

**HANSARD**

**NOVA SCOTIA HOUSE OF ASSEMBLY**

**COMMITTEE**

**ON**

**PUBLIC ACCOUNTS**

**Wednesday, April 29, 2015**

**LEGISLATIVE CHAMBER**

**Department of Education and Early Childhood Development  
iNSchool Student Information System**

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## **Public Accounts Committee**

Mr. Allan MacMaster, Chairman

Mr. Iain Rankin, Vice-Chairman

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Ms. Suzanne Lohnes-Croft

Mr. Brendan Maguire

Mr. Joachim Stroink

Mr. Tim Houston

Hon. Maureen MacDonald

Hon. David Wilson

[Mr. Bill Horne replaced Ms. Margaret Miller]

[Mr. Terry Farrell replaced Mr. Brendan Maguire]

In Attendance:

Ms. Kim Langille

Legislative Committee Clerk

Legislative Counsel Office

Ms. Ann McDonald

Assistant Auditor General

### **WITNESSES**

#### **Department of Education and Early Childhood Development**

Ms. Sandra McKenzie, Deputy Minister

Ms. Diana Eisenhauer, Chief Operating Officer

Mr. John Fahie, Director of ITS

Ms. Monica Williams, Executive Director, Centre for Learning Excellence



House of Assembly  
*Nova Scotia*

**HALIFAX, WEDNESDAY, APRIL 29, 2015**

**STANDING COMMITTEE ON PUBLIC ACCOUNTS**

9:00 A.M.

**CHAIRMAN**

Mr. Allan MacMaster

**VICE-CHAIRMAN**

Mr. Iain Rankin

MR. CHAIRMAN: Good morning everyone, I call this meeting to order. Today we have with us the Department of Education and Early Childhood Development. We will be discussing the iNSchool Student Information System. I'd like to remind everyone if you have a cellphone with you to put it on silent or shut it off so there are no interruptions.

We will begin with introductions by members of the committee, starting with Mr. Farrell.

[The committee members and witnesses introduced themselves.]

MR. CHAIRMAN: Thank you. We'll now begin. Ms. McKenzie, you have some opportunity now to provide some opening comments.

MS. SANDRA MCKENZIE: There are a number of numbers in my opening comments and I can make copies available if people are interested, so thank you, Mr. Chairman.

Good morning and thank you for the opportunity to be here to discuss the Nova Scotia Student Information System, otherwise known as iNSchool, as reported in the May 2014 Report of the Auditor General. My opening comments will provide some background and general information about the iNSchool program.

I would like to begin with a brief overview of the iNSchool system and how it has evolved. The iNSchool program was officially launched in the Fall of 2009 when it was approved and funded through the tangible capital assets budget process. However, preparations for implementation began before this time. The functional and technical requirements were initially developed jointly by the department and the school boards in 2005 and 2006 and refined during subsequent years. The decision to acquire commercially available systems was made explicitly and the core systems were selected via competitive tender, following provincial procurement policy.

Program goals and objectives were agreed to, common processes documented and data standards were established so that a common system could be developed for our more than 400 schools.

Once capital funding was allocated for the iNSchool system, contracts for the software were negotiated, implementation plans developed and the projects were carried out. The first two applications of iNSchool, PowerSchool and TIENET, which means the Technology for Improving Education Network, were fully implemented by June 2013. All this work was done under a carefully conceived governance and project structure established by senior leadership in the department and the school boards. Roles and responsibilities were assigned based on who was best positioned for success and accountability for successful implementation was taken seriously.

iNSchool has enjoyed widespread support among senior leadership in the school boards and the Department of Education and Early Childhood Development and is widely viewed within the Nova Scotia public education system as a model for collaborative delivery of complex projects. The overall benefits from the implementation of iNSchool are the implementation of common data standards and processes. Previously, data and process was often left to the individual schools to administer.

With iNSchool we now have a common, province-wide system that provides the public education system with data to make evidence-based decisions, to help strengthen and identify at-risk students and provide timely intervention for students who require help from parents, teachers and others.

iNSchool helps increase confidence in the public education system. We expect that our students be technically competent. In turn, our students expect their schools to set a good example. Many expect to reviews assignments and marks online and have the ability to register and select courses online. The parents and student portal has provided this benefit and has millions of visits annually. For example, from January 1<sup>st</sup> to April 27<sup>th</sup> of this year, there were 1,602,919 parent accesses and 2,595,337 student accesses. From

personal experience, I know that my third child was quite dismayed that I was able to track him far better than I was able to track the previous two, through the benefit of PowerSchool.

iNSchool fosters better engagement of parents and more effective parent-school partnerships. Parents are able to view homework assignments, attendance, and other information online and in real time, thereby enabling them to be more involved in the education of their children.

iNSchool provides teachers with easy access to information about the students they teach. This will better equip teachers to implement effective, tailored learning strategies in the classroom. It also provides consistency for teachers who move from one school to another and reduces the professional development needs.

iNSchool improves the efficiency, timeliness and reliability of sharing student data among schools, school boards, and the department. iNSchool enables more effective implementation of strategies; supports accountability to ensure that standards of quality are established, measured, and reported; and enables more collective collaboration with our partners - for example, SchoolsPlus.

The department welcomed the audit of the Nova Scotia Student Information System and agreed with all of the Auditor General's findings. We addressed the most significant recommendations immediately, and we are addressing the remainder, as indicated in the department's response.

In conclusion, the iNSchool program has been very successful. PowerSchool and TIENET were implemented on time and within budget. As stated before, it has enjoyed widespread support among the school boards and the department and is widely viewed within the Nova Scotia public education system as a model for collaborative delivery of complex projects.

This view is supported by the Auditor General's Report, which states, "The development of the iNSchool system was aided by an appropriate governance structure with involvement from users and other stakeholders. Reasonable project management practices were used throughout the project lifecycle. The design requirements of the new system appropriately considered the needs of its users and the concept of value for money. Government's procurement rules were followed in selecting the iNSchool system."

Thank you, Mr. Chairman. I look forward to receiving the committee's questions about the iNSchool Student Information System.

MR. CHAIRMAN: Thank you, Ms. McKenzie. We will now move to Mr. Houston of the PC caucus for 20 minutes.

MR. TIM HOUSTON: Thank you for those introductory comments. I just want to make sure I understand the relationship, because we have PowerSchool, iNSchool, and

TIENET. Are they all the same thing? Is iNSchool the big project, and inside that you have PowerSchool? How do they all hang together?

MS. MCKENZIE: That's correct. iNSchool is the overall project, and PowerSchool and TIENET fit within in it.

MR. HOUSTON: So would PowerSchool be a module of iNSchool?

MR. JOHN FAHIE: iNSchool is the brand for the project. There are two systems or applications that have been implemented thus far: PowerSchool and TIENET. Each addresses a set of functionality, and they're integrated. Just briefly, we consider PowerSchool the core information system that is used largely by schools to manage their operations - register and enroll students, schedule classes, take attendance, manage discipline incidents, produce report cards, and other operational reporting.

TIENET is the system that we use to manage extended services and programs. It's our case management system, if you will. Any student who receives programs and services beyond the regular program would have a record in there, and the data would pertain to whatever that service or program is.

MR. HOUSTON: Okay, thank you. That's helpful. So is iNSchool an off-the-shelf package that was purchased, or was it a homegrown system?

MR. FAHIE: No, PowerSchool and TIENET are both commercial, off-the-shelf applications. PowerSchool is provided through a company called Pearson School Systems, and TIENET is provided through a company called MAXIMUS Inc.

MR. HOUSTON: Okay, so "iNSchool" is just the name that the department has for this overall project?

MR. FAHIE: Yes, it's our brand, if you will. Every time we do communications or change related to it, we talk about iNSchool as a program. There are additional products to come, to round out and fully implement the vision.

MR. HOUSTON: Inside the iNSchool kind of bucket, you have Power School and TIENET - are there other areas of functionality that you're looking at adding to the iNSchool project?

