

HANSARD

NOVA SCOTIA HOUSE OF ASSEMBLY

COMMITTEE

ON

PUBLIC ACCOUNTS

Wednesday, October 24, 2012

LEGISLATIVE CHAMBER

**Department of Education
Nova Scotia Virtual School and Skilled Trades Education**

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Public Accounts Committee

Hon. Keith Colwell, Chairman
Mr. Howard Epstein, Vice-Chairman
Mr. Clarrie MacKinnon
Mr. Gary Ramey
Mr. Mat Whynott
Mr. Brian Skabar
Mr. Andrew Younger
Mr. Chuck Porter
Mr. Allan MacMaster

[Ms. Michele Raymond replaced Mr. Brian Skabar]
[Hon. Karen Casey replaced Mr. Andrew Younger]
[Mr. Eddie Orrell replaced Mr. Chuck Porter]

In Attendance:

Mrs. Darlene Henry
Legislative Committee Clerk

Mr. Terry Spicer
Assistant Auditor General

Mr. Gordon Hebb
Chief Legislative Counsel

WITNESSES

Department of Education

Ms. Carole Olsen, Deputy Minister
Ms. Ann Blackwood, Director of English Program Services
Ms. Shannon Delbridge, Acting Senior Executive Director of Public Schools
Ms. Jan Jollymore, Acting Director of Education Funding and Accountability



House of Assembly
Nova Scotia

HALIFAX, WEDNESDAY, OCTOBER 24, 2012

STANDING COMMITTEE ON PUBLIC ACCOUNTS

9:00 A.M.

CHAIRMAN
Hon. Keith Colwell

VICE-CHAIRMAN
Mr. Howard Epstein

MR. CHAIRMAN: Good morning, I'd like to call the meeting to order. We'll start the meeting this morning with introductions and I'm going to start with Mr. Ramey.

[The committee members and witnesses introduced themselves.]

MR. CHAIRMAN: We're going to start the meeting again, as we usually do, and ask the deputy minister if she would give us a brief overview.

MS. CAROLE OLSEN: Thank you, Mr. Chairman. We have two topics to present to the committee this morning: one on the skilled trades education and the other on the Nova Scotia Virtual School. I'll begin with skilled trades education.

Thank you for having me here this morning. It's a pleasure to have the opportunity to speak about the Skilled Trades Program and the Nova Scotia Virtual School. We know that Nova Scotia has a growing demand for skilled workers. The skilled trades sector is one of the highest job opportunity sectors this province has to offer. It is important for young people to be ready and able to take advantage of these opportunities. One of the key aspects of Kids and Learning First is preparing our young people for good jobs and citizenship.

Our Skilled Trades courses provide a unique opportunity for students to experience the trades as a potential career opportunity. Skilled Trades 10 was first introduced in February 2009 with 131 students. By the end of the last school year, 2011-12, more than 1,600 students had taken Skilled Trades courses. Schools deliver Grades 10 and 11 Skilled Trades courses in custom-designed Skilled Trades Centres.

Students experience work in the trades as realistically as possible, in a school setting. They spend approximately 80 per cent of their time working on real projects, using real tools of the trade. They also learn skills such as trades-focused math, measurements, preparing documents and, of course, workplace safety. We hear, from teachers and students alike, how much students gain from this course. One student said: this class has made me realize I'm capable of things I never knew I was able to do.

Skilled Trades courses include Skilled Trades 10, Construction Trades 11, Transportation Trades 11, and Skilled Trades 12 Co-Op. A new course, Manufacturing Trades 11, will be introduced in September 2013. Schools have also expressed interest in Culinary Arts 11 for development in the future. These courses are designed by high school teachers and experienced trades educators from the Nova Scotia Community College, with input from industry representatives.

They can also provide students with a head start towards a career. The Department of Education and the Department of Labour and Advanced Education have an agreement so students can receive apprenticeship hours based on the actual time in class, under the supervision of a certified journey person. This valuable experience can prepare them for future study at an institution like NSCC or it can lead them directly into the workplace. Whether these students move into skilled trades occupations or not, they have acquired valuable, transferable skills that will serve them well throughout their lives. Parents, teachers, students and industry professionals alike have told us that this is a great program and we look forward to expanding it further in the years to come.

With that, I am concluding my opening remarks on the Skilled Trades Program and I'd like to move on to the Nova Scotia Virtual High School. I would like to begin my remarks on the Nova Scotia Virtual High School by sharing with you three quotes from users. The first one, "Teaching online has allowed me to join two things I love, technology and teaching" This was from a teacher, Guy Aucoin, from the Nova Scotia Virtual School - instructional lead.

Another quote, "This is an amazing experience, and it gives us the chance to show our skills and be proud of them." This is from a student, Dawn Moore, who was a film and video student.

The last is, ". . . my virtual course has come to be my favorite class . . . I don't always have a teacher standing over my shoulder but if I need help I just go into Via . . ."

that's the video conference, ". . . and Guy is almost always there to help in any way he can." That's from Kaitlin Lake and she's an entrepreneurship student.

Nova Scotia is building on a strong tradition of distance learning that began as early as 1917; think about it, 1917. At that time, courses were established to assist those coming home from the war to complete high school and to upgrade. The nature of the course delivery has changed and developed over the years. Today, approximately 2,000 students are enrolled in correspondence studies at any given time. Half of those in correspondence studies are public school students.

The current approach to on-line learning in Nova Scotia came from some innovative efforts in our school boards - notably the Strait Regional School Board in the late 1990s - when they realized they had a need for a new way to deliver distance education. The Chignecto-Central Regional School Board and CSAP also took up this ground-breaking work. Because there was a need, the province began working together with the boards to develop a more coordinated and comprehensive approach to the Nova Scotia Virtual School.

Just to let you know, the Nova Scotia Virtual High School is not just for students. The Department of Education now offers professional development and informational resources for teachers that have been produced by our own media production. Five years ago, the province began funding 200 seats per year for students in predominantly small rural schools so they could take on-line learning. Today there are approximately 400 students per year at the Virtual School, choosing from among 46 courses, including immersion courses.

Our vision for Nova Scotia Virtual School is quite ambitious and exciting. We want students to be able to complete a Nova Scotia high school graduation fully on-line, we want to increase the number of course options, we want teachers to be able to take advantage of a host of professional learning opportunities, and we want to continue to work in partnership with school boards to ensure the needs of students are met.

On-line learning is becoming increasingly more common. Nova Scotia students not only gain curricular skills from on-line learning, but they enhance their technological skills and broaden their perspectives on the learning in the 21st Century.

Let me talk a little bit about what is ahead. We are planning to have 1,500 students enrolled next year. We will continue to expand the course offerings to the point where a student could actually complete a Nova Scotia high school graduation diploma through the Nova Scotia Virtual School. It's not expected that many students would actually complete the diploma on-line, but the number of courses would be there should this ever become necessary. We do have some exceptional circumstances where the full range of course work is required, and I'm thinking of students that might have medical issues and they can't attend school, or elite athletes who are training away from - not only Nova Scotia, but

they may even be out of the country and they want to complete their Nova Scotia high school diploma. They would be able to do so.

We're developing courses to support Grades 7 to 9, as well as credit recovery courses. We're also working to increase the number of the Nova Scotia Virtual School teachers to include all school boards.

Mr. Chairman, this concludes my opening remarks on the two topics before the committee today. Thank you.

MR. CHAIRMAN: Thank you very much. I'd like to welcome Ms. Casey and Mr. MacMaster to our meeting. Ms. Casey, you have 20 minutes.

HON. KAREN CASEY: Thank you very much and welcome to the new deputy. I certainly listened to your introduction with interest and just have some questions based on some of the information that you shared, perhaps for clarification. If we can talk first about the virtual high school and your numbers - and I think it was 400 students in this current year, 2012-13, and a projection of 1,500 for the upcoming school year?

MS. ANN BLACKWOOD: That's correct.

MS. CASEY: Can you tell me how that expansion in a short period of time will unfold - what it will look like?

MS. BLACKWOOD: I think we're working very closely with school boards to plan the expansion. It will look like more courses available so students will have more course options to select, and it will look like more teachers so that we have teachers in each of the school boards. We shall also be investing in development of more courses.

MS. CASEY: When you talk about more teachers and more school boards, I think if I could go back to the deputy's comments I would take from that that not all school boards currently have the capacity to deliver the Virtual High School - was that correct or did I misunderstand?

MS. OLSEN: Yes, I think so. I believe all school boards do have the capacity to deliver some, but not all school boards are delivering a large number of courses in the current configuration - but perhaps Ms. Blackwood could expand on that.

MS. BLACKWOOD: All school boards have the capacity to deliver on-line courses. The teachers of on-line courses do not yet represent every school board.

MS. CASEY: Mr. Chairman, through you, the number of high schools that currently have students who are participating in the Virtual High School courses, how many high schools do have students who are currently in this school year participating?

MS. OLSEN: I don't have that number of schools with me right now in terms of the enrolment. We can get it for you.

MR. CHAIRMAN: Ms. Delbridge.

