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Evaluating Essential Skills for Ontario's Tradespeople (ESOT) Project – Appendix

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Appendix A: Invitation to Apprentices

Congratulations and good luck as you begin your apprenticeship!
The training and experience you receive on the job and in school will provide you with skills for life and a successful career.

Are you confident that your academic skills, especially math, are up to the challenges of the job and in-school training?
You are ready for the challenge of an apprenticeship – but you may need to refresh or update your math skills. We invite you to find out if your math skills are current before you begin your in-school training.

How can you quickly and confidentially evaluate your math skills?
Find out by taking a confidential online assessment called ESOT – Essential Skills for Ontario Tradespeople. It is simple to use and can help you determine if your math and academic skills are at the level required for your Red Seal trade.

What if the test results tell you that you need to refresh your skills?
If the results indicate your academic skills are at the level required by your Red Seal trade, you can continue your apprenticeship with confidence.

But... if your skills do require updating, the report you receive immediately upon completing the test will identify skill areas that will benefit from updating and study resources you can access online. ESOT will list online resources for you. All are free of charge. You will receive an individual learning plan to guide you.

How can you update your skills?
If you are unable to participate in a classroom program because of your work or travel schedule, you can use the self-study materials provided or participate in a distance program.

If you prefer to work with a teacher face-to-face, there are college, school board and community-based programs in your community offering classes free of charge. Your apprenticeship consultant can provide you with more information.

How do you take the test?
It's simple:

a) Using your computer, simply go to: www.csc.essentialskillsgroup.com.
b) Click on "How to Sign Up", register as an "individual" and use project code #333. Eliminate any doubt about your math skills. Receive an individual learning plan and study materials.

What does this cost?
This is free. If you do decide to complete the online assessment, you will receive a $5 Tim Horton's gift card in the mail from project staff. Apprentices who use the individual learning plan will receive an additional $5 Tim Horton's gift card in the mail.

How long does the test take?
It takes about 1 hour to complete the online assessment. You will know if your reading, document use and math skills are at the level required for your Red Seal trade.

If I don't do well, does this affect my apprenticeship?
Absolutely not!! This is not a requirement of your apprenticeship. It is a tool to help you prepare for your in-school training and to improve your on-the-job performance.

Why are we offering this to new apprentices?
Two reasons:1) this is an effort to provide learning resources to apprentices in Red Seal trades; and 2) this is part of a research study that will help us determine if completing the ESOT assessment and the individual learning plans makes a difference in the success rates of new apprentices.

Why should you participate?
By taking the time to update and improve your skills before your first in-school session, you will be better prepared for your training and your apprenticeship.

We look forward to helping you succeed!

This project is being conducted by the College Sector Committee for Adult Upgrading in collaboration with local MTCU offices in Kitchener, Ottawa and Sudbury.

If you have any questions about the project, please contact:
Lynne Wallace, Executive Director, CSC or Bea Clark, Project Lead at 705.675.2124

Appendix B: Script for MTCU Staff

ETC: Here is a script to guide your discussion with a new apprentice about this important project.

a) We want you to succeed. As you begin your apprenticeship, I'd like to make you aware of the resources available to help you succeed.
b) It will be a number of months before you take your in-school training. In the meantime, you will also be learning on the job. You may find that some of your skills, such as math, need to be updated or reviewed.
c) You may not even know if your skills require updating, but you have a chance to find out and it's free. All you need is access to a computer.
d) There is a pilot project taking place in Kitchener, Ottawa and Sudbury.
e) You are under no obligation to participate in this project. It is offered to you so that you can assess your own skills and decide if you are prepared for your apprenticeship training.
f) The decision to take the online self-assessment and any follow-up activities is entirely yours. The self-assessment is voluntary and confidential. If you decide not to participate, there is no penalty and no impact on your apprenticeship. You may also choose to stop your participation at any time without penalty.
g) You are invited and encouraged to take a simple online assessment, based on the skills required for your Red Seal trade. Once you complete an assessment your results are provided immediately to you online. The report will identify whether or not you need improvement, especially in math. If the results indicate your academic skills are at the level required for your Red Seal trade, you can continue your apprenticeship with confidence.
h) If you do need improvement in one or more areas, this will be identified on your results. Note that the results will not impact your apprenticeship. You will also receive a confidential, individual learning plan that identifies online learning resources you can complete on your own, using your own computer. All of these resources are free and you can complete the learning activities online, at your own pace. It is a great idea to use the time you have available before your in-school to prepare. It will make your return to the classroom less stressful and more successful.
i) If you prefer to have face-to-face support, there are many resources in our community to help you update and upgrade your skills. Colleges, community-based agencies and school boards offer classes for this. I can give you more information about these classes.
j) The goal would be to complete the assessment and the updating of your skills before you begin Level 1 in-school training in the fall or winter.
k) If you are interested in participating, go to www.csc.essentialskillsgroup.com. Click on "How To Sign Up", register as an "Individual" and use the project code that appears on your *Invitation to Participate.*
l) I hope you will seriously consider participating in this project. All information is strictly confidential and no individual results will be shared. The results of this project will help us identify ways in which we can better support all apprentices in Ontario.
m) This project is being conducted by the College Sector Committee for Adult Upgrading, in partnership with the MTCU offices in Kitchener, Ottawa and Sudbury. If you have any questions about the project, you may contact the CSC or the project lead. The contact information is listed on your *Invitation to Participate.*

