Bill as Introduced

HB 528 – AS AMENDED BY THE HOUSE

20mar03... 0485h

2003 SESSION

03-0826
04/10

HOUSE BILL ***528***

AN ACT establishing a commission to study computer standards used in public schools in New Hampshire.

SPONSORS: Rep. Carson, Rock 75

COMMITTEE: Education

ANALYSIS

This bill establishes a commission to study computer standards used in public schools in New Hampshire.

Explanation: Matter added to current law appears in ***bold italics.***
Matter removed from current law appears [~~in brackets and struckthrough.~~]
Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Three

AN ACT establishing a commission to study computer standards used in public schools in New Hampshire.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 Commission Established. There is established a commission to study computer standards used in public schools in New Hampshire.

2 Membership; Compensation; Terms.

I. The members of the commission shall be as follows:

(a) Two members of the house of representatives, one of whom shall be from the education committee and one of whom shall be from the science, technology, and energy committee, appointed by the speaker of the house.

(b) One member of the senate, appointed by the president of the senate.

(c) The commissioner of the department of education, or designee.

(d) One high school teacher who has experience teaching in the New Hampshire Information Technology Pathway program, appointed by the executive director of the program.

(e) One member who represents the New Hampshire Information Technology Pathway program, appointed by the executive director of the program.

(f) The executive director of the New Hampshire School Boards Association, or designee.

(g) The executive director of the New Hampshire School Administrators Association, or designee.

(h) One member from the business community, appointed by the governor and council.

II. Members of the commission shall serve without compensation except that legislative members of the commission shall receive mileage at the legislative rate when attending to the duties of the commission.

III. The members listed in subparagraphs I (d), (e), and (h) shall serve 2-year terms. The members listed in subparagraphs (c), (f), and (g) shall serve 3-year terms. The remaining members shall serve a term coterminous with the term of office which qualifies them to serve on the commission.

3 Duties. The commission shall study computer standards used in public schools in New Hampshire. The commission shall:

I. Evaluate the New Hampshire Information Technology Pathway program and determine if it would be appropriate to adopt such program in the public schools.

II. Determine if the New Hampshire Information Technology Pathway program meets the

requirements of the No Child Left Behind Act of 2001.

III. Study increasing the number of credit hours required for computer education at the elementary and secondary school levels.

IV. Apply for, receive, and expend any available federal, state, or private funds.

V. Accept donations, gifts, equipment, or other items which may assist the commission in the completion of its charge.

4 Chairperson; Quorum. The members of the commission shall elect a chairperson from among the members. The first meeting of the commission shall be called by the first-named house member. The first meeting of the commission shall be held within 45 days of the effective date of this section. Three members of the commission shall constitute a quorum.

5 Report. No later than November 1 of each year, the commission shall report its findings and any recommendations for proposed legislation for that year to the speaker of the house of representatives, the senate president, the house clerk, the senate clerk, the governor, and the state library. Each recommendation contained in the report shall include proposed implementation schedules with timelines, and details regarding agency personnel and resources needed.

6 Prospective repeal. Sections 1-5 of this act, relative to the commission to study computer standards used in public schools in New Hampshire, are repealed.

7 Effective Date.

I. Sections 1-5 of this act shall take effect upon its passage.

II. The remainder of this act shall take effect July 1, 2005.

Education

LBAO
03-0826
4/23/03

HB 528 FISCAL NOTE

AN ACT establishing a commission to study computer standards used in public schools in New Hampshire.

FISCAL IMPACT:

The Office of Legislative Budget Assistant indicates this bill, as amended by the House (**House Amendment #2003-0485h**), will increase state restricted revenue and expenditures by an indeterminable amount in FY 2004 and FY 2005. There will be no fiscal impact on county and local revenue or expenditures.

METHODOLOGY:

The Office states this bill directs the Commission to apply for, receive and expend any available federal, state or private funds. As a result, state restricted revenues and expenditures will increase by the amount of available funds received by the Commission. The amount to be received cannot be determined.

Committee Minutes

Date: April 16, 2003
Time: 2:15 p.m.
Room: State House, Room 105-A

The Senate Committee on Education held a hearing on the following:

HB 528 establishing a commission to study computer standards used in public schools in New Hampshire.

Members of Committee present: Senator O'Hearn
Senator Johnson
Senator Foster
Senator Green
Senator Larsen

Senator Green, opened the hearing on HB 528 and called upon Representative Carson, the prime sponsor, to introduce the legislation.

Representative Carson: I do have a handout. **Please see House Committee on Education Testimony from February 19, 2003 hearing, attached hereto and referred to as Attachment #1.**

Senator Richard Green, D. 6: We opened the hearing, as you requested, and I have called on the sponsor to testify on HB 528.

Senator Jane E. O'Hearn, D. 12: Welcome.

Representative Carson: Thank you, Madam Chair. Good afternoon, Madam Chair and members of the Senate Education Committee. For the record, I am Representative Sharon M. Carson, representing District 75, comprising the towns of Londonderry and Auburn.

I am here today to speak on behalf of HB 528, which is to establish a commission to study New Hampshire computer standards in public schools. This bill is the result of a conversation I had with Ms. Marsha Miller, who is here with us today. Ms. Miller is the tech prep consultant for the Information Technology Career Pathway Program.

I was very surprised to discover that, under current statute, New Hampshire public school students are required to successfully complete one-half a unit course in computer standards at the high school level or pass a locally developed computer competency test or successfully complete a computer education program prior to grade nine. I find this requirement to be wholly inadequate in meeting the needs of today's rapidly advancing technology-based society.

Students need to know more than how to use an e-mail system, the internet, or perhaps a word processing program. Students need to understand the design, development, implementation, support and management of computer based information systems, particularly software applications and computer hardware. This is the type of knowledge that students can utilize throughout their lifetime. They can use it in college and, most importantly, in the workforce. A program like this might even open doors for students who have given up on school and their education.

I also sit on the Governor's Economic Workforce Commission where we evaluate grants from New Hampshire companies applying for funds to educate their workers. The requests usually fall into two categories. The first is manufacturing technology and the second is computer-based skills. Both of these categories comprise computer-based technology. Just as an aside, I am wondering if the Committee would consider how attractive it would be to have a computer literate workforce readily available for companies that are looking to come to New Hampshire and provide jobs for our citizens.

This particular commission is responsible for a number of things. The first would be to evaluate the New Hampshire IT Program and to see if it would be appropriate to adopt this program for our public schools. Secondly, it would determine whether or not this program meets the new technology requirements of the No Child Left Behind Act. Thirdly, it would study increasing the number of credit hours required for computer education.

One of the issues that was revealed during the testimony given at the previous hearing is that the Department of Education has not updated any of its minimum standards, including computer education, for at least ten years. I would like the Committee to think for a moment and consider how computer technology has changed over the past ten years. We are not keeping up with those changes. One of the functions of the committee would be to advise the Department of Education on these changes and how to implement them through course work and credits required for computer education.

Lastly, this commission also has the ability to accept federal, state, private funds, donations, gifts and equipment. I see this as an important role played by this commission and that they will be able to target these resources to our communities who need them the most in order to comply with the new standards.

Ms. Miller, again, is here with us today and she can answer the more technical aspects of this particular program and I would like to thank you for your time and consideration and I will be more than happy to answer any questions.

Senator Jane E. O'Hearn, D. 12: Questions from the Committee? Representative Carson, I am looking for an ending date.

Representative Carson: Thank you for your question, Senator. I don't have an ending date in here because I see this as an ongoing commission.

Senator Jane E. O'Hearn, D. 12: And, you're asking to rewrite the standards for computer education?

Representative Carson: Yes, Senator.

Senator Jane E. O'Hearn, D. 12: Isn't that the job of the DOE and the state board?

Representative Carson: As I understand, yes it is. But, as I brought out in the testimony, they haven't done it for at least ten years. The Department of Education is part of this commission, so they would have input.

Senator Jane E. O'Hearn, D. 12: Is there any other computer or technology commission in the state that we have ongoing that could pick up on this or even one that we could designate within the Department of Ed to move on this?

Representative Carson: I'm not sure, Senator. I know, at the House hearing, they presented another program that the Department of Education is currently working on. My argument of that is the Department of Education was part of implementing and creating this technology program. Federal funds have been used to train teachers into this program. This program is already up and running very, very successfully in a number of schools in New Hampshire already. We are only going to receive a limited amount of money under No Child Left Behind for a technology program. Why would we want to extend more money in creating another program when we already have a

program in existence that is being utilized and is working very well in our schools?

Senator Jane E. O'Hearn, D. 12: Any further questions? Senator Foster?

Senator Joseph A. Foster, D. 13: What is the requirement in No Child Left Behind?

Representative Carson: Thank you, Senator. I am not sure. I am not up to par on that. It is very convoluted and that would be part of the commission's job to interpret that particular statute and to make sure that the two programs work together.

Senator Joseph A. Foster, D. 13: Follow up? Is there a requirement in No Child Left Behind maybe is the way I wanted to ask the question as opposed to what it is. This bill suggests that there is something that is required.

Representative Carson: Yes, there is, Senator.

Senator Jane E. O'Hearn, D. 12: Any further questions? Thank you. I know, I can't put my hands on mine, but I asked Kristy to have the letter from the Department handed out. I have made copies for everyone. We do have someone here from the Department that we can call on. Thank you, Representative.

Please see memorandum from Sarah L. Browning, Special Assistant to the Commissioner, Department of Education, dated April 15, 2003, attached hereto and referred to as Attachment #2.

Representative Carson: Thank you, Senator.