MR. FAHIE: Yes, the other large area would be what we are branding as iNSchool learning management. That would be all the data and processes that are very closely linked to the curriculum and pedagogy, so it is curriculum management; instructional management; provincial assessment management; and professional development management. So it's very teacher- and program-focused.

We started with the systems that enable schools to manage their operations as well as manage the data associated with the program planning process, and they're now moving to the area that arguably provides the most significant benefit.

There are some other smaller systems. We implemented the Power Alert System, which is an autodialer; it enables schools to communicate automatically with groups of students for any number of communications. Schools close because the heat is not working or it's a snow day, schools closing early, any reason that a school may have to communicate to a broad group of people. This system allows that through phone, text, and email.

MR. HOUSTON: Was PowerSchool the first implemented functionality, and when was that?

MR. FAHIE: Yes, we went live with the first set of schools in September 2010 and we concluded the implementation, I believe it was March 2012.

MR. HOUSTON: How does that work? Is that an annual licensing fee to PowerSchool per student - what is the fee arrangement there?

MR. FAHIE: The licences were purchased, but there is an annual maintenance and support fee that we are obligated to pay to continue to receive upgrades to the product and any support that is beyond our ability to provide.

MR. HOUSTON: In terms of the cost to - let's not talk about the past, the capital expenditures - just the annual operating costs for PowerSchool and TIENET. So there would be a fee to the vendor. I think there is kind of like a PowerSchool expert at each school - it's just a staff person, right? There is nobody dedicated at the school level that's 100 per cent doing PowerSchool - or how do you staff this across the schools?

MR. FAHIE: We have four levels of support. The first level we consider tier zero. There generally is somebody at each school who would be leaned on to provide expert support; however, that person's scope of responsibility is fairly narrow and it would be routine things. Generally, newer teachers or - it's something new that has been entered into the system.

From there, tier one is at the school board level. They're typically answering questions of how do I do register this student, it's a unique situation, what have you. Any problems with the software that are encountered are escalated to the department, which would be tier two. We deal with anything that is within our ability to address. Given that it's a commercial off-the-shelf, if there is a need to make changes to the software, we then escalate that to tier three, which would be the vendor - depending if it's PowerSchool, Pearson; and if it's TIENET then, obviously, it would go to MAXIMUS.

MR. HOUSTON: At the tier zero, at the school level, that's just a person, like 5 per cent of somebody's time?

MR. FAHIE: Probably not even that. We just consider that person sort of the super-user.

MR. HOUSTON: And then at the tier one at the board, are there dedicated people at the board whose full-time job it is, and how many would there be there at the board?

MR. FAHIE: There are - and it varies based on the size of the board - Halifax has the largest number, with four. The others have one or two, depending.

MR. HOUSTON: And at the department, the same thing - are there a couple of people at the department whose full-time job it is for these programs?

MR. FAHIE: To be precise, we are now not located in Education and Early Childhood Development. As part of the shared services program the responsibility for providing information communication technology services was transferred to the Internal Services Department. Regardless, your question is what support exists provincially to provide the system and yes, there are probably four people in total but they are not full time dedicated to the support of the system. In fact, there are five, now that I think about it. I would say three are full time and the others are part time in some capacity. As well we also have contracts with people who can do development on our behalf.

MR. HOUSTON: So just in terms of all those things, is it kind of a million bucks for these programs or a couple of million, when you consider all the staff and the fees? I'm just trying to get a sense.

MR. FAHIE: Yes, ours is about \$2.2 million a year.

MR. HOUSTON: In terms of the Auditor General's Report, in the report he stated that an IT disaster recovery plan does not exist to help restore iNSchool and supporting infrastructure. Given that was a year ago there is probably a disaster recovery plan now?

MR. FAHIE: We did not implement a disaster recovery plan because we knew shared services was coming. It was approved on March 2014 and it didn't make sense at that time to create a plan that would fit just this solution. We knew we were consolidating the delivery of these services and we knew we would be consolidating other elements including infrastructure and applications. We also knew that the former CIO, now ICT Services, had in their plan a secondary data centre. So it didn't make sense to us to go out and create yet another data centre so we didn't do that and we are working with ICT Services to ensure that the infrastructure that sits in education today is consolidated with the infrastructure that sits provincially.

Having said that, we do take steps to ensure that we can recover from disasters. We have all of our data, including the applications, the data itself, the operating systems, and



so forth backed up off site at - we partner with Halifax Regional School Board so it's in Spectacle Lake.

As well, the hardware required to rebuild, if you will, in the event that Brunswick Place were to cease to exist, is commercially available. There is nothing unique about the products and so we could, in fairly short order, if required, procure, install, and recover from the backups.

MR. HOUSTON: In terms of the security of the system, are you aware of any security breaches in the system?

MR. FAHIE: No.

MR. HOUSTON: Maybe at the school level, students getting into information that they shouldn't get into? I wonder how that would get reported up to you at the department level. If somebody gained unauthorized access, is there a protocol in place? If a teacher learns of this, do they have to report it to somebody who then has to report it somebody? Is there a process in place that would be well known and that would alert you to a security breach at that level?

MR. FAHIE: Yes, anyone at a school level who is made aware of a breach would report that to the school board and the school boards would report that to us.

MR. HOUSTON: And you've had no such breaches reported to you?

MR. FAHIE: None.

MR. HOUSTON: None? I did have an opportunity to speak with a young fellow at Christmas, actually, who was able to gain access to a bunch of administrator passwords and take some control over some different computers in the system. I was thinking of that when I was reading this information. It was a case he got caught. He got suspended and didn't get up to any nefarious activity.

MR. FAHIE: I think it would be important for me to point out that I received your question as pertaining specifically to the iNSchool systems. There are lots of other systems out there, school-based, board-based, and externally throughout the world that students and staff would have access to. If he, the student, breached one of those systems, we wouldn't necessarily hear about it because it is not our responsibility to address that. I don't know. Unless you tell me which specific system, I couldn't speak to it.

MR. HOUSTON: It was my understanding that he did it through the PowerSchool. I don't have enough details to really pursue that but I was curious if this was something that you were hearing about on an ongoing basis through different schools and it sounds like it's probably not.

MR. FAHIE: I mean, you can only know what you know. This was Christmas gone by, so Christmas of 2014?

MR. HOUSTON: Yes.

MR. FAHIE: By that time we had strong passwords in place for PowerSchool so every teacher and administrator would have been required to have a password that was a minimum of eight characters. It would have had to have at least one uppercase letter, at least one lowercase letter, it would have had to have at least one digit zero through nine, it would have had to have at least one special character: a colon, semicolon, quotes, that sort of thing; there are probably 15 or so of them.

It would be very difficult to guess that password and you are also locked out, after 10 unsuccessful attempts, the account would be locked. I would like to know which student was able to do that.

MR. HOUSTON: That security is coming from the vendor is it, from the PowerSchool vendor?

MR. FAHIE: Well the security is built into the system but it is configurable. So we, at the provincial level, maintain the configuration and we are able to set various parameters and what I described are the parameters which we established and now have in the system and have had since April.

MR. HOUSTON: I might switch gears a little bit and maybe come back to Ms. McKenzie to talk about the value of the data in the system. My daughter is in Grade 10 and I know she uses PowerSchool multiple times a day, but my son is in Grade 8 and he would have no idea what it is. You mentioned 2.6 million student interactions over January to March. How many students are in the system?

MS. MCKENZIE: All of our students are listed in PowerSchool.

MR. HOUSTON: Yes, but that is a couple hundred thousand students, is every student in Nova Scotia from Grade 1 to 12?

MS. MACKENZIE: Every student in the system is listed in PowerSchool. I wouldn't suggest that the Primaries are regularly accessing their information but all of our students are in PowerSchool.

MR. HOUSTON: How many is that, every student? How many students are in school in Nova Scotia?

MS. MACKENZIE: There are 118,000.

MR. HOUSTON: Okay so that is a pretty high average per student interaction, I would say. I don't know if Mr. Fahie might have that number. If you took out the cohort of younger kids who just wouldn't be using it, I don't know, I guess maybe Grades 7 and 8 and below probably wouldn't be going in. If you look at the high school students - I don't know if you know how many high school students are in the province - but I wonder what the average interaction would be per student.