MS. SHANNON DELBRIDGE: I believe it's 57 high schools now have students who are enrolled in the Nova Scotia Virtual School.

MS. CASEY: And if I could, what is the breakdown by board of those 57 schools?

MS. DELBRIDGE: What I have is the breakdown of the number of students by board as opposed to which high schools they're associated with, if you would like that information.

MS. CASEY: The number of students by board would be helpful.

MS. DELBRIDGE: Currently we have 27 students from the Annapolis Valley Board; seven students from Cape Breton-Victoria; 68 from Chignecto-Central; 49 from Halifax; 124 from the Strait Board; eight from the South Shore; and 19 from Tri-County - that equals 302.

MS. CASEY: What was that total again?

MS. DELBRIDGE: Three hundred and two.

MS. CASEY: Okay, so if I could, Mr. Chairman, go back to the introductory information, I think the number was 400 - so how can we explain the difference between 302 and 400?

MR. CHAIRMAN: Just one second, there's a procedural thing here. I would wait, if you're going to change the speakers, so I can introduce who it is for Hansard. The microphones will come on automatically once I recognize you.

So, Ms. Delbridge, you can continue, please.

MS. DELBRIDGE: Thank you. We're still currently enrolling students for the second semester, so there's one number there. On average right now we have about 400 students but they're still coming in, they're still enrolling. So we have, let me see - I'll remove my glasses so I can actually see - semester two, currently the number is 268 students enrolled and, excuse me just for one moment, semester one is 198 students. So we're still enrolling. We do hope to have up to 800 students enrolled in the second semester.

MS. CASEY: I guess my next question would be, how many teachers are delivering the Virtual High School courses?

MS. OLSEN: We don't have that information with us; we'll get it to you.

MR. CHAIRMAN: You will get that for us?

MS. OLSEN: Yes, we will.

MS. CASEY: Mr. Chairman, my next question would be, how many courses?

MS. BLACKWOOD: We are delivering 46 courses this year. I also have the number of teachers now: there are 7.75 FTEs. Those are full-time teachers for the year or the semester, with no other teaching responsibilities.

MS. CASEY: Mr. Chairman, for clarification, no other teaching responsibilities, the 7.75, how many teachers do have some other responsibilities? How many teachers, in total, whether full-time or part-time, are delivering the Virtual High School courses?

MS. BLACKWOOD: I have the full-time information; I don't have information about the part-time. I believe those are the teachers who are delivering the courses.

MS. CASEY: Mr. Chairman, those 7.75 FTEs, where would they be located?

MS. BLACKWOOD: We have 2.75 FTEs in the Chignecto-Central Regional School Board, which has quite a history of developing and delivering on-line courses; we have one in the Cape Breton-Victoria Regional School Board; we have one in the Halifax Regional School Board; and we have three in the Strait Regional School Board - that school board also has quite a history of developing and delivering on-line courses.

MS. CASEY: Mr. Chairman, for clarification again, the 7.75, their full-time responsibility is delivering virtual high school courses?

MS. BLACKWOOD: Correct.

MS. CASEY: Do they deliver to any other students as they are delivering on their full-time virtual, do they have a classroom of kids when they're doing that?

MS. BLACKWOOD: I don't believe so but I don't really know.

MS. CASEY: Mr. Chairman, I guess my next question would be, should we know and should those teachers be delivering to a class of 25 students as part of their delivery to the rest of the students in other parts of the province? Would that be a cost saving?

MS. BLACKWOOD: My understanding is that the courses are delivered on-line at the time the teacher is interacting with the students and delivering instruction or mentoring individual students. There are no other students, physically, in the same space as the teacher but I'm not really certain of that. I can imagine that but I do believe it's all on-line at the moment.

MS. CASEY: Who would have that information?

MS. BLACKWOOD: My colleague, the director of Learning Resources and Technology can provide that information.

MS. CASEY: Through the Chair, I would ask that that information be provided, and through the Chair, it would be appropriate for that information to be provided. Thank you very much.

I'd like to ask a few questions about the Skilled Trades Program. Again, I'm looking at some of the expansion plans for the skilled trades; I'm wondering what the source of funding is for the Skilled Trades Program, how is that delivered to the school boards?

MS. BLACKWOOD: The expansion of the skilled trades funding is new funding for this year, in the amount of \$1 million. That will be provided to boards through grants and otherwise used to set up the new Skilled Trade Centres, to purchase the required equipment and tools and so on. Also, we have some development funding for the new course, Manufacturing Trades 11.

MS. CASEY: So if I could be clear on the breakdown of the \$1 million, the \$1 million is new money to deal with the expansions in the Skilled Trades Program. You said that out of that \$1 million it would include things like equipment and tools and it's available to boards through grants.

MS. BLACKWOOD: I believe it will be provided through grants to reimburse boards for expenditures made by the boards.

MS. CASEY: Do those expenditures have to be approved by the department before boards can seek reimbursement?

MS. BLACKWOOD: Yes, the way it works is that boards develop a proposal and we work with boards through the process and then boards provide the invoices and so on – the records of any expenditures - and we do approve the funding.

We anticipate it will vary from one site to another; each site is quite unique. We had a tentative plan to spend approximately \$560,000 of that \$1 million new funding on the actual renovation or construction of the Skilled Trades Centres. We anticipate it will cost

\$392,000 to fully equip those Skilled Trades Centres, but that again depends upon the courses that the schools decide to offer once the Skilled Trades Centres renovations have been complete and student enrolment begins.

MS. CASEY: Mr. Chairman, that \$1 million then is for this current year, 2012-13?

MS. BLACKWOOD: It is.

MS. CASEY: And what are those sites where there will be the renovations so that those programs can be included?

MS. BLACKWOOD: We have not yet announced all of the sites because we're still working with school boards on the sites they have identified. Just on Monday we announced the new site in Chester Basin, Forest Heights Community School, and you will be aware that we are also undertaking a major project at Cole Harbour. The school boards have identified sites, so we are in the process of working with them to inspect the sites and to confirm estimates of what the costs might be to complete the renovations.

MS. CASEY: The numbers that I saw in press releases for both Cole Harbour and Forest Heights certainly would not be included in the \$1 million you've talked about, so can you explain how those other expansions can be carried out if the allocation for expansion is \$1 million?

MS. BLACKWOOD: Yes, certainly. The \$1 million reflects year one of the Kids and Learning First commitment to double the numbers of Skilled Trades Centres within four years. It was our hope to begin that work in four schools this year.

In addition to that, government announced that a Skilled Trades Centre would be included in major renovations at Cole Harbour District High School, and there was a further announcement of additional funding for Skilled Trades Centres in rural sites. The funding for which we are responsible, this \$1 million, would exclude Cole Harbour.

MS. CASEY: You mentioned there were four schools. Cole Harbour, Forest Heights – what are the other two?

MS. BLACKWOOD: We have not yet made those announcements. We are looking at high schools in several school boards.

MS. CASEY: If that's the case, in 2012-13, when will students be able to benefit from this expansion that is proposed?

MS. BLACKWOOD: In some cases they will benefit beginning in September 2013.

MS. CASEY: So the students who are enrolled in 2012-13, the expansion that you mentioned earlier will not benefit any students in 2012-13?

MS. BLACKWOOD: The students who are in schools that already have Skilled Trades Centres are certainly benefiting now and spreading the good news about how much they are enjoying their courses. I anticipate the new sites will begin delivering programs in September 2013.

MS. CASEY: Mr. Chairman, I'll go back to my question, there's a commitment of \$1 million for skilled trades for 2012-13 - is that correct?

MS. BLACKWOOD: That is correct.

MS. CASEY: But that will not translate into any new schools or any new centres?

MS. BLACKWOOD: That will translate into new centres, but we don't know when the renovations will be completed so as to offer students the opportunities. Therefore we couldn't guarantee that we could enroll students in the new sites beginning in February 2013. I know for a fact that Forest Heights will be able to offer programming in September 2013. There are some other sites we are looking at where we believe that may be possible.

MS. CASEY: Mr. Chairman, I will leave that one. I'm still confused about how you can invest \$1 million but no students can benefit from it.

My next question is on skilled trades. Is it the expectation of the department that all students in the province will have an opportunity to participate in the Skilled Trades Program?

MS. BLACKWOOD: I think all students in the province have the opportunity to participate in skilled trades education. We have integrated skilled trades education across the curriculum, as appropriate. We do not anticipate that every school in the province will have a Skilled Trades Centre, which is a custom-designed learning space to deliver specific programming pertaining to skilled trades.

MS. CASEY: Mr. Chairman, for those students who are in a community where the school does not have a Skilled Trades Centre, do they have an option?

MS. BLACKWOOD: I believe schools are looking at various possibilities, including transporting students from one site to another, where they can benefit from that specific programming. Again, it's a question of geography and logistics.

MS. CASEY: Mr. Chairman, my question is, if that situation does unfold where students are transported to a skilled trades centre, will boards be reimbursed for the cost of transportation?

MS. BLACKWOOD: We have not had that discussion with boards. However, skilled trades education is well funded and the department has worked with boards to fully cover all expenses involved to date.

