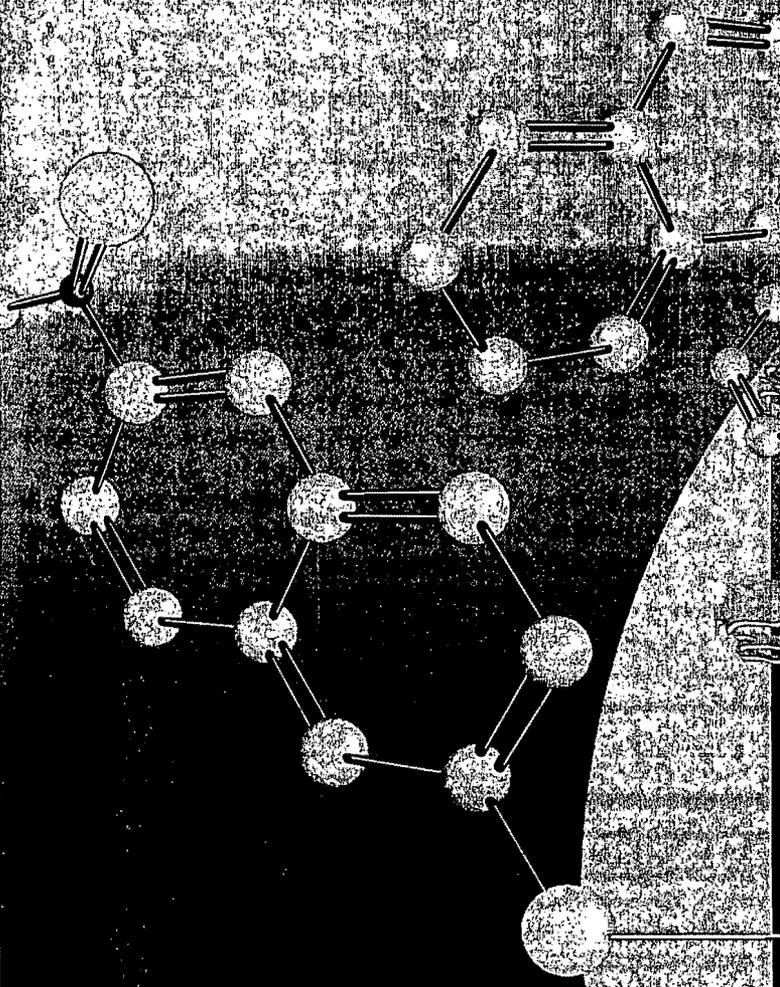
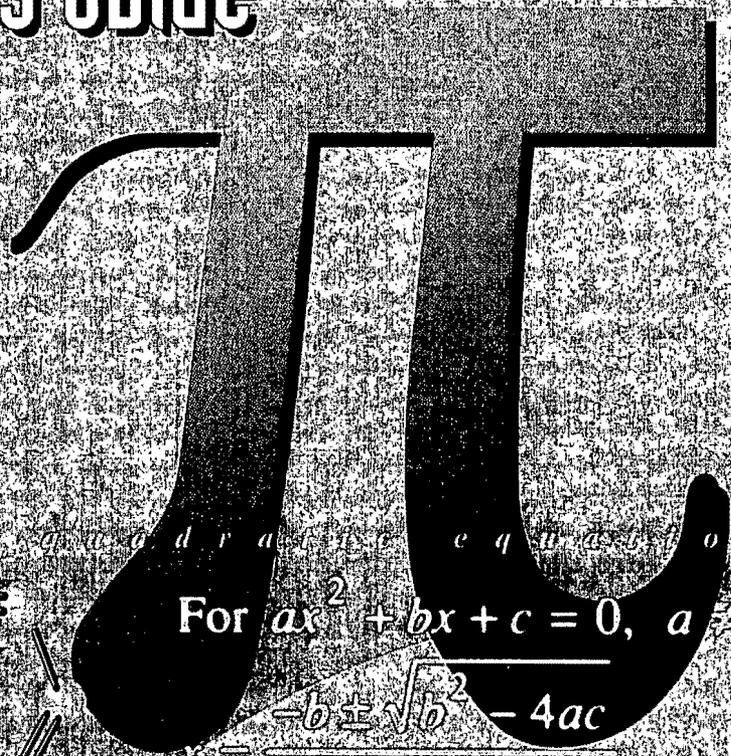


# The Formula for Success:

## A Business Leader's Guide to Supporting Math and Science Achievement



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# BCER Update

**Business Coalition for Education Reform**

## *The Formula for Success* A New BCER Resource

May 1998

Attached is *The Formula for Success: A Business Leader's Guide to Supporting Math and Science Achievement*, released this month by the BCER and the U.S. Department of Education. Prepared at the request of business leaders and BCER coalitions across the country, this publication provides employers with data on the state of math and science achievement of American students (including the recently released Third International Math and Science Study results), links between math and science achievement and workplace success, and concrete strategies, examples, and resources for employers to support increased math and science achievement in their own communities.