MR. FAHIE: I did look at the data and it is quite high. I knew it was high because we had tracked it since implementation, just to see what the take-up was and it is quite high. If you want I can do some math and come back to it.

What I saw last night, this was a four-month period, January 1<sup>st</sup> to April 27<sup>th</sup>, so that is four out of 10 months, so about 40 per cent of the year. As you said, elementary children generally don't have accounts so we are really referring to students from Grade 7 through Grade 12. I can do some math but last night I looked at the parent engagement because I thought that was rather important and that was about seven per student, you can't really do per parent because my wife and I can both access our children, so seven per student, and if you extrapolate that over 10 months it would be 17.5, which is pretty significant.

MR. HOUSTON: So I guess maybe the conclusion would be that the parents and the students see value in the system - is that a fair statement?

MS. MCKENZIE: We would say that parents and students see value in the system. As a follow-up to the number of hits that we would have from January to April, don't forget that they would have been going in at that period of time to find out how they did in their exams, if they were missing assignments, what their marks were in the assignments, and how they had been doing in terms of attendance to see if they qualify for exemptions, that type of thing.

MR. HOUSTON: My daughter checks it every night to see who marked her absent by accident or whatever - she might be bumping your stats up.

I wonder on the other side, if the students and the parents see value to the system - which I don't argue, I see value in that system, I'll be honest - what value does the department get from it? There's a lot of information in there about kids' grades across different subjects and stuff. I wonder, at the department level, is it somebody's responsibility to analyze the data that might be there to reach some conclusions and maybe interact with certain boards or certain subjects?

MR. FAHIE: I think it's fair to say the department has received quite significant value and every year we find more things that need to be addressed. I can give you a couple of examples, if I may. We ran an attendance pilot three or four years ago and PowerSchool was configured to support that pilot. It provided the data at the end of the pilot to make decisions about future actions.

I think about the recent discussion about disproportionality, so now I'm kind of shifting to TIENET and PowerSchool. So the thought that African Nova Scotian students and First Nation students in particular are disproportionately represented with individual program plans, some analysis was done there, based on self-identification and the IPPs, and at the end of that the minister asked for a review. So the data in the system will . . .

MR. CHAIRMAN: Order. I'm sorry, we have to move to the NDP caucus now and Ms. MacDonald.

HON. MAUREEN MACDONALD: Thank you, Mr. Chairman. That was unfortunate timing because I was quite interested in hearing what you had to say. Perhaps we could finish, I'm okay with that, your response, Mr. Fahie.

MR. FAHIE: Yes, I was concluding on the disproportionality concerns - so the minister asked for a review and that's going to happen and the data to support that review will come from the two systems. Also there are a lot of benefits, but if you think about the program planning process it is now consistently implemented in every school, so the eight-step process is followed by all schools and the reports and the forms and so forth, and thus the data, is consistent. You can do some analysis whereas in the past it was difficult to do analysis in many ways. I can think about - I'll come back to attendance - prior to the implementation of PowerSchool, we had over 300 different attendance codes. It's very difficult to analyze that data. We now have seven attendance codes, so you can do some work to understand who is absent, why they are absent and so forth.

Another example would be the work the department is doing with Dr. John LeBlanc at Dalhousie. He is looking at social and emotional programming and trying to draw connections between it and student engagement, whether it is attendance, behaviour, peer relationships, and so forth. We're using the data on the learner profile to - well we're not, we're providing Dr. LeBlanc with the data and he is using that to do some analysis.

We've worked with the Public Health Agency of Canada. They have a program where they're looking at the prevalence of autism spectrum disorder, and we've been able to use the data in TIENET because we track that. We track all formal diagnoses of learning disorders and so forth. We've been able to provide that data to the Public Health Agency and support a national program. There are many examples; those are a few.

MS. MACDONALD: Thank you. Not having kids in the system like my colleague to my left, it's really edifying to get more detail about how these programs actually work.

I am curious about the last points you just made. So individual students, I recognize that their identities are in the system, but medical information - medical diagnoses - would that be part of what is identified in the system?

MR. FAHIE: Yes, we maintain data about health - formal diagnoses of health. I will mention though that access to this information is restricted to a need-to-know basis.

MS. MACDONALD: That's obviously where I'm going, because I'm quite familiar with the different levels of protocols that are in place for access to personal health records. I'm curious about the protocols that are in place and the protections with respect to access to information through the system because I think that's essentially why we're here. The Auditor General's Office, when they did their audit, had identified some weaknesses in the system, and so it would be very concerning if there weren't strong protocols. Can you explain to me what those protocols are?

MS. MCKENZIE: I would actually like to divide the question really quickly. John can speak to the steps that were put in from an IT basis to ensure there was a strength of access to prevent it from being hacked, for instance. Then, Monica Williams can speak to the protocols with respect to medical information or other diagnoses.

MR. CHAIRMAN: Could we go to Mr. Fahie first?

MR. FAHIE: Sure. We received the Auditor General's recommendations and we clearly agreed with the password. We took steps immediately to address the accounts that presented the greatest risk, and those would be teachers and administrators. It was sort of a two-step process. First, we had to change the configuration in the system. I think I mentioned earlier, in a previous question, that we are able to set the parameters that determine what passwords are acceptable or not, so we did that. Then we had to follow up and make sure that all of the existing accounts were changed, and we did that as well. That took a couple of months. That was completed on April 14<sup>th</sup>. That's for teachers and administrators.

There are three other types of accounts. The simplest, most straightforward are operating system database accounts. Those were addressed immediately. I will say that they had strong passwords. The Auditor General's concern was not that the passwords weren't strong to begin with - because they were - but the system wasn't configured to force it. We changed the configuration, but it didn't really matter because the passwords were strong anyway.

The third and fourth types of accounts are parent accounts and student accounts. Parent accounts are done now, so they're all strong passwords. Student accounts are in process and will be completed by May 11<sup>th</sup> of this year.

MR. CHAIRMAN: Ms. Williams.

MS. MONICA WILLIAMS: Thank you. It's important to look at the access provisions with regard to the policy framework. In terms of iNSchool and when we're speaking about confidential student records, that goes back to the policy of the Department of Education and Early Childhood Development on student records. What's to be placed in those files - there are guidelines for the inserts for those files electronically and also the access to those files on a need-to-know basis.

For example, it was mentioned about health information for students. If a student has diabetes and there's a medical plan to support that student in school, then the teachers working with the student would have access on a need-to-know basis. Parents would be involved in the development of the plan and have access. It's those types of situations where we would have the access to the confidential record in order to support the student's safe attendance at school and their health and well-being.

We also have acknowledgement in the provincial student records policy of adherence to all governing legislation such as FOIPOP. It's recognized that we have to follow the provisions of the legislation as well.

MS. MACDONALD: Out of the 118,000 students, how many students would have medical information or health information in the system? Do you know?

MR. FAHIE: I don't have that data readily available. We can certainly get for you.

MS. MACDONALD: Thank you. That would be quite useful. I want to just ask a few questions about the cost of the system. I note in the AG's report that the capital cost for PowerSchool and TIENET was budgeted at \$12.75 million and the actual cost as of March 2013 was \$12.5 million with an additional \$0.25 million in remaining costs. Has the capital cost of the system changed or is that where we're at today in April 2015?

MR. FAHIE: Those are the costs.

MS. MACDONALD: What are the annual operating costs? Those are the capital costs, so there would be annual operating costs associated with this.

MR. FAHIE: Yes. We estimate, when you factor in expenditures to vendors and our own forces - our own staff - about \$2.2 million.

MS. MACDONALD: \$2.2 million to operate this system. Just because I don't know, when was the system purchased? When was the first expenditure on this system?

MR. FAHIE: We signed the PowerSchool contract December 23, 2009 - the 22<sup>nd</sup> or the 23<sup>rd</sup>. We signed the TIENET contract about a year later.

MS. MACDONALD: And it's now province-wide. It started as a pilot in some areas; is that correct?

MR. FAHIE: Are you referring to TIENET or PowerSchool?

MS. MACDONALD: I guess I'm not sure, but either one of them.

