

STORAGE NAME: h0323.ed

DATE: April 14, 2000

**HOUSE OF REPRESENTATIVES
AS REVISED BY THE COMMITTEE ON
EDUCATION APPROPRIATIONS
ANALYSIS**

BILL #: HB 323

RELATING TO: Math and Science Teacher- Education Program

SPONSOR(S): Representative Wise

TIED BILL(S): None

ORIGINATING COMMITTEE(S)/COMMITTEE(S) OF REFERENCE:

- (1) EDUCATION K-12 YEAS 10 NAYS 0
 - (2) EDUCATION APPROPRIATIONS
 - (3)
 - (4)
 - (5)
-

I. SUMMARY:

HB 323 establishes a mathematics and science teacher-education program to improve instruction in these subjects in public schools, especially in grades kindergarten through 8. The program includes an evaluation of pre- and post- data for the analysis of student achievement, including an analysis of students whose teachers participated in the program relative to students whose teachers did not participate.

The bill establishes the Alliance for Improving Mathematics and Science Teaching in Education Programs (AIMS) to administer the mathematics and science teacher-education program (math and science program).

HB 323 requires State Board of Education (SBE) rules for school improvement and accountability to add reporting requirements to indicate the number and percentage of teachers who have achieved National Board of Professional Teaching Standards certification and, when required, the number and proportion of teachers who have successfully completed the math and science program. The bill also requires teacher education programs in science, mathematics, and technology education under the School Community Professional Development Act to be fully aligned with Sunshine State Standards. The bill requires the Excellent Teaching Program to include a salary bonus or increased stipend for teachers who successfully complete the math and science program. The bill also requires that certain information regarding the number and proportion of K-8 teachers with national certification or program completion to be included in school public accountability reports.

The bill provides that funds for the math and science K to 8 teacher professional development program are subject to legislative appropriation. The House Appropriations Bill includes a \$3 million appropriation for this program.

The bill establishes an effective date of July 1, 2000.

There is one strike all amendment adopted by the Committee on Education K-12 that is traveling with the bill which does the following:

- requires the DOE to determine the criteria for evaluation of effectiveness of the program.
- removes the establishment of AIMS.
- reestablishes the Technological Research and Development Authority as a statewide independent special district.

II. SUBSTANTIVE ANALYSIS:

A. DOES THE BILL SUPPORT THE FOLLOWING PRINCIPLES:

- | | | | |
|-----------------------------------|------------------------------|-----------------------------|---|
| 1. <u>Less Government</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 2. <u>Lower Taxes</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 3. <u>Individual Freedom</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 4. <u>Personal Responsibility</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |
| 5. <u>Family Empowerment</u> | Yes <input type="checkbox"/> | No <input type="checkbox"/> | N/A <input checked="" type="checkbox"/> |

For any principle that received a "no" above, please explain:

B. PRESENT SITUATION:

Math and Science Teacher Preparation Program

There is currently no state authorized program specifically designed to provide professional development for teachers in the instruction of math and science.

School Improvement and Accountability

Section 229.592, F.S., requires every public school in the state to have a school improvement plan. The commissioner is responsible for implementing and maintaining a system of intensive school improvement and stringent education accountability.

Upon request, the Florida Department of Education (DOE) must provide technical assistance and training to any school, school advisory council, district, or school board for conducting needs assessments, developing and implementing school improvement plans, developing and implementing assistance and intervention plans, or implementing other components of school improvement and accountability. Priority for these services must be given to school districts in rural and sparsely populated areas of the state.

School Community Professional Development Act

Section 231.600, F.S., requires DOE, public community colleges and universities, public school districts, and public schools in this state to collaborate and establish a coordinated system of professional development. The purpose of the professional development system is to enable the school community to succeed in school improvement. DOE must design methods by which the state and district school boards may evaluate and improve the professional development system. The evaluation must include an annual assessment of data that indicate progress or lack of progress of all students. DOE must report annually to SBE and the Legislature any school district that has failed to provide an adequate professional development system. This report must include the results of the department's investigation and of any intervention provided.

Excellent Teaching Program

Section 236.08106, F.S., provides for the Excellent Teaching Program. The program gives teachers a monetary incentive to acquire National Board of Professional Teaching Standards (NBPTS) certification and rewards teachers who demonstrate teaching excellence by attaining NBPTS certification and sharing their expertise with other teachers. Under the program, the state subsidizes 90% of certification fees, to a maximum of \$1,800.