Analyses of eighth-grade teaching and curriculum show our country has a fragmented curriculum and teaching generally is not focused on challenging content nor is executed in a way that promotes problem-solving skills. By the twelfth-grade, U.S. TIMSS ranking fell to below average in both science and mathematics, even among our advanced students. This low performance stems from the fact that the majority of our students do not take advanced math or science courses, do not have a solid foundation coming out of middle school, and are not being taught by teachers fully qualified to teach math and science.

*The Formula for Success* highlights six strategies that business can use to work with educators, parents, and community leaders to support math and science achievement, including:

**1) Articulate workplace academic skill requirements; communicate these needs to schools, parents, and students on a regular basis; and ensure these skills are incorporated into academic standards.**

**2) Support more rigorous teacher training that incorporates mastery of content as well as its application to success in the workplace.**

**3) Support programs that expose students to the world of work.**

**4) Support the use of student and system performance data that are clear, reliable, and broadly disseminated.**

**5) Use student achievement in hiring decisions to send the message to all students that academic achievement is important.**

**6) Encourage employees, especially those who are parents, and other community stakeholders to increase their involvement with local schools to help students achieve challenging academic standards.**

Additionally, the publication profiles over 25 model programs and initiatives led by individual companies and business coalitions (most of which are part of the BCER network) that exemplify these strategies. Many of these programs will be featured at a session at the National Alliance of Business Annual Conference on October 4 - 6 in Washington D.C.

Ten thousand copies of *The Formula for Success* are being distributed by the U.S. Department of Education and the BCER to employers, business coalitions, and others concerned with education reform across the country. It is also available on the BCER website ([www.bcer.org](http://www.bcer.org)). Additional copies can be ordered by contacting the National Alliance of Business at 800/787-2848.

The BCER Update is published monthly by the Business Coalition for Education Reform (BCER). The BCER is a coalition of 13 national business organizations dedicated to strengthening America's schools. Let us know how we can help you. Feel free to contact us whenever you need information about business involvement in education at the national, state or local level, or to provide feedback on BCER products and services. Address: BCER, c/o National Alliance of Business, 1201 New York Avenue, NW, Suite 700, Washington DC 20005; Phone: 800/787-2848; Fax: 202/289-2908; Email: [larsnk@nab.com](mailto:larsnk@nab.com); World Wide Web: <http://www.bcer.org>

## CAPITAL NEWS - Comprehensive School Reform Demonstration Program

*An important new opportunity for local communities to obtain funds to improve entire schools and raise student achievement based on reliable research and effective practices.*

The Comprehensive School Reform Demonstration (CSRSD) program, new in 1998, will help raise student achievement by assisting public schools across the country to implement effective, comprehensive school reforms that are based on reliable research and effective practices, and that include an emphasis on basic academics and parental involvement.

In establishing the program, Congress and the President recognized the need for effective research-based models for comprehensive school reform. Achieving this goal is dependent upon building support and leveraging ongoing efforts, which connect higher standards with school improvement at the state and local level through Title I and other major reform initiatives. The CSRSD program, in turn, will help expand the quality and quantity of schoolwide reform efforts that enable all children, particularly low-achieving children, to meet challenging academic standards.

The comprehensive school reform program is intended to foster coherent schoolwide improvement that cover virtually all aspects of a school's operations, rather than

piecemeal, fragmented approaches to reform. To qualify for funding, schools must thoughtfully integrate key components described in the legislation such as curriculum and instruction, student assessment, teacher professional development, parent involvement, and school management—and utilize high-quality assistance from outside partners experienced in schoolwide reform. The legislation calls for each participating school to receive at least \$500,000 of CSRSD funds a year, renewable for up to three years.