A CSC research project funded by the
Higher Education Quality Council of Ontario

Appendix C: Consent Form

Essential Skills for Ontario Tradespersons

WEB INVITATION

Congratulations as you begin your apprenticeship. This web site will offer you the opportunity to assess your academic readiness for your apprenticeship. You will also receive an Individual Learning Plan (ILP) that offers you the opportunity to update your skills to ensure you are at the level required for your Red Seal trade. You may take advantage of this opportunity by **clicking here** to access the self-assessment site.

a) **Click here** to complete an online confidential assessment of your skills. Then, if you wish, you may complete voluntary online activities to build your skills.

b) **Click here** to register in a special **pilot project** designed to see if an online training program will help you succeed. This project is entirely voluntary and confidential. There is no cost to take the program.

Content of Website:

ESOT (Essential Skills for Ontario Tradespersons) Pilot Project

Welcome to the ESOT Pilot Project. You are invited to take part in an online self-assessment and self-directed skills training pilot project.

This pilot project is free, voluntary, and is not a requirement of your apprenticeship. You may stop participating at any time. All information is completely confidential.

The pilot project is part of a study to assess whether participation in a self-directed online program to update your skills will help you later in the in-school portion of your apprenticeship. The study is being conducted by the Ontario College Sector Committee for Adult Upgrading. Results of the study will help the Ontario government decide whether self-directed learning to update skills for new apprentices is valuable. Success in apprenticeship programs may be enhanced.

The pilot project is capable of receiving only 150 apprentice participants. If you are interested in taking part in the pilot project, all you have to do is **check here** ____ to indicate that you have read and understood the information above. Then, **click here** for your self-assessment.

If you have any questions or comments regarding this project please contact the Project Lead, Bea Clark at 705.675.2124.

Appendix D: Focus Group Schedule

October 3:

- 10:15 am – 11 am: Ottawa MTCU conference call
  Marti Jurmain, facilitator and Bea Clark, note taker

October 4:

- 10 am – 11 am: Algonquin apprentices, ACCE Board Room (CA103)
  Marti Jurmain, facilitator and Deborah Carminico, note taker
  Juice and sweets
- Noon – 1 pm: Algonquin coordinators, ACCE Board Room (CA103)
  Marti Jurmain, facilitator and Deborah Carminico, note taker
  Sandwiches and coffee
- 2 pm – 3 pm: Sudbury MTCU conference call (Marti to use LBS office, Algonquin)
  Marti Jurmain, facilitator and Bea Clark, note taker

October 9:

- 9:30 am – 10:30 am: Kitchener MTCU staff, Kitchener office
  Marti Jurmain, facilitator and Bea Clark, note taker
- Noon – 1 pm: Conestoga apprentices, Cambridge campus, Grand River Room
  Marti Jurmain, facilitator, and Bea Clark, note taker
  Pizza/pop
- 3:30 pm: Conestoga faculty, Guelph campus, Room A19
  Marti Jurmain, facilitator, and Bea Clark, note taker
  Coffee/cookies

October 10:

- 11:30 am – 12:30 pm: Conestoga apprentices, Guelph campus room C6
  Marti Jurmain, facilitator and Bea Clark, note taker

October 16:

- 8:30 am – 9:30 am: Cambrian faculty/staff, Trades board room 1711
  Lynne Wallace, facilitator and Michael, note taker
  Coffee and pastries
- 11:30 am – 12:30 pm: Cambrian apprentices, Trades board room 1711
  Lynne Wallace, facilitator and Michael, note taker
  Pizza/pop
- 2:30 pm – 3:30 pm: Cambrian apprentices, Trades board room 1711
  Lynne Wallace, facilitator and Michael, note taker
  Pizza/pop

Appendix E: Focus Groups Report

BACKGROUND

The goal of the ESOT project is to determine the effectiveness of an online pre-in-school self-assessment program for Ontario apprentices. The project arises from findings over the years that many apprentices lack foundational math, science, communications or computer skills that are required for both in-school and on-the-job success. Apprentices may not be aware of their skill levels and need for academic upgrading, and colleges selected by apprentices normally cannot offer upgrading opportunities until apprentices enrol and begin their in-school training program.