Senator Jane E. O'Hearn, D. 12: Next I would like to call Karen Olmstead in support. Welcome.

Karen Olmstead: My name is Karen Olmstead and I am a teacher, the computer teacher at Raymond High School. I am also a member of the adjunct faculty at Southern New Hampshire University in its business and education programs. I have twenty plus years of business experience, am a certified financial planner, and a certified public accountant. I hold teaching endorsements in computer technology education, general business education, and am certified in school business administration. I am here to provide information in support of House Bill 528 that establishes a commission to study New Hampshire computer standards in use in public schools.

At the time I was hired by Raymond High School three years ago, I was in the process of completing the Masters in Business Education Program at Southern New Hampshire University. During this period, Southern New Hampshire University was in the process of revising the program to give interested students the skills needed to earn the new computer/technology teacher endorsement. As part of this process, I was asked to write the curriculum for and teach a course titled "Computer Teacher Toolbox" that covered basic computer hardware and maintenance. I developed the course for the fall of 2001 and have taught it in both the face to face and distance education format. Since then, I have also taught Technology for Teachers II in the distance education environment and I am currently teaching distance education courses in the accounting and MBA programs.

You will hear Marsha Miller speak about the IT & Me and the IT & Me Works Program. I participated in the development of these programs as an attendee at the summer workshops and in the development of the IT Career Pathway as a member of the IT Task Force at the Seacoast School of Technology in Exeter.

When I was hired by Raymond High School, I asked for the curriculum for the courses I was scheduled to teach. Much to my surprise, I found that there were no syllabi or course outlines and that the textbooks being used were several years old. I had to rely on my many years of business experience to develop a curriculum for that year and have been continuously revising it in an effort to keep up with the rapid technological changes that are part of our everyday life. The IT & Me curriculum has been a tremendous aid in this process.

One of the problems that I have seen time and time again, both as an educator and in the workforce, is the lack of applicable technology skills exhibited by students entering the workforce and students in both undergraduate and graduate programs. It isn't so much the inability to use word processing or similar programs, but the inability to adapt to new or revised versions of the programs. Students have been taught keystrokes, but not the problem-solving skills necessary to explore the program to find out how to accomplish new tasks. This concern was also raised by businesses that were visited during the first IT Educator in the Workplace Workshop in 2000. As part of that conference, we split into several groups and were taken on prearranged visits of several area businesses. The universal message given by the management of these businesses was the need for anyone they hire to have basic technological skills. The IT & Me curriculum was designed to incorporate the need for students to learn problem-solving skills.

Another problem that exists, especially in economically disadvantaged communities, is the large number of students who enter the workforce immediately after leaving high school. These students need skills that will allow them to earn more than a minimum wage. I am very fortunate in that I am the only computer teacher at Raymond High School and have an administration that believes in my ability to assess the skills that students need to develop before graduating from high school. As a result, I have been able to make curriculum revisions to give students an opportunity to develop these skills. However, there are many districts in New Hampshire where that flexibility does not exist, either because the policies and procedures are set up in such a way as to require a long lead time for new courses or because the local school board or district administration are not cognizant of the need to revamp current curriculum.

One of the obstacles to curriculum revision is the lack of state standards for computer education. Although there are several national organizations that have set forth standards that can be followed, the adoption of relevant, flexible technology standards by the state would help give technology educators the tools needed to encourage districts to update current technology programs.

Standards for Technological Literacy: Content for the Study of Technology Executive Summar,y prepared by the International Technology Education Association states that "a person that understands, with increasing sophistication, what technology is, how it is created, how it shapes society, and in turn is shaped by society is technologically literate". In his on-line book, *Education for an Information Age*, Bernard Poole states that computer-integrated education may in fact represent the key to the survival of the individual student in a modern, computer-controlled, information-based society. It is the responsibility of the schools to prepare students for the challenges that they will face, not only upon graduation, but also during the remainder of their lives. Students will be required to use a computer in some way to perform the requirements of their jobs, whether as nuclear engineers or as cashiers at the local supermarket. They must have the skills to judge what computer technology best serves their needs and how to put the available equipment to optimal use. We cannot assume that students are learning these skills at home. Many students in New Hampshire do not have a computer available at home and for those that do, the computer is often used only for playing games, chatting online and finding the tickets for the next concert of their favorite band.

Today, many companies have adopted technology to the point that all major functions of the business, from inventory control to sales and customer relations, are computer-coordinated. A new term, Computer-Integrated

Manufacturing, has been coined to represent this trend. Ideas are converted to designs, designs are converted to prototypes, sales are tracked, inventory orders are placed using the Just In Time concept and packages are tracked, all through the use of computers. We can even file our income tax returns electronically using an electronic signature function. Many of these trends have had a negative effect on the workforce. Repetitive, routine jobs have been taken over by computers, leading to layoffs of unskilled workers. Workers who are not willing or able to retrain or adapt to the new trends are the first to lose their job.

In a report published by the US Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS), five competencies of effective workers are identified. Two of these are specifically related to technology. The first is the productive use of information. Effective workers need to know how to acquire and evaluate data, maintain and organize files, interpret their findings, communicate their findings, and process the information with the use of computers. The second is the productive use of technology. Workers must know how to select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot technology.

Not only is technology information important in and of itself, but also the ability to productively use technology helps students throughout the education process and their careers. Writing research papers, preparing presentations, and graphing research results are just a few of the applications that can benefit a student in core courses. For many teachers in core programs, the curriculum is so packed that they don't have time to take a class period to teach a student how to use PowerPoint or how to research a problem. I include a unit on the internet as part of my IT and Me curriculum to teach students how to search the internet, how to evaluate that information and how to use the information in papers or presentations. I have found that many students at both the high school and college levels do not know what plagiarism is, so we cover that as well.

In *Education for an Information Age*, Poole states his belief that teachers of the future will be very different from teachers of today. They will still have to have subject matter knowledge, but, more importantly, they will need to know how to manage the learning environment, individualize learning experiences for each student, and how to create positive interactions between the student, school and home. Teachers will need to be more of a coach or a guide to the students instead of being a fount of information. Students must be taught how to learn. With the rapid technological changes that are taking place, students must be able to adapt to these changes if they want to be successful in the workplace. Teachers of the future will not direct each step

of the learning experience, but must maintain an environment that encourages the students to learn on their own.

Currently, students in New Hampshire are only required to take one-half credit of computer classes to graduate, and this requirement can be met by taking courses in middle school. With the rapid evolution of technology, we are doing our students a disservice by allowing them to complete four years of high school without updating their computer skills. In a *Report to the President on the Use of Technology*, the Office of Science and Technology Policy stated, "it is widely believed that a continuing acceleration in the pace of technological innovation, among other facts, will result in more frequent changes in the knowledge and skills that workers will need if they are to play high-level roles within the global economy of the 21st century. Our children will thus need to be prepared not just with a larger set of facts or a larger repertoire of specific skills, but also with the capacity to readily acquire new knowledge, to solve new problems, and to employ creativity and critical thinking in the design of new approaches to existing problems. In the words of Frank Withrow, the director of learning technologies at the Council of Chief State School Officers, 'the U.S. work force does not need knowers, it needs learners.'"

Thank you for your consideration.

Please see Ms. Olmstead's typewritten testimony, attached hereto and referred to as Attachment #3.

Senator Jane E. O'Hearn, D. 12: Thank you. Questions from the Committee? Senator Johnson?

Senator Carl R. Johnson, D. 2: Thank you, Madam Chair. I have been looking over the rules of the Department and it seems to cover a wide area of what the skills might be. I guess, as a member of the local school board, I have a problem with competing clock hours in different areas. We find that, in order to make something work here, we have to compromise on something somewhere else. I have a problem with that. If we are going to concentrate more on this curriculum, what do we give up?

Ms. Olmstead: I don't think you give up anything. I think what you have to do is look at increased requirements for graduation. The way our world is changing right now, some of the skills that the students are getting are not skills that they are going to need going forward and they are not getting some of the skills that they will need.

The other thing that can be done is there can be an integration of the technology education into the core program. For example, I have a biology teacher across the hall from me at the high school and when she heard that I was going to be testifying here, her comment was, "What we need is we need the students, in the freshman year in high school, to learn PowerPoint, they need to learn Excel, they need to learn Word. They need to learn how to research on the internet because, when I teach 'em biology, they need to be able to do PowerPoint presentations, and they need to be able to graph the results of their laboratory experiments that they are doing. Because I have so much to teach in my biology curriculum, I don't have time to teach them how to do PowerPoint."

Senator Carl R. Johnson, D. 2: Follow up?

Senator Jane E. O'Hearn, D. 12: Yes.

Senator Carl R. Johnson, D. 2: Why does that have to start at the state level? Can't that same thing be done at the local level right now?

Ms. Olmstead: It can be done at the local level, but it is not being done at the local level at a lot of places. If it is pushed by the state, it gives the teachers at the local level a little bit more impetus behind them to be able to push their local level for the reform.

Senator Carl R. Johnson, D. 2: Thank you.

Senator Jane E. O'Hearn, D. 12: Further questions? IT is a curriculum?

Ms. Olmstead: IT and Me is a curriculum that was developed through the Western New Hampshire Education Partnership with a group of thirteen teachers two years ago who developed the curriculum for IT and Me, which was intended to be a ninth grade level introduction to computer program. Last summer, we also added the IT and Me Works curriculum to that, which is basically an add on. It is the second course in the program. The curriculum is completely written and is currently available on the internet for anyone who would like to take advantage of that curriculum.

Senator Jane E. O'Hearn, D. 12: Thank you. Are there any further questions? Next I would like to call Marsha Miller.