The program provides an additional one-time award of \$150.00 from the DOE to teachers as a portfolio-preparation incentive for participants of the NBPTS certification program. The program also provides annual bonuses equal to 10% of the previous year's statewide average salary of classroom teachers to NBPTS certified teachers employed by a district school board or public school. An additional annual bonus equal to 10% of the previous year's statewide average salary of classroom teachers is also available to NBPTS certified Florida public school teachers who agree, in writing, to provide mentoring and related services for at least 12 workdays each school year.

The Educational Funding Accountability Act

Section 236.685, F.S., requires district school boards to classify each employee of the school board or school district into one of the following categories: instructional personnel, instructional specialists, instructional support personnel, administrative personnel, managers, or educational support personnel. The school public accountability report to parents must include the number of district school board or school district employees in each of these categories, by work location.

C. EFFECT OF PROPOSED CHANGES:

HB 323 creates an incentive program to encourage teachers, especially those teaching in grades K-8, to become better familiar with the Sunshine State Standards content requirements of, and best teaching methods for, mathematics and science. The bill establishes the program, creates a planning and implementation entity with specific responsibilities, provides for Legislative and governmental oversight, improves public reporting of public school teachers' credentials, and authorizes funding of the program as detailed in the sections below.

Math and Science Teacher Education Program

The bill establishes an inservice professional development program in mathematics and science (math and science program). The initial emphasis of the math and science program will be for public school teachers of grades K-8. The bill provides that the math and science program may be conducted separately or in conjunction with other inservice professional development programs. Funds for the math and science program must not supplant current professional development in mathematics and science education.

The bill provides that the purpose of the math and science program is to improve the ability of teachers to deliver instruction that:

- ▶ Concentrates learning on the Sunshine State Standards and the Subject Matter Content Standards adopted by the Education Standards Commission,
- ▶ Includes content in sequences designed to prepare students for the state assessments of progress,
- ▶ Demonstrates its quality by improvement in students' classroom achievement, and
- ▶ Identifies and challenges students who excel in science and mathematics as well as those whose aptitude is average or below average.

The bill requires the math and science program to improve a teacher's command of content knowledge and teaching skills.

The bill provides that if resources are inadequate to include all teachers in the math and science program, then the resources must be allocated to produce a measurable, systemic

change in student learning, instead of only reaching as many teachers as possible. The bill requires the math and science program to:

- ▶ Employ strategies that have proved effective,
- ▶ Exploit current knowledge and research on professional staff development and standards,
- ▶ Include components for school board members and administrators at the school level, school district administration level, and state level,
- ▶ Involve the expertise of public and independent universities, colleges, and community colleges in planning and implementation,
- ▶ Provide for an incentive plan, and
- ▶ Include an evaluation of effectiveness as determined by AIMS.

The bill requires the evaluation component of the math and science program to provide pre- and post- data for the analysis of student achievement, including an analysis of comparable students whose teachers participated in the math and science program relative to students whose teachers did not participate.

The bill gives AIMS the authority to operate or delegate the delivery mechanisms for the math and science program to various specified entities which may involve the expertise of, and collaboration with, science centers. The bill defines science centers as nonprofit organizations, which are accredited by the American Association of Museums and have had at least 5 years experience providing professional development and support services to teachers throughout the state. The bill requires collaboration between AIMS and administrators of each components of the math and science program. Delivery sites for the program must be joint-use facilities that may be owned by a school district, university, college, or any other group under contract approved by AIMS.

The bill provides that teachers participating in the math and science program may receive compensation from the school district for participation in the math and science program and may use their successful participation for extension of a certificate, addition of a new certification area (where applicable), or for college credit (if the program was taught by a full-time, postsecondary faculty member). The bill authorizes a community college or university to report full-time-equivalent students for the instruction provided under the math and science program if the institution used its own staff and resources.

The bill provides that the Legislature annually determines the funding available for the math and science program in the General Appropriations Act (GAA).

Alliance for Improving Mathematics and Science (AIMS)

The bill creates the Alliance for Improving Mathematics and Science in Florida's education programs (AIMS) to plan and implement the math and science program. AIMS is a not-for-profit corporation that is operated in compliance with chapter 617, F.S., and is recognized under section 501(c)(3) of the Internal Revenue Code. AIMS is not a unit of state government and, although assigned to the Office of the Commissioner of Education for administrative purposes, executes its responsibilities independently. AIMS is required to comply with the provisions of chapter 119, F.S., relating to public records, and with chapter 286, F.S., relating to public meetings and records.