The ESOT project provides a customized, online, self-managed self-assessment and customized pre-in-school training opportunity for interested apprentices who have signed with MTCU. There are three college sites selected: Algonquin College, Cambrian College and Conestoga College. MTCU offices in these areas provided information on the resource and invited their apprentices at sign up from April to August, 2012 to take advantage of it. Participation was entirely voluntary. Apprentices who entered their in-school college program in September, 2012 also were introduced to the online assessment tool by their college faculty or administrative staff and encouraged to use it to test their skills related to their specific apprenticeship trade.

OVERVIEW OF FOCUS GROUPS

Direct contact with stakeholders was one of the methods selected of assessing the impact (both actual and potential) of the online assessment tool. Three stakeholder groups were selected to take part in focus groups: MTCU representatives, college representatives from three colleges, and apprentices currently taking their in-school program at each of the three colleges. As the apprentices who were signed up with the Ministry during spring and summer, 2012 were at their work placements and not yet enrolled in college in-school sessions, the apprentices who were in the college programs were offered the opportunity to test out the online tool in fall, 2012. These apprentices were able to act as a "proxy" for the newly signed apprentices in order to provide feedback on the key questions of the research project.

A consultant organized focus groups, summarized and analyzed findings as they related to the main research questions.

FOCUS GROUP RESEARCH QUESTIONS

The ESOT project asks the question: *Does intervention at apprentice sign-up with MTCU, using a learner-customized online learning model, result in better success during in-school training than that of those who do not access the intervention?*

Questions asked in the focus groups gathered information related to the overall research question. Participants provided information on:

- Level of preparation of apprentices at sign-up with MTCU or at entry to the in-school portion of their specific apprenticeship trade
- Methods of assistance for apprentices needing skills upgrading for success in their apprenticeship in-school program, and use of the services
- Motivation to use the online assessment tool and use of the tool (i.e., participation)
- Usability of the online tool
- Usefulness of the online tool (e.g., ease of access, information required, quality of materials)
- Recommendations for timing of the promotion of the online tool and likelihood of positive impact

Note: The impact of the use (i.e., effectiveness) of the online tool on apprentices' in-school success could not be measured at this point in time, as the proxy apprentice groups had just begun their in-school training. However, the stakeholder groups were able to comment on the likelihood of positive impact and the most effective timing and use of the tool for maximum effect on apprentices with academic deficiencies.

All focus group materials and summaries can be found in the attachments.

SCHEDULE OF FOCUS GROUPS

All focus groups were held in October, 2012 and were in-person group sessions, with the exception of two MTCU focus groups – Ottawa and Sudbury – that were held using telephone conferencing. The schedule is included in the appendices.

FOCUS GROUP SUMMARIES

MTCU Representatives

There were 27 MTCU representatives who participated in focus groups from three locations: Ottawa, Kitchener and Sudbury.

Section 1: Background and Experience

In your experience, are apprentices at sign-up prepared for success in in-school training?

- In general, MTCU representatives do not really gauge apprentice preparedness when they register an apprentice. They may "ask about the individual's learning style, have a discussion regarding how they learn best, in a group, or on their own, or a combination of both." They may "review the individual's high school or other transcript."
- Since apprentices are signed up with the employer present, there is reluctance on the part of both apprentice and MTCU representative to discuss preparedness, as it may be embarrassing for the apprentice and may impact on the apprentice-employer relationship.
- Readiness may depend on the route apprentices have taken to the trade – directly from high school, following postsecondary programs, or directly from work experiences.
- For those directly from high school, apprentice eligibility sometimes prompts a discussion about high school and what that experience was like. "Are they proud of their marks or was it a struggle?" High school graduates may have varying levels of readiness: "Construction trades apprentices are ready. Electricians might lack some physics." Comments were also made about students who went through the Ontario Youth Apprenticeship Program (OYAP). Responses varied with one feeling that "OYAPs are sometimes not as ready; I did a study a few years ago re how many OYAPs could handle Level 1 in-school – about half failed."
- For those who have come through a postsecondary program, employers may recruit them directly and may have already screened them: "I assume they are ready since the employer has registered them."
- Comments were made related to readiness for Certificate of Qualification exams. "C of Q test takers indicate that they are not ready for exams due to lack of math, English skills. Some still have difficulty in comprehension or test questions on trade exams."
- There were a few comments about the high pass rates for apprentices in the in-school portion of their apprenticeships. One stated, "When I asked about the rate of failure during the three in-school activities, I was told 'no problem, people passed'. Colleagues in other regions... told me that a lot of people do fail their in-school." A recommendation was made that the passing grade at colleges be standardized.

For those who believe that they are not fully prepared for success in in-school training, what have you done in the past to help them?

- MTCU representatives generally are quite familiar with college supports and programs for underprepared students: “If the apprentice has some sort of learning challenge, I refer them to the Centre for Students with Disabilities.”
- Representatives frequently put students with challenges in compulsory courses in touch with college representatives and may talk to the employer about supporting the apprentice through upgrading programs.
- There was reference made to making apprentices aware of free resources online as well as supports at colleges.
- Occasionally MTCU will make referrals to a literacy network.
- Several mentioned that apprentices are reactive, not proactive regarding their preparedness: “At the time of registration, apprentices are reactive, not proactive. They all think they are going to be successful.”

