

STORAGE NAME: h1463.ei.doc
DATE: March 29, 2001

**HOUSE OF REPRESENTATIVES
COMMITTEE ON
EDUCATION INNOVATION
ANALYSIS**

BILL #: HB 1463
RELATING TO: Mathematics and Science Teacher-Education Program
SPONSOR(S): Representative(s) Mike Haridopolos
TIED BILL(S): None

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

- (1) EDUCATION INNOVATION
 - (2) EDUCATION APPROPRIATIONS
 - (3) COUNCIL FOR LIFELONG LEARNING
 - (4)
 - (5)
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I. SUMMARY:

This bill establishes the Mathematics and Science Teacher-Education Program (math and science program), an in-service professional development program designed to improve math and science teaching in public schools, with an initial emphasis on grades K-8. 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; improves student classroom achievement; identifies and challenges students that excel in math and science; and identifies and challenges students whose aptitude in math and science is average or below average. As part of the Excellent Teaching Program, this bill provides an unspecified salary bonus or increased stipend for teachers that successfully complete the math and science program.

This bill establishes the Florida Alliance for Improving Mathematics and Science in Education Programs (AIMS) in order to implement the math and science program. The bill also requires AIMS to plan and oversee the implementation of the math and science program and must establish and maintain a system of professional development programs in math and science; involve the postsecondary education sector in the planning and implementation of the math and science program; produce specialized professional development program guidelines; provide for the selection and preparation of staff to implement professional development programs in math and science; establish priorities that school districts and centers for educational enhancement must use in selecting the teachers to participate in the math and science program; design strategies to provide follow-up support for participating teachers in the math and science program; design and oversee an incentive plan that encourages the participation of public school teachers and administrators in the math and science program; and measure the effectiveness of the math and science program on learning and teaching.

Funding for the math and science program must be determined annually in the General Appropriations Act. However, the Department of Education estimates that AIMS will incur approximately \$35,000 worth of start-up costs and will incur approximately \$140,000 worth of operating costs. Additionally, the Department of Education estimates that first-year costs to provide one day's worth of training to 100% of all teachers in grades K-8 is approximately \$20.4 million, while first-year costs to provide one day's worth of training to 25% of all teachers in grades K-8 is approximately \$5.1 million.

SUBSTANTIVE ANALYSIS:

A. DOES THE BILL SUPPORT THE FOLLOWING PRINCIPLES:

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

This bill does not appear to support the principle of less government for the following reasons:

- The Commissioner of Education must appoint the board of directors of the Florida Alliance for Improving Mathematics and Science Teaching in Education Programs (AIMS);
- The President of the Senate, Speaker of the House of Representatives, Governor, Commissioner of Education, Executive Director of the Community College System, and Chancellor of the State University System must appoint the members of the council created to apprise decision makers of the activities of AIMS;
- Schools must report the number and percentage of teachers certified by the National Board of Professional Teaching Standards (NBPTS) and the number and proportion of teachers that successfully completed the Mathematics and Science Teacher-Education Program (math and science program), where applicable; and
- Schools are required to include in the school public accountability report that is sent to parents the number and proportion of instructional personnel in kindergarten through grade eight that are certified by the NBPTS or have successfully completed the math and science program.

B. PRESENT SITUATION:

Please see SECTION-BY-SECTION ANALYSIS.

C. EFFECT OF PROPOSED CHANGES:

Please see SECTION-BY-SECTION ANALYSIS.

D. SECTION-BY-SECTION ANALYSIS:

SECTION 1: Creates section 231.6015, Florida Statutes, in order to (1) establish the Mathematics and Science Teacher-Education Program; (2) outline the purpose of the program; (3) establish program requirements; (4) authorize school districts to provide compensation to teachers participating in the program; and (5) specify that the General Appropriations Act must determine funding for the program.

PRESENT SITUATION-

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

SUNSHINE STATE STANDARDS:

In 1996, the State Board of Education approved the Sunshine State Standards in order to provide student achievement expectations. These standards provide parents, students, teachers, and school administrators a clear understanding of what skills and competencies students should have in seven subject areas (math, science, social studies, language arts, health & physical education, arts, foreign language) at certain stages of their school career (PreK-2, 3-5, 6-8, 9-12). Additionally, the Sunshine State Standards for certain subject areas (math, science, social studies, language arts) must include grade level expectations.

