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## FISCAL IMPACT REPORT

ORIGINAL DATE 2/22/2007

SPONSOR Sharer LAST UPDATED \_\_\_\_\_ HB \_\_\_\_\_

SHORT TITLE Market NM Math and Science Distance Learning SB 1112

ANALYST Schuss

### APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY07	FY08		
\$200.0		Recurring	General Fund

(Parenthesis ( ) Indicate Expenditure Decreases)

Relates to HB 201/SB 209; HB 68, SB 211, SJM 31

### REVENUE (dollars in thousands)

Estimated Revenue			Recurring or Non-Rec	Fund Affected
FY07	FY08	FY09		
		\$480.0*	Recurring	Educational Technology Fund

(Parenthesis ( ) Indicate Revenue Decreases) \*This is an estimate from PED based on the project successfully generating revenue

### ESTIMATED ADDITIONAL OPERATING BUDGET IMPACT (dollars in thousands)

	FY07	FY08	FY09	3 Year Total Cost	Recurring or Non-Rec	Fund Affected
<b>Total</b>	\$40.0*			\$40.0	Recurring	General

(Parenthesis ( ) Indicate Expenditure Decreases) \* DFA notes that at least \$40.0 will be needed

### SOURCES OF INFORMATION

LFC Files

Responses Received From  
Public Education Department (PED)  
Department of Finance and Administration (DFA)

## SUMMARY

### Synopsis of Bill

Senate Bill 1112 appropriates \$200,000 from the general fund to the Public Education Department to conduct the Mathematics and Science Distance Learning Pilot Project.

Senate Bill 1112 creates a three-year Math and Science Distance Learning Pilot Project in PED in collaboration with one or both of the national labs that:

- has lab mathematicians and scientists produce online math and science courses;
- evaluates the educational and fiscal benefits to New Mexico

The purpose of the pilot project is to:

- demonstrate effective ways to partner with the national labs;
- benefit from the expertise at the labs;
- provide better access to math and science courses in districts that have difficulty attracting and retaining math and science teachers; and  
raise money for public school purposes

## FISCAL IMPLICATIONS

The appropriation of \$200,000 contained in this bill is a recurring expense to the general fund. Any unexpended or unencumbered balance remaining at the end of FY10 shall revert to the general fund.

DFA notes that SB 1112 would appropriate \$200 thousand to implement four science and four mathematics distance education courses. PED staff indicates that the cost of new course design can range between \$30,000 and \$100,000 per course depending on the course requirements and technology utilized. Given this, it is unlikely that the \$200,000 appropriation would sufficiently provide for new course development, as well as training of national laboratory staff and pilot evaluation. Supposing that new courses would cost \$30,000 to develop, it is likely a minimum additional \$40,000 would be necessary to implement the eight pilot courses.

PED also notes that an appropriation of \$200,000 might not be sufficient for the development of eight high-quality courses.

PED has included the following revenue estimate:

A report from Bell South on *Costs and Funding of Virtual Schools* indicates that the national average for per pupil expenditures in brick and mortar schools (not considering capital expenses) is \$7727. The Wisconsin Virtual School charges \$750 per student for a one-year course. In 2001 Clark reported ([http://www.wested.org/online\\_pubs/virtualschools.pdf](http://www.wested.org/online_pubs/virtualschools.pdf)) that the most tuition was \$600 per student for a full-year course. Considering just these three data points and the *Keeping Pace with K-12 Online Learning* suggestion that competition may drive down course prices, perhaps high-quality courses could be marketed at \$750 per student. If after one-year of development, each of the eight courses could be marketed to 100 students in other states, the revenue in FY09 would be \$480,000.

The LFC remains concerned with funding initiatives outside the funding formula as it tends to disqualify school funding away from core educational needs.

## SIGNIFICANT ISSUES

At least four math and four science courses would be developed and marketed to at least 10 schools around the country.

PED would enter into an agreement with one or both of the labs and work with recruited mathematicians and sciences to develop courses that meet the New Mexico Standards, Benchmarks and Performance Standards or would be specialty courses beyond those Standards.

If a developed course is bought by three or more schools then PED would select a New Mexico school that did not have a teacher for such a course to receive it free of charge.

The participating national lab would market the courses nationally; PED would be the fiscal administrator of the project. Proceeds from the sale of the courses would be used first to repay the general fund for the seed money for the project. The remainder of any proceeds would be deposited in the “Educational Technology Fund” where they would be subject to appropriation by the Legislature to improve educational technology in the public schools.

PED and participating national labs would establish reporting and evaluation requirements, and provide interim and final reports on the pilot project to the Legislature and Governor.

According to PED, New Mexico’s national labs have significant expertise in math and science, and already have experience with significant educational outreach programs.

The National Education Association (NEA) has developed *Guide to Online High School Courses*. In addition to providing valuable guidelines that would be useful in developing the proposed courses, they also point out that:

- with virtually all schools now linked to the Internet, states, districts and individual schools are increasingly adopting online courses to expand their curricula;
- the appeal of online courses is evident: they can increase the range of course offerings available to all students as well as provide educational access to special students (for example, homebound, incarcerated and atypical students for whom regular classrooms are not effective);
- in addition, they provide an alternative method of instruction, one that adults are increasingly using for both professional and personal development. The number of students participating in online courses is large and growing dramatically; and
- recently, multimedia Internet-based technologies have provided even more powerful options for teaching and learning at a distance.

## ADMINISTRATIVE IMPLICATIONS

PED would have significant responsibilities for recruiting lab mathematicians and scientists, and work with them on the development of online courses that meet *Standards* and offer appropriate pedagogical elements.

## **CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP**

Relates to HB 201/SB 209; HB 68, SB 211, SJM 31

### **TECHNICAL ISSUES**

PED has included the following in their analysis:

Conditions under which lab human resources could be used in a process that would generate funds for the state will need to be carefully worked out.

New Mexico Statute 22-15A-9 outlines procedures for the Educational Technology Bureau to distribute funds in the Educational Technology Fund. Are lines 11 to 13 of page 4 of this Act in conflict with that statute?

Courses developed based on the New Mexico Standards might not be in close enough alignment to be attractive to other states.

SB 1112 provides for the appropriation to be available for expenditure in FY07, but no emergency clause is included in the bill.

### **OTHER SUBSTANTIVE ISSUES**

To meet current teacher licensure requirements in New Mexico the mathematicians and scientists would probably have to be teamed with licensed teachers.

DFA notes that every state is responsible for establishing academic content and performance standards for mathematics, science, English/language arts and social studies at each grade level. One possible roadblock for SB 1112 is that courses designed to meet New Mexico's standards may not meet the standards in other states. One possible alternative would be to ensure that the distance education courses proposed in SB 1112 are aligned with standards such as those put forth by the National Council of Teachers of Mathematics. This would ensure that the standards taught would meet national criteria, rather than local or regional.

### **ALTERNATIVES**

If the Statewide Cyber Academy is funded, the national labs could collaborate with that effort in the development and marketing of online math and science courses.

### **POSSIBLE QUESTIONS**

DFA notes that it is difficult to determine how much revenue SB 1112 might generate, there are several factors, including market demand, instructor salary, and course pricing that have yet to be determined. One question is that if the pilot does not generate the anticipated revenue, whether or not PED will be responsible for repaying the initial \$200 thousand to the General Fund. An amendment may be considered to strike language on page 4, line eight through line 13 and replace with "Any proceeds generated by this project shall be deposited into a separate account in the educational technology fund and shall be subject to appropriation by the legislature to improve educational technology in schools.