What has been the success of these remedial efforts?

- MTCU representatives noted that a perceived stigma often prevented students from coming forward about potential academic problems.
- College resources “have been referred to and success rates appear to be increasing.” However, it was noted that resources for Francophones are not as readily available.
- Literacy and Basic Skills (LBS) programs were mentioned by MTCU representatives. “However, they (LBS programs) don’t necessarily have a lot of apprentices who self-identify that they have literacy issues.” Since LBS is an Ontario Employment program, “we may see an increase in this area since this goal path must be reported.” However, there is “still a stigma attached to (self-reporting).”
- In general, MTCU will not know the results of remedial efforts and they do not have mechanisms to follow-up on referrals.

Section 2: Pre-In-school, Online Academic Upgrading Program

During your interaction with your apprentices, what was their reaction to the offer of the assessment of their skills and online skill upgrading program? Their motivation to use the tool?

- Overall, MTCU representatives stated that apprentices were initially positive and that the majority seemed interested. Employers seemed even more interested, but that might mean that “apprentices were just agreeing with employers.”
- Responses varied to actual use, however. In one location there did not appear to be much uptake. The stigma attached and “the fact that they are sitting with their employer made it difficult to raise” the opportunity. “Book learning is not an interest, school is not coming up for a while, they are not yet interested in school, and they will put it off as long as possible.”
- Some sounded eager – “yes, I’ll do it” – but it seemed unlikely. Perhaps this was said to try to impress the employer. One noted that “15 have registered and they thought this was great.”
- It was noted that there is a great deal of paper handed out at the sign-up sessions and that although “no one handed the info back to me... and some showed interest”, it was difficult to assess the likelihood that the apprentice would act on the offer. “Tim Horton coupons created a spark”, however.
- Enthusiastic response for some was related to the desire for confirmation that they are at the right level.
- Employers/unions in one location were supportive and sent out information to all apprentices.

Were you able to check out the tool yourself? If so, what did you think about its ease of use and usefulness for apprentices?

- Most did not use the tool: “My intention was to try it but couldn’t access it from work and I did not follow up from home.”
- One found it easy to use but noted that not every apprentice “uses the language-numeracy, communication and may not understand what this means. The terminology (can be) a little confusing.”
- A few shared the tool with school boards: “They loved it – it allowed guidance staff to use this to guide youth to be successful.”

To your knowledge did any of your apprentices try the online tool? Did any share their experience with you?

- In general, MTCU representatives do not have the ability to follow-up with apprentices after sign-up. They are simply “not able to have this conversation.”

There were several options discussed by MTCU representatives:

- While none thought that the online tool was best offered in high school, it was mentioned by several: “Connect with the school boards. Introduce students to trades at grade 7, 8 and earlier”; “It would be nice if they could complete the test before they even apply as an apprentice – OYAP or high school”; “In high school, students could evaluate themselves for the trade.” It was also seen as a tool to help high school staff “understand the nature of the trade” and what is required in skill levels. The earlier a potential apprentice realizes academic shortcomings and can have help in addressing them, the better.
- Some identified sign-up with MTCU as an appropriate time. However, even for those who did, it was recognized that offering the online tool several times throughout the apprentice’s academic and employment history was best.
- The majority felt that when apprentices begin to be “in school mode” is probably the best time to introduce a self-assessment tool. It could be promoted when offers for in-school are sent out. “The TDA sends package of information 2-3 months prior to in-school. This would be a good time to do the assessment and then follow up, then refer to supports.”
- The first week that apprentices attend their in-school program was generally seen as the best time: “Use (the online tool) as a testing tool, so that if there are some issues, the instructor could identify and tighten up the referral process with student services”; “Identify problem within the first week of in-school; I’d like to link them up early since they are only in school for such a short time and it may take 4 weeks to get accommodation in place”. Apprentices have access to computers and supports at college and are more ready to respond to assistance.
- “It depends on the individual; they must assess this themselves. Tie in to college handouts and documentation at the beginning of in-school.”
- A few noted that using the tool in preparation for Certificate of Qualification exams could be useful: “For C of Q, a starting point to prepare, specific to the trade.”

Can you suggest any strategy to increase the use of the tool by apprentices?

Suggestions that related to the timing of the introduction of the tool are summarized in the previous question. Other suggestions related specifically to the research project motivation techniques (e.g., offer of a $25 Tim Horton’s card) and are not listed below. Suggestions were made related to information provision (marketing), use of testimonials, a discussion of how employers might be helpful, use of findings from the research project and the possibility of making the assessment mandatory.

- “Attach it to the apprenticeship website”; “Use e-mail addresses from MTCU to link the apprentice to the website.”