COALITION FOR IMPROVING MATHEMATICS AND SCIENCE EDUCATION:

In the summer of 1998, the National Alliance of State Science and Mathematics Coalition convened a national group in order to discuss the need for improvements in the subject areas of math and science. This national group's Florida contingent is called the Coalition for Improving Mathematics and Science Education (CIMS). According to CIMS, the need to improve the quality of math and science education can be accomplished by focusing on professional development through a statewide assessment program; coordinating the state's efforts through a non-governmental organization with considerable autonomy to define, implement, and evaluate a statewide professional development plan; and utilizing student performance to evaluate the success of a statewide professional development program.

EFFECT OF PROPOSED CHANGES-

This section establishes the Mathematics and Science Teacher-Education Program (math and science program), an in-service professional development program designed to improve math and science teaching in public schools, with an initial emphasis on grades K-8. Funds designated for the program must be used to supplement current professional development activities in math and science education.

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;
- Improves student classroom achievement;
- Identifies and challenges students that excel in math and science; and
- Identifies and challenges students whose aptitude in math and science is average or below average.

The section requires the math and science program to be designed to improve a teacher's command of content knowledge and teaching skills; employ strategies that have proved to be 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 public and private universities, colleges, and community colleges in its planning and implementation; provide for a monetary incentive plan; and include an evaluation of its effectiveness as determined by the Florida Alliance for Improving Mathematics and Science in Education Programs (AIMS).

The section authorizes AIMS to operate the delivery mechanisms for the math and science program or delegate the delivery mechanisms for the math and science program to a school district, a consortium of school districts, an academy, an area center for educational enhancement, or a group operating under a charter arranged by a district or consortium.

The section authorizes school districts to provide compensation to teachers participating in the math and science program. A teacher's successful participation in the math and science program can be used for extending a teaching certificate; adding a teaching certificate in a new subject area, where applicable; or earning college credit for portions of the program taught by faculty members of postsecondary institutions. A community college or university whose faculty provides instruction for the math and science program may report full-time-equivalent (FTE) students for state funding if the instruction is provided as part of a faculty member's regular teaching duties/load. A teacher that successfully completes the math and science program may be eligible for the salary bonus that is provided to teachers that successfully complete the current Excellent Teaching Program.

The section specifies that delivery sites used for the math and science program should be joint-use facilities and may be on property belonging to a school district, a public or private university, a college or community college, or any other group approved by AIMS.

Funding for the math and science program must be determined annually in the General Appropriations Act.

SECTION 2: Creates section 240.149, Florida Statutes, to establish the Florida Alliance for Improving Mathematics and Science in Education Programs (AIMS) in order to implement the math and science program. The alliance is a not-for-profit organization recognized under section 501(c)(3), Internal Revenue Code, and is not considered to be a unit or entity of state government.

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

- Establish and maintain a system of professional development programs in math and science, as provided in the General Appropriations Act;
- Involve the postsecondary education sector in the planning and implementation of the math and science program;
- Produce specialized professional development program guidelines which assure that programs focus on content learning, employ tested strategies, reflect the nature of math and science, and base their design on current knowledge and research concerning professional development;
- Provide for the selection and preparation of staff to implement professional development programs in math and science;
- Establish priorities that school districts and centers for educational enhancement must use in selecting the teachers to participate in the math and science program;
- Design strategies to provide follow-up support for participating teachers in the math and science program;
- Design and oversee an incentive plan that encourages the participation of public school teachers and administrators in the math and science program, provides for access to any merit pay plan developed by school districts, and may provide for a stipend and a salary bonus for participating teachers under the Excellent Teaching Program; and
- Measure the effectiveness of the math and science program on learning and teaching.