MS. CASEY: Are there students who are currently travelling out of their own school to another site, for the skilled trades programs?

MS. BLACKWOOD: I don't believe that is the case at the moment but I know some boards are definitely looking at that model.

MS. CASEY: So if I could be clear, Mr. Chairman, the boards will be engaged and do understand that if students travel, the board will be reimbursed for the cost of that student's travel, is that correct?

MS. BLACKWOOD: We have not had that detailed discussion. We have responded very positively to other requests from boards, of a similar nature.

MS. CASEY: So there has been no request or no dialogue or no questions between the boards and the department about that possibility?

MS. BLACKWOOD: I believe that in the case of Cole Harbour, that's regarded as a magnet site and, indeed, students may well be attracted to the opportunity to take programming at that school but I have not, myself, been involved in those discussions.

I believe in the South Shore, as well, the board has stated its intent to make programming available to as many students as possible but I don't know the details of what students at the moment, for example, travel to or have transferred to Park View Education Centre, where skilled trades are already being offered.

MS. CASEY: Mr. Chairman, perhaps I could direct that question to the deputy.

MS. OLSEN: Certainly within my former role, the question of having the school's Skilled Trades Program open to students from outside the particular high school catchment area is actively being considered. So I think the boards are working to ensure that the students who want the program can have access to the program.

MS. CASEY: Mr. Chairman, my question to the deputy was specific to transportation costs; has there been any discussion between boards and the deputy or the minister about the costs they could incur if they provide opportunities for their students to travel and the fact that they could be reimbursed for that?

MS. OLSEN: I think Ms. Blackwood has answered that question. To date there haven't been any direct conversations right now, there haven't been any direct requests but

the department will be very open to having that dialogue with school boards on a case-by-case basis.

MR. CHAIRMAN: Order, please. Ms. Casey, your time has expired. Mr. MacMaster.

MR. ALLAN MACMASTER: Thank you, Mr. Chairman, and I would like to thank the members from the Department of Education for being with us this morning. I think this is essentially about - especially with the Skilled Trades program, it's essentially about matching education opportunities with students' natural abilities that they might have, I guess a natural ability - I'm trying to think of another word but it's not coming to me - (Interruption) aptitude that's the word I'm looking for. Not everybody learns the same way and I'm sure that you would know all about that in your field.

It's nice to see that the education system has changed over the years to help these people so that they get really the same kind of attention as maybe the traditional student who went to university so that they're having a chance earlier in their student career, you may say, to develop the skills that they would need to go out and find work. So I think that's great.

I know that we also in this province need them because there's a growing demand for people who have skills that are, say, taught in the Nova Scotia Community College and what better way to prepare some of these people for that kind of training than through the Skilled Trades program. So I think it's great. I think we have to make sure as legislators that we have all the systems in place and education is one of the systems - there's also the importance of apprenticeship as well.

My first set of questions is going to deal with virtual classrooms. I believe there was a goal to have 800 students in virtual classrooms in the last academic year - up from 500 the previous year. Has that happened? What were the number of students in virtual classrooms in 2011?

MS. DELBRIDGE: In 2011, there were 22 different courses offered. We had 198 students in semester one, and 268 students in semester two. In 2012-13 and semester one, we have 302 students so far and 221 students are already registered. Again, we have the capacity for up to 800 students. As was mentioned by Deputy Olsen, we are hoping to enroll up to 1,500 students in 2013-14.

MR. MACMASTER: How many were in 2013-14?

MS. DELBRIDGE: We're hoping to enroll up to 1,500 students in 2013-14.

MR. MACMASTER: Okay, thank you. What research backs up the viability and success of virtual classrooms?

MS. BLACKWOOD: I think we've seen some strong models of delivering courses on-line in many jurisdictions but, most importantly, the experience within our own province and the success enjoyed by Chignecto-Central Regional School Board, CSAP, Strait Regional School Board, for example. They have had a lot of experience and were able to provide very valid advice and recommendations in terms of best practice for on-line learning.

The other thing is that there's a huge body of evidence that students really engage in learning on-line. Youth today live on-line and that is a very engaging way of learning for them. So I think that again supports this move. Our deputy shared some quotations from students and there are many more from students in terms of how they have engaged and really connected with the virtual teacher and really felt that they could be successful in that line. So, for me, when we hear the voices of students, that's the strongest evidence of all.

MR. MACMASTER: Do you actually track some students who have gone through the program in the past to see how they've been doing? Is there any way to do that?

MS. BLACKWOOD: I'm quite sure that's done at the school level. We at the province have not engaged in that kind of tracking at this time.

MR. MACMASTER: I realize evidence sometimes can be cumbersome just to present, but is there something that you could maybe provide to the committee after today, or sometime in the next couple of weeks, that just sort of shows the evidence that you use as the background for providing these programs?

MS. OLSEN: We would certainly be committed to going to the boards, asking for the number of students that have been enrolled in virtual high school programs or courses and the numbers that have successfully completed those courses. As my colleague has already said, in addition to the virtual school, I think you're going to be finding - and this would be another conversation - that students working in technology, integrated right into a face-to-face class have also increased as well, and that is increasing student engagement in their learning with their teachers in a classroom as well as being on-line for the virtual school.

MR. MACMASTER: I realize that this is a growing trend of increasing the number of people who are learning through the virtual school. Is there any move afoot within the department to see how it's actually working in practice? I appreciate you would go back to the school boards just to see who has completed the courses. I know there's testing that, of course, determines whether or not somebody graduates, but beyond that, how are those people faring? Once they leave school, are they faring as well as people who would be educated in the traditional classroom setting?

MS. OLSEN: We haven't got a formal research program in terms of where the students go after high school and how they're faring when they might get to community

college or university or into the workforce, but that would certainly be a piece of research that we could take to our research department to see what it is that we need to do, both with students enrolled in virtual programs and our more traditional programs to ensure that our students transition very successfully into their destination after high school.

MR. MACMASTER: I wonder if you might provide the committee - once you have a chance to talk with the research people - maybe you could provide their thoughts back to us by way of something in writing. Would that be possible?

MS. OLSEN: That would be possible.

MR. MACMASTER: Social interaction builds the ability to work well with others. Of course, when somebody is going to a virtual classroom, there's not the same kind of social interaction. How does the expansion of these virtual classrooms develop skills like conflict resolution and team building? Are there aspects of the training that help to give that kind of experience to the students?

MS. OLSEN: Certainly in my opening remarks I suggested that we don't believe the majority or a vast number of students are going to take their whole high school program through the virtual high school. Within the virtual high school, students are able to collaborate and chat on-line. That isn't quite the same as being in a room face-to-face and doing negotiations there, but there is that capability. So we are very, very cognizant that students need to develop those collaborative skills as well as their academic skills through the work that they do in schools.

MR. MACMASTER: Are there any actual ways that, through the virtual classroom, you can help them with that? Are there any practical ways that that can be achieved?

MS. BLACKWOOD: I believe it depends on what courses students are taking on-line. Almost all of our courses seek to develop these skills to which you're referring. They're so important for our graduates. I think both the teaching and the learning focuses on those generic skills, whatever the course, but some focus more directly on that than other courses.

MR. MACMASTER: Sure.

MS. BLACKWOOD: I think the fact that students can collaborate with others through e-chat, for example, really allows them to develop quite sophisticated skills of interaction with others and collaboration with others who might be in a different physical space, so it's quite cutting-edge in that regard, actually.

MR. MACMASTER: Sure, sure. And I know you mentioned there are some elite athletes, for instance, who are using the virtual classrooms. They'd be dealing with conflict

resolution, maybe playing a team sport or something like that, and I guess what's leading me into the next question, it's about phys. ed., these people would also be probably getting lots of physical activity, but there are, I suppose, other people who are using the virtual classroom who may not have access, maybe they're not participating in sports to that degree - what ways can the virtual classroom assist students or give them the experiences that they would get in the physical education class?

MS. BLACKWOOD: Virtual courses are delivered on-line and courses are delivered in schools and courses are delivered sometimes in the community. So students actually, whether they are taking courses on-line or not, do benefit from all of the opportunities provided by their schools. To date, our students are in school, they would be required to take a physical education course to earn a credit required for graduation.

I think the focus of an on-line course is to support students in diverse ways, to achieve the outcomes prescribed for that particular course, not to try to address the totality of expectations of the whole public school program as the students go through high school.

MS. OLSEN: I think it should be noted that we're going to be doing a program evaluation in 2014-15 of the development and the expansion of the virtual high school, and some of the questions that you are addressing in terms of engagement and collaboration and the relationship that the student has with the virtual high school and the regular high school I think will part of that program evaluation and we would have more details to bring back to you at that time.

MR. MACMASTER: Okay. This next question - it has kind of been asked already, and this may be something you can come back to when you speak to your research people - I was going to ask, have students who have been trained through virtual classrooms been able to perform at a comparable level to classroom-based students when they attend university or community college?

Maybe again that's something that when you are submitting something back to the chairman of the committee in writing, on research that you've done or you think you might do in the future, maybe you can offer some comment on if that can be measured. Again, it's just about the success of virtual classroom trained students compared to the traditional classroom setting.