- Use a “real life case study/best practice, an example of someone who did this, found it helped them; perhaps it helped their math skills, they utilized services available, and because of that they succeeded in trade school.”
- “Could employers suggest that they do this, provide incentive, computer access?” “The reality is that employers cannot offer this.”
- Statistics from research might help – e.g., “apprentices who did this did 50% better in school.”
- “Alberta makes this mandatory, as a pre-screening for school.” “If we are waiting for the apprentice to be motivated while working, there has to be an outside motivator – i.e., the employer making it mandatory or MTCU making it mandatory.”
- Others were not convinced of the advantage of making it mandatory: “Is it realistic to make this mandatory?”; “If 95% are successful in Level 1, then why do this? If they have lots of education, why do they have to jump this hoop?”

Any other comments?

- There was a recognition that, in terms of the research project, there had been very little time to orient and motivate apprentices at sign-up. There was some indication that the numbers noted by the project research team did not reflect the number of invitations provided (“We actually gave out more invitations.”)
- Monitoring of apprentices is important but “is not done anymore. It was done once per year, now every 2 or 3 years.” “Monitoring strategy is coming, we hope.”
- Other existing tools may be linked to ESOT: “There may be other tools including EARAT.”
- Multiple opportunities and multiple resources are required.
- There are opportunities for increasing the numbers of students who enter apprentice training: “At the secondary school level, OYAP students who we register are those who are not great academically. The strong academics are channelled to postsecondary. We are registering the converted; they are familiar with trades, etc. A whole group is being missed... we are not capturing the entire secondary school audience.”
- Employer education is a good tool: “Some employers have said that they will use this (tool) to hire, if they have several candidates.”
- “Re: C of Q, it may be a barrier for immigrant, second-language speakers.”

College Representatives

24 college faculty and administrative staff involved with apprenticeship programs attended the sessions at the three colleges. Most were faculty members in apprenticeship programs, although there were also administrators, support staff and postsecondary communications and math faculty.

Section 1: Background and Experience

In your experience, are your Level 1 student apprentices prepared for success in in-school training?

- In general, the responses reflected where their students came from – e.g., “Mostly yes – the Level 1 student apprentices are prepared for success because 18 of (my) 40 students came from postsec so they are college grads.” The others “not so much” because they are “coming from the field.” Recent secondary school graduates were seen as having fundamentals but experiencing difficulties at more theoretical levels, particularly in math. “They understand the math component at Level 1 and 2 but when they get to Level 3 their comprehension is not there. And they don’t do well in math not because they don’t know the math but because they don’t understand what they are being asked for (i.e., reading comprehension).”
- Many expressed concern with high school graduating competency levels. Graduates were seen as lacking math fundamentals and as having motivation/attitude problems (“...don’t see the value in

completing assignments and projects, even shop activities... happy with partial grades, do not value completing an assignment").

- There was a mix of responses regarding mature students, from "fully competent apprentices" to those with weak math and reading/writing skills.
- There was recognition that the difference in requirements between a grade 10 level and grade 12 level caused problems.
- There was also a comment on the "great variance from high school district to district."

For those who you feel are not fully prepared for success in-school training, what have you done in the past to help them?

- Respondents cited numerous college resources available for students needing assistance: student support services; LBS and other academic upgrading programs; peer tutoring, both formal and informal; "Professor tutoring inside and outside of class (3 hrs/wk one-on-one or small groups)"; EARAT: Evaluating Academic Readiness for Apprenticeship Training.
- The facilitators noticed a common reference to students registering at a Centre for Students with Disabilities. Such a centre may provide excellent assistance, but respondents recognized that a stigma was often attached to seeking help from such a resource: "(I had a) definite sense from students who were referred that they didn't want the stigma of special needs, or as they called it Dummy Centre." "A lot slip through the cracks, for fear of being labelled a disabled student. (With one student, his problem) was actually a language, translation issue, but he has chosen to do it on his own because he does not want the stigma."
- Various strategies were mentioned to assist students having academic difficulties, including "recording classes and information online so students can preview and review material" and having math "integrated into shop and theory classes." One respondent suggested that "stand-alone math classes contextualized to the trade would be best. This is what is done in the machinist program and it works well."

What has been the success of these remediation efforts?

- Success has been mixed, due to a number of factors
- Some problem factors relate to the busy student schedule and lack of time: "Students are often overwhelmed in the first week of an eight-week course. Eight weeks is just too short a time to cover required materials."
- Several respondents noted that "apprentices do not stay on campus; they are out of here at the end of the day" and "day release don't stay on campus."
- Another referred to the issue of students not being skilled at using online tools: "You cannot put the students at a PC and expect them to do an online assessment independently."
- Clearly, motivation to make use of supports was an issue for many students: "Some students are willing to fail rather than get help."
- Where success was noted, specific strategies seemed to be most effective. "Informal peer tutoring arrangements have worked best" or "the teacher making themselves available for one-on-one works best."
- "I can usually tell, after a few tests, that there are issues and I take them to the counsellor personally to get them help."
- However, despite the value of counsellors, "some apprentices are here and the counsellor is not always here, and tutoring is not available that day."
- A comment was made related to measuring success by pass/fail rates. "...out of 45,000 apprentices, only 100 fail. We pass 99.5 % of them but between 40-60% fail their license testing. Eventually 75% pass."