Marsha Miller: Good afternoon. My name is Marsha Miller and I am the Regional Director of the Western New Hampshire Business & Education Partnership.

Just as an aside, within the State of New Hampshire, there are five regional partnerships. They were set up to receive School to Work money when it came into the state in 1994. When the School to Work money funds that, the decision was made that some of the work had been done through School to Work, but there was still a long way to go. Specifically, the long way to go was around curriculum changes. Although School to Career got a number of people and stakeholders to the table, the integration of what was learned from business and industry partners had not yet taken hold in curriculum. So, at that time, the five regions stayed in place and they then became a part of the Department of Education's initiative called the Career Pathways Project. The money that supports that development of Career Pathways is tech prep money that comes in through the county Perkins Vocation and Technical Act of 1998. So, each one of the five regions inherited a growing or an existing labor market need and, in the western region, they were delegated, it was given to the them for the IT Pathways. At that time, I was asked to come and lead the effort.

The western region, like the other four regions, has an executive board that really serves as the advisors to the curriculum development. That board represents all of the stakeholders. We have businesses; we have superintendents, principals, teachers, guidance counselors, community members on the board. In the fall of 1999, the work began and it began first with a definition of what is IT. What do we mean when we say information technology? Is it PowerPoint? Is it keyboarding? Is it networking? Is it Cisco? What is it? The underlying principle of the work that was done by the regions was that, number one, the board said, "Do not" and I'm sitting here remembering a very strong directive to their director, "Do not bring back a canned curriculum. Do not bring back something that is going to cost the schools money. While we believe that every student needs to be technologically literate to live in our knowledge economy, not for high tech work, but just to live and learn, do not bring back the easy way out. We are as passionate about the process as we are about the product."

So, I am here not to serve or be looked at in terms of cost purposes with the Department of Ed. They pay my salary. It is a grant under which we have done this job. But, the reason I'm here goes back to a passion for the work that has been done, that the underlying principle again was not that we would take the easy way out, that we would build a curriculum on existing curriculum. That we would look at what was already being taught and that we would in fact bring in our own teachers. If anybody was going to get paid, we would pay those teachers a stipend to develop the curriculum, to move it one step and, in some cases, many steps forward. Karen is a part of that process. Gary McKenney was a part of that process.

The first thing was the definition. The second thing were the skills and standards that needed to be taught within a K-12 environment, but specifically, a 9-14 environment. The skills and standards that Karen alluded to are not only nationally recognized because there isn't one set of IT standards, there are many sets. So, our work, our partners, were national partners as well as local partners. Once those skills and standards were developed and EDC, the Education Development Center in Newton, Massachusetts that had its genesis with the Harvard School of Education, they were our partner. New Hampshire was accepted into a national project and we went around the country, teachers, administrators and business partners, asking what is it that students need to know and be able to do.

Then, the work that Karen mentioned was that, when we had identified the sixteen core standards that make up IT, when those had been translated into learner outcomes for literacy and IT fluency and IT for all work and IT for high tech work, then the teachers came in and, in that first summer, five days, teachers from across the state debated, and I mean debated, what is it that we will then do in New Hampshire? How many contact hours should we take to teach minimum level of keyboarding skills? That's the foundation upon which the IT is built and each summer going forward that same group plus more, we are up to now thirty-five teachers including post-secondary faculty, they sit down and they look at, not only where our K-8 students are, but they look at where do our high school graduates need to be so that the curriculum is not irrelevant or redundant, but in fact, it aligns with what those students need for post-secondary enrollment.

Tape change.

Ms. Miller: ...to validate the process. And so, I bring you to what my directive was from the teachers and it goes back to last June. This was shared with the Department of Ed. This is not something that they didn't know.

When the teachers were asked in their evaluation, what is it that you need from the Department of Education, what is it that you need from me, the tech prep consultant for IT, to bring your curriculum forward? To make sure that, unlike other curriculums, it doesn't sit on the shelf. What do you need from us? This is their answer. The state department could mandate that this whole process start in middle school and have high schools concentrate on raising the bar by teaching more advanced techniques.

Number two, implement mandatory offering at least of IT & ME at each high school. The State of New Hampshire could strongly recommend that every

student needs to take a computer course in a high school setting. This course would be above and beyond computer literacy.

Adoption of computer education as a core course. At minimum, require the half a credit to be earned during the ninth and twelfth grades so that it will show up on an official high school transcript.

Another, explore more teachers, principals, superintendents, and school boards and state Reps to the information. Just getting the word out that what we are doing is important. The State needs to make basic intro skills mandatory at the middle school so that at the high school we can focus on advanced skills. Then the State needs to make the advanced skills mandatory.

Another, I think it needs to be pushed from the top down, the State Legislature. Why I am here. From the bottom up, teachers. Some effort will be needed at the middle school, school boards and administration.

And last, use this course to satisfy the computer requirement at the high school level, not middle school. It's a great curriculum.

This is what they directed me to do. The passion, perhaps, isn't in my testimony. The passion, perhaps, is more in my words. I am here again as their voice to say don't let their work die. It has been paid for. We have three high schools that require IT & ME as the way in which students will demonstrate computer literacy. That's only three out of seventy-six. It aligns with the state technology plan. Cathy Higgins and I have worked together. It is very uncomfortable to be here looking like we're at cross purposes with the Department of Ed, but it is, for me, the right thing to do. I thank you for listening.

Please see Ms. Miller's typewritten testimony, attached hereto and referred to as Attachment #4.

Senator Jane E. O'Hearn, D. 12: Questions from the Committee? Have you been to the Department of Ed or to the state board asking them to rewrite their standards or to develop a curriculum guide?

Ms. Miller: Senator O'Hearn, the curriculum is on the website. They are aware of the IT Pathway. They have been a part of the process. Beginning in June, when these comments were given to the Department of Ed, there was conversations, many of them, that I have had with individuals about the need to change the standard and what was the process. In fact, I met with Nick Donohue and asked him straight out what was the process and should I

become politically active or was the Department going to take care of this? Number one, I have an e-mail that says go get political people behind this and number two, there have been many conversations or several, with Kathy Moulis, Director of Public Approval. She was aware that I would be talking with Representative Carson, with Senator Green, with Representative Sandra Keans from my area.

So, every communication has been transmitted and translated to the Department of Ed. They knew what I was doing. Now, with Representative Carson, perhaps they didn't realize that after that conversation we had an advocate. We had someone who took it on also as a mutual passion.

At the time that I met with Nick and I met with Kathy Moulis, there was the conversation that there would be, at some point, a process within the Department to study all of the standards and I had assumed that that would take place within a short period of time. Again, it has now been, we are now into April, and I understand that the process has begun. Again, I am not here to fault anybody, but what I'm here to say is that at least built into HB 528 is the language that includes the work that these teachers have done. It includes evaluating the IT Pathway to determine if it should be in all schools. It also establishes a standing commission so that we don't get another ten or thirteen years in between the change and changes. My passion is kids, just as it is yours, but my passion is curriculum that works in classrooms and teaches. I cannot walk away from this having taken the part of salary. I volunteered the other part of the time. I cannot walk away and say to the thirty-five teachers, "Thanks for giving me three summers, but you know what? Nobody cares. The evaluation doesn't include your work."

If there is a compromise that includes looking at IT, the Pathway, the skills and standards that that is part of the process, Senator O'Hearn, great. But, until it is, I'm not comfortable that the work does not get lost.

Senator Jane E. O'Hearn, D. 12: Any further questions? Senator Larsen?

Senator Sylvia B. Larsen, D. 15: In a memo from the Department of Ed, they say that they are in fact the current rules for minimum standards expire in 2004 and that they are working to align minimum standards with No Child Left Behind. The inference is that there will be work on the IT section of our requirements as well. They express concern that the commission might or wouldn't be working within the time frame of the expiring rules and that they need to bring them along faster than that. Are you, have you followed some of this? Is this what you heard when you spoke with the Commissioner and others?

Ms. Miller: No, that hasn't been shared with me. It was shared in the testimony again when Virginia Irwin came from the Department of Ed and provided testimony to the House Education Committee. She mentioned that there was a concern that the deadlines would not be comparable. The deadline that she gave for all of the standards to be reviewed was in May. I understand that that deadline has been pushed now to November and December. Built into the commission in HB 528 is that they in fact will have their work done by October. So, I don't see that there is a conflict in terms of time. In fact, I think that they can inform the work because the work is done.

Now, what the commission does do is that the commission that is set up with term limits, and some have three-year terms and some have two, is that they will be on an ongoing basis, talking with, as we did when we began this work, we talked to the work about what do you need and what is IT. My concern is that, Senator Larsen, if you don't have some kind of a process in place, changes happen so quickly that we will be sitting here again saying, "My goodness. How did it get away from us?"

To give you an example, I'm working with the UNH Dean of the Whittemore School, Steve Bolander. He looked at the IT Pathway. He looked at the skills and standards. He said, "Marsha, can I assume that every one of the high school seniors graduating in a New Hampshire school is going to in fact be able to demonstrate competency at the twelfth grade level? We have broken it down as this is what twelfth graders should know." I said, "No, you can't say that because the way that it works is that a high school student may never ever take an intro to computer class. They may take a keyboarding class or a seventh grade intro to computer class and they can earn the half a credit." So, Steve Bolander is saying to us, "You know what, at UNH, what we have had to do, because students are so computer illiterate, that instead of having the requirement in the junior year, we now require it of the freshmen because we are finding this huge disconnect."

So, it is with all of those comments that I sit here, that are in my heart, my soul, and my head saying that there has been so many people involved in this process, you gotta put it on the table and hope that in the end, whether it is the DOE doing it or whether it is the commission doing it, but please recognize the work that is going on in this State to get kids to that level.