MS. OLSEN: We can certainly put that question back to our research people, but I think we can assure you that the standards held for students in the regular program, as opposed to the virtual high school program, would be the same, that they would be achieving the same outcomes and they would be evaluated to the same standards.

MR. MACMASTER: I'm going to move on to apprenticeship just as it relates to the students training under the Skilled Trades Program. I know that we've been hearing that apprentices are having difficulty finding places to complete their apprenticeship training

and a lot of them have to leave the province. I know it's perhaps a matter more so for the Department of Labour and Advanced Education, but at any rate the government will need to deal with this problem and, given that the Department of Education, through the Skilled Trades Program, is essentially preparing these people for future apprenticeship, do you work with the Department of Labour and Advanced Education on this matter right now?

MS. BLACKWOOD: We've worked very closely with the Department of Labour and Advanced Education, in particular the Apprenticeship Training Division, from the beginning of this particular initiative. We've also worked with the community college and with industry and sector partners.

The purpose of the skilled trades courses is to give students a really good experience of what working in the skilled trades would be like and to interact with skilled trades persons. It's not specifically to prepare them for a specific trade or training program in that regard, rather to give them real career development in terms of exploring and considering that as a viable career option.

Students also have the opportunity to become young apprentices if they so choose, and we certainly provide that information to all students and their parents at the school level. We expect that students who pursue the Skilled Trades Program through Grades 10, 11 and 12 will be extremely well prepared for entry into the workforce as apprentices or to pursue related programming at the community college.

MR. MACMASTER: I know that in the industry, Red Seals are only allowed to have one apprentice at a time in the Skilled Trades Program. I know you're not necessarily training, as you say, for a specific trade. However you do have a situation where you have an instructor with a number of students. Have you talked to the Department of Labour and Advanced Education about that - the ability perhaps for people in the apprenticeship to be able to have maybe a supervisor looking after more than one apprentice?

MS. BLACKWOOD: We have not; I have not myself participated in discussion about that specific point. We do have a number of trades in this province - some require Red Seal certification and some require other certification. I think what we have done and have benefited from in terms of our collaboration with the Department of Labour and Advanced Education is to get real buy-in from employers in the communities where we're offering skilled trades education.

At Grade 12, the program offers Skilled Trades 12 Co-op whereby students go into the community and pursue a co-op with a tradesperson - whether that might be a Red Seal designation or some other kind of certification. When students are working directly under the supervision of a certified journeyman, the hours of instruction or work with that person do count towards apprenticeships. I think getting buy-in from employers has been a major benefit in this regard.

MR. MACMASTER: That's great. I mentioned earlier in my opening, there is an increased demand for skilled workers in the province who have trades. Maybe it is more of a question for the Department of Labour and Advanced Education but when I think about us educating young people, I'm always thinking of where they will end up. If we need more people because their skills are very useful, it's nice that we have a program that matches their aptitude to a training experience that works for them. But then I think of taking it a step beyond that and seeing - are they going to be able to keep living in Nova Scotia, are they going to have opportunities here? I guess that's when they come under the Department of Labour and Advanced Education's care.

I know in government, departments sort of work independently, but are you working with them to ensure that your students are taken care of when they enter the hands of the Department of Labour and Advanced Education?

MS. OLSEN: We have a close working relationship with the Department of Labour and Advanced Education and those will be ongoing dialogues that we'll have with the department.

MR. MACMASTER: Okay. Would that perhaps include advocating they make changes to the apprenticeship program to ensure if there are a number of people who want to be an apprentice here in the province that they have a chance to get that experience by having a Red Seal instructor look after more than one apprentice?

MS. OLSEN: From my perspective and my background, the first thing I need to do is learn a little bit from the Department of Labour and Advanced Education about what they perceive the need would be in terms of making that kind of a change. I don't know about that and the statistics, so it's a question I will ask.

MR. MACMASTER: Thank you. I think it's an important issue and that's why I decided to raise it.

Mr. Chairman, how much time do I have left?

MR. CHAIRMAN: You have no time left. (Laughter)

MR. MACMASTER: Oh, okay. Thank you.

MR. CHAIRMAN: Mr. Whynott.

MR. MAT WHYNOTT: Thank you very much, Mr. Chairman, and again thank you for coming in this morning. I'm going to start with virtual high school because I think it's an interesting new way of delivering education to our students. Just as a quick little story: I think of anybody in this room, I might be the closest person to have just graduated from high school, in the early 2000s. One of the interesting parts is when I went to

Sackville High, there were some people who wanted to have a political science class and we couldn't because the school said, we don't have enough people interested; I think there were only 15 or so who wanted one. We tried to go around and drum up some support but at the end of the day we couldn't have one.

I notice that on the Virtual School a political science class is actually offered in semester two of this year. I think, in itself, that shows that students who want to get a particular course and don't have access to it are given opportunities to get those courses and to learn about what interests them. So I think that if we could go back in time and if the Internet was as good as it is now, it would be a valuable tool; it would have been a valuable tool and I think it is a valuable tool right now. It's kind of exciting to think that we're going to be starting to expand and see more students taking this sort of thing because I often hear from parents who say, my student, for whatever case, may not be interested in what's being offered at school but this is just another model of how you can interact with students. So it is a good thing. So if I'm a student and I want to do a virtual class, how do I sign up?

MS. BLACKWOOD: They register on-line. We have a division that handles all the on-line registrations, working with boards, schools and responding to student questions and so on. I do believe that boards work with the department regarding numbers of students and so on.

MR. WHYNOTT: So I would assume when students are going to select their courses for the following year, they work with their guidance counsellors to select those courses. Is that correct?

MS. BLACKWOOD: Yes, indeed. It's part of their whole education and career planning process. It begins in junior high as they become more aware of options available to them and more aware of their own interests and aptitudes and what might be possible. They work with guidance counsellors and with other teachers and school administrators to identify their particular needs for courses. Schools usually decide what courses to offer, as you've noted, on the basis of student interest and having the possibility to take some other courses on-line really adds another dimension to what is possible for students. So normally they would work with school staff to plan their whole high school program and this is another possibility now for accessing credits in which they're particularly interested or which they need for their post-secondary intention.

MR. WHYNOTT: Currently is there - I know you've mentioned several times about the expansion or the hope that we're going to be able to have 1,500 students next year enrolled in Virtual School - is there a limit? If there are 1,700 students who want it, are we going to limit that?

MS. BLACKWOOD: Right now we're focusing on meeting that goal.

MR. WHYNOTT: Sure.

MS. BLACKWOOD: I think if you look really long-range and think about what might be possible, there are many educators and others who think it would be a wonderful opportunity for every student to have the experience of learning on-line and taking a credit on-line as part of their total program. We do advocate lifelong learning and we anticipate that after students graduate from the great opportunities offered within their high schools, they will continue to be learners and they will pursue learning opportunities on-line. So it would be terrific to offer that opportunity to more students, as we are able to expand. We have quite an ambitious program and we're working very hard to provide the capacity that we've noted already.

MR. WHYNOTT: I think Ms. Delbridge had a comment as well.

MR. CHAIRMAN: Ms. Delbridge.

MS. DELBRIDGE: Thank you. Just to add to that, the approach that we've been talking about has been students taking whole courses on-line and our work towards that. There are also two other elements to the Nova Scotia Virtual School that I think are really important that we're really excited about. One is blended opportunities, where a teacher may engage with students who are actually in a real setting in a classroom but perhaps might be part of the program delivered on-line with students in other schools, so that's another piece that I think has unlimited opportunities.

The third piece is that we're really supporting and promoting the use of the on-line vehicle as a support for collegial conversations through communities of practice across schools but also within schools to support more professional development of teachers while they're in their school. One of the concerns we've heard, and I'm sure that you've heard as well from parents, is that the teachers aren't in the classroom enough and while it's really important that they engage in their professional learning in a myriad of ways, we want to look for more opportunities that they can stay in their classrooms and still engage with other teachers. Those three elements are all part of the Virtual School.

MS. OLSEN: I'd like to give one example that I did see in my former role. Three students from Eastern Shore District High wanted to take calculus and there weren't enough students in that school to take calculus, so it was done virtually through Halifax West. They signed in at exactly the same time, as was described earlier, that the teacher was teaching the class. We were fortunate enough in that circumstance that because of the proximity within HRM, the teacher was actually able to go out occasionally into Eastern Shore District High and just meet with the students, to make sure that all of their needs were taking place. They took virtually all of the courses on-line, as students in the high school did.

MR. WHYNOTT: So what happens if a student doesn't - I would assume that most students do, but let's say there may be a student who doesn't have the technology available to them. They want to take the virtual course but unfortunately, due to potential economic

or socio-economic issues, they don't have the ability to do that. Is there space available in the school for them to do this? Can you just elaborate on that, Ms. Olsen?

MS. OLSEN: Absolutely. The school would make sure that the technology that was available within the school setting would be available to the student to be able to take the course on-line.

MR. WHYNOTT: Just to have a pan-Canadian look at how we compare to other provinces as far as virtual schools, have we done an assessment on that? Are we sort of leading edge or are we in the middle of the pack or even has that information been - can someone - Ms. Delbridge, I guess.

