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Hybrid Delivery of College Instruction in the Skilled Trades: Supporting Apprenticeship Completion – Appendix

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Table of Contents

Appendix 1: Course list for IMM Program3
Appendix 2: Participant Groups in Surveys and Interviews5
Appendix 3: Survey Questions7
Appendix 4: Interview Questions.....10

Appendix 1: Course list for IMM Program

Level 1 - Industrial Mechanic (Millwright)/Construction Millwright

Summary of Total Program In-School Training Hours

	<u>Reportable Subjects</u>	<u>Total</u>	<u>Theory</u>	<u>Practical</u>
1	Workshop Practice I	48	32	16
2	Workshop Technology I	56	16	40
3	Machine Technology I	32	24	8
4	Rigging & Hoisting	24	20	4
5	Welding & Fabrication I	32	8	24
6	Electrical & Electronic Controls I	16	12	4
7	Drawings & Schematics I	32	32	0
	TOTAL	240	144	96

Level 2 - Industrial Mechanic (Millwright)/Construction Millwright

Summary of Total Program In-School Training Hours

	<u>Reportable Subjects</u>	<u>Total</u>	<u>Theory</u>	<u>Practical</u>
1.	Drawings & Schematics II	32	32	0
2.	Workshop Practice II	52	28	24
3.	Power Transmission	56	40	16
4.	Machine Technology II	40	32	8
5.	Welding & Fabrication II	44	14	30
6.	Electrical & Electronic Controls II	16	12	4
	TOTAL	240	158	82

Level 3 - Industrial Mechanic (Millwright)

Summary of Total Program In-School Training Hours

<u>Reportable Subjects</u>	<u>Total</u>	<u>Theory</u>	<u>Practical</u>
1. Workshop Practice III	54	18	36
2. Machine Technology III	48	36	12
3. Fluid Power	81	53	28
4. Electrical & Electronic Controls III	24	20	4
5. Welding & Fabrication III	33	5	28
TOTAL	240	132	108

Appendix 2: Participant Groups in Surveys and Interviews

Participants	Cohort	Data Collection Method	Date of Data Collection	Number of Participants
Student/Apprentice	Durham College, Level 1	Survey	January 2012	21
Student/Apprentice	Durham College, Level 2	Survey	April 2013	23
Student/Apprentice	Durham College, Level 3	Survey	May 2014	8
Student/Apprentice	Sault College, 1st cohort, Level 1	Survey	January 2012	11
Student/Apprentice	Sault College, 1st cohort, Level 2	Survey	April 2012	11
Student/Apprentice	Sault College, 1st cohort, Level 3	Survey	January 2013	11
Student/Apprentice	Sault College, 2nd cohort, Level 1	Survey	April 2013	7
Student/Apprentice	Sault College, 2nd cohort, Level 2	Survey	January 2014	7
Student/Apprentice	Sault College, 2nd cohort, Level 3	Survey	May 2014	12
Student/Apprentice	Sault College, 1st cohort, Level 1	Group interviews	January 2012	11
Employers of Apprentices	Sault College	Group interviews	May 2012	5
Student/Apprentice	Durham College cohort, Level 1	Group interviews	May 2012	17
Stakeholders ¹		Individual interviews	January 2012, 2013; May 2013, 2014	4
Stakeholder		Individual interview	May 2012, January 2013, May 2013	1

¹ Other stakeholders include administrators from the colleges, government departments and faculty, and anyone with a role or stake in the apprenticeship program excluding the student/apprentices and their employers. The group is referred to collectively to retain individual anonymity.

Participants	Cohort	Data Collection Method	Date of Data Collection	Number of Participants
Student/Apprentice	Sault College, 2nd cohort, Level 1	Group interview	May 2013	11
Employers of Apprentices	Sault College	Group interview	May 2013	3
Student/Apprentice	Sault College, 2nd cohort, Level 3	Group interview	May 2014	11
Student/Apprentices	Durham College cohort, Level 3	Group interview	May 2014	7
Employers of Apprentices	Durham College	Individual interviews	November 2014	8
Stakeholders		Individual interviews	November 2014	2

Appendix 3: Survey Questions

Administrative

Program – Overall Delivery (responses from important to not important and satisfaction from very dissatisfied to very satisfied)

- This program provides you with skills and abilities specific to your chosen apprenticeship
- This program has teachers who help you to understand your chosen apprenticeship.
- This program develops your ability to solve trade-related problems using math techniques.
- This program develops your ability to work with others.
- This program develops your ability to solve problems.
- This program develops your computer skills.
- This program prepares you for opportunities to further your education upon completing your apprenticeship.
- This program OVERALL is giving you knowledge and skills that will be useful in your apprenticeship.

Instructors (always/usually/occasionally/sometimes/never)

- In this program the teachers demonstrated a high degree of subject-area knowledge through in-course communication.
- In this program the teacher's feedback specified and explained problems particular to my individual work.
- In this program when asked a question, the teachers responded within 24 hours (excluding weekends and holidays).
- In this program the teachers demonstrated courtesy and respect for students in responding to inquiries and in other course interactions.
- In this program the teachers encouraged academic dialogue when appropriate.