The bill establishes that AIMS is governed by a board of directors. Members of the AIMS board of directors are appointed by the Commissioner of Education from recommendations by the Postsecondary Education Planning Commission, the Education Standards Commission, the Workforce Development Board of Enterprise Florida, or by another public

or private organization with educational or technological expertise. The composition of AIMS' board of directors must include:

- ▶ four employees of postsecondary institutions with expertise in science and science education, mathematics and mathematics education, or a related technical field,
- ▶ four employees, two of which are teachers, of Florida district school boards,
- ▶ four members from the private sector, and
- ▶ one ex officio representative of the DOE who participates in all deliberations, but may not vote.

The bill provides for four-year staggered terms of the members. AIMS board members are entitled to receive reimbursement for travel and per diem. The AIMS board of directors must employ a chief executive officer to whom the board may delegate powers and duties.

The bill creates a council of six appointed members to apprise decisionmakers of AIMS activities that will meet at least twice a year. Once each year the council must meet jointly with the AIMS board of directors. The required composition of the council is as follows:

- ▶ a member of the Senate who is appointed by the President of the Senate,
- ▶ a member of the House of Representatives who is appointed by the Speaker,
- ▶ a representative of the Executive Office of the Governor who is appointed by the Governor,
- ▶ a representative of the Department of Education who is appointed by the Commissioner of Education,
- ▶ a representative of the Florida Community College System who is appointed by the executive director of the system, and
- ▶ a representative of the State University System who is appointed by the chancellor.

The bill requires AIMS to plan and oversee implementation of the math and science program and must:

- ▶ Establish and maintain a system of professional development programs in mathematics and science education, as provided in the GAA.
- ▶ Provide for involvement of postsecondary education in planning and implementation.
- ▶ Produce specialized professional development program guidelines which *must* assure that the programs focus on content learning, employ tested strategies, reflect the nature of science and mathematics, and base their design on current knowledge and research on professional development.
- ▶ Provide for the selection and preparation of staff to implement professional development in mathematics and science.
- ▶ Establish priorities that school districts must use in selecting teachers to participate in the math and science program.
- ▶ Design strategies for providing follow-up support for each participating teacher.
- ▶ Design and oversee an incentive plan that will encourage the participation of public school teachers and administrators in the professional development program.
- ▶ Measure the effectiveness of the professional development program on learning and teaching in mathematics and science.

HB 323 requires the AIMS board of directors to submit a proposed budget by December 1, 2000, to the Commissioner of Education for implementing the program in the years 2001 through 2004. This budget must contain alternative plans for the participation of 50 percent, 32 percent, and 25 percent, respectively, of the state's teachers at the elementary and middle school levels by 2004.

School Improvement and Accountability

The bill requires DOE rules for school improvement and accountability to include a requirement that each school report the number and percentage of teachers who have achieved certification by the NBPTS and, for schools that contain a kindergarten or grades 1 through 8, the number and proportion of teachers who have successfully completed the professional development program to improve mathematics and science teaching under the Excellent Teaching Program.

School Community Professional Development Act

The bill requires that teacher education programs in science, mathematics, and technology education, under the School Community Professional Development Act, be fully aligned with the content of the science tasks included in statewide teaching scheduled for 2003 and with the Sunshine State Standards.

Excellent Teaching Program

The bill includes a salary bonus or increased stipend for teachers who successfully complete the professional development program to improve mathematics and science teaching under the Excellent Teaching Program. However, the bill does not specify the bonus or stipend amount.

The Education Funding Accountability Act

The bill revises educational funding accountability provisions to require the public school accountability report to include the number and proportion of instructional personnel in grades K-8 who have achieved national certification or who have completed the program to improve mathematics and science teaching in Florida.

D. SECTION-BY-SECTION ANALYSIS:

Section 1: Creates s. 231.6015, F.S., to create a mathematics and science teacher education program, to require demonstration of certain uses of funds; provides program purpose, required components, and resource allocation, to require collaborative planning and implementation, and to authorize incentives and certification.

Section 2: Creates s. 240.149, F.S., to establish a nongovernmental, nonprofit organization to plan and implement a program for mathematics and science teacher education, to require a board of directors, a chief executive officer, other staff, and an advisory council, to provide for membership, terms of office, and an appointment process, to provide responsibility and authority to conduct certain activities, and to require a budget request.