MS. DELBRIDGE: Thank you, that's a great question. While I don't have specific information about where other jurisdictions are, we've just begun sort of a pan-Canadian dialogue on using technology to support this kind of learning. I know as Ms. Blackwood mentioned, our director who supports the development of the virtual school has just begun engaging with her colleagues across the country. So I don't have that information but it's certainly something that we're very interested in pursuing so that we can all continue to learn together.

MR. WHYNOTT: That might be something that maybe - if we can get that information - to find out something in that regard, Mr. Chairman.

MR. CHAIRMAN: Could you tell me exactly what you're looking for.

MR. WHYNOTT: I think I was asking for how Nova Scotia compares to other provinces when it comes to on-line or virtual learning.

Now I want to move to the Skilled Trades Program; just a few questions on that, then I'm going to pass things over to my friend from Lunenburg West. Can you tell me exactly what courses are offered in our schools in regard to skilled trades?

MS. BLACKWOOD: I would be happy to do that. In Grade 10, the introductory course is Skilled Trades 10. In Grade 11 the courses are Construction Trades 11 and Transportation Trades 11 and, as the deputy noted, we shall be offering a third course called Manufacturing Trades 11. At the Grade 12 level the course is Skilled Trades 12 Co-op and students may earn up to three credits through those co-ops.

MR. WHYNOTT: So what sort of, I guess a two-part question here - how does O2 fit in all of this? I mean, I think O2 is a success in itself and my understanding was that O2 was part of that as well. My understanding also is that O2 is, you know, when you graduate, you have an opportunity to go to NSCC. So where does O2 fit and what partnerships have been formed between NSCC and our public education?

MS. BLACKWOOD: I would be happy to respond to that because we have such a great partnership with the Nova Scotia Community College and we have worked closely with them in developing Options and Opportunities and have enjoyed such success in expanding our co-op courses as well - everything to do with safety, workplace health and safety, for example, and most recently skilled trades. They have been a very solid partner every step of the way.

Students in Options and Opportunities are required to take certain courses and then they can select other courses from a range of options. So a school that is an O2 school would be able to offer Skilled Trades as a course option for students within Options and Opportunities. It would be entirely possible for a student to pursue the Skilled Trades courses offered in that school at each grade level and be part of the Options and Opportunities program.

MR. WHYNOTT: How are we recruiting qualified teachers to teach the Skilled Trades courses? Are we having difficulty or is there - where do we sit on that?

MR. CHAIRMAN: Ms. Delbridge.

MS. DELBRIDGE: That's an excellent question and certainly we're working very closely with school boards in this regard. We do have a shortage of teachers who are qualified to teach the Skilled Trades Programs, particularly as we move into adding additional courses. There's a very strong need for both a pedagogical background, a strong teaching foundation, but also a content background in terms of the skilled trades to really ensure that the course is taught appropriately with strong content, with consideration to things like safety, for example.

As was discussed a little bit earlier, we talked about the benefit for students who might wish to accumulate and count those hours for apprenticeship training and it's very important that there's a role with a journey person in that regard. So those are conversations we are having very closely with school boards and with the Teachers Union and other partners to make sure that we can staff those positions appropriately with all of the skills that we need.

MR. WHYNOTT: Great, thank you. Mr. Chairman, I'm going to share my time with Mr. Ramey.

MR. CHAIRMAN: Mr. Ramey.

MR. GARY RAMEY: Thank you, Mr. Chairman, and how much time is left in this round?

MR. CHAIRMAN: About six minutes.

MR. RAMEY: Okay, well, I'll try to talk fast. I have a previous career in the education system teaching at the high school and junior high level, at the university level and also at the college level.

When I was in the Nova Scotia Community College system a number of years ago - and I'll go back quite a ways, in the early 2000s and the late I guess 1990s even - I had met with the director of student services and the principal of Park View Education Centre, the biggest school in the district where I was, which is the Bridgewater area, and I was trying to find out how many kids were quitting school prior to graduation because that's an ongoing - or it was an ongoing - problem at the time.

I was quite appalled by the number. I thought they would be Grade 12 kids who got part-time jobs and then just kind of lost interest but I found out they were actually kids in Grades 10 and 11. There were more boys than girls, which I guess maybe is not a big surprise, and I asked them if they would be interested in trying to work with me at the college if I could come up with a plan where we could perhaps introduce a lot of these kids to trades - not because I thought that was necessarily what they needed but I thought that would be an option that they currently didn't have.

This did not go smoothly for me because I was asking the trades instructors at the community college to give up one day a week of their shop. Because trades teachers have related subjects, like communications, math and blueprint reading in many cases, I asked them to schedule all those courses on Friday so that the shops would be open and I could bring the high school students in to a completely furnished shop.

The trades I went after at the time were welding, MVR mechanical, carpentry, culinary arts, which would be cooking, industrial electricity, diesel repair, and electronics. I called it the "STEP program" - the Skilled Trades Exploration Program - because I had to call it something, so that's what I called it. It's still going, actually, in that area and it has been phenomenally successful. Many of the students who take those introductory trades - I think they did two months at a time - they would sign up for three different ones during the school year. They still had to take their high school courses in high school, but they could come and get introduced to - they might sign up for carpentry for two months, industrial electricity for two months, and motor mechanics. Then, at the end, that would have been their kind of like introduction to what might be going on there.

I guess my question is - that's a long preamble to a question - has that been looked at with any of the other community college campuses around the province as a way to have super, good quality equipment and good quality training maybe provided to high school students?

MS. BLACKWOOD: Thank you for that question. Yes, we're very familiar with the STEP program and, as you say, that program continues to be offered at Park View -

and, also, Park View is one of the schools that has a state-of-the-art Skilled Trades Centre, so both programs are operating very well.

I think in the evolution of our skilled trades model, we have worked closely with community college partners and we have optimized opportunities for students to visit the community college and to take what opportunities their particular local college can offer. It's really critically important for students in skilled trades courses to have that authentic experience. We provide industry standard tools to them within Skilled Trades Centres, just as community colleges do, and we really value the opportunity to take them off-site, to work where they can really see how those tools and how that equipment is used in an industry setting. So that happens through community-based learning, as well as partnerships with the community college.

When we first started to work with boards on site selection, we did look at that very model of creating Skilled Trades Centres customized for school-aged students within community colleges, and we looked at the costs of transportation and the impact on scheduling and other opportunities at the school where the students would be based. So we've explored a number of programs.

The Skilled Trades Program that we're speaking to today is a rigorous academic program. We recognize the standards required in industry now, so I think we're absolutely on the right track. We are certainly open to considering all kinds of innovative opportunities to interact with industry and with the community college.

MR. CHAIRMAN: You have a little bit less than a minute left.

MR. RAMEY: So the students who are taking the trades programs at the high school level, if they complete those programs do they get advanced consideration when they go to the college – if they apply to the college, I should say?

MR. CHAIRMAN: Order, please, Mr. Ramey's time has expired.

Ms. Casey. You have 15 minutes, by the way.

MS. CASEY: Thank you, Mr. Chairman. I would like to follow up on something that has already been mentioned by another speaker and that's the O2 program. I think it has been announced that there would be an expansion of the O2 program so I'm wondering, what funding has been provided to expand the O2 program?

MS. OLSEN: We don't have that information at this point.

MR. CHAIRMAN: Will that information be provided?

MS. OLSEN: That information can be provided, yes.

MS. CASEY: Would the funding for the O2 program not have been part of the 2012-13 budget?

MS. BLACKWOOD: The Options and Opportunities program does have funding, it's in the 2012-13 budget. It is now in the base as distinct from being restricted funding in previous years. Boards now have a really good handle on costs of delivering the program and the program requirements. Because of the program's success they are certainly looking at optimizing those opportunities across the school board. I believe we have two additional sites this year that boards have selected and they're doing that within the dedicated envelope of funding for Options and Opportunities that they have in their regular budget.

MS. CASEY: To provide some clarification, that funding is now in the base which means that it's not restricted. Does that mean that boards have the opportunity to use that money for something other than O2?

MS. BLACKWOOD: Boards have asked for that flexibility and that funding is now in the base, as you said.

MS. CASEY: If a board chooses to not expand the O2 program, what role does the department play?

MS. OLSEN: The department will be working with each of the boards to ensure we know where the O2 programs are and where they're going to be expanded. We will be making the commitment from the Kids and Learning First that the programs will be expanded across the province.

I think you asked previously - the question was - what money had been dedicated to expanding the program? We don't have those figures with us at this point.

MS. CASEY: I guess I do need some more clarification though. If the department - and I fully support the expansion of the O2 program, I'm pleased to hear the department make that announcement that they would support expansion. My question is, how can the department ensure there will be expansion if there's flexibility at the board level as to how they use those dollars?

MS. OLSEN: I believe that with the dialogue we're having, I don't see any board across the province trying to reduce the O2 program. I think the boards are supporting the O2 program as much as the department is and we would be in dialogue with them to support them as they make that expansion. At this point, I just don't see that the boards are looking to take money out of O2.