The section requires the Commissioner of Education to appoint members of a board of directors to govern AIMS. The composition of the board of directors must include:

- Four employees of postsecondary institutions that have expertise in science and science education, math and math education, or a related technical field;
- Four employees of district school boards with at least two of the employees being teachers;
- Four members of the private sector; and

- One ex officio representative of the Department of Education that may participate in all deliberations but may not vote.

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

The section requires the board of directors to submit a proposed budget for the implementation of the math and science program during the years of 2002 through 2005 to the Commissioner of Education by December 1, 2001. The budget must contain alternative plans for the participation of 50%, 33%, and 25% of the state's teachers at the elementary and middle school levels by 2005.

The section creates a council of six appointed members to apprise decision makers of AIMS activities that will meet twice a year. Once each year, the council must meet jointly with the AIMS board of directors. The composition of the council must include:

- A member of the Senate appointed by the President of the Senate;
- A member of the House of Representatives appointed by the Speaker of the House of Representatives;
- A representative of the Executive Office of the Governor appointed by the Governor;
- A representative of the Department of Education appointed by the Commissioner of Education;
- A representative of the Community College System appointed by the executive director of the system; and
- A representative of the State University System appointed by the chancellor.

SECTION 3: Amends subsection 229.592(8), Florida Statutes, in order to establish reporting requirements relating to the number and proportion of teachers that complete the math and science program.

PRESENT SITUATION-

Section 229.592, Florida Statutes, requires all public schools in the state to develop a school improvement plan. A school improvement plan must be designed to achieve the state education goals and student performance standards pursuant to current law, which include improving readiness to start school; improving graduation rates and readiness for postsecondary education and employment; improving student performance; improving the learning environment; providing school safety; increasing the number of competent teachers and staff; increasing adult literacy rates; and promoting parental, family, and community involvement. Each school improvement plan must also address issues relative to budget, training, instructional materials, technology, staffing, student support services, specific school safety and discipline strategies, and other matters of resource allocation, as determined by school board policy, and must be based on an analysis of student achievement and other school performance data.

Subsection 229.592(8), Florida Statutes, requires the State Board of Education to adopt rules in order to implement a statewide system of school improvement and accountability. These rules must specify the annual reports that schools and school districts must submit.

EFFECT OF PROPOSED CHANGES-

This section requires the State Board of Education to amend current rules in order to require schools to report the number and percentage of teachers certified by the National Board of Professional Teaching Standards. Additionally, those schools that contain a kindergarten or grades

one through eight must report the number and proportion of teachers that successfully complete the math and science program.

SECTION 4: Amends subsection 231.600(3), Florida Statutes, to require teacher education programs in certain subjects to be aligned with the statewide test scheduled for 2004.

PRESENT SITUATION-

Section 231.600, Florida Statutes, the School Community Professional Development Act, requires the Department of Education, community colleges, state universities, school districts, and public schools to establish a coordinated system of professional development. The purpose of the professional development system is to enable the school community to meet state and local student achievement standards and state education goals.

Subsection 231.600(3), Florida Statutes, requires activities contributing to the establishment of a coordinated system of professional development to increase the success of educators in guiding student learning and development; assist the school community in providing stimulating educational activities that encourage and motivate students; and provide continuous support for all education professionals.

EFFECT OF PROPOSED CHANGES-

Under the School Community Professional Development Act, this section requires teacher education programs in math, science, and technology education to be fully aligned with the content of science tasks included in the statewide test (FCAT) scheduled for 2004. These teacher education programs must assure that all teachers know and understand the math and science standards included in the Sunshine State Standards and the Subject Matter Content Standards for teachers adopted by the Education Standards Commission.

SECTION 5: Amends subsection 236.08106(2), Florida Statutes, to provide a salary bonus or an increased stipend for teachers that complete the math and science program.

PRESENT SITUATION-

Section 236.08106, Florida Statutes, creates the Excellent Teaching Program. The program provides monetary incentives to teachers that seek certification by the National Board of Professional Teaching Standards (NBPTS) and provides monetary rewards to teachers that obtain certification by the NBPTS and share their expertise with other teachers.