Senator Jane E. O'Hearn, D. 12: What is your goal? Is your goal to have the curriculum or the standards endorsed by the Legislature or written into law?

Ms. Miller: I have two goals, Senator O'Hearn. One is the goal, the number one goal would be that the IT Pathway skills and standards would inform the

work, that a judgment would be looking at what has already been done and that, in fact, while we don't mandate curriculum in this state and I appreciate that, that if in fact the second goal is realized, and that would be that it would be a full credit of computer literacy, one-half credit in K-8 and that, in fact, to align with the state technology plan, they would use the first course, IT & ME, as the way to document eighth grade literacy. That is built into the state's technology plan. All schools need to identify how eighth graders are going to be assessed in technical literacy. What I am saying is that the curriculum is already done in schools. You don't need to create it. You don't need to spend money. We did that. We used the grant so that the poor schools wouldn't have to do that.

So, the first goal would be to look at the curriculum and get some standards, that's the second goal, standards to get some teeth behind it. Half a credit K-8 use IT & ME or at least the foundation skill of IT & ME to document literacy because they are both nationally validated standards. The second part of the standard would be another half a credit, but it would have to be earned nine through twelve. Again, the curriculum is there with IT & ME Works. Six weeks of lesson plans in each one of four occupational strands. Again, it is modular so that each school can have a flexible delivery system. Nothing is, you know, it's gotta be this way. But, in fact, again, the base is there. That's what my goal is, that we will use that, we will use the money that has been spent, we will acknowledge our teachers and that we will move this forward. That's my goal.

Senator Jane E. O'Hearn, D. 12: Thank you. Any further questions? Thank you very much. Next I would like to call David Miller for Mr. Gary McKenney. Welcome.

David Miller: Good afternoon. It is eighty degrees on the seacoast, fifty degrees here and it will be snowing tomorrow. A very quick change in the weather and, of course, as you go around the state, there is quite a broad scope in sequence of and variety of curriculum and computer courses.

My personal experience as a high school principal and an elementary principal, going back to the period of the Commodore 64 when I designed a national award program called Cans for Computers and my parents were diving into dumpsters collecting cans so they could buy computers. It was then that the half credit course was authored that all students had to take. And, from my experiences as a high school administrator, I know that that was being done and completed by the eighth grade and nothing further was required in the high schools. So, the necessity here is to be in the twenty-first century, as we all say. I think that being fully cognizant of the changes that have taken place in the information technology pathway area, it is necessary

that across the board all students be at a certain level of performance in order to be competitive in the workplace, wherever they might apply for a position.

What I would like to do today is speak for Gary McKenney, who could not be here because he has had his day out of school and gave his testimony at the House hearing. I will read his testimony at this time. Having business program a number of times, it will give you one concrete example of how far one teacher, through the many hours that he has donated on the side, can carry a program and have a significant impact upon his students and upon the community. The computer networking technology program at the Sugar River Valley Regional Technical Center in Claremont is an example of what can be realized as a result of business school connection. I will read his testimony.

In the fall of 1999 my Director, Jill Edson, approached me with the notion of offering a computer repair class at our technical center. We started with six computers and space in a former school store. We quickly perceived that there was student interest and looked into expanding the class into a full vocational program. Contacts were made with Tam Brands, Corporation Claremont and News Bank in Chester, Vermont, through which we attained computers for use in the program. Since 1999, News Bank has supplied over one hundred computers, fifty printers, fifty monitors, and some networking equipment. Tam Brands has provided nearly two hundred computers, networking equipment and desks for the classroom area, along with assorted office equipment, including fax machines, laser printers, and teleconferencing equipment.

A major supplier of the program has been Enterasys, formerly of Cabletron, which provided our program with racks of networking equipment, about fifty computers, and four days of instructors for educators who would be using their networking equipment. This equipment is currently in use in the New Hampshire Community Technical College programs as well as in several technical high schools in the State.

Cisco Systems, a dominant supplier of network equipment, also supplies equipment for use in our lab as well as the online Cisco Academy Networking curriculum for use by high school and college programs across the country. I attended two summers of training in the use of the Cisco curriculum.

Even the federal government got involved in the development of our program as a result of computers and networking equipment being donated by the Coast Guard base in Boston, Massachusetts.

Smaller firms such as Personnel Connection and Mascoma Savings Bank have also volunteered support through the donation of equipment to our program.

As a result of this strong support from the industrial sector, the program at Claremont currently provides a ten-week class in computer repair that serves approximately fifty students per year and a two-year vocational program that encompasses computer repair, network administration, network construction.

Effective in the fall of 2003, students in the vocational program will be able to earn twelve NHCTC college credits through the Running Start Program. Not only does this program allow students to earn college credit while still in high school, students can save over $1,000 on tuition and book costs over the two-year period. Several completers are currently involved in the Claremont NHCTC computer science program and are reportedly doing well on the post-secondary level.

Since 1999, over three hundred computers have been refurbished and distributed throughout our school district in such community locations as the Claremont Christian Academy, St. Mary's School, the Claremont swim team and local recreation center. Out of town locations include the Springfield, Vermont Public Library, the Windsor, Vermont State Prison, the Windsor Recreational Center, the Lebanon, New Hampshire Elementary School, the Bennington, Vermont Elementary School, and the Rochester, Vermont High School Library. A Brattleboro, Vermont teen crisis center and the Meeting Waters YMCA have also put our equipment to use. This is equipment that was donated and refurbished from area businesses.

Finally, we supply a large quantity of excess equipment to a non-profit organization that plans to use the equipment to offer after school junior high school classes in Brattleboro, Vermont and Keene, New Hampshire.

An area that has been identified nationally as being in need of qualified employees is that of customer service. In fact, one of the reasons that Dell Computer has become the top computer retailer in the country is their superior customer service. In an effort to introduce this career area to students in the computer networking technology program study, a help desk technology unit has been added to the curriculum this year. In addition to technical materials, students in the program gain valuable experience in customer relations by going into the field to set up, configure, and troubleshoot computers at the Claremont Middle School. We frequently get service calls from teachers experiencing problems with their classroom computers, many of which are provided by our program. Occasionally, a

faculty member will bring a personal computer to our students to troubleshoot, configure or upgrade.

Sometimes an unusual educational experience presents itself. Last year, a team of students had the unique opportunity of installing cable and internet access to the middle school administrative offices as a class project and, just last week, one of my second year students helped configure a computer via telephone for a person living in Florida.

Later this semester, Joseph Kern of Pease NHCTC Campus and formerly of Enterasys, and Norman Fredericks, formerly of Tam Brands, will spend time in our labs instructing myself and my students in the use of some of our advanced equipment.

We have also continued affiliation with Decker, an international vocational youth group associated with marketing programs. Despite being a computer related program, we had our second first place competitive events winner this spring in the Annual New Hampshire Decker Career Development Conference. She will be accompanying a group of state level event winners to represent New Hampshire in Florida.

In our labs, students experience practical on-hands exposure to networking as each is required to build and administer a Windows client server network and eventually connect the networks for migration to a singles Windows 2000 multi-domain network model. Some build computers to spec for teachers and even for their own personal use. Four semester students also have the option of selecting individualized study options to allow them to focus on areas of specific interest. This semester, students are working on visual plus program, Advanced Windows 2000 server administration, and website design. Because there is adequate equipment and resource information available to allow a self-faced curriculum that integrates classroom theory with hands-on applications, students are in charge of their own learning, which models workplace behavior. Attendance is high in all the computer technology classes. Perhaps the most significant example of this is in the exploratory What's In the Box class that meets at 7:30 a.m.

Recently, we purchased basic wireless equipment so that the students can experience the latest networking technology, connecting multiple computers to the internet without the need for wired connections between components.

Without the support of the industrial sector, we would not be able to provide the skilled development opportunities we currently provide, let alone be able to purchase cutting edge technology to keep abreast of the changing technology available in the field.

The Claremont School District is vitally aware of the need for all students to have an understanding of technology and the role it plays in their lives today. Further, they must have an awareness of the rapid changes that occur in technology and will continue to do so in the future. As a means of addressing this need, Stevens High School required all students to take the IT & ME class as a foundation course.

This year we piloted a cooperative activity in which the IT & ME students visited our lab at the tech center for an introduction to PC repair and network fundamentals. The second year students in my computer networking technology program conducted a ninety-minute seminar. This activity required my students to organize and present information to other students, providing information to IT & ME students, and may encourage more students to explore the network strand as a possible career choice.

In my position as computer technology instructor at the Sugar River Valley Regional Technical Center in Claremont I have met students with a wide variety of knowledge and technical skills with relation to computers. There is no doubt that the computer and related technology are integral parts of our lives, whether we use computers for business, personal enjoyment, internet access or education. I strongly support the inclusion of IT& ME and IT & ME Works in the high school curriculum. Much work has been put into the development of the curriculum package and is available at no charge to schools across the state. At minimum, this curriculum should teach the basic skills needed to live and work in our society and, ideally, it will give all students the tools to keep abreast of technological developments after graduation.

That concludes Mr. McKenney's testimony, which I would like to enter into the record.

Transcriber's note: Mr. McKenney's testimony was not found in the file.

Senator Jane E. O'Hearn, D. 12: Thank you. Are there questions from the Committee? Thank you very much. That is all I have that have signed up to speak. Cathy Higgins, did you want to speak on behalf of the Department?