MR. FAHIE: Yes. We wouldn't call it a pilot; it was a staged rollout. We didn't do all 400-plus schools at one time.

MS. MACDONALD: The gaining access to data in the iNSchool in the three boards by the AG's department, that access was because of weak controls around passwords, correct?

MR. FAHIE: Correct. We also gave the Auditor General the user names. You have to enter a username and a password, and he had access to the user names.

MS. MACDONALD: Right, and he was able to guess the password, I guess.

MR. FAHIE: Correct.

MS. MACDONALD: That's the thing about those darn passwords. So specifically, what are the changes that have been made to prevent that from occurring now? Can you tell us that?

MR. FAHIE: Yes, I can tell you in as much detail as you like. I think I mentioned earlier there are four types of accounts that are in play. We have operating system and database accounts. There are 296 operating system accounts; there are 92 servers. This is a big system and there's not just a production server, there are development servers, there are testing servers, training servers and so forth. So 92 servers, each server has three administrative accounts. Each of those accounts is now configured to enforce a strong password.

It is important to know, though, that they had strong passwords to begin with so it's sort of analogous to: I leave the house and the door shuts behind me and automatically locks, or I leave the house and I have to lock it myself. We were in the position where we had to lock it ourselves and we did. We had strong passwords in place. Even though the systems didn't enforce it, we had them in play.

What we did to respond to the AG recommendation was to force that to be the case, so you couldn't create a password that wasn't strong, so that's the first type of account. That was done - it's very straightforward, 296 operating system accounts and I think 80 or so data-base accounts - done, complete.

The second type of account, and the one that required the most amount of effort, were teacher administrator accounts. There are some 14,000 active accounts in this area. The configuration had to be changed to force a strong password so when a teacher would be set up or an administrator would be set up with a new account, the system would force the person creating the account to create a strong password. Prior to that it wasn't; you could enter a password that wasn't considered to be strong. So there are two areas of the system where you can create a password. The first area is the individual user; if I've forgotten my password or I need to reset my password, I can do that myself. That's one area the configuration that was updated.

The second area is when as an administrator someone comes to me and says, I forgot my password, will you please reset it for me. That was updated as well. At that point we now have the configuration in play that forces those passwords to be created strong. By strong we mean a minimum of eight characters, must have at least one upper case, must have at least one lower case, must have at least one number and must have at least one special character in the set of special characters. So that was done.

The next step was to make sure every one of those existing accounts had a new, strong password and so we did that. Then the next step after that is to then force - not, well force, yes - teachers and administrators the next time they log in to change it, because you want them to have their password. So we change the password to be strong and then the next time the individual logged in, they were presented with the functionality to change it themselves but the change had to be to something that was strong. So that's teachers and administrators.

Parents, a very similar process. Parents are a little different in that as a parent I am able to not only choose the password but I can choose the name of the account. But regardless, it's the same kind of process.

There were 44,000-odd parent accounts and through the process of allowing parents to change their own, 22,000 were done. That left 22,000-some accounts that still needed to be fixed and we forced a change. As parents log in, they will not be able to connect because their password has been changed. They will then have to reach out and ask that their password be reset and they be given an opportunity to change it.

Then lastly, students - student accounts - very similar to parent accounts but in our view presented the least risk. We went from the accounts that presented the greatest risk to those that presented the least risk. The only ones that remain are the student accounts and they are in play now and will be completed by May 11, 2015.

MS. MACDONALD: I am wondering if you could tell me - the AG's Report, in recommendation 4.1, says that there have not been any known compromises of iNSchool since it was first implemented. This report is about a year old now, so since May 2014, when we received the report, have you identified any compromises in the system or any difficulties?

MR. FAHIE: No.

MS. MACDONALD: What kind of monitoring is in place to do that?

MR. FAHIE: We have a very comprehensive environment in which we monitor network access and server access. We have two levels of firewall, and each level has dual firewalls in place. We have intrusion detection systems - in fact, we have two different types of intrusion detection systems. We monitor account access and we can see if there is any suspicious access. We monitor network traffic to see if there are any anomalies. We



control for spam and spyware and viruses, and we address denial of service attacks. We have a very comprehensive network and server security system.

MS. MACDONALD: Some of the schools in the province have been designated as SchoolsPlus sites. Those schools have a different mix of professionals working with the students, so you would have social workers and psychologists and folks like that working in those schools. Do they have access to these databases in terms of recording information or making notes, treatment plans, or program plans?

MR. FAHIE: Yes, they do. Again, though, your access is limited to need-to-know; for example, SchoolsPlus would not have access to guidance counsellor data unless it was necessary to do their job.

MR. CHAIRMAN: We will now move to the Liberal caucus and Mr. Rankin.

MR. IAIN RANKIN: I want to go back to the value in data, specifically as it relates to wellness. I wrote down a couple of things you mentioned that were interesting about the prevalence of autism, but specifically the diabetes question, especially since we have such an epidemic with type 2 diabetes. I know that is definitely a preventative health thing, and I would like to see it incorporated into the education program as much as possible. Given the fact that we did the review and there were 19,000 submissions, I wonder how much the data that was extrapolated from the systems that you're using - did you also use the data to bring that into the curriculum change?

One of the things I put forward that I was concerned about was the physical education level that's in the schools. I know there has been tremendous progress on the other side for nutrition, you can no longer buy things like pop and chips in vending machines, but there are two parts to the wellness equation. You said there was direction from the minister about other things from the data, like the marginalized groups participating. I want to know, is there any direction from the data that supports looking at enhanced physical education, particularly in the younger grades?

MS. WILLIAMS: With regard to the Action Plan for Education that has been released, there is a heavy emphasis on health and wellness for students through multiple initiatives. I was taking notes as you were speaking, and I hope I address all the different variables that you raised.

With regard to the initiative in this domain, they fall under Pillar Three in the action plan. There is an emphasis on inter-agency co-operation in working to support the health and wellness of students; for example, education working with mental health services, education working with health authorities on initiatives in diabetes. There is also recognition of the importance of protocols for sharing information. So when we're speaking about data and collecting information on the incidence of diabetes in our school-age population, being able to share the data with health care providers to work on initiatives in the schools. That's recognized in the plan.

In addition, we're looking at the provision of services to increase physical activity during the school day. That is explicitly referenced in the plan - in answer to your question - that we would look at the creation of a framework to support more physical activity during the school day.

MR. RANKIN: Do you know any specifics of how that will be achieved, because obviously there is the challenge of fitting that into the school day. I think right now they only get one hour of physical education in a week - maybe I'm wrong on that, but that's what I'm hearing.

MS. WILLIAMS: The amount of time students are allocated for physical education in the school week varies by grade level. There are recommended standards under the Time to Learn guidelines for the department, so, for example, at the Primary to Grade 2 level, the recommendation is 20 minutes a day of physical education, going up to 30 minutes a day in higher grades and so forth.

It's really important to point out that physical education is one aspect of providing that support; however, incorporating physical activity into other areas of the curriculum is another area that we're looking at as a priority. It's not restricted to phys. ed. classes, but to involving physical activity in teaching science and going out and looking at nature - just as one example in Elementary - to get that movement involved in the learning process.

MR. RANKIN: I agree with you there. I know the Scandinavian countries are very good at expanding in the playtime during recess and things like that. I think that's a good thing to look at as well.

They hybrid hub model RCMP are using now to identify students at risk - and I know they're basically using different agencies, schools being one of the key ones and also social services and things like that - to identify people before they get involved in crime, is there data that you use to identify youth at risk to support that model? I'm wondering because it is a new program, granted, I know they're really only initiating that this year and I understand that probably not all teachers are aware, but I think a great effort should be put into disseminating the information so teachers have that.

I guess the question is: Are you aware of the hybrid hub model? Hopefully the schools are starting to get engaged in it.

MS. MCKENZIE: Currently I chair a social policy deputy's committee, which is looking at a number of social policy issues. One of them is providing services through joint agency work in the schools, and one of the models that has come forward for us to seriously consider expanding and taking a look at is the hybrid hub model. We are anticipating that it will be called something different because there are a number of different "hub" discussions in schools right now, but the overall notion that we would work together in a

preventative way and looking at the current sites, and whether we are able to expand, is an active file that we're looking at.