As part of the Excellent Teaching Program, the state must provide the following monetary incentives to teachers seeking certification by the NBPTS:

- A fee subsidy equal to 90% of the fee charged for participating in the NBPTS certification program; and
- A one-time award of \$150 in order to prepare a portfolio for the NBPTS certification program.

Additionally, the state must provide the following monetary rewards to teachers that obtain certification by the NBPTS:

- An annual bonus of 10% of the prior fiscal year's statewide average salary for classroom teachers; and
- An additional annual bonus of 10% of the prior fiscal year's statewide average salary for classroom teachers that provide 12 workdays worth of mentoring services to teachers that are not certified by the NBPTS.

EFFECT OF PROPOSED CHANGES-

As part of the Excellent Teaching Program, this section provides an unspecified salary bonus or increased stipend for teachers that successfully complete the math and science program that is created in the bill. Criteria for the successful completion of the math and science program must be developed by AIMS and must include a demonstrated improvement in student achievement in the areas of math and science.

SECTION 6: Amends subsection 236.685(4)(a), Florida Statutes, to require the school public accountability report to include numbers and percentages of teachers that are NBPTS certified or that completed the math and science program.

PRESENT SITUATION-

Subsection 236.654(4)(a), Florida Statutes, requires the school public accountability report that is sent to parents to include the number of employees within a school classified as instructional personnel, instructional specialists, instructional support personnel, administrative personnel, managers, and educational support personnel.

EFFECT OF PROPOSED CHANGES-

This section requires the school public accountability report that is sent to parents to include the number and proportion of instructional personnel in kindergarten through grade eight that are certified by the National Board of Professional Teaching Standards or have successfully completed the math and science program created in the bill.

SECTION 7: Establishes an effective date of July 1, 2001.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT:

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

This bill does not appear to have a fiscal impact on state revenues.

2. Expenditures:

Please see FISCAL COMMENTS.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

This bill does not appear to have a fiscal impact on local revenues.

2. Expenditures:

Please see FISCAL COMMENTS.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

A teacher who successfully completes the math and science program is eligible for an unspecified salary bonus or increased stipend.

D. FISCAL COMMENTS:

Funding for the math and science program must be determined annually in the General Appropriations Act. However, the Department of Education estimates that AIMS will incur approximately \$35,000 worth of start-up costs and will incur approximately \$140,000 worth of operating costs. Additionally, the information below reflects the Department of Education's estimates of the costs to provide one day's worth of teacher training under the math and science program.

	YEAR 1	YEAR 2	YEAR 3
100% OF TEACHERS TRAINED	\$20,391,397	\$210,031	\$218,496
50% OF TEACHERS TRAINED	\$10,195,699	\$105,016	\$109,248
33% OF TEACHERS TRAINED	\$ 6,729,161	\$ 69,310	\$ 72,104
25% OF TEACHERS TRAINED	\$ 5,097,849	\$ 52,508	\$ 54,624

Since the bill does not specify the amount of the salary bonus or increased stipend that teachers may be eligible for if they successfully complete the math and science program, the fiscal impact of the bonus or stipend cannot be determined.

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

A. APPLICABILITY OF THE MANDATES PROVISION:

This bill does not require counties or municipalities to spend funds or to take action that requires the expenditure of funds.

B. REDUCTION OF REVENUE RAISING AUTHORITY:

This bill does not reduce the authority that counties and municipalities have to raise revenues.

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

This bill does not reduce the percentage of a state tax shared with counties and municipalities.

IV. COMMENTS:

A. CONSTITUTIONAL ISSUES:

This bill does not appear to violate any constitutional issues.

B. RULE-MAKING AUTHORITY:

This bill requires the State Board of Education to amend current rules in order to require schools to report the number and percentage of teachers certified by the National Board of Professional Teaching Standards. Additionally, those schools that contain a kindergarten or grades one through eight must report the number and proportion of teachers that successfully complete the math and science program.

C. OTHER COMMENTS:

None.

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V. AMENDMENTS OR COMMITTEE SUBSTITUTE CHANGES:

None.

VI. SIGNATURES:

COMMITTEE ON EDUCATION INNOVATION:

Prepared by:

Staff Director:

Daniel Furman

Daniel Furman