Theoretical Component (always/usually/occasionally/sometimes/never)

- In this program course information (outline, schedule, etc.) was clear and accessible.
- In this program lesson materials were purposeful, thorough and clear.
- In this program lesson materials were engaging and well presented.
- In this program lessons were reinforced with clear, helpful assessments/quizzes.
- In this program the required support materials (textbooks, manuals, online resources, etc.) were us
- In this program the marking criteria for assessments/quizzes was provided to the learner.
- In this program if a discussion forum or online chat was provided, how often would you participate?
- Please include any comments about your experiences with the ONLINE / IN CLASS portion of the program that have not been addressed above. (open response)
- Please rate the ease of use of the platform (e.g., navigation, log-in procedures, and user friendliness)
- Do you have access to a high-speed connection?
- What attributes of the course do you have difficulty accessing? (open response)

College Facilities (did not/low/high use and not/important and satisfaction (very dissatisfied to very satisfied))

Library/Resource Centre
Special Skills Services (e.g., math/writing/remedial assistance)
Space for individual/group study
Special needs/Disability Services
Bookstore
Cafeteria/Food Services
Safety and Security Services
Comfort/Cleanliness/Accessibility of college facilities
The OVERALL quality of the facilities/resources in the college
The OVERALL quality of the services in the college

Student Engagement (always/usually/occasionally/sometimes/never)

How often do you participate in class or online discussions?
How often do you ask questions in class or online?
How often do you present information to your class or via email to your fellow students?
How often do you work with other students on assignments/projects in class or online?
How often do you select and organize information from different sources to complete an assignment/project?
How often do you complete homework assignments/projects on time?
How often do you skip classes or not log-in online when required?
How often do you discuss your course performance with a teacher?
How often do you discuss ideas from your courses with a teacher?
How often do you work hard to meet the demands of your courses?
How often do you feel motivated to come to class or log-in to your online course?
How often do you feel excited about the learning opportunity?

Practical Component (responses from important to not important and satisfaction from very dissatisfied to very satisfied)

The practical activities correspond to the learning outcomes.
The practical activities are well sequenced within the program.
Practical materials (e.g., manuals, handouts, etc.) are helpful.
The workload for the practical component is appropriate.
The practical sessions are organized and well planned.
The teachers are effective as practical teachers.
The practical sessions make an important contribution to my apprenticeship program of study.
Please include any comments about the quality of the practical sessions that have not been addressed above. (open response)

Perceived Engagement of Stakeholders (responses important/not important and satisfaction from very dissatisfied to very satisfied)

The concerns of people at this college for your success

Your overall college experience

The quality of on-the-job training you are receiving

Your company's support for you attending this program

Please use the space below to provide any additional comments you may wish to make about the quality of, or about any aspect of this program. (open response)

Demographics

How much time in a typical 7-day week do you spend traveling to and from the college?

How much time in a typical 7-day week do you spend doing coursework outside of class?

How much time in a typical 7-day week do you spend participating in college activities other than attending classes or labs?

How much time in a typical 7-day week do you spend participating in volunteer activities?

How much time in a typical 7-day week do you spend working for pay?

How much time in a typical 7-day week do you spend providing care for dependents (e.g., children, spouse/partner, relatives, etc.)?

You are: male/female

Your first language is:

Your age is (in years):

The education you completed before entering this program includes: (select all that apply)

Appendix 4: Interview Questions

A: For students

- How has your experience in the IMM collaborative program been over the past semester?
- Can you describe any issues or challenges that you encountered since you entered the program?
- What strategies did you use to resolve those challenges?
- What strategies did the college provide to resolve those challenges?
- What strategies did your employer employ to assist you with these challenges?
- What factors have influenced your success this semester?
- What factors have influenced your success this semester that we can attribute to the college?
- What factors influence your success that can be attributed to your employer?
- What one thing would make the current program offering better?

B: For employers, other stakeholders

(the wording of the questions was tailored for the role of each stakeholder but the topics were covered in each interview)

- Tell me about your background as it relates to the apprenticeship program.
- What incentive is there for employers to have apprentices?
- What are the challenges the employers face?
- What are the challenges faced by the administrators (college or governmental)?
- What can the college do better to support the apprentices?
- What are incentives/supports for the students/apprentices for completion of their program?
- What are the students saying?
- What are the challenges/barriers to the success of the program?
- Do you have any last words/Is there anything you would like to add that hasn't been covered in the interview?
- [if there were multiple interviews] What if anything has changes since we started this study?
- [for employers] Do you foresee a shortage in man power over the next few years in regard to apprenticeship needs?
- [for employers] Are you losing apprentices to the West Coast?
- [after it had been created] What is the role of the College of Trades in apprenticeship?



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