MR. RANKIN: So that really has to do with identifying at-risk students. In terms of looking at the mental health assessments, do you believe the school is - there is an obvious shift away from resources into the schools for mental health, do you believe that's the most effective place to invest in mental health?

MS. MCKENZIE: I'm going to turn it over to Monica who has had the most recent experience in school boards, but at a global response I would say that iNSchool is certainly a very, very important place to begin to address child mental health.

MS. WILLIAMS: With regard to mental health services, partnership is really important in providing support for the students, and early intervention is essential. When you look at the incidence of mental health challenges in Canadian children, a very significant percentage of them start in childhood and adolescence, and so school is an ideal place to provide those supports, especially when you consider in Nova Scotia that not all children have access to the same medical facilities across the province. So access is very well supported when the services are provided in schools.

With SchoolsPlus, through the partnership that we have, the health authority provides the funding and oversight for mental health clinicians who are based in schools, which has been a fairly recent development and a great step ahead in providing services for students as soon as challenges appear, and also there is work done with the families, which is another really important variable because oftentimes you need that support for the family network.

I also want to, if I may, just speak to your question earlier about identifying at-risk students from a little bit of a different perspective. Through the action plan we are going to be registering all students who are born in the province, in an electronic file through the school system, education system, and we're going to start the screening of our children, our prospective students, at 18 months of age, 36 months of age, and six months, before they start school, to identify early any challenges that they having and to direct the families and the children to supports that they may need. Early identification of risk is something that is a very high priority in the department.

MR. RANKIN: Okay, that's great. Thanks very much for those answers.

MR. CHAIRMAN: Mr. Stroink.

MR. JOACHIM STROINK: I need to first commend you on the 18, 36, and the six months. As past chairman of the Learning Disabilities Association Nova Scotia that is a huge step for Nova Scotia in identifying the kids and building a curriculum that will help these kids succeed and the stigma that goes along with that. Hats off to you, this is pretty amazing.

I want to touch a bit on that because IPP is a big problem that we have in Nova Scotia and I guess for me it goes back to the security and the feeding of data from classroom to classroom to teacher to teacher - what is shared and what is not shared and how tight is the security that goes around that and the confidentiality side of things, because there is a huge stigma issue with learning disabilities within our culture.

MR. FAHIE: Those professionals in our schools who require access to the data are provided access to the data. In TIENET we have identified about 20 different roles: principal, vice-principal, guidance, registrar, teacher, APSEA teacher, classroom teacher, resource teacher, administrative assistant, and so forth. As I say, there are about 20 different roles. Those who need access to the data have access to the data and those who don't, don't have access to the data.

It's important because I'm sure you are aware we have program planning teams in our schools, and so there are a number of people who are involved in the program planning process - so more than one person would require the access.

MR. STROINK: My question then follows up to - if a child is leaving our school system because of tuition support or going to Bridgeway or something like that, is that data shared with them? How is it exported to that school to ensure that they get the support that they already need?

MR. FAHIE: We have had conversations with the three designated schools.

MR. STROINK: Yes, there are three.

MR. FAHIE: So we have had conversations with them about sharing the data, but we have not implemented anything at this point. Conversations have been a bit wide-ranging, maybe they would implement TIENET themselves, and PowerSchool, and if so what would that look like and how would we, and so forth. To date we have not put anything in place.

MR. STROINK: One other question - I understand through the Auditor General's Report, the iNSchool program had some security weaknesses that sounds like you've addressed, but I'm trying to get an understanding of how those weaknesses were discovered in the sense through the AG. Through Community Services they were given a road map to show how you could get into the system. Were they given the same kind of road map to get into your system, or did they just try to figure out these weaknesses on their own?

MR. FAHIE: They were given the user account names, they were given the names of the user accounts.

MR. STROINK: So they were given a bit of a road map to figure out how to get into the system.

MR. FAHIE: They were given one of the two pieces of information required to access the system.

MR. STROINK: So if someone from the outside hacked in, they might not have any of the information at all?

MR. FAHIE: I would hope they wouldn't have it, yes.

MR. STROINK: So they had a little bit more of an advantage.

MR. FAHIE: Correct.

MR. STROINK: Thank you, that's all I wanted to know, thank you.

MR. CHAIRMAN: We'll move to Mr. Horne.

MR. BILL HORNE: Thank you and good morning. It's a tremendous system, it sounds like. It's very pliable and you are able to get a lot of information out of it. But in the long run, how does it really affect or increase our ability for students to move on to national standards or meet national standards like literacy or math or any of those? Are there outcomes that you can show that that's happening?

MS. WILLIAMS: One of the main goals of the Action Plan for Education is to increase student achievement in math and literacy. The iNSchool system plays a major role in providing the data on student performance; how they are performing right now in those subject areas; what their scores are on different tests, provincial, national or international; and the teacher's assessments as well. We're using that data and implementing a series of projects - a wide range of projects across the province - to work intensively on student achievement.

PowerSchool plays a great role because it provides the evidence that we're using to create those programs and, really importantly, to monitor the programs. One of the key focal points is that there has to be ongoing monitoring of student achievement and their performance in those subject areas as they proceed through school. We will be looking to see what's effective when we're implementing the projects, which strategies are most effective, which don't appear to be working, and making adjustments on the basis of the information we are receiving, again, through PowerSchool.

MR. HORNE: Just to add to that - if a student is having trouble at school or not performing very well, will it be looked at from the point of the student and the point of the teacher and what the program is and so on?

MS. WILLIAMS: Yes. We're really attempting to increase monitoring early on in the school system - for example, for literacy in Grade 1, for math to have more frequent

assessments on how the students are doing - and then if there is a struggle or a challenge identified, to provide early intervention.

MR. CHAIRMAN: Ms. Lohnes-Croft, you have about five minutes.

MS. SUZANNE LOHNES-CROFT: Five minutes, okay. I have a couple of questions about your security. How long do you think PowerSchool was accessible to hackers? Do you have any idea what period of time? In the Auditor General's Report last week, we heard that it was accessible to hackers - do you know for what period of time before you found out?

MR. FAHIE: We were made aware about the weak password findings in December 2013 to January 2014.

MS. LOHNES-CROFT: And it was in effect starting when?

MR. FAHIE: September 2010.

MS. LOHNES-CROFT: Do you know how many people had accessed that? Do you have any idea?

MR. FAHIE: How many teachers?

MS. LOHNES-CROFT: No, how many hackers.

MR. FAHIE: To our knowledge, none.

MS. LOHNES-CROFT: None, okay.

MR. FAHIE: We're not aware that the system was ever hacked.

MS. LOHNES-CROFT: One of the things discussed was that there was no follow-through, no review of the system once it was set up. Has that changed?

MR. FAHIE: Yes. I think you're referring to the recommendation that the accounts be reviewed on an annual basis. Yes, we are implementing that recommendation now. They will be reviewed twice annually, once in September and once in February. That sort of follows the semester periods. This will entail producing reports of accounts for boards to take a look at, and any accounts that should be disabled will be disabled.

MS. LOHNES-CROFT: When you have long-term substitutes in the school, they have their own PowerSchool. Do they access it through a teacher who is already at the school or do they have their own accounts?

MR. FAHIE: Long-term substitutes, in all likelihood, would be given their own accounts. Short-term, no.

MS. LOHNES-CROFT: No? So how do they access PowerSchool?

MR. FAHIE: Short-term? They wouldn't.

MS. LOHNES-CROFT: They wouldn't at all?

MR. FAHIE: Unless they were given access to a - no, they wouldn't. No, I don't think so.

MS. LOHNES-CROFT: So at the end of the term for a long-term substitute, they are taken off the system right away when they complete their term?

MR. FAHIE: Correct.

MS. LOHNES-CROFT: So there's no way they can access the information?

MR. FAHIE: Correct. But to be fair, these are employees and they are bound by confidentiality agreements, too.

MS. LOHNES-CROFT: Okay, that's good to know, thank you. I'll pass it along.