Section 2: Pre-In-school, Online Academic Upgrading Program

During your first month with your apprentices, what was their reaction to the opportunity to take an online skill assessment and upgrading program? Their motivation to use the tool?

- Reactions by apprentices appeared to vary considerably. Apprentice responses depended on the timing and nature of the invitation.
- Timing was impacted by when the faculty received information and their ability to help the students. In one case "teachers had just been made aware of this testing opportunity October 10 and it is the last week of class." In another case, the teacher was unable to access a computer lab and help the students complete the self-assessment.
- How the invitation was provided to students had an impact. "In another program the students were given a paper invitation to do the test and when class was over 18 of the 40 invitations were left on their desk or on the ground." "In another program most of the students said they didn't realize they had a college email address." "Another professor emailed and posted the information and didn't hear back from any students."
- Responses from students also depended on their worry about results and the potential impact of weak results ("No apprentice wants to be labelled disabled or anything").
- There were, however, a few positive comments from students to faculty. One student sent his professor the following text: "I took the online survey you asked us to take and it was not fun. It told me about skills I am lacking. Mostly math. This was an eye-opener. I suggest you push the other students in the class to do it. I feel it would benefit them."
- From a group of 12 students, 10 agreed to try it. "One student dropped in to see me who had done it on her own on the weekend. She liked the test. Showed me her results and is planning on brushing up her skills before Level 2."

How many used the tool in your class? What was their motivation?

What did your students feel about the ease of use and usefulness of the online tool?

- Neither of these questions garnered consistent information.

Section 3: Recommendations

What do you think is the best time to offer this assessment/online upgrading tool to apprentices?

- Faculty responses mirrored those of the MTCU representatives. A variety of times were suggested.
- High school, prior to graduation: "If you tested them in grade 10 or 11 and had them pre-assess, then they can prepare and start at the right level here."
- At sign up with MTCU and the employer: it "should be mandatory once they are signed up, but not used to determine who should be signed."
- Prior to the in-school semester; there were several suggestions as to how this could be done: "we had to do a pre-test before we went to the college"; "perfect the pre-admission test, diagnose problems before they start in-school"; "colleges need to set up trade specific remedial courses to help students prepare prior to in-school."
- During orientation at college was suggested by several faculty.
- One respondent wondered about "a potential leadership role from the College of Trades and CCAC committee" in promoting the online tool.

Can you suggest any strategy to increase the use of the tool by apprentices?

- Some suggestions related to making the self-assessment mandatory, such as making it a required part of the first week in class or making "it a requirement of C of Q."
- "There must be a reward."
- "In high school, use this assessment as an entry requirement."
- There was a suggestion several times to involve high school guidance counsellors to help them guide students to appropriate trades.

Any other comments?

- People are "very supportive – great group of teachers."
- There is "clearly a lack of communication and consistency within/across programs."

Apprentices

In total, there were 58 apprentices in attendance at four focus group sessions. A variety of trades were represented: automotive service technician, refrigeration and air conditioning, millwright, metal fabricator and facilities technician.

Section 1: Background and Experience

Did you feel well-prepared for success in your in-school apprenticeship training?

- The majority of apprentices indicated they "felt ready for success." Some indicated that "they have all been working in their apprenticeship for 2-5 years." Others were "postsecondary graduates in either millwright or related post-secondary programs." One noted that "I left school in grade 9 in 1987 and just finished GED, and now the math is easy because I just finished my GED. I am doing well."
- For those who did feel ready, there was still some apprehension. The major challenge was getting back into the "swing of doing homework."
- A minority felt nervous and worried: "One took the full assessment because he did feel that his reading was low; four felt nervous that perhaps they were not ready."
- Math was mentioned by many as a concern: "(The) only problem with the online test was with trigonometry. The rest was o.k., but I struggled with trig – I've been out of school for 12 years." Several felt "rusty" in math.
- For a few of the adult students, there was nervousness in returning to a school setting: "I am 36 and starting a new career; it is daunting coming into a college setting."
- A few were reflective: "I probably wasn't prepared; the ESOT was helpful to refresh math skills, or formulas."

For those of you who feel you were not fully prepared for success in-school training, would you take an upgrading program of any sort to help you become better prepared?

- Some respondents were positive, although the answers ranged from "might take the assessment" to "definitely yes, for sure."
- Many responses related to the online tool rather than an upgrading program per se and reflected (for several) an attempt at the self-assessment. For example, "at the end of the online (tool), there were tutorials, videos. I thought these were perfect. You can stop /start whenever you want"; "If they had this tool before we started studying mechanics, you'd be able to do two things – some who weren't interested would drop the trade, and the others would get ready for the trade and update math, reading, etc."