A key feature of the program is encouraging schools to examine successful, externally developed models for inclusion in their comprehensive school reform efforts—models that have well-researched and well-documented designs for schoolwide change. And that have been replicated with proven results.

Funds will become available to states on July 1, 1998, and will remain available for obligation by states and school districts through September 30, 2000. *For additional information, see the U.S. Department of Education's home page, at <http://www.ed.gov/offices/OESE/compreform>. You may also contact the Comprehensive School Reform Program at 1-800-USA LEARN, or e-mail [compreform@ed.gov](mailto:compreform@ed.gov).*

## PROGRAMS THAT WORK

### Triangle Coalition for Science and Technology Education

#### Mission and Impact

The Triangle Coalition for Science and Technology Education, founded in 1985, works to improve science, mathematics, and technology education in the schools by encouraging the collaboration of leaders from business, industry, science, engineering, and education.

The Coalition gathers and disseminates information about developments in science, mathematics and technology education from national organizations and local and state alliances. The Coalition promotes and assists the establishment of alliances, and links them with each other and with the larger Coalition network.

The Triangle Coalition provides members with:

- Time-sensitive information on education issues, programs, and legislation in the *Triangle Coalition Electronic Bulletin*.
- Legislative updates that analyze and offer contact information for direct impact on the nation's education agenda.

- Staff resources to help develop or refine science, mathematics and technology education, and school-to-work programs, especially through alliance development;
- Conferences at which national and local decision makers develop national and grass roots strategies for action;
- National recognition for education activities; and
- Publications useful in developing collaborative programs.

Other programs include the Scientific Work Experience programs for Teachers (SWEPT), which exposes educators to real-life applications of their curricular subjects through paid on-the-job opportunities in workplace and research settings, and the Albert Einstein Distinguished Educator Fellowship Program, which offers elementary and secondary mathematics and science teachers with demonstrated excellence in teaching an opportunity to serve on the national public policy arena.

*For more information, contact the Triangle Coalition for Science and Technology Education at 800/582-0115, email: [tricoal.com](mailto:tricoal.com), website: [www.triangle-coalition.org](http://www.triangle-coalition.org).*

## MARKETPLACE: Events, Initiatives, and Resources

### Resources for Improving Math and Science Achievement

Last month, the Eisenhower National Clearinghouse unveiled a one-stop website for information on TIMSS (<http://timss.ene.org>). The site offers the "Attaining Excellence Kit," papers by international education experts, and links to additional resources. President Clinton's remarks at the Presidential TIMSS Roundtable, a new overview of the U.S. Department of Education's Math Initiative, and a self-assessment guide for using federal resources to improve mathematics teaching and learning can be found at: <http://www.ed.gov/inits.html#2>.

### Getting Real & Getting Smart

This first-year culminating report from the National Teacher Policy Institute (NTPi) - a project of IMPACTII - The Teachers' Network - describes specific policy recommendations aimed at improving student achievement based on

four issues in professional development: teacher preparation & new teacher induction, ongoing professional growth, teacher networks, and teacher leadership in school change. Thirty-five MetLife Fellows, all of whom are classroom teachers, wrote the report. Complete versions of fellows' research papers are available on IMPACTII - The Teachers' Network's website: [www.teachnet.org](http://www.teachnet.org). For a copy of this publication, send \$3.50 (shipping and handling) to IMPACTII - The Teachers' Network, 285 West Broadway, New York, New York, 10013. For more information, call 212/966.5582 or Email: [teachnet@teachnet.org](mailto:teachnet@teachnet.org).

### New Skills for New Schools: Preparing Teachers in Family Involvement

Produced by the Harvard Family Research Project for the U.S. Department of Education, this 75-page report highlights numerous examples of specific successful projects and activities.

Also included are policy recommendations. To order a copy of the report, call (800) USA-LEARN, or write to: Harvard Family Research Project, Harvard Graduate School of Education, Appian Way, Cambridge, MA 02138.

### Employer to Employer: Building the Workforce of the Future

June 4-5, 1998 Dallas, TX  
This employer-only conference is designed for any employer seeking practical assistance in implementing school-to-career or workforce development programs. Through the partnership of the National Employer Leadership Council (NELC), the National Tech Prep Network (NTPN), and the National School-to-Work Office, this event offers the best opportunity for participants to learn from and network with peers on these important initiatives. Areas of emphasis include: working with teachers and students, strengthening business practice, and

building a system. For more information about the conference, contact NTPN at 800/518-1410.