MS. CASEY: I guess my follow-up question would be, boards are receiving less money from the department to provide programs for their students and they have to make some difficult decisions. I would not want them to take O2 out of that decision making

either but they will have to make some choices and they will not be able to provide everything they have been in the past. I guess my question would be, again, in the dialogue the department has with the boards around O2, will it be dialogue or will it be directives?

MS. OLSEN: To begin with, it's going to be dialogue to make sure the program is continuing.

MS. CASEY: And if it's not through dialogue it would be a directive, is that correct?

MS. OLSEN: We haven't made that decision at this point.

MS. CASEY: I go back to a similar situation last year where money that was not restricted, in difficult times, boards made some decisions and those were overruled by the department, so why would we want to get in that same situation again?

MS. OLSEN: I think that the best approach for us is to work collaboratively with boards and, as I said, I don't see the boards reducing O2 programs because they're meeting some very real needs of students. I expect the boards will continue to support the programs. But if we're having difficulty with that, and the boards are having difficulty with funding the programs, we will have that dialogue, at that point in time, and come back and review the situation as the need arises.

MS. CASEY: In the 2012-13 Budget Bulletin it identifies the number of expenditures that were in the 2012 budget. One of those is the establishing of Skilled Trades Centres and the \$5 million. Would that \$5 million be what we talked about earlier for places like Forest Heights School, or is that out of another budget?

MS. BLACKWOOD: I believe you may be referring to the announcement made around Eastern Shore that there would be \$5 million made available for expansion of Skilled Trades Centres in rural areas. It was my understanding that commitment pertained to 2013-14, not to this fiscal year. In terms of Forest Heights, we will be funding that from this year's budget within the Department of Education, that \$1 million.

MS. CASEY: I'm referring to the Budget Bulletin 2012-13 - this document. I'm sure, you came from the department so I'm sure you are familiar with it in that it identifies a number of expenditures and one of them is "establish skilled trades centres in other parts of the province", and with a figure of \$5 million. Was my assumption correct then that it would be projects like the most recent announcement?

MS. BLACKWOOD: Yes, indeed. The \$1 million pertains to this fiscal year. The \$5 million to which you refer is for the four-year plan.

MS. CASEY: Okay, then I would go up to the state-of-the-art trades centre for Cole Harbour and other upgrades and that is showing as \$10 million. That is not for 2012-13, or it is for 2012-13?

MS. OLSEN: That money is going to be through the capital project. There was a renovation for Cole Harbour District High School as the high school and then part of that renovation would be the establishment of a manufacturing Skilled Trades Centre within that school.

MS. CASEY: That same document talks about the capital for new schools and the A&A budgets, so I guess I'm trying to be clear - new school construction has a \$48.8 million; A&A has a \$46.3 million; and then we have the Cole Harbour, which has \$10 million. Is the Cole Harbour standing alone or is it in the A&A?

MS. JAN JOLLYMORE: Cole Harbour has a capital budget of \$10 million. I believe it's a stand-alone, but I will confirm that and get back to you. In the 2012-13 budget, of that \$10 million, \$1.7 million has been committed for the Cole Harbour project with an expected completion date of 2014. So the \$10 million is for a total project cost of which \$1.7 million is dedicated to the 2012-13 fiscal year.

MS. CASEY: So the \$10 million that is earmarked here for Cole Harbour is not included in the A&A money?

MS. JOLLYMORE: I do not believe so, but I can confirm that once I go back, if that's acceptable.

MS. CASEY: That clarification would be appreciated.

MS. JOLLYMORE: No, problem - okay.

MS. CASEY: When we look at the - again back to that Budget Bulletin document - it talks about the Manufacturing Trades 11, and I know that was mentioned as one of the expanded programs, are students able to enroll in the Manufacturing Trades 11 in this current school year?

MS. BLACKWOOD: No, that course will be available beginning in September 2013. We're developing it right now so I don't think schools have yet started the process of enrolling students in courses for the following school year, 2013-14. That's when that course will become available.

MS. CASEY: So the \$1 million that is earmarked for that in this budget year - how would that be used?

MS. BLACKWOOD: We reserved \$48,000 for the development of that course in this fiscal. We have not yet expended that funding but that's what we thought would be the maximum for development of that course. We are underway but we have not yet completed development.

MS. CASEY: So, \$48,000 of the \$1 million?

MS. BLACKWOOD: Of the \$1 million, yes.

MS. CASEY: What about the balance of the \$1 million?

MS. BLACKWOOD: We have dedicated some of the budget to establish new sites, those that are not capital projects. We've also established a portion of that for setting up the program, all of the equipment costs, tools, materials and so on.

MS. CASEY: Are you able to tell me how many sites will have the Manufacturing Trades 11? What's your projection for that, when it is completed and when it's ready to be rolled out?

MS. BLACKWOOD: We haven't confirmed that information but the interest from the school boards is very great. I anticipate that the new sites will certainly have the capacity to offer Manufacturing Trades 11 and may well choose to do so.

In addition to that, the existing sites are also expressing interest in manufacturing trades, so we anticipate some of the sites we already have would like to add that to the course options they currently offer.

MS. OLSEN: I understand also from Ms. Blackwood that with the existing sites, if they do express interest, there is room within the site itself and I think they would need to get different equipment to be able to offer that program, but they wouldn't be excluded from offering the program if that is what is going to meet the needs of the students in that school.

MS. CASEY: Okay, thank you. The question was raised about the supply of teachers who are able to teach in some of the skilled trades classrooms and working with the Teachers Union and others on that. Are there any particular trades for which we have a real void?

MS. BLACKWOOD: No, I don't believe in that regard. We've taken the position that educators with experience in the trades really bring that authentic experience to the classroom. The most important thing to us is safety; safety is at the heart of every skilled trades course. We do believe that persons with the requisite knowledge that Ms. Delbridge referred to really have a wide knowledge of the trades, beyond their own particular special interests, so it's not required that we have to have a certain tradesperson qualification for a

specific course. We do look for educators who have experience with the trades and knowledge of the trades.

MS. CASEY: Can I follow-up that question with, what kind of criteria would those teachers have to meet other than having been a handyman around the house? What other qualifications would they have to have before they could be instructing in some of these trades courses?

MS. DELBRIDGE: Well the ideal situation is for the instructors to be both qualified teachers as well as having a journeyperson's certificate. That would be the ideal. We do believe that in some cases school boards . . .

MR. CHAIRMAN: Order, please. Unfortunately Ms. Casey's time has expired.

Mr. Orrell.

MR. EDDIE ORRELL: Thank you very much and welcome; thank you for your presentation. Just on the topic of safety that Ms. Casey brought up there, we talk about safety being a main concern and one of the biggest concerns in the school system - I come from Cape Breton where there's a high school that had a dust collection system that was deemed out of date two years ago, and two years ago they decided they were going to replace it. Up until now, the system still is not working and the kids in the shop there have to stop every so often - if they cut a board in the carpentry shop, clean up the dust, clean up the tools, and go back to doing what they were doing. So their learning opportunities are limited because of that. Is there a reason that that took so long to replace that system and limit their educational opportunities?

MS. BLACKWOOD: Yes, we have been working with those involved in that project. It is a huge project and a great number of schools involved and I understand that each one has its own specific needs. I think one of the reasons it takes quite a long time to replace the system is that the manufacturers of dust collection equipment themselves do not have the ready supply. So the supply is fairly slow and the whole process is a very complex one.

I know it's very annoying for the teachers and students involved to be waiting for the project to be completed at their particular school but, as you say, it has provided a very valuable opportunity within technology education classrooms to focus on aspects of safety and techniques while clearing up and alternative ways of using tools to create the projects that you're working on that do not create so much dust.

MR. ORRELL: But it also limits the amount of time they get to use those tools so that's a hindrance to them if they're going to enter the workforce and haven't had the proper amount of time in that. Is there still anything being done about this issue? Is it still front and centre?

MS. OLSEN: We have a person in the Department of Education dedicated exclusively to working with the boards and with the suppliers to make sure that we can move the replacement of the dust collectors to appropriate standards and current standards. He's dedicated full time to that particular job and it's moving forward as quickly as we can get it to move forward.

MR. ORRELL: I guess another question I have is, if in that school system the students are spending more time cleaning up, all the hours that they're spending away from the actual workforce working with the tools - do they count as hours towards their apprenticeship program as well? Is it just hours in the classroom, no matter what they're doing at the time?

MS. BLACKWOOD: Yes, the dust collection issue has really centred on technology education classrooms, particularly woodworking shops, production technology and so on, and we continue to work with those teachers to address any changes in program delivery that might be required. This has not been an issue with Skilled Trade Centres. So it's the skilled trades courses and related hours with a certified journey person that provide the hours for apprenticeship of students who register as apprentices, so there's no impact there.

MR. ORRELL: So if I'm correct, the Skilled Trades Program, there's a 10, 11 and a 12 component to it. The introduction to the program would entail what, in Grade 10?