Section 3: Amends s. 229.592, F.S., relating to the implementation of the state system of school improvement and education accountability, to require a report.

Section 4: Amends s. 231.600, F.S., relating to School Community Professional Development, to require certain additions to professional development programs.

Section 5: Amends s. 236.08106, F.S., relating to the Excellent Teaching Program, to authorize a salary bonus for teachers who complete certain training programs.

Section 6: Amends s. 236.685, F.S., relating to educational funding accountability, to require a report to include certain information.

Section 7: Provides an effective date of July 1, 2000.

III. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT:

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

None.

2. Expenditures:

The bill provides that funds for the math and science K to 8 teacher professional development program are subject to legislative appropriation. The House Appropriations Bill includes a \$3 million appropriation for this program.

Funds for the program are to supplement rather than supplant current teacher development programs. The bill requires the Alliance for Improving Mathematics and Science Teaching in Education Programs to provide a proposed budget for implementation of the program from 2001-2004 to include alternative plans which train 50, 33, and 25 percent of the state's K to 8 teachers, respectively. As provided by the Department of Education, if 100% of Florida's K to 8 teachers receive one day's math and science training, the cost for a one day salary stipend would be \$20.4 million. 50% of the teachers would cost \$10.2 million; 33% - \$6.7 million; and 25% - \$5.1 million. If substitute teachers were used to replace the teacher in training during a school day, the cost would be roughly half of the amounts estimated above.

The Department of Education also estimates the cost for operation of the Board and the council, including funds for the CEO, support staff, office expenses, and travel as follows: \$35,000 nonrecurring and \$140,000 recurring. These costs appear to be a low estimate.

Cost of the Excellent Teaching Program bonus for K to 8 teachers following completion of the training and demonstrated math/science improvement in student performance cannot be estimated without a known bonus amount and the number of teachers who would qualify. In the fall of 1999, there were 75,040 grades K to 8 regular classroom teachers in the state.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

See Fiscal Impact on State Government, 2. Expenditures:

2. Expenditures:

According to DOE, estimated appropriations for one day of training for each of the first three years of the math and science program are as follows:

| Percent of Teachers | Year 1 | Year 2 | Year 3 |
|---------------------|--------|--------|--------|
| ===== | ===== | ===== | ===== |

| | | | |
|------|--------------|-----------|-----------|
| 100% | \$20,391,397 | \$210,031 | \$218,496 |
| 50% | \$10,195,699 | \$105,016 | \$109,248 |
| 33% | \$ 6,729,162 | \$ 69,310 | \$ 72,104 |
| 25% | \$ 5,097,849 | \$ 52,508 | \$ 54,624 |

The fiscal impact of the bonus or stipend for teachers who complete the program cannot be determined because the bill does not specify the amount of the bonus or stipend.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

None.

D. FISCAL COMMENTS:

See above.

IV. CONSEQUENCES OF ARTICLE VII, SECTION 18 OF THE FLORIDA CONSTITUTION:

A. APPLICABILITY OF THE MANDATES PROVISION:

The bill does not require counties or municipalities to spend funds or take action requiring the expenditure of funds.

B. REDUCTION OF REVENUE RAISING AUTHORITY:

The bill does not reduce the authority that counties or municipalities have to raise revenues in the aggregate.

C. REDUCTION OF STATE TAX SHARED WITH COUNTIES AND MUNICIPALITIES:

The bill does not reduce the percentage of a state tax shared with counties or municipalities.

V. COMMENTS:

A. CONSTITUTIONAL ISSUES:

None.

B. RULE-MAKING AUTHORITY:

None.

C. OTHER COMMENTS:

None.

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VI. AMENDMENTS OR COMMITTEE SUBSTITUTE CHANGES:

On April 10, 2000, the Committee on Education K-12 passed HB 323 with one amendment that does the following:

- requires the DOE to determine the criteria for evaluation of effectiveness of the program.
- removes the establishment of AIMS.
- reestablishes the Technological Research and Development Authority as a statewide independent special district.

VII. SIGNATURES:

COMMITTEE ON EDUCATION K-12:

Prepared by:

Staff Director:

Raylene H. Strickler

Patricia W. Levesque

AS REVISED BY THE COMMITTEE ON EDUCATION APPROPRIATIONS:

Prepared by:

Staff Director:

Mark Armstrong

John Newman