### New Clearinghouse Provides Listing of Personal Finance Teaching Materials

High-quality personal finance teaching tools for use in K-12 classrooms are available in a new, web-based personal finance clearinghouse operated by JumpStart Coalition for Personal Financial Literacy ([www.jumpstartcoalition.org](http://www.jumpstartcoalition.org)). This clearinghouse, provides a central listing of existing personal finance resources provided by a variety of public, private, and non-profit organizations. Topics covered by the resources relate to at least one of the four broad areas of personal finance identified by JumpStart as essential for young adults to understand: income, money management, saving and investing, and spending. For more information, contact JumpStart at 202/466-8610.

### New on the BCER website ([www.bcer.org](http://www.bcer.org))

• **Interactive coalition database.** By the end of the summer, the BCER web site will feature on-line profiles of BCER coalitions and links to their web sites. You can search by issue or geographical area to find information about business-education coalition efforts across the country or in the city next door. It isn't too late to send information. You should have received a write-up of your coalition in April, with a fax back sheet for changes. Feel fax to Elizabeth Pauley (fax: 202/289-2908) or call her for more information (phone: 202/289-2864). We look forward to including your coalition's profile on the web!

• **The Formula for Success: A Business Leader's Guide to Supporting Math and Science Achievement** (see front cover).

## COALITION WATCH

In each issue, this section will profile BCER coalition activities and initiatives. If you would like your coalition to be featured, please contact Karen Larson - phone: 800/787-2848, email: [larsonk@nab.com](mailto:larsonk@nab.com), fax: 202/289-2908.

### SciMathMN-Minnesota

Founded in 1993, SciMathMN is a partnership among business, education and state government to increase the educational achievement of all Minnesota students in science and mathematics to help them meet the complex challenges of their future. SciMathMN is pursuing statewide improvements in teaching and learning of K-12 math and science through alignment of the national education standards, the Minnesota Graduation Standards, teacher preparation, and local policy and classroom practice. SciMathMN, working with a coalition of business, education and parent groups in Minnesota is launching a **statewide public awareness campaign** to ensure that standards-based practices are recognized in local schools for all students. SciMathMN is using a booklet developed by the Education Excellence Partnership (see April issue of BCER Update), along with locally-developed brochures for parents, including, **"What should I look for in the mathematics/science program in my child's school?"** SciMathMN's web site ([www.seimathmn.org](http://www.seimathmn.org)) offers a wealth of information on math and science standards. *For more information, contact Bill Linder-Scholer, Executive Director, at 612/282-5981.*

### North Carolina Business Committee for Education (NCBCE)

The North Carolina Business Committee for Education (NCBCE) is a catalyst for systemic change and continuous improvement in public education. NCBCE involves business in results-oriented, self-sustaining state and local initiatives to prepare all North Carolina students to be nationally and globally competitive for employment and lifelong learning. In 1997, under the leadership of **Jay Billie Ray, Jr., President of Bell South -NC**, NCBCE created the **Technology Learning Initiative**, a unique partnership between N.C. **Association of School Administrators (NCASA) and N.C. Electronics & Information Technologies Association (NCEITA)**. This partnership brings together expertise and perspectives across these organizations to enhance NC educational leaders' knowledge and skills in planning for technology. Positive results include increasing educators' awareness about resources offered by the business community, and building business leaders' understanding about the attributing factors which impact public school decisions. The collaborative is planning a conference for November 23-24, 1998. *For more information, contact Tom Williams, Executive Director, at 919/713-5555.*

### Texas Business & Education Coalition (TBEC)

The Texas Business & Education Coalition (TBEC), under the leadership of **Jack Doherty, Vice President of Shell Oil Company Foundation**, is a major force for school improvement in Texas. In late April, the **Quality Texas Foundation**, an organization created in 1996 to facilitate public school involvement in quality initiatives, announced that **Brazosport Independent School District of Freeport**, along with a division of Dell Computer Corporation of Austin and TD Industries of Dallas, as recipients of the prestigious 1998 Texas Quality Award, an award based on the Malcolm Baldrige National Quality Award criteria and process. This achievement is a result of an initiative organized by the Quality Texas Foundation and TBEC, which encourages school districts to apply for the Texas Quality Award and helps secure expert support from the business community for their quality initiatives. To date, ten schools have already indicated their desire to participate in this effort during the next year. *For more information, contact John Stevens, Executive Director, at 512/480-8232.*



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