Section 2: Pre-In-school, Online Academic Upgrading Program

When you were offered the opportunity to take the online skill assessment and upgrading program, what was your initial reaction?

- Generally the reaction was negative, although in some cases it was because of the timing of the "offer": "What's the point the last day of classes?" It is important to note once again that these apprentices are acting as proxies for those who were offered the online tool at sign-up with MTCU.
- Several felt bothered by another "test": "Another bloody test. I had just done GED and then having to take another test – I did not have a high score."
- One worried about a "hidden agenda": "(I was) leery of what the ministry is up to. What type of hurdles are they going to throw up to us now?"
- Another worried about anonymity: "I thought there must be a catch to it. I thought it was anonymous but they asked for your name online. I was suspicious, but then I did it."

Did you use the tool in class? If not, why not?

- A minority used the tool in class; for some there were no available computer labs.
- For others, the timing was poor: "Many were offered the opportunity approximately 2 weeks ago"; "We are only here for 8 weeks – just want to get our mandatory class stuff done."
- Many commented on a lack of time: "The assigned book we have is really thick – we just don't have the time."
- Another felt confident: "no need – got 'A's in high school."
- A few completed the assessment outside of class: "I did it at home"; several nodded in agreement.

If you did, overall was the web-based tool easy to use?

- For those who used the tool, in general they "found the tool easy to follow and the web interface easy"; "pretty straightforward, very quick, very easy to use."
- Several noted that it took longer than they had anticipated, particularly the math section.
- Positive reviews included: "one student really liked the report and training plan and is planning to follow up."
- Negative comments focused on two specific concerns: the need to re-start ("If you don't complete a section, then you must restart when you come back to it. This was a problem"); and the lack of specifics about where an answer went wrong ("I failed by 2 points, then I did the retest and then I did a bit better. I did not know exactly where my problems are. Show me where I am going wrong").
- There were a few isolated issues with the online technology. For example, "in the math section, I could not complete it – the page would not page forward. It stopped there so I gave up."

What did you think of the information asked? The consent form? The materials (test materials, learning plan) provided?

- As many students did not try the online tool, comments about the information provided tended to be individual reactions by the minority who did access it.
- In considering the information requested, "One student didn't know why questions were being asked, especially a phone number and didn't want to provide it"; "thought it was a little much, aboriginal-why this?"; "also didn't want to give email – but understood why when I explained the purpose."
- Two students did not "remember seeing the consent form."
- The most frequent positive comment was that the questions related to the trade ("for the welding, it was easier and more related to the trade").
- One student "really liked the report and training plan and is planning to follow up."

Are you still using the tool? If not, why not?

- A few students who had not yet tried the self-assessment were interested in the focus group discussion and said they planned to try it out later.
- Only one or two was still using the tool.

Would this tool be helpful to future apprentices for in-school success?

- Comments and non-verbal indicators were very positive in response to this question.
- Many wanted it made mandatory, and there were numerous suggestions as to the timing of the online tool opportunity: “Have the whole class take the test during class time when we have spare time. Make it part of the in-class curriculum.”
- One individual “identified that the best remedial strategy is a helpful teacher –willing to spend extra time one-on-one.”
- When asked about in-class versus online, “this group really preferred online and would do an online course as long as there was support from the teacher readily available.”

Section 3: Recommendations

If you had been offered the opportunity to use this online upgrading tool when you first signed up for your apprenticeship with the ministry, would you have used it?

- The majority of comments were positive. In one location, 22 out of 23 said they would at least give it a try to use the online self-assessment tool when they first signed up for apprenticeship with the ministry: “If it’s going to help, why not?”
- Several commented that an offer of the tool at sign-up would be preferable since once they start school they are very busy. It would also potentially help with their academic work. “It would have been easier to work on math in advance; then I would have been ‘good to go’ when school started.”
- For those who were postsecondary graduates, there was little interest. Many suggested various times for the offer of the online tool: “If it was offered during the in-school portion, I would be more apt to try it as I am already in the school mentality”; “before you sign up for your co-op in high school”; “grade 12 – because they start an apprenticeship, purchase tools, then quit after 4 months because they are not ready for the trade, don’t know enough, don’t have the skills.”

What would have motivated you?

- “My employer would have motivated me to do this.”
- “Just knowing you are prepared in advance.”
- “Knowing that others failed would have motivated me.”
- “If you don’t do well in math, the online courses are key. I won’t go to school to brush up, since I do not have the time.”

Any other comments?

- Final comments from apprentices ranged from statements about when to offer the online tool to the value of the apprenticeship trades.
- Some felt that the tool should be offered or made available more than once: “Offer the testing twice. First time from MTCU when enrolled in the apprenticeship program and the second time by the professor once in-class portion at college begins.”
- A few felt that the tool could have helped them decide on an appropriate career direction: “One said he wished he’d had something like this 10 years ago when he was selecting a career. He had five options and it was like picking straws – he chose stationary engineering and spent 1.5 years, then realized it

wasn't for him. If he'd had a tool where he could find out about different trades options he would have chosen differently."