Cathy Higgins: I will accentuate a few things. As was previously mentioned, the Department is undergoing a massive process, actually, of revising all of the standards. So, this is definitely a part of that process. I work in the Office of Educational Technology, which is a different office than the tech prep program which funded the IT Pathway Program. There are several of

us involved in the standards revision process and this is definitely a part of it.

We did make specific reference in our state educational technology plan to the need to insure that students in New Hampshire are technology literate by the end of eighth grade so that they can undertake more rigorous information technology kinds of courses in high school. So, that is in process.

I guess I just want to point out, too, another point that I heard earlier that I'm not sure was included in the Department's written memo is that there is a statewide educational technology council which is basically an advisory group that oversees, advises the Department on the implementation of our statewide educational technology plan. That has traditionally been a statewide representative group of Department people as well as educators in the field and organizations. So, that might be something that you might also want to consider as you're thinking about groups and where to get the representation. Certainly, on that technology council, which we are in a major revision of right now because of the new federal legislation, a lot of things have been undergoing some major change. So, we have a lot of new membership coming onto the Council and I think what's become really clear is that we want to make sure that somebody who is intimately involved in the IT Pathway Program be a part of that process, too. I'm not quite sure whether previous members were involved in the IT Pathway. But, we have been aware of what this group had developed. I think clearly the Department is clearly aware of and I think everybody involved in trying to implement No Child Left Behind legislation were very clear that this is the information age, this is the knowledge age, and technology is an integral part of it.

Senator Jane E. O'Hearn, D. 12: The standards are being rewritten? Is it already in the process?

Ms. Higgins: We are in the process now. There is a large group within the Department and there are a couple of different groups outside of the Department that are key people in the offices of school approval that are working with folks in the field. So, there has been, just within, I think, the past month, there have been some communications sent out to various organizations soliciting their input. I'm not quite sure that the other piece that was mentioned in the communication that was sent over.

There are two groups that I noticed are not mentioned as potential membership on this commission, but they are groups that our office works with quite a lot. One is the NHSTE Group, the New Hampshire Society for Technology and Education. The New Hampshire Society for Technology and Education. They tend to be the technology directors, technology coordinators

in schools. They may or may not be folks who are working in the career development and the things. It depends on the school district and how their staffing is arranged. The other group is the New Hampshire Educational Media Association, which, as you can imagine, library media has become much more involved in information technology. So, those are two other groups that I think are key to the discussions that we are having on standards.

Senator Jane E. O'Hearn, D. 12: Questions? Senator Johnson?

Senator Carl R. Johnson, D. 2: Thank you. So, do these councils and boards, do they interface with DOE?

Ms. Higgins: The technology council? I actually currently facilitate that council, yes. So, it is a council that we organize out of our Office of Educational Technology. It is our office that is actually responsible for the Title II-D part of the federal funds, which is enhancing education through technology. So, while I think IT Pathway has focused a lot on the industry piece of it, our office is sort of more global than that looking at all K-12.

Senator Jane E. O'Hearn, D. 12: Further questions? Senator Larsen?

Senator Sylvia B. Larsen, D. 15: Just so I'm clear in my head, our current minimum standards include a requirement for half a credit before the completion of middle school?

Ms. Higgins: Yes. There is a half a credit required for high school graduation and that is a very old set of standards, which we have been very anxious to update. So, it is great that we are at that moment where we can be revising them all. They are, for instance, there is no specific reference in those standards to e-mail or internet. So, they are outdated and I think, in the time I've been at the Department, which is close to six years, I think, from the very start, I have had occasionally people call and say are these the current standards because you can tell that they need upgrading.

Senator Richard Green, D. 6: May I make an observation, as opposed to a question? I read this letter with interest because, having been an educator and having dealt with the Department over the years, and trying to be innovative and make changes, I had little encouragement from the Department because the bureaucracy wants to maintain the status quo. That's been my experience. Not meaning you personally.

This letter says to me there's two things that are going on. Number one, No Child Left Behind is pushing the issue. We've gotta do these things. If it

wasn't, we wouldn't be doing it; we would be sitting on our hands. In ten years, you haven't dealt with this. So, all of a sudden we are going to deal with it. We are going to use No Child Left Behind to do that.

Secondly, you've got a group of people who have gone out and done this, taken the initiative. This looks like to me it's turf protection. And, all I guess I'm saying is, why would you not want to take something that has proven successful, you think it's successful, why would you want to promote and endorse that kind of effort and make it work because it is coming from teachers who are actually doing it in the field. I mean, I assume they got the data. If they haven't got the data and maybe my comments aren't correct. But, they are certified standards and they are working. Children are learning. Why aren't we jumping on board as opposed to trying to figure out a bureaucratic way to do it? That's my observation.

Ms. Higgins: Do you want me to answer that?

Senator Richard Green, D. 6: Please be my guest. If you think it is a question, I would love to have you respond.

Ms. Higgins: Well, I heard a question in there, Senator.

Senator Richard Green, D. 6: Yes, there was. Why aren't we doing it?

Ms. Higgins: Those ten-year old standards are one piece of that entire school minimum standards documents and we have actually asked, within the Department, can we get to that piece now and it was no, let's get to it next year because, obviously, there was the adequacy debate and you know. So, I think it was just a matter of when can we get to it and I would agree with you that, with NCLB we have a wonderful opportunity to say okay now this is... Your question about the why not accept this, I don't think it's that we're not. I think what we are saying is there is a larger process that it should be within and I think any of the colleagues that I work with at the Department, what I see is a lot of pulling in people from the field because that's where you draw the expertise, that's where you draw the what's happening now in the classroom experience. So, I think clearly, you know, that was a target group that needs to be involved in the school wide standards practice. As I said, I think those notices have just gone out and having asked Marsha recently, I think it was just a matter of catching up.

Senator Richard Green, D. 6: My comment was just about IT. I don't see IT as the subject. I see IT as encompassing all subject areas. So, I don't see it as a special little pigeonhole. No matter what subject you are dealing with, it is valuable. My comment was no matter what subject matter you have.

Having gone through these battles of curriculum development and getting people to move on an issue as opposed to having an excuse of not the money, haven't got the time, not the right time, wait 'til next year. That's a bureaucratic problem and I understand that and I'm not placing blame on any individual. But, that's the nature of the beast and it doesn't move very fast until somebody lights a fire under it and I think I will light the fire and I like it.

Senator Jane E. O'Hearn, D. 12: Further questions from the Committee?

Senator Sylvia B. Larsen, D. 15: Is there a way, when you look at HB 528, you can make it better match with the Department's initiative so that the timing works and we could get the advice of this group or this study in such a way that the feedback is valuable or that it incorporates with the groups that you mentioned and statewide educational technology so there was some work with them so that you had that input?

Ms. Higgins: I'm not sure that I'm the best person to answer that because I'm not actually coordinating the whole of that entire documents revision. We have just, as I said, just in the beginning process of gathering feedback from various organizations, from educators around the State, and, if I remember the timeline correctly, we are hoping to finish this sometime by the end of the year. But, it is a process and I think our original timeline was already pushed back a little bit because those in the field recognized that you are going too fast because we really need, we want to get quality feedback from people. So, I think maybe there is, but I guess my wonder is, it might be some of the same people that would be working on this that would be also working on the other piece. So, I guess, I wonder about duplication of effort.

Senator Jane E. O'Hearn, D. 12: Senator Johnson?

Senator Carl R. Johnson, D. 2: So, in listening to what you are saying, I assume that, when you are through, you will be developing new standards?

Ms. Higgins: Yes.

Senator Carl R. Johnson, D. 2: And no one group will be able to take ownership?

Ms. Higgins: No, that would not be our intention. No, because, I mean, the way we approach, our office is focused on educational technology, whether it meets the high school requirements, whether it supports students learning in the vocational education programs, or whether it is a student who is bound to a teacher ed program, whether it is elementary. So, and we see technology as

sort of woven throughout the curriculum, not as a separate thing. There certainly is a place for these specific courses in the IT Pathway Program. But, there are other areas where we try to make an impact so that it just becomes like the pencil and paper in the classroom so that technology is just a part of what kids use.

Senator Carl R. Johnson, D. 2: Why I asked that question is because, in my district, we spend a lot of money on IT. We have a director and we have an assistant director. I just don't want someone coming into my district and mandating what we have to do.

Ms. Higgins: Right. I think our thought is that it is the standards that would be fairly universal because, as was mentioned previously, there are a few key sets of standards that have been developed nationally, which are, you know, well accepted in New Hampshire, too. So, those would form the basis of what students should know and be able to do. Then, within that, a district decides how they want to address that. I think the question is, do you require a particular curriculum or do you require that of a district trying to meet standards? Then, the district can use existing curriculum or develop their own.

Senator Carl R. Johnson, D. 2: Thank you.

Senator Jane E. O'Hearn, D. 12: Any further questions? When will the standards be completed?

Ms. Higgins: I can tell you. Again, I'm trying to think what the timeline was. I know that we were hoping that they would be ready to move forward into rulemaking by the, I want to say by the end of the year, by November or December. As you know, the school minimum standards are a set of all the various required courses for graduation, all of the standards there, and the facilities, and what have you. So, I may be wrong, but Lorraine Petroski or Joyce Johnson could answer that question 'cause they are right on that.

Senator Richard Green, D. 6: It is my understanding that there is nothing in this bill that mandates anything. It is just a study. Is that correct? I don't see anything here that mandates a thing. I think it is a study that is going to recommend certain kinds of data to be available to school districts to consider using in developing their curriculum. I don't understand... I don't want to be mandated either, but I think we've got a national standard that are working. Kids are learning with it. Why shouldn't it be available?

Ms. Higgins: I'm not the legal person. For instance, I'm reading the number of study increasing the number of credit hours, etc.