MR. CHAIRMAN: Mr. Rankin.

MR. RANKIN: I have a question on trades schools actually. It was something that I remember the last government started off and I remember being very impressed with it and thinking that is the direction we need to go for some students. I'm wondering where that is identified in the budget. If a trade school is looked at as - and going back to the data - if it seems that that's the most appropriate for that geographic area, which part of the budget is it? Obviously in the capital budget but does it have its own line identified in the budget or is it just kind of part of the broad - is it in the TCM area or where is that in the budget?

MS. MCKENZIE: Skilled trades centres, we have information that can be broken out of the budget. We do have some capital purchases to start the skilled trades centres up and then they move over into operating, but Diana Eisenhower could speak to that - I see that she's looking for her information.

MR. RANKIN: I guess I'm just wondering, is there a certain allocation per year or per a certain amount of period that is specifically designated for trades schools or is it just kind of an ad hoc project that is encapsulated into the full capital budget?

MS. DIANA EISENHAUER: From a capital perspective it would form part of the capital budget and there would be an allocation made to the specific school to do the

renovation work or build the trades centre, whatever was required. There would be money set aside very clearly to equip the skilled trades centre.

Then on an ongoing basis, as part of what we call profile sheet funding, so each board receives their funding allocated in various components and there is this very specific component that is allocated for the skilled trades centres. So I can just look at the funding allocation exactly how it's calculated.

MR. RANKIN: Is there a specific amount that the province says we're going to spend this much on trades schools or is that more on the demand that is presented?

MR. CHAIRMAN: Order, perhaps we can get to that answer in the next round. We do have to move back to the PC caucus and Mr. Houston.

MR. HOUSTON: Thank you, Mr. Chairman. I want to go back to how the data in iNSchool, in PowerSchool specifically, is used by the department to help with the academic experience. Would there be set reports that somebody would run, like screens I guess they might call them in technology, and just kind of screen for patterns, whether it's in academics - like would there be a set suite of reports that somebody at the department would run and look for certain patterns, whether it's attendance or whether it's academics?

My other question would be, are those same reports run at the board level, but if we start at the department, I wonder is the department mining the data to look for things to go to certain boards and discuss?

MS. MCKENZIE: I'm going to start with this answer and then I'm going to turn it over to Monica for more of the specifics. I think the strength of PowerSchool is that we're now just beginning, now that we have it set up and running over the last number of years, we are beginning to be able to look at the data that exists within PowerSchool and to pull the reports and to look at what that information provides.

I think a second strength is that PowerSchool then becomes part of the database that we have that then we can take a look at early EDI data, the early development indicators, or to take a look at other health data or other community-based data and begin through analytics and start to see where there are patterns for communities as well - so not just student-based information but also patterns by communities so we can look and see if there needs to be a more global intervention.

I'm going to turn it over to Monica to speak specifically to the question you just asked.

MS. WILLIAMS: With the provincial assessment data as one example at the department, it is certainly mined and there are different reports that are provided to the school boards when the assessments are done. They look at the different aspects in math and literacy, how the boards are performing. For an example, you might get information



that indicates that poetry is not a strong area in language arts and needs some attention. In math you may receive a report that indicates that geometry is stronger in some boards than others and that is something to be looked at.

When the information goes to the school boards, it is very heavily used to support programming. Speaking from past experience, that information is taken and can be analyzed by school, by classroom and right down to the individual student, to look at the patterns in the school as to areas where teacher professional development might be needed and by classroom so the teacher has information around where she has to direct her instruction or where an area is for enrichment because the students are doing so well. For the individual student, it creates the opportunity for learner profiles of strengths and challenges so that the teachers know where the student is performing, areas that need to have some increased detention and support, and again, potential areas for enrichment.

It has been a tremendous boost; it really empowers a lot of the services in the boards. For example, the mentors or coaches that we have for literacy and math would use the data to go out to the schools and work with teachers in these areas to increase the classroom instruction and the attention in those areas. It has multiple uses and it has been a great step forward.

MR. HOUSTON: It sounds as though it's there but is it used? In other words, would there be a situation where the department would go to a board and say we're concerned about this group of students, these 10 students, for this reason, what can you tell us? Does that happen at that level?

MS. MCKENZIE: One of the examples that John gave earlier would be a good example where for the first time we had released the data on students on IPPs in Nova Scotia and noticed they were variances in boards and did start the process of having conversations with boards at the superintendent level about the information that was coming forward and the data.

Another example would have been, now that we have the self-identification built into PowerSchool, the information that is becoming available to understand by population where we're getting results and then were able to share that with boards as well. We are in the beginning stages of going back to boards with the data, sitting down and starting to understand what the results are. I can see that will be growing over the implementation of the Education Action Plan.

MR. HOUSTON: That would be from the department to the board and then you have to get from the board to the principal and then from the principal to the family. I think I understood that at the school level - would you say that's happening? I'm curious, are teachers - well teachers are on the ground, they know the students - but the principal is a person who is once-removed, as another set of eyes looking at this data and then going to a teacher and saying - what can you tell me about these particular students?

I think that would be a good check and balance in the system. I know people are often overworked in many instances and they might not have time to do data analysis but I do think there would be a lot of value in this type of data analysis to interact at the earliest time. Is that happening at the school level that principals have a responsibility to look at this data and get a sense?

MS. WILLIAMS: For example, at principals' meetings in the school board, there is often discussion around the data when it is coming in from the provincial assessments. Another area where the principals and teachers have a lot of discussion around the student assessment data is in school improvement planning. When they are working on their improvement goals in the school, that is part of the data that they're looking at. They are certainly also looking at teacher assessments, surveys of parents and students and teachers but the assessment data coming from the department plays a big role as well.

In the new Centre for Learning Excellence that I head right now at the department, we are looking at the data closely and ways to share it more broadly and more effectively through the different levels of the system. Another area that's being looked at for further development is research in Nova Scotia schools, using the data to learn more about our students and the patterns for their achievements and effective strategies to help support them to reach higher results.

MR. HOUSTON: Thank you for that. There are a certain number of private schools in the province. I don't know how many. Does anybody know how many private schools there are?

MS. MCKENZIE: There are versions of private schools. There are about 13 or 14; some are hockey schools, some are different . . .

MR. HOUSTON: Would those schools have access to PowerSchool?

MR. FAHIE: No.

MR. HOUSTON: So those students just write exams and they're kind of matched to make sure they're progressing at some level, like for the school accreditation process? Would there be value in extending PowerSchool to those schools? I don't know if those schools might resist that or not, but from the department's point of view, would there be value in offering that out to capture them in the iNSchool system?

MS. MCKENZIE: We haven't been approached. They would certainly have to cost-share with us in any type of extension out to the private schools. The private schools in Nova Scotia offer the Nova Scotia curriculum and we do have a relationship with them to ensure that's being delivered to a high-quality standard.

MR. HOUSTON: Do you have a sense with those private schools how those kids stack up academically against kids who are in the public school system? I'm wondering

because if you had all that stuff in PowerSchool, you could easily mine right through and see what's happening there. But do you have a sense of whether the kids in the private schools - how they rank academically compared to our other kids?

MS. MCKENZIE: I would have to get information by specific school. As I've said, some schools are what you would consider traditional private schools; others have been put in place specifically for hockey or for religious purposes or those types of things. I would have to go back and take a look at that.

MR. HOUSTON: But each of those schools, no matter their other purpose, would be following the exact same curriculum. Is that correct?

MS. MCKENZIE: They would be following the Nova Scotia curriculum. We do have homeschooling that's happening with some parents; they would be following a curriculum there that is not the Nova Scotia school curriculum.

MR. HOUSTON: I would be curious to see - I assume that information would be available in the department somewhere as to how the private schools - how those kids perform academically compared to the other ones. For the 118,000 students in the province, you would be able to - through PowerSchool or through whatever - pull those out by grade and kind of see where and then rank schools and rank kids and all that stuff. Is that true? Is all that information available?