MS. BLACKWOOD: I'm happy to give you some information about Skilled Trades and I can give you more if you would like to have it. The introduction to Skilled Trades doesn't have a specific trade concentration; that comes in Grade 11. In Skilled Trades 10 students focus on exploring the trades as a life choice. They engage in research and interact with tradespersons to learn more about that as a possible career option. They work with basic hand tools; the focus is on the students improving in terms of dexterity and hand-to-eye coordination and balance - all of those are very important - and trade specific mathematics is part of that course, as is measurement. They also learn how to use specific documents that are used in the trades and communications, working with others, the skills we spoke about earlier.

MR. ORRELL: So if a student didn't take that in the Grade 10 level and wanted to do the trades program at the Grade 11 level - you have a construction trade, transportation trade and, soon to be, the manufacturing trade - would they be eliminated from that because they didn't take the introduction in Grade 10 and they would have to start at that again?

MS. BLACKWOOD: Yes, they would. Skilled Trades 10 is a prerequisite to all of the other courses. That's where a lot of the safety education begins as well, so it is vital to have that background.

MR. ORRELL: And at Grade 12 is the co-op where they go into the workforce with a skilled tradesperson obviously . . .

MS. BLACKWOOD: And the support of the co-op teacher.

MR. ORRELL: Yes. So say if I took the construction trade in Grade 11, all the introduction and the construction trade in Grade 11, do they do job-specific trades there or is it the one course they would continue on through?

MS. BLACKWOOD: If you were to take Construction Trades 11, you would learn directly about the seven construction trades. So a part of the course deals with electrical, part with plumbing, part with carpentry, lather – I'm not well informed about what that is, but that's in interior systems – mechanic, they'd also learn about floor covering installers and what they do, painters and decorators, what they do, and tile setters and, hopefully, have the opportunity to meet some of those tradespersons to benefit from their first-hand knowledge.

MR. ORRELL: As I've said, Memorial Composite High School has a skilled trades program, but Memorial basically concentrates three years in the one direction where you would take your electrical program and you'd go through the three years and do that. They are apprenticeship-ready when they leave high school, they have their first so-called block done, they work for so many hours, and they go back to the community college and gain that program. Does the Skilled Trades Program that's going to be offered do the same – it enables people to come out at the same level, is it the same basic education system for that as it is the program that's offered at Memorial?

MS. BLACKWOOD: No, it's really a different program. The vocational program offered at Memorial has been in place for many years and provides a specific concentration on a particular trade or other area from the beginning, and students spend a great deal of time with that particular concentration at each of Grades 10, 11 and 12. So it's really quite a different program.

MR. ORRELL: Basically, their program is a step above what is going to be offered in other schools around the province.

Is there a way we could say that program will be protected in the school system because of the need that's going to be presented in the future with other contracts, shipbuilding contracts and so on? Is that program going to be protected in future budgets or is it just going to be part of the school budget that the school boards in that area will have to try and protect as well as the rest of the programs they have?

MS. BLACKWOOD: I believe the Cape Breton-Victoria Regional School Board values that program very much, just as they value the Skilled Trades Program offered at BEC. It's a wonderful program, one of our real success stories. I think these opportunities

are really valuable and the department and the board are keenly interested in sustaining those opportunities for students and, indeed, in the case of our Skilled Trades Program, expanding that model.

MR. ORRELL: If the manufacturing section were to expand into a school like Memorial, would there be money available to allow that to happen or would it go to one of the other schools that would have to be upgraded?

MS. BLACKWOOD: The dedicated funding for skilled trades is for the existing sites and the expansion to new sites, I think the vocational program at Memorial is not part of that budget at all.

MR. ORRELL: What would the qualifications be for the teachers in the Skilled Trades Program if there were no Red Seal people available who have a teaching degree and would that be available for a skilled tradesperson to go into that classroom with the promise of upgrading into a teaching certificate through summer courses or Virtual School systems?

MS. DELBRIDGE: Thank you, that's a great question. As I had mentioned earlier, we are going to be looking at ways that we can support getting effective instructors in the classroom, whether it be beginning with people who have the B.Ed. program or a teaching background and ensuring that they have the skills necessary to the skilled trades content area, or if we work with, perhaps, a cohort of skilled tradespersons to help support development of teaching skills and acquisition of the B.Ed., we're going to be talking with partners about trying to come at it from both directions because it's such an important piece of the program that ensures that we have qualified instructors in front of these students that we really can't limit either one of those areas to be the only solution.

So we've begun conversations with the universities. We're talking with the Teachers Union. We're talking with school boards. We're looking at creative ways we can develop a cohort program with the university to work with skilled tradespersons to employ or, I guess, to give them some other teaching skills they may not have. We're looking at possibilities of working with the Nova Scotia Agricultural College. I mean there are many partners that need to have a voice in the solution around this area. We're in the middle of those conversations now and we do hope to have some ideas about how we can go forward effectively.

MR. ORRELL: Changing gears now to the Virtual School system, is there a minimum or a maximum number of students who can be available in a classroom or before one instructor in the Virtual School system?

MS. BLACKWOOD: I would have to get that information for you. Are you talking about in real time, when students are together, is there a maximum number of students for a given course that the teacher would engage with?

MR. ORRELL: Or a minimum number as well, either/or, because if there were only three students looking to take - we talked earlier about a political science course. Would that be able to be offered to them through Virtual School? If there were 300 students who wanted to do that, how would we go about that? Would we do 300 of one class or would we do 10 classes of 30?

MS. BLACKWOOD: I'm not sure that we've drawn hard lines in the sand, in terms of minimum and maximum. I do know that the courses offered reflect boards' recommendations in terms of students' needs and interests at this time, so we really do a lot of that researching in terms of what is the need and what is the interest in these courses. We're developing the on-line courses to reflect that information.

I don't have in front of me the information on actual enrolment at a given virtual class, as it were, at a time. I do know that exists. I don't think the minimum number is an issue at all.

MR. ORRELL: So if the maximum number were exceeded, would they make more teachers available for the virtual system in that course?

MS. DELBRIDGE: Thank you. There are currently some parameters we work within, for example, the teachers' professional agreement with the NSTU, through Article 49, establishes some maximums in terms of the numbers of students for teachers in those schools in their virtual program. Currently the courses cannot have more than 22 students in a virtual course. However, we can go - or they can go - to a maximum of 25 students, with the permission of the teacher. That is currently one of the parameters we work within.

MR. ORRELL: So if there are more available in the students looking to take that certain course, would the teacher be made available for that or would they have a second course offering from the same teacher?

MS. DELBRIDGE: If there was demand for a course, that's certainly a conversation that we would be having with the school board as to how we could support those students who want to take the course.

MR. ORRELL: So would more teachers be hired, then, or would they be taken from the classroom that's available, real time class?

MS. DELBRIDGE: I couldn't answer that; that would be a board conversation.

MR. ORRELL: You're talking later on down the road about a high school completely being offered virtually. There are different courses that are required in order to get your high school diploma, you have to have a Canadian history course or a mathematics course . . .

MR. CHAIRMAN: Order, please. Unfortunately, your time has expired - just when you were getting to the really interesting stuff; that's always the way. Mr. MacKinnon.

MR. CLARRIE MACKINNON: First, I would like to thank and commend the department for the advances that you're making in the two areas that we're discussing this morning. It was mentioned that the Chignecto-Central Regional School Board showed some real leadership in relation to the virtual school. I'm wondering how that leadership may have, in fact, helped develop the program throughout the province.

MS. BLACKWOOD: I'm happy to answer that. This province is blessed in terms of how closely the department collaborates with boards. I know for several years now, we have worked very closely with professional staff in the Chignecto-Central Regional School Board, and also with the Strait Regional School Board and other boards that have been quite innovative in practice, in terms of how to make these opportunities available to students and how on-line learning might provide them opportunities they otherwise wouldn't have. Essentially, staff with the Department of Education charged with the responsibility for this, have worked with their counterparts and boards. It has been a very collaborative process and it continues so to be.

MS. OLSEN: I'd like to pick up on that in wearing my former hat as a superintendent for the past 10 years in Nova Scotia. We are very, very fortunate that all the superintendents in Nova Scotia meet with the deputy minister once a month. Chignecto-Central Regional School Board had virtual learning on the agenda for years and helped shape the discussion and was willing to work with other boards to experiment with that, so from my former role and my current role, I think we can say a big thank you to Chignecto-Central for helping shape our direction in this regard.

MR. MACKINNON: As a history buff, I would sort of like to see the flow or the evolution from 1917 - a date that was actually mentioned - but I have to share my time so I'm not going to ask for that. On another front, I'm wondering - we sort of have 100 years of some form of history in relation to this, but with the advances that are taking place on a monthly basis now, or almost a daily basis, we can expect fundamental changes in the years coming up. I'm wondering if someone wants to give us a little visionary approach here this morning on what we can expect. The question would be, what do you see as the future of the Virtual School?

MS. OLSEN: Perhaps I can start and then I'll turn it over to Ms. Blackwood. What we're seeing right now in terms of all of the students in our school system is that the technology they're using outside the classroom is influencing what's happening inside the classroom. As educators, we need to explore the very best ways to support engagement in student learning, and technology is going to be a significant part of that, so it's not only the Virtual School that's going to change and evolve, but I think our day-to-day experience of students in classrooms is going to evolve, as well, and we've got some very strong and

positive experience of how that's happening across the province. Ms. Blackwood, I turn it over to you.