Senator Richard Green, D. 6: Well, that's recommended. This is a different study. The final analysis, the state board will set standards and required credits. That's all. These people don't have any power to do that. They are just being given the opportunity to present their case.

Ms. Higgins: Right.

Senator Jane E. O'Hearn, D. 12: Thank you. Any further questions? Thank you very much. Is there anyone who would like to speak or to speak again? Thank you.

Hearing concluded at 3:25 p.m.

Respectfully submitted,

L. Gail Brown

Recorded by Merideth Chandler
Transcribed by L. Gail Brown
7/24/03

4 Attachments

ATTACHMENT #1

HOUSE COMMITTEE ON EDUCATION

PUBLIC HEARING ON HB 528

BILL TITLE: establishing a commission to study computer standards used in public schools in New Hampshire.

DATE: February 19, 2003

LOB ROOM: 207 **Time Public Hearing Called to Order:** 10:04 a.m.

Time Adjourned: 11:00 a.m.

(please circle if present)

Committee Members: Reps. L'Heureux, Alger, Dearborn, Flint, Carson, Colcord, Balboni, Leone, McHugh, Naro, Laurent, Tufts, M. Carter, Hagan, Ingbretson, Snyder, Claire Clarke, Jean, Rush, Scovner and J. Dunn.

Bill Sponsors: Rep. Carson

TESTIMONY

* Use asterisk if written testimony and/or amendments are submitted.

Rep. Sharon M. Carson, sponsor. Introduced the bill that would establish a commission to study computer standards. In New Hampshire, students are required to take .5 credit of computer science. They need to know more than e-mail. They need it for college and to open doors to new opportunities. Two separate categories – manufacturing, and computer-based technology. Does the IT program meet the requirement of "No Child Left Behind"? Rep. Ingbretson (Question): Is there a fiscal note on this? (Answer): A fiscal note is not needed. Rep. Alger (Question): Many schools are doing it. Why not just have them all do it? (Answer): IT can keep the pulse and write new regulations while also monitoring.

*Marsha Miller, Regional Director of the Western New Hampshire Business & Education Partnership and Tech prep consultant to IT & Education. Written testimony, in file. Rep. Leone (Question): What is the most recent requirement to teach computers? (Answer): My understanding is in certification, the concern was that they would have to get someone from industry. Rep. Leone (Question): How do we get kids to keyboard? (Answer): Teachers address keyboarding in middle school. It creates a problem for junior and high school when you assess computer literacy – hope kids get a foundation. Rep. Tufts (Question): "IT & ME"? (Answer): It's "Information Technology and Me". Show us through a PowerPoint demonstration something of yourself that also shows computer competency.

Gary McKenney, network teacher at Sugar River Valley Technical Center in Claremont. In 1999, we started a computer center with six computers; only four were working. Grants permitted us to equip our center with a network of computers that work, but others still needed to be repaired. Cisco Systems provided not only equipment, but also a curriculum. Many others in industry have made donations. High schoolers now can earn 12 credits for college training. Claremont kids are getting better work opportunities after high school. They also donated repaired computers to other schools,

YMCA, prisons, nonprofit organizations, and after-school programs, etc. Customer service is an area being expanded. They get service calls from teachers. Some students can troubleshoot over the phone. Some teachers install upgrades to others' computers. Students experience hands-on learning. Some students build their computers even over their vacation. Students also have choices within the curriculum. Attendance is high. Some classes are offered at 7:30 a.m. and kids who otherwise have attendance problems show up. This program works for highly motivated students going to college, as well as for dropouts. Computers are an integral part of all our lives. Rep. Leone (Question): In view of the fact that there is a big demand on subjects for credit hours – are there problems? (Answer): Not generally, but we've had to cut credit from ½ to ¼ for computer repair to accommodate more students. We offer classes for 11th and 12th graders only. (Unidentified) (Question): Do you know how many teachers are not computer literate? (Answer): It depends on whether we're talking software or hardware. Rep. Colcord (Question): How do you suggest we keep the standard high? (Answer): If this were lumped in. Rep. Colcord (Question): How do we keep this upgraded? (Answer): Our computers, even those that are two years old, sometimes cannot handle the latest technology. Rep. Alger (Question): Are you certified? (Answer): No. When I began four years ago, certification wasn't required. Rep. Leone (Question): Is there a certificate in New Hampshire? (Answer): Yes, now, as of this year (2002).

Virginia O. Irwin, DOE, Career Development. Opposes this legislation. These are kids helping kids. Marsha's vision is applaudable. The Department is emphasizing that we are reviewing all standards. Yes, some of our computers are dinosaurs. We support higher standards. The courses that Gary McKenney is teaching are doing great. 92% of students (vs. 89% of students) graduated. The DOE is able to achieve this evaluation without a commission. We expect to have all are evaluations done by November. We support the curriculum, but not the commission. Rep. Dearborn (Question): How far along are you in evaluating the minimum standard? (Answer): There is an Office of Technology dealing with curriculum, not just installing. Rep. Naro (Question): How often is a review of minimum standards reviewed? (Answer): Every 10 years, if not longer. Rep. Naro (Question): That being the case, why would you oppose a commission that would pass determinations on an area that needs ongoing reviews? (No answer recorded). Rep. Dearborn (Question): If there is currently a delay for the Department of Education to study the issue, wouldn't a commission speed up a study of standards? (Answer): Quite possibly, yes. Rep. Dunn (Question): Who at the DOE is responsible for school approved accountability and assessment? Sits here for administrative function? The Department is organized in a variety of bureaus. (Answer): Education consultants are responsible for content, and work with the bureau that is responsible for minimal standards. Rep. Balboni (Question): If I wanted to speak to someone about minimum standards, who would I contact? (Answer): Joyce Johnson is generally responsible for minimum standards. (271-3582). Or call Chrys Bouvier (271-3875) for technology questions. Rep. Alger (Question): Would you put computer standards in math? And in what framework? (Answer): We have no framework for computers. IT has a competency. There are certain criteria in computers – minimal. Rep. Carter (Question): Re: Lines 26-28 – is the DOE doing that? (Answer): Yes. Rep. L'Heureux (Question): Does it provide three sources of information? (Answer): Yes.

Pink Cards:

- ✓ Rep. Sharon Carson, sponsor. Supports the bill.
- ✓ Marsha A. Miller, Western NH Business & Education Partnership, 7 Harding St., Rochester. 332-0925. Supports the bill.
- ✓ Gary McKenney, Sugar River Valley Regional Tech Center, 111 South St., Claremont. Supports the bill.
- ✓ Virginia O. Irwin, NH Department of Education, 101 Pleasant St., Concord. 271-3867. Opposes the bill.

Respectfully submitted,

Sharon M. Carson

Rep. Sharon M. Carson
Committee Clerk

SMC:co

ATTACHMENT #2

Nicholas C. Donohue
COMMISSIONER
Tel. 603-271-3144

STATE OF NEW HAMPSHIRE
DEPARTMENT OF EDUCATION
101 Pleasant Street
Concord, N.H. 03301
FAX 603-271-1953
Citizens Services Line 1-800-339-9900

MEMORANDUM

TO: The Honorable Jane O'Hearn, Chairman
And Members of the Senate Education Committee

FROM: Sarah L. Browning
Special Assistant to the Commissioner

DATE: April 15, 2003

RE: The Department's Position on HB 528
Relative to Establishing a Commission to Study Computer Standards

The Department is opposed to the creation of a commission to study computer standards in New Hampshire public schools.

The bill creates duties for the commission that are more appropriate for local school districts: ***evaluate the New Hampshire Information Technology Pathway program and determine whether it would be appropriate to adopt such a program in the public schools***. The IT Pathway program was a project that developed a curriculum to meet the needs of the Career Development Program. The curriculum is available on the department's web site through NHEON (New Hampshire Educators Online). Any school district that wants to evaluate or use this curriculum may already do so. The department does not mandate that a district use a particular curriculum. For the commission to make a determination concerning the appropriateness of adopting this or any other curriculum would exceed the authority that any segment in state government current possesses and deprive the local school district from making the decisions that they have always made.

The bill is also an encroachment into areas that the legislature has previously delegated to the department and state board of education: ***(1) determine if the program meets the requirements of No Child Left Behind;*** NCLB requires that students be literate in technology at the end of eighth grade.

The department will be held accountable by the federal government for providing assurances that this requirement is met. If IT Pathway is to be evaluated on the basis of meeting federal requirements, the people who are making the evaluation should be the same people that will be held responsible by the federal government for assuring that the requirement will be met; ***(2) study increasing the number of credit hours required for computer education at the elementary and secondary school levels*** The statute requires that the state board of education adopt minimum standards for elementary and secondary schools. As part of the current minimum standards (SEE: Ed 306.27, attached). These rules expire in 2004. In order to have the new rule in place before the old rule expires, the department and the board have already begun preparing for the work of reviewing and aligning minimum standards with NCLB and the requirements of an adequate education.

In addition to the substantive reasons for opposing this bill, there is a practical reason, and that is that the commission will not be able to complete its work and make its reports in a time frame that is consistent with the work that state and federal law requires of the department. In essence, the creation of this commission will not accomplish what the sponsor seeks to accomplish. It should be noted that most of the non legislative members of the commission will already be working with the department and involved with the state board on activities concerning computer literacy. Any legislator, just like any citizen, may participate in the rule-making process. Finally, any rule will have to be approved by the Joint Legislative Committee on Administrative Rules before it is adopted by the state board.

For all of these reasons, we believe this bill is unnecessary.

Ed 306.27 Computer Education Program.