MS. MCKENZIE: We do have information on the 118,000 children who are in the public school system, and we would have the marks and information for the children who are moving through the private school system. There would be some significant differences between the public school system and a private school system, so I would need to go back and take a look at how that data stacked up. I do believe that Monica has a comment on this as well.

MS. WILLIAMS: Some of the public schools in Nova Scotia offer the International Baccalaureate program and so do several private schools in the province, so certainly the data on the results there, in terms of academic comparison, would provide one avenue for some academic comparison in terms of students taking the exact same program and having international examinations as to their performance.

MR. HOUSTON: It raised curiosity with me when my colleague was asking about the amount of physical education time. It just got me thinking, I wonder if some of those kids in that private school that have more time dedicated or - I don't know if it's more time, but certainly more access to sports, in the case of a hockey school or something like that - I wonder if there's an impact with the academics.

I don't know if that's a type of analysis that the board would do. I would have thought that maybe those proponents of more physical education time for kids in the run of a school week, of which I would be one, might do an analysis and present a report that

says that kids who are more physically active are more academically strong. I don't know if the department looks at that. I don't know if it's a true statement or not, but I wonder if, when you are looking at the curriculum and doing your curriculum reviews, that's something that comes up often in discussion.

MS. MCKENZIE: We believe that children who lead healthy, active lifestyles contribute to a better performance in school. There could be other contributing factors for some children that prevent them from having what perhaps would be considered an optimal academic experience. There could be a variety of reasons for that, so I don't want to say there's an exact correlation, but we do believe that children who lead healthy, active lifestyles are stronger students.

MR. HOUSTON: Okay, and that will at some point make its way to the curriculum, I guess, when it goes through curriculum reviews and stuff?

I think I'm out of time.

MR. CHAIRMAN: Mr. Houston, you are just seconds away.

MR. HOUSTON: Well, I'll use that time to thank them for their answers.

MR. CHAIRMAN: We will now move to Ms. MacDonald and the NDP caucus.

MS. MACDONALD: I'm curious about a recent report that was around incidents of violence in schools and the minister subsequently talking about introducing a province-wide code of conduct. I guess this system, this database that we have on students, would capture incidents of violence or aggression, would it not?

MS. MCKENZIE: Yes.

MS. MACDONALD: Is that where the data came from for the 4,700-odd incidents of violence, or is there a database someplace else with respect to the Promotion of Respectful and Responsible Relationships Act?

MS. MCKENZIE: The information that was in the report came from our iNSchool system.

MS. MACDONALD: I noticed that the minister kind of downplayed - that seems like a lot of incidents that were reported and downplayed, that we shouldn't jump to conclusions - that these were all highly violent situations. What I'd like is some understanding of the breadth of behaviours that those 4,700 incidents capture, in terms of really serious incidents to maybe less serious. What are the ways we categorize what is reported?

MS. MCKENZIE: I am going to turn it over to Monica to describe the new code of conduct that has been introduced. What we did find with the previous code of conduct was that we were putting out ministerial guidelines which then got translated into policies at the board, which then got translated again in an interpretation at the school level, and that there were wide inconsistencies when teachers recorded incidents in the system.

When we found the 4,700 that the minister referred to, it could be a very serious incident in a classroom through to recording as a “violent incident” someone who had refused to remove their hat. So when she was making that reference, the minister was also referring to how there are cases where the violence is deliberate and sometimes when it is involuntary, because it is associated with a particular vulnerability that a student has. Those were all being categorized together.

Under the new code of conduct we are being very explicit about how things would be categorized as unacceptable behaviour. I can turn that over to Monica now to explain that in more detail.

MS. WILLIAMS: With the new code of conduct, there are two requirements associated with it on the basis of some of the experiences that Ms. McKenzie has described that we’ve had thus far. There will procedures - clear procedures - for reporting, recording, and tracking incidents of unacceptable behaviour. The behaviour is clearly described as either acceptable or unacceptable with definitions to try to make that a more common understanding of what was being reported, because previously there were some different interpretations.

Also, there is a requirement with the new code of conduct for monitoring incidents of unacceptable behaviour at the school, board, and provincial levels to identify areas requiring support. We wanted to be explicit around the importance of monitoring, which wasn’t as clearly communicated in the past - that you’re recording the data, but it’s essential that you monitor it at the different levels, and, if you see a pattern emerging, that action should be taken to support the students and the families involved.

As the deputy minister pointed out, the context of the behaviour is very important. Sometimes a violent act may be perpetrated with intent, but at other times a student may lash out or have an incident of violent behaviour associated with a challenge or special need that they have and it’s beyond their control. We’re trying to, with the new code, have better recording and distinguishing of those different kinds of behaviour - the two different contexts there - especially with regard to incidents of violence, which is what you asked about specifically.

MS. MACDONALD: Of those 4,730 cases, how many were serious incidents of violence with intent?

MS. WILLIAMS: With the way the recording was done thus far, we didn't have that delineated. With the new code, that's why we're moving to have more clarity around intent and the context of the act. We were unable to distinguish that.

MS. MCKENZIE: We did do some cross-correlation though to take a look at specifically what the acts were, to begin to understand what exactly was happening. We also did some cross-referencing between PowerSchool and TIENET to see how many children who may have been reported as having a violent incident were also receiving supports for other special needs, and that actually showed up to be quite high. Although I can't give you the specifics or a statistic, there was enough of a pattern that it was used to inform the new code of conduct.

MS. MACDONALD: In the new code of conduct, will there be any category that specifically identifies bullying behaviour?

MS. MAKENZIE: In the new code of conduct, there will be definitions that specifically describe bullying and cyberbullying. The definitions of those have been, I believe, placed right into the Act.

MS. MACDONALD: Sexual harassment?

MS. WILLIAMS: There are different forms of harassment that are identified: sexual, racial, et cetera. Yes.

MS. MACDONALD: The final questions I will have will be around mental health in the schools and mental health programming in the schools, something that I have long supported and worked to make a reality when I had an opportunity to do that in government. I want to be really clear that more support for kids with mental health concerns earlier is really important.

However, I'm greatly disappointed when I see services taken out of our health care system where kids show up with really severe psychosis and other severe behaviours and mental illnesses. We don't have enough services in our health care system sometimes to meet those needs. I don't see it as a zero-sum game taking money from one pot and moving it into another. I want to ask about the mental health services that are being provided in the schools through the school system and what the school system's plan is, what the education system's plan is for those services in the periods of time when schools are closed.

MS. MCKENZIE: As I mentioned, we have been looking at, through the Social Policy Deputies Committee, where we can work together more effectively so not only did the 19,000 Nova Scotians tell us that it was important to have more inter-agency partnership and that just didn't show up in the education review, it showed up in the Nunn report and a variety of other examinations of how departments work together so again, through the Social Policy Deputies Committee we are taking a look at how can we ensure that services are happening so that they're not just wrapped around the times that schools

are open but they are true wrap-around services - everything from the hybrid hub-model that would be initiated by Justice through to other programs that are initiated through the Department of Community Services or those that are initiated through Education, that we take a look at them and ensure that communities have access to them on a year-round basis and outside of school hours as well.

There are a number of projects that we are looking at but we're also changing our overall practices. You will see, as we've extended into the early years and the wrap-around services related to schools, it is an extremely important issue to make sure that families are supported through the entire period of time.

MR. CHAIRMAN: Thank you Ms. MacDonald, we will now move to the Liberal caucus and Mr. Rankin.

MR. RANKIN: Thank you and I just wanted to finish up on the discussion revolving around the trade schools. The reason why I see it as being so important is that there is an identified group of people who really can take advantage of a different path in the school system to really capitalize on what their skills are. I was just wondering if I could possibly get a list of schools that have - there's another program and the name escapes me but Ms. McKenzie, you would know; it's through LAE and its Opportunities or something like that. There's a certain threshold of students who are allowed to enter into that program. Do you have any idea how many schools have an excess amount of students so they have more students that want to get into that program?

MS. MCKENZIE: I believe you are talking about Options and Opportunities, the O2 Program. We've expanded O2 this year and we've expanded skilled trades this year as well. We're also introducing into two new boards the Discovering Opportunities 9 programming which could also lead to an interest in the skilled trades. We're responding to a demand in that programming through expansion of O2 and through skilled trades.