- Many thought the tool should be introduced in high school: "Europe, Asia are way ahead of us. Introducing it in high school is a great idea; a lot of people want to do this work. At my high school, there was not much introduction to trades and what you need to get into a trade. This will help. Many agreed with this. Europeans way ahead of us."
- A few wanted some incentive such as "a bonus – perhaps a few marks for doing the test."

KEY FINDINGS

1. Level of preparation of apprentices. The main predictor of the preparation of apprentices for their in-school trade training is the preceding activity of the apprentice – high school, postsecondary program or work, particularly in the trade. The apprentices most likely to feel prepared are those who have recently completed a postsecondary program.

2. Assistance for underprepared apprentices. There is an impressive array of services provided for apprentices needing academic assistance and they are referred to by MTCU and college representatives on a regular basis. The use of these services varies, however. An unexpected finding was that there is definitely a stigma attached by the apprentices themselves to the use of some of these services, particularly since many connect the services to those for students with disabilities.

3. Motivation and use of the online self-assessment tool. Use of the tool was low among apprentices, to some degree due to the offer being made after their in-school classes were well along. Those apprentices who did try the tool generally were positive about its potential. There was no overall agreement about whether the tool should be mandatory, although apprentices did not respond negatively to a requirement for the self-assessment tool, particularly if it was used at the beginning of their in-school apprenticeship component.

4. Usability of the online self-assessment tool. Apprentices who tried the online tool found it easy to access and use. There was no serious concern about the types of personal information requested on registration on the online system. The report generated was considered very useful (albeit by a small minority who had used the tool).

5. Usefulness of the online self-assessment tool. There is general agreement that future apprentices should find the tool very helpful, and it should be made available. Apprentices were very positive about the potential value of this tool.

6. Timing of the offer/promotion of the online tool. There was agreement that the tool should be promoted and available at several points in apprentice careers – including in high school, at sign-up with the ministry, at their in-school approval or in-school start-up, and as Certificate of Qualification preparation. The majority favoured at in-school start-up.

CONCLUSIONS

The following conclusions are based on the commonalities of responses, in particular across stakeholder groups; predictions and preferences of the proxy stakeholder group of apprentices; and a comparison of answers across the parallel categories of questions.

1. There is no overall "ownership" of the apprentice experience, and it results in a lack of follow-up with apprentices or consistent advising for those in need of academic support. The ministry signs up apprentices; employers hire and provide workplace experiences; colleges (and perhaps other academic service providers) provide the in-school portion of the apprenticeship, during which time numerous academic services are available for apprentices.

2. There is no evidence provided through the focus groups at this point in time that the availability of an online skills self-assessment tool at sign-up with the ministry has a positive impact on the apprentices' in-school or on-the-job performance. There are very positive comments on the *potential* for such a tool to make a difference, and there is strong support from all stakeholders to have the tool to be used by various stakeholder groups, including high schools.

3. Since the online tool is an academic assessment and improvement tool, it is best offered at the beginning of the in-school portion of the apprenticeship. At this point college advising and support systems and services are available for apprentices. The ability of faculty to make the tool a normal part of college procedure, and the corresponding likelihood of apprentices to make use of it make this timing most appropriate.

APPENDICES

1. Focus group schedule
2. Focus group questions: MTCU representatives, college representatives, apprentices
3. Focus group transcripts: MTCU representatives, college representatives, apprentices

Appendix F: ESOT Summary Profile of 106 Test-Takers

Profiles of Test Participants

Education of test-takers	
University	3
Trade/Vocational school	9
College	30
High school	59
Less than high school	5

Age of test-takers	
16-24	52
25-34	32
35-44	16
45-54	6

Gender of test-takers	
Female	7
Male	99

Test-takers by trade (if known)	
Agricultural equipment	1
Auto service technician	17
Bricklayer	1
Carpenter	13
Construction craft worker	1
Cook	1
Hairstylist	1
Heavy duty equipment	1
Industrial electrician	1
Industrial maintenance	24
Metal fabricator	1
Plumber	8
Refrig & air conditioning	3
Roofer	2
Steamfitter	13
Truck and transportation	6
Welder	2

Table 1: Assessment Results of 106 Identified Test-Takers

Type of assessment	Number of test-takers	Did not meet minimum level
Reading	95	19%
Document use	87	22%
Mathematics		
Whole numbers	79	5%
Algebra	79	37%
Decimals	79	28%
Fractions	79	39%
Percentages	78	40%
Geometry, advanced task	77	81%
Geometry, plane figures	79	26%
Geometry, solids	79	37%
Measurement	79	16%
Trigonometry	52	81%

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