(a) Pursuant to Ed 306.21, the local school board shall ensure that a computer education program is developed and offered in each elementary school that provides:

(1) Opportunities for students to become familiar with computers and computer applications including keyboarding skills; and

(2) Systematic classroom instruction and activities designed to increase students' awareness of computers, computer operation, and the use of computers to aid in word processing and problem solving.

(b) Pursuant to Ed 306.22, the local school board shall ensure that a computer education program is developed and offered in each middle/junior high school that provides:

(1) Opportunities for students to become familiar with computers and applications;

(2) Instruction which emphasizes computer awareness and computer operation, including keyboarding skills;

(3) Opportunities for students to become familiar with several software packages;

(4) Planned activities designed to increase students' abilities to use computers to aid in word processing, data management, and problem solving; and

(5) Systematic classroom instruction and activities designed to enable students to:

a. Be aware of the common uses of computers as well as social and economic issues related to their use;

b. Recognize legal issues associated with computer use such as copyright law infringement and protection of privacy;

c. Demonstrate proper handling and use of computers, peripherals, and diskettes;

d. Identify the basic components of a computer;

e. Understand how data is treated by a computer, including input, process, storage, and output;

f. Demonstrate computer operation by logging on, loading a program, interacting with the program, saving the work, and logging off;

g. Become familiar with several software packages;

h. Write a program to solve a problem; and

i. Become familiar with computer-related careers.

(c) Pursuant to Ed 306.23(b) and (c), the local school board shall ensure that a computer education program is developed and offered in each high school that provides:

(1) Opportunities for students to become familiar with computers, computer operation, and programming;

(2) Opportunities for students to develop a knowledge and understanding of the makeup of computers, how they affect our lives, the history of computers, and the legal issues associated with their use;

(3) Experiences which develop students' abilities in keyboarding, the proper use of peripheral equipment, and the use of computers in areas such as drill and practice, simulations, word processing, and data management;

(4) Instruction which emphasizes knowledge of at least one programming language and the ability to develop and make minor modifications to computer programs;

(5) A course for at least 1/2 unit of credit in computer education as specified in Ed 306.23(e);

(6) A plan by which computer use and applications shall be integrated throughout the program of studies; and

(7) Systematic classroom instruction and activities designed to enable students to:

a. Demonstrate computer awareness;

b. Develop and/or enhance skills in computer operation;

c. Demonstrate knowledge of hardware and software;

d. Identify peripheral devices and demonstrate their uses;

e. Describe what computers can and cannot do;

f. Demonstrate familiarity with at least one computer language;

g. Demonstrate the ability to write simple programs and make minor modification to them;

h. Develop problem-solving skills associated with computer applications; and

i. Demonstrate knowledge of career opportunities associated with computers and their applications

ATTACHMENT #3

Wednesday, April 16, 2003. Concord, NH

Testimony in support of HB 528 sponsored by Rep. Sharon M. Carson, Londonderry, NH.

Good Afternoon:

My name is Karen Olmstead and I am the computer teacher at Raymond High School. I also am a member of the adjunct faculty at Southern New Hampshire University in its business and education programs. I have 20+ years of business experience, am a Certified Financial Planner and a Certified Public Accountant. I hold teaching endorsements in computer/technology education, general business education, and am certified in School Business Administration. I am here to provide information in support of House Bill 528 that establishes a commission to study NH computer standards in use in public schools.

At the time I was hired by RHS, I was in the process of completing the Masters in Business Education program at Southern New Hampshire University. During this period, SNHU was in the process of revising the program to give interested students the skills needed to earn the new computer/technology teacher endorsement. As part of this process, I was asked to write the curriculum for, and teach, a course titled "Computer Teacher Toolbox" that covered basic computer hardware and maintenance. I developed the course for the fall of 2001 and have taught it in both the face-to-face and distance education format. Since then I have also taught Technology for Teachers II in the distance education environment and I am currently teaching distance education courses in the accounting and MBA programs.

You have heard Marsha Miller speak about the work done through the Western NH Partnership in development of the IT & Me and IT & Me Works curriculum and the IT Pathway. I have participated in the development of these programs as an attendee at the summer workshops, and in the development of the IT Career Pathway as a member of the IT Task Force at the Seacoast School of Technology.

When I was hired by RHS (my first teaching job), I asked for the curriculum for the courses I was scheduled to teach. Much to my surprise, I found that there were no syllabi or course outlines and that the textbooks being used were several years old. I had to rely on my many years of business experience to develop a curriculum for that year, and have been continuously revising it in an effort to keep up with the rapid technological changes that are a part of our everyday life. The IT & Me curriculum has

been a tremendous aid in this process.

One of the problems that I have seen time and time again, both as an educator and in the workforce, is the lack of applicable technology skills exhibited by students entering the workforce and students in both undergraduate and graduate programs. It isn't so much the inability to use word processing or similar programs, but the inability to adapt to new or revised versions of the programs. Students have been taught keystrokes but not the problem-solving skills necessary to explore the program to find out how to accomplish new tasks. This concern was also raised by businesses that were visited during the first IT Educator in the Workplace workshop in 2000. As part of that conference, we split into several groups and were taken on prearranged visits of several area businesses. The universal message given by the management of these businesses was the need for anyone they hire to have basic technological skills. The IT & Me curriculum was designed to incorporate the need for students to learn problem-solving skills.

Another problem that exists, especially in economically disadvantaged communities, is the large number of students who enter the workforce immediately after leaving high school. These students need skills that will allow them to earn more than a minimum wage. I am very fortunate in that I am the only computer teacher at Raymond High School and have an administration that believes in my ability to assess the skills that students need to develop before graduating from high school. As a result, I have been able to make curriculum revisions to give students an opportunity to develop these skills. However, there are many districts in New Hampshire where that flexibility does not exist, either because the policies and procedures are set up in such a way as to require a long lead time for new courses or because the School Board or district administration is not cognizant of the need to revamp current curriculum.

One of the obstacles to curriculum revision is the lack of state standards for computer education. Although there are several national organizations that have set forth standards that can be followed, the adoption of relevant, flexible technology standards by the state would help give technology educators the tools needed to encourage districts to update current technology programs.

"Standards for Technological Literacy: Content for the Study of Technology Executive Summary", prepared by the International Technology Education Association states that "a person that understands – with increasing sophistication – what technology is, how it is created, how it shapes society, and in turn is shaped by society is technologically literate." In his on-line book *"Education for an Information Age,"* Bernard Poole states that a computer-integrated education "may, in fact, represent

the key to the survival of the individual student in a modern, computer-controlled, information-based society." It is the responsibility of the schools to prepare students for the challenges they will face, not only upon graduation, but also during the remainder of their lives. Students will be required to use a computer in some way to perform the requirements of their jobs, whether as nuclear engineers or as cashiers at the local supermarket. They must have the skills to judge what computer technology best serves their needs and how to put the available equipment to optimal use. We cannot assume that students are learning these skills at home. Many students in New Hampshire do not have a computer available at home, and for those that do, the computer is often used only for playing games, chatting online and finding the tickets for the next concert of the student's favorite band.

Today, many companies have adopted technology to the point that all major functions of the business, from inventory control to sales and customer relations are computer-coordinated. A new term, Computer-Integrated Manufacturing, has been coined to represent this trend. Ideas are converted to designs, designs are converted to prototypes, sales are tracked, inventory orders are placed using the Just In Time concept and packages are tracked all through the use of computers. We can even file our income tax returns electronically, using an electronic signature function. Many of these trends have had a negative effect on the workforce. Repetitive, routine jobs have been taken over by computers leading to layoffs of unskilled workers. Workers who are not willing or able to retrain or adapt to the new trends are the first to lose their jobs. In a report published by the US Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS), five competencies of effective workers are identified. Two of these are specifically related to technology. The first is the productive use of information. Effective workers need to know how to acquire and evaluate data, maintain and organize files, interpret their findings, communicate their findings and process the information with the use of computers. The second is the productive use of technology. Workers must know how to "select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot technologies."

Another issue that has arisen because of the tremendous growth of the Internet has been information overload. However, a portion of that information is inaccurate, biased, or just plain wrong. There is no police force for the Internet, any information can be posted by any user (provided the content is not illegal such as child pornography.) Anyone using information today, must have the skills to find data, determine the validity of the data, and analyze the data available without becoming overwhelmed with the sheer volume of information. Information that has been analyzed and interpreted provides companies with a competitive advantage. The

need for accurate timely information is so great that information gathering and interpretation has grown into a specialization for some businesses.

Not only is technology information important in and of itself, but also the ability to productively use technology helps students throughout the education process and their careers. Writing research papers, preparing presentations, and graphing research results are just a few of the applications that can benefit a student in core courses. For many teachers in core programs, the curriculum is so packed that they don't have time to take a class period to teach a student how to use PowerPoint or how to research a problem. I include a unit on the Internet as part of my IT & Me curriculum to teach students how to search the Internet, how to evaluate that information and how to use the information in papers or presentations. I have found that many students at both the high school and college levels do not know what plagiarism is, so we cover that as well.

In "*Education for an Information Age,*" Poole states his belief that teachers of the future will be very different from teachers of today. They will still need to have subject matter knowledge, but, more importantly, they will need to know how to manage the learning environment, individualize learning experiences for each student, and how to create positive interactions between the student, school and home. Teachers will need to be more of a coach or a guide to the students instead of being a fount of information. Students must be taught how to learn. With the rapid technological changes that are taking place, students must be able to adapt to these changes if they want to be successful in the workplace. Teachers of the future will not direct each step of the learning experience, but must maintain an environment that encourages the students to learn on their own.