I would just like to point out that O2 doesn't always lead to skilled trades. The kids who are interested in that could come in through O2 or they could come in through our skilled trades centres but also kids who are experiencing O2 are being exposed to a number of other career opportunities as well.

MR. RANKIN: I guess my concern is the amount of people who are trying to get into a program like that and they can't get in. With the curriculum changes I know there's a focus on math and literacy, which is great, I like to see that, but in high school some of the concerns I've heard from people from that background who prefer to be into a path that's more directed into trades, mechanics, plumbers, carpenters, is they now have to take three math classes in high school. Instead of just getting through Grades 10 and 11, they have to get to a higher level math to get their high school. That concerns me a little bit in terms of what value would they have to have a Grade 12 level math when they may not use it and then they might miss an opportunity to get into something that would really make them more effective in the workforce.

MS. MCKENZIE: You have a whole bunch of observations. I'm just going to start with the third math won't be required until 2017 - 2020, sorry. We'll be expanding Grade 11 math in 2017 to a full year. So those changes will be coming on gradually.

Here's my observation, and I was responsible for trades in my previous position, math is required to be successful in the trades.

MR. RANKIN: I'm challenging that on the Grade 12 level. I understand you need a basic level but I'm just challenging why some people I know, whom I have talked to, personally suffer through those math classes and just want to be able to get it done. I'm just wondering, what is more valuable to them, having not just three courses but a full year of Grade 11 when they could be in a shop working towards a career?

MS. MCKENZIE: Well I guess here's the thing, on career decisions for young people oftentimes what we want them to do is keep as many doors open as possible. So it is not uncommon for kids moving into pre-apprenticeship - in fact at one point we did a study on pre-apprenticeship and we determined that of the kids who entered pre-apprenticeship who actually moved through to journeyperson, it was single digit, less than double digit.

The issue then became, kids moved into studying the trades and then discovered they didn't like being cold, they didn't like going high up buildings, and experienced that they weren't necessarily going to be successful in where they thought they were going to be. What we would like them to do, as they move through the system, is have the maths in case they want to try other doors.

We are introducing the changes to math later because what we want is for kids to be more confident in math as they move through, so that we don't have the deep concern of kids moving into the maths in the future. We understand the concerns with respect to that, but we also know the statistics are that 62 per cent of kids in Nova Scotia - I believe it's 62 per cent, I know it was a few years ago - are in academic math. We also know that all the growth sectors in Nova Scotia require success in math. That's why we've been moving to focus on math matters.

MR. RANKIN: I'm just wondering, and I can narrow it down to HRM, but could the department get the numbers from the HRM high schools which high schools have more applicants than the amount that they are allowed to put into that O2 program? I'm just wondering if you can get that.

MS. MCKENZIE: We certainly will look at that, yes.

MR. CHAIRMAN: We'll now move to Mr. Farrell.

MR. TERRY FARRELL: I just want to begin by commending the department on your complete response to the Auditor General's recommendations. It's encouraging to



me, the ability of the department to accept that constructive criticism and build in those strengths.

I guess it appears from some of what I've heard here is that in spite of all the measures you put in, with respect to strengthening passwords and building integrity into the system, that there may be opportunities still for breaches to the system, for instance if someone were to obtain passwords either through, I guess if someone leaves their password laying around or has it written down or if they are able to obtain it in some other way other than just guessing a weak password - is that the case?

MR. FAHIE: I would say if I were to give you my user name and password, I should not be surprised if you are able to gain access to my system. We certainly encourage during professional development and throughout the year, in fact it's on our website as well, that it's critically important that teachers and administrators and others not disclose this information. If you do, I am powerless to do anything about that.

MR. FARRELL: If someone did obtain another person's user name and password or even a list of user names and passwords, I presume they could use that to access the system and access the personal data in the system - what kind of harm could they do once they got in there?

MR. FAHIE: It would depend on the account. Some accounts have little access - read only access for parents and students, as an example. As a parent, when I log in to the portal, I can see the information that pertains to my two children. Every parent would have a similar scenario. Students have a little more. High school students can not only see, they can go through the course selection process and select courses. Teachers and administrators have a greater scope of access. They create data. They update data; they can delete data.

MR. FARRELL: I presume they could also find out personal information about large numbers of students, which includes medical information and things of that nature?

MR. FAHIE: Not necessarily. There are two dimensions to access. You have a role-based dimension: so I'm a teacher, which means I can do these things. I can take attendance; I can record a discipline incident; I can produce a report card, that sort of thing - so functions, if you will. I don't have complete access to every function of the system.

The second dimension is the records that I may access. So as a classroom teacher, my access would be limited functionally, but also to the students in my classroom. I wouldn't have access to, for example, all 1,500 students at Citadel High School.

MR. FARRELL: But if someone had the access of a principal or a guidance counsellor or maybe even a school nurse, then they would have a different form of access where they could actually not only look at the information, but they could change it as well?

MR. FAHIE: I can't tell you exactly what the role of a nurse, as an example, would be. I know it's limited, so school nurses wouldn't have access to all of that data. Principals would have the greatest access. They have it prior to iNSchool as well. They have access to all of the student records for the students in their school - confidential records and so forth, but yes, you are correct, certain roles have expanded access.

MR. FARRELL: If that user name and password information had somehow been compromised and it was in the possession of an unauthorized person and you knew about it, what would you do?

MR. FAHIE: That would depend on the circumstances. We may involve law enforcement if we felt that the nature by which that access was granted required that, so that would depend on who, or it may be dealt with by the board or it may be dealt with by the school. It really depends on how and who.

MR. FARRELL: But if you didn't know about it you couldn't do anything about it. You would be powerless in the face of any of the harms that could possibly result from that.

MR. FAHIE: Correct - we can't know what we don't know. I can tell you that we would know if data were being changed. We would hear about that very quickly. To our knowledge, we have never been hacked. I said earlier, 10 attempts and the account is locked and we log these attempts so if we see that there is an attempt on a particular account, we investigate.

MR. CHAIRMAN: Are there other questions? Ms. Lohnes-Croft.

MS. LOHNES-CROFT: Just continuing on - I know the school I worked in, the confidential records were kept in the office. You could only access them in the office. You weren't allowed to take those records out of the office. Will that practice continue?

MS. WILLIAMS: Access to the confidential records still falls under the student records policy, and you have mentioned the procedures under that policy where there was limited access through the principal and the records were reviewed on-site, they couldn't be taken home, for example.

With the electronic system we continue to have limited access to the records. It's a bit different in that it's an electronic copy, but the principle of limited access still applies as you're describing from the former days.

MR. CHAIRMAN: Any other questions? Mr. Horne.

MR. HORNE: A quick question. I'm curious to know how the teachers are taking on this project for themselves - has it been beneficial in making their life easier or more

cumbersome in entering data, and can they use the computers at home to access and input data?

MR. FAHIE: Yes, they can access the system from home and they can manage the data from that place, whether it is assessment data, looking at lesson plans ahead, and so forth. I think it has been tremendously beneficial for everyone in the system, including teachers.

MR. CHAIRMAN: Order, please. Time has expired for questions.

Ms. McKenzie, we'll now give you an opportunity to provide some closing comments if you wish.

MS. MCKENZIE: They will be very brief. Thank you very much for the questions today. It's an opportunity for us to talk about iNSchool and I think it's an opportunity to have the light shone back on the fact that we've addressed any security issues that were raised by the Auditor General, and that this is a secure system and it is supporting the education plan as we move ahead.

I'd like to thank my colleagues for answering most of the tough questions here today and I hope everybody enjoys their day.

MR. CHAIRMAN: Thank you for being with us.

We just have one piece of committee business - from the Department of Community Services there was some information that everyone would have received based on information that was requested from our April 1<sup>st</sup> meeting with them.

If there are no other matters coming before the committee, and I see none, the next meeting will be May 6<sup>th</sup> with the Nova Scotia Health Authority to discuss central zone staffing.

This meeting is now adjourned.

[The committee adjourned at 10:47 a.m.]