MS. BLACKWOOD: I'm happy to expand on that. I don't think I could have said any better, though, what our vision is. It's really a very exciting time to be involved in education in this regard. Ms. Delbridge spoke about the way technology is being integrated into every classroom in terms of how we teach and how students learn, and it really does offer some very exciting possibilities.

In terms of the Nova Scotia Virtual School itself, our vision is that students will graduate from our schools - not only with the curricular skills that they gain through on-line learning but also with advanced technological skills and they'll be really able to broaden their perspectives on learning in the 21st Century. It's so easy to connect with others across the globe, you know, we really live in a global community and I think the Nova Scotia Virtual School really supports students in connecting with others and conducting research in very exciting new ways. So I think there's a lot to look forward to.

MR. MACKINNON: I have a number of questions but just one last one and then I'll share my time with Ms. Raymond. I'm looking at a brochure that is, of course, in French and English and I'm wondering about both programs in relationship to serving the Acadian community and so on. The Virtual School and the skilled trades - how are we doing in serving our French communities and if not adequately at this time, how do we hope to expand in that direction?

MS. OLSEN: We certainly have a school trades program in CSAP in one school and they have asked for the expansion of that program. I would ask that Ms. Blackwood be recognized to talk about the French first language and the Virtual School.

MR. CHAIRMAN: Ms. Blackwood.

MS. BLACKWOOD: A few minutes ago we talked about how many years we had really been envisioning what a Nova Scotia Virtual School province-wide system might provide. From the beginning CSAP has been very active in looking at how can they best serve their particular enrolment and some of the challenges of smaller schools in terms of students being able to access the on-line courses. So they did do a great deal of work in that regard themselves and we are committed to ensuring that on-line courses include delivery of French first language courses as well as some immersion courses down the road. So that's very important to us and certainly to CSAP as well. So that has been part of our planning and implementation from the beginning.

MR. MACKINNON: Thank you very much and thank you for what you're doing.

MR. CHAIRMAN: Ms. Raymond.

MS. MICHELE RAYMOND: Yes, thank you very much and I have to agree it really is a very, very exciting time in education in Nova Scotia and I have been enjoying watching the development of this. I think this is a long and honourable tradition in Nova Scotia as well and I'm sure my colleagues have heard me say that I always remember the delight of a friend of my mother, who grew up in the Transvaal, being educated over the radio, used to speak about the absolute joy of those radio broadcasts and at the end of it of encountering her fellow students once a year for a few days.

So I mean this in no way compromises education and having watched the Imagine Our Schools exercise unroll in the Halifax Regional School Board, representing some fairly small but also some fairly isolated schools, I'm thrilled to see that the Virtual School is coming forward as a possible way of reinforcing those schools in combination with SchoolsPlus and everything else is really a physical place which supports an education in the community, and the Virtual School is that.

Having said that, one of the things I'm really interested in, actually - I know you've been invited to cross quite a few bridges today where you haven't seen the river yet - and you're still looking at full enrolment, but one of Nova Scotia's great strengths and its exports for years and years has been its education. I know I have a niece who's teaching in Dubai based on the fact that she is trained in Nova Scotia and the Nova Scotia curriculum has been exported extensively. Have you looked at the Virtual School as something which might, in fact, be a way of exporting the Nova Scotia curriculum to other interested countries?

MS. BLACKWOOD: Our current focus is on meeting the needs of students within Nova Scotia. Almost as soon as announcements were made about the Nova Scotia Virtual School, we did receive expressions of interest from elsewhere in Canada and beyond and looking at the future. Who knows what possibilities might emerge? Our immediate focus though is on the expansion within our province providing access to the students enrolled in the public school system. We continue to work with our international school partners in terms of supporting them in accessing the resources they need to deliver the courses.

MS. RAYMOND: Great, and actually that does lead me to another question. I notice that in the brochure you talk about "copyright cleared" and so on, and that must be one of the challenges that you do deal with in an on-line system. Just out of curiosity, you talked about the tools that students gather when they learn on-line. Is there any kind of a component in any of these courses which teaches students about not only using the technology but critical appraisal of sources and so on? Is that some of what's discussed?

MS. OLSEN: That would have to be an absolute critical component of the students when they go on-line in terms of how they would evaluate information that comes to them, because those are the higher-order thinking skills of problem solving and analysis that we're expecting of them. I don't know if Ms. Blackwood would want to comment.

MS. BLACKWOOD: I'm happy to say that that's an extremely important focus within our curriculum. Critical thinking is really at the heart of it, and ethical use of technologies is part of that, as Deputy Olsen described - thinking critically not only about the information that they access but also about the sources of that information. So we really have an exciting focus on inquiry-based learning and we are working to ensure the students question critically what is available on the Internet, what the resources are, what the purposes for its particular use in what they're looking at are, and to think very critically about their own use. Of course, that's an aspect in terms of safety on the Internet as well.

We do certainly focus on copyright, especially when we are engaging students in research, really teaching students how to engage in research, to think critically about the resources they select and how they cite those resources and give appropriate credits, and how they use their own thinking and their own language to draw conclusions from the research that they have conducted.

MS. DELBRIDGE: I would like to add very quickly to that comment about copyright in particular. We have been very fortunate in having a new Copyright Modernization Act that has been passed that has really focused on ensuring that teachers and students have educational access to the Internet for use in the classroom. Also, when the Act was designed, we worked very closely with the federal government in ensuring that it met our needs.

One of the key elements is that it's technology-neutral, so that when a student considers the copyright aspects of using a work or citing a work, it doesn't matter if they're in a virtual classroom or in a real classroom. It's still very important. Now we have very clear rules and guidelines around educational use of the Internet. That will help us and teachers to ensure that students understand very clearly how to respect copyright well. We're also going to be distributing a handbook called *Copyright Matters!* very shortly, which will then serve to educate both teachers and students about what the rules of the road are today that we all need to respect.

MS. RAYMOND: Good. I'm happy to hear that, and I think that's probably a lesson for all of us. If I have a moment, a very quick question, actually, about the Skilled Trades Program. I know that this is something which is being developed at this point and I know that there is mention of the Agricultural College. Before I came to the Legislature I started an organization called the Urban Farm Museum of Spryfield, and one of its explicit purposes was to serve as an adjunct teaching venue. So I know that there is a lot of work in the development of the personal development credits and so on. You mentioned the Agricultural College, is there any consideration of an agricultural trades component to the skilled trades?

MS. BLACKWOOD: Not in our present schedule. There is great interest in the culinary arts, so we have put that on the list of things to think about for the future. Right

now our focus is on fully supporting implementation of the existing courses: Skilled Trades 10, Construction Trades 11, and Transportation Trades 11, which was a big breakthrough.

MR. CHAIRMAN: Order, please. Unfortunately, Ms. Raymond's time has expired. That brings us to the end of our questioning for today. I will ask the deputy minister if she has any wrap-up comments she would like to make?

MS. OLSEN: I would like to thank the committee for being here today and the interest that you're taking in public education.

You've identified this as being a very exciting time for public education and I can't agree with you more. The two topics we've talked about today are very important topics but I think there is a broader discussion that, as Nova Scotians, we are going to be embarking on in terms of our high school program in general. The Canadian Education Association research on "What'd you do in school today?" indicated the intellectual engagement of students begins to decline in Grade 6. For us as educators, I think we are going to be looking at the pedagogy that we're using, the curriculum that we're teaching, the authenticity and the inquiry-based approaches, the hands-on approaches that are very rigorous to ensure we engage all of our students, right through high school.

Any of the research would indicate to us that students - if they don't want to have a second-class existence in terms of the workplace - need to be able to graduate out of high school fully equipped to go on to post-secondary education and into the workforce. So I look forward to working with you, with the government, with my colleagues, and my colleagues right across the province.

MR. CHAIRMAN: Thank you very much. Unfortunately we have other committee business we have to complete by 11:00 a.m. Thank you very much for coming. There is a list of questions that members have and I have at least seven down here, the clerk will be contacting your department with a written request for that information. Ms. Casey?

MS. CASEY: If I could, there was one topic we talked about, teacher qualification. I wonder if we're looking at information that can be provided, could we get a copy of the teacher qualifications that are required for those who are teaching in the skilled trades classrooms?

MR. CHAIRMAN: Would that be possible to provide that? Yes? Thank you. You can stay if you like, we're going to just be a few minutes here.

We have before the committee a list of the confirmed meetings we have set up to date. You will note on that the January 15th meeting had to be moved as a result of witness scheduling conflict and it has been moved to February 20th. Next week we have a workshop with the Canadian Comprehensive Auditing Foundation from 9:00 a.m. to 12:00 p.m. It is regarding the effective questioning on Public Accounts, which we agreed to before.

Just a note that Mr. Younger now is a permanent member of the Public Accounts Committee. Unless anyone else has anything else they feel they would like to discuss, we stand adjourned.

[The committee adjourned at 10:58 a.m.]