Currently, students in New Hampshire are only required to take ½ credit of computer classes to graduate, and this requirement can be met by taking courses in Middle School. With the rapid evolution of technology, we are doing our students a disservice by allowing them to complete 4 years of high school without updating their computer skills. In a Report to the President on the Use of Technology, the Office of Science and Technology Policy stated "it is widely believed that a continuing acceleration in the pace of technological innovation, among other factors, will result in more frequent changes in the knowledge and skills that workers will need if they are to play high-level roles within the global economy of the 21st century. Our children will thus need to be prepared not just with a larger set of facts or a larger repertoire of specific skills, but also with the capacity to readily acquire new knowledge, to solve new problems, and to employ creativity and critical thinking in the design of new approaches to existing problems. In the words of Frank Withrow, the director of learning technologies at the

Council of Chief State School Officers, 'the U.S. work force does not need knowers, it needs learners.'"

Thank you for your consideration.
Submitted by:

Karen A. Olmstead, Teacher
Raymond High School
45 Harriman Hill Road
Raymond, NH 03077
kolmstead.rhs@raymond.k12.nh.us

ATTACHMENT #4

Wednesday, April 16, 2003. Concord, NH

Testimony in support of HB 528 sponsored by Rep. Sharon M. Carson, Londonderry, NH.

Good Afternoon:

My name is Marsha Miller and I am the Regional Director of the Western NH Business & Education Partnership. I am also the tech prep consultant for two of New Hampshire's career pathways: Information Technology and Education.

The Career Pathways Project is a Department of Education initiative within the Career Development Bureau. The design and development of the IT Pathway was delegated to the Western Region Partnership who have – on an annual basis – been awarded a tech prep grant to cover the development costs. These funds are a separate funding stream under the Carl D. Perkins Vocational and Technical Act of 1998.

Today, I am here to share information about the IT Pathway and, further, to support House Bill 528 that establishes a commission to study NH computer standards in use in public schools. My objective is to focus attention on the teaching/learning opportunities provided through the IT Pathway as well as to raise awareness concerning a perceived obstacle to statewide implementation.

First, the key objectives:

- ✓ Objective #1: Computer Literacy

From balancing your checkbook, to making travel arrangements, to working an entry-level job, computer literacy is a required skill. To insure that all students are prepared to live, learn and work in the knowledge economy, the IT Pathway begins with two core courses – I.T. & ME and I.T. & Me Works. It is important to note that these courses are not a canned curriculum from out-of-state. Rather, over the last two years, a team of thirty-five NH teachers have developed and field-tested these courses. On-line access to the course outlines, skills and standards, and the 100+ lesson plans can be obtained through the Department of Education's website.
In summary, IT & ME and IT & ME Works were developed by NH teachers for NH classrooms.

✓ Objective #2: Career Development

Once students acquire the basic skills, the IT Pathway provides a sequence of recommended courses in four broad areas of focus: business information studies with a focus on eCommerce; multimedia from desktop publishing to digital imaging; network systems from installing and repairing a computer to systems configuration and maintenance; programming & software development from both the software and hardware perspective.

✓ Objective #3: Postsecondary Enrollment

To insure a seamless transition from secondary to postsecondary, the IT Pathway has – from its inception – included representatives from New Hampshire's Community-Technical College System. This alignment of competencies and learner outcomes insures that students are prepared for postsecondary enrollment. In fact, because these courses are built on postsecondary outcomes, high school students can get a head start on their future education by earning college credit as well as high school credit.

✓ Objective #4: Alignment with the State of New Hampshire's Technology Plan

To assist local districts in complying with the State of New Hampshire's Technology Plan that requires all districts to identify the way in which technical literacy will be measured by the end of 8th grade, the Western NH Business & Education Partnership will sponsor its third IT Summer Institute. The intended outcome will be an assessment tool for the IT core courses so that local schools, should they choose to do so, can offer I.T. & ME as an 8th grade course and use the assessment tool to document proficiency. This evidence could also serve as a placement tool so that entering ninth graders are appropriately placed in challenging courses. The two-day workshop will be held on the Pease Campus of NHCTC on June 26 and 27. To date, twenty-three teachers are registered.

✓ Objective #5: Statewide Implementation & Sustainability

The IT Pathway is a tool. The teachers and students, at all levels, are the users. However, in our attempt to deliver the Pathway statewide, the teachers have identified the current computer standard as an obstacle. For reference sake, the standard reads as follows:

The ½ unit requirement in computer education shall be met by successfully completing a ½ unit course at the high school level, passing a locally-

developed computer competency test, or successfully completing a computer education program prior to grade 9. Their question, and the one that needs to be addressed by the proposed commission is:

"If a student achieves the credit prior to high school enrollment and, as a result, does not enroll in any computer course at the high school level -- how do we – as educators – insure that the emerging workforce is computer literate in a fast-paced, technology-driven economy?"

In a discussion with Dr. Steven Bolander, Dean of the Whittemore School at UNH, he noted that his school's computer requirement has been shifted from the junior year to the freshman year due, in part, to the entering students' deficiency in computer literacy. After reviewing the IT Skills and Standards that serve as the foundation of the Pathway, his question was: "Can we assume that all schools are using the IT skills and standards as 12th grade outcomes?" Unfortunately, the answer depends upon when the student enrolled in the course. If it was in middle school, how do we insure that the lessons learned are still relevant?

In conclusion, I leave you with these questions:

1) "Does the existing computer standard that was written in the era of Commodore 64, Apple II and 16 credits to graduate, serve the needs of our emerging workforce?"

2) "Is it fiscally responsible to increase the standard and disregard the curriculum work that was done by New Hampshire teachers for New Hampshire students?"

3) "Without the standing commission to conduct a periodic review, how do we insure that technological advances do not, once again, outdate our standards?"

Thank you for your consideration.

Submitted by:

Marsha A. Miller, Regional Director
Western NH Business & Education Partnership
Tech Prep Consultant for IT & Education
7 Harding St., Rochester, NH 03867
mamiller@ttlc.net

Background Information on the IT Project:

New Hampshire's Information Technology Pathway is grounded in core academic, technical and employability skills. In its formative stage, the IT Project was chosen by the National Techforce Initiative as an "aspiring center of excellence." This engagement in a national project led by the National Alliance of Business, the Information Technology Association of America, and EDC* in Newton, Massachusetts provided the funding for participation – first as an attendee and – later as a presenter – at five national convocations on workforce development. Further, to study model programs, onsite visits were conducted at Hi-Tech High School in San Diego, California, the Northwest Center for Emerging Technologies in Bellevue, Washington and Central and South High Schools in Omaha, Nebraska.

On January 31, 2003 an NSF grant proposal was submitted by EDC, whose genesis is Harvard's School of Education. This proposal is to establish an ITEST Learning Resource Center (Information Technology Experiences for Students and Teachers). The State of New Hampshire is named as a qualified partner because of the teaching/learning opportunities provided through the IT Pathway.

Closer to home, the Western NH Business & Education Partnership is an active member of the Greater Portsmouth Chamber of Commerce's eCoast Technology Roundtable. The focus of the roundtable is the training, recruitment and retention of IT professionals.

In conclusion, the ongoing engagement of national, regional and local partners insures that the IT Pathway will maintain rigorous and relevant standards.

*The Educational Development Center is most commonly known as EDC and is one of America's foremost curriculum development centers.

Speakers

SENATE EDUCATION COMMITTEE

Date 04/16/03 Time 2:15 PM Public Hearing on **HB 528**

establishing a commission to study computer standards used in public schools in New Hampshire.

Please check box(es) that apply.

SPEAKING	FAVOR	OPPOSED	NAME (Please print)	REPRESENTING
X	☐	☐	Representative Carson	Prime Sponsor
☒	☒	☐	Karen Olmstead	
☒	☒	☐	Marsha Miller	Reg. Dir. of Regional Partnership
☒	☒	☐	David P Miller reading for Mr Gary McKerney	
☒	☐	☐	Cathy Higgins	NH Dept. of Educ.
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Committee Report

STATE OF NEW HAMPSHIRE

SENATE

REPORT OF THE COMMITTEE

Date: May 22, 2003

THE COMMITTEE ON Education

to which was referred House Bill 528

AN ACT establishing a commission to study computer standards used in public schools in New Hampshire.

VOTE: 2-0

Having considered the same, report the same with the following resolution:
Resolved, that it is: **INEXPEDIENT TO LEGISLATE.**

Senator Carl R. Johnson
For the Committee

HB528 Docket

Next|Prev|Results List|Main|Bill Status

Bill Title: establishing a commission to study computer standards used in public schools in New Hampshire.

Date	Body	Description
1/9/2003	H	Introduced and ref to Education; HJ 12, p199
1/29/2003	H	Hearing Feb 19 10:00 RM207,LOB
3/6/2003	H	Maj Report OTP/AM for Mar 20 (Vote 16-1;CC)
3/6/2003	H	Prop Comm Am{0485}; HC22, p536
3/20/2003	H	Passed with Am; HJ27, p785 + 805
4/3/2003	S	Introduced and Ref. to Education; SJ 11, Pg.269
4/11/2003	S	Hearing; April 16, 2003, Room 105-A, SH, 2:15 p.m.; SC18
5/22/2003	S	Committee Report; Inexpedient to Legislate, [05/29/03]; SC24
5/29/2003	S	Inexpedient to Legislate; SJ 18, Pg.498
5/29/2003	S	Sen. Johnson Moved Laid On Table, MA, VV; SJ 18, Pg.498

Next|Prev|Results List|Main|Bill Status

Docket Abbreviations