

**Report on the Skillshed pilot study
data collected in the Region of Durham
in cooperation with the Durham Workforce Authority.**

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Table of Contents

	Page
Introduction	2
Causes of the Skills Gap/Shortage	3
Consequences of the Skills Gap	3
Measuring skills in Canada	3
What is a skillshed analysis?	4
Why do a skillshed analysis?	4
Selected results for the employer skillshed pilot study.	5
Selected results for the employee skillshed pilot study.	16
References	34
Appendix	36
Employer Survey	36
Employee Survey	44
SSHRC Knowledge Synthesis grant final report on Skillshed analysis.	54

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Introduction

The following are selected results derived from the data collected from a pilot study which was a joint initiative between the Durham Workforce Authority in the Region of Durham and Dr. Hannah Scott from the Faculty of Social Science and Humanities at the University of Ontario Institute of Technology. The request for data did not include an in-depth analysis of material as the results follow from a volunteer sample and are not generalizable to the Regional Municipality of Durham. The request dove-tailed into a Knowledge Synthesis Grant that we applied for, and were awarded, with the Social Sciences and Humanities Research Council (SSHRC; file # 412-2013-2006) under the Knowledge Synthesis Grants: Skills Development for Future Needs of the Canadian Labour Market Competition). This report has been completed and will be made available via the SSHRC website at http://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/knowledge_synthesis_grants-subventions_connaissances_syntheses-eng.aspx. A copy of this final report has been placed in the appendix of this document.

What follows is a brief literature review explaining the purpose of a skillshed analysis, and a summary of findings with very few interpretative statements. The purpose of this document is to invoke discussion about the skillshed analysis, to test the instrument generated under the Knowledge Synthesis Grant, and evaluate its potential for local data gathering utility. More in-depth analysis may come at a later date, should there be sufficient interest in doing so.

Causes of the Skills Gap/Shortage

- Canadian companies are experiencing increasing challenges in finding qualified job candidates who have the required skills to fill a position (Deloitte, 2012). The existence of a skills gap is illustrated by Miner (2012), who notes that workers cannot find jobs and employers cannot find workers with the skill sets that they require.
- Causes of the skills shortage: The growth of a knowledge-based workplace, which is accompanied by changes in the nature and organization of work. As a result, jobs are becoming increasingly specialized and require workers to have higher levels of education and skills (Canadian Chamber of Commerce, 2013; Canada Council of Learning, 2006).
- In order to illustrate the predominant shift toward a knowledge-based workplace, the Canadian Chamber of Commerce (2013) notes that between 1991 and 2003, the number of businesses in Canada grew by 12% and the number of workers grew by 8%. Over this same period, the number of high-knowledge businesses increased by 78%, the number of medium-knowledge businesses increased by 14%, and the number of low-knowledge businesses decreased by 3%.
- Associated with the growth of a knowledge-based workplace are technological advancements that have increased productivity and that facilitate communication and information sharing (Canada Council of Learning, 2006).
- The aging of the population and the departure of baby boomers from the workforce (Canadian Chamber of Commerce, 2013; Johnson & Gaston, 2011).
- The growth in global markets has resulted in increased competition for Canadian firms (Canadian Chamber of Commerce, 2013; Canadian Council of Learning, 2006).
- Global competition is further enhanced by the rising level of skills in developing countries (Canadian Chamber of Commerce, 2013)
- Work that was traditionally completed by unskilled workers has been increasingly outsourced to foreign countries, thereby reducing the relative domestic demand for unskilled workers (Canadian Council of Learning, 2006).

Consequences of the Skills Gap

- The shortage of skilled workers reduces the competitiveness of Canadian businesses by limiting their productivity, profitability, and capacity for innovation. To this end, the Canadian Chamber of Commerce (2013) has listed the skills crisis as first on the “Top 10 Barriers to Competitiveness” in both 2012 and 2013.
- The shortage of skills has been described as “one of the great challenges facing Canada” and has been identified as the country’s leading economic issue. It is recognized that the skills gap significantly impedes the country’s potential for long-term economic success (Canadian Chamber of Commerce, 2013).
- In the province of Ontario alone, the skills gap is estimated to cost \$24.3 billion in lost GDP, \$4.4 billion in lost federal tax revenues, and \$3.7 billion in lost provincial tax revenues each year (Stuckey & Munro, 2013).
- On an individual level, the skills gap can have an effect on one’s quality of life by affecting their employability and salary, which can in turn also affect one’s physical health (Canadian Chamber of Commerce, 2013).
- Acemoglu and Autor (2011) note that, over the past 40 years, work experiences and skills have become a better predictor of employment and wage growth than either one’s level of education or occupation.

Measuring skills in Canada

- Existing methods tend to focus on labour shortages as opposed to skills. At the national level, the Canadian Occupational Projection System provides projections of labour demand and supply by occupation. While studies have been conducted at the provincial, regional, and local level (see, for example, Crutchfield 2012), they also tend to focus on labour shortages and surpluses as opposed to gaps in specific skills.
- These methods are problematic for several reasons. Results that focus on the available labour supply are often too broad for assessing exact skills gaps; for example, individuals who are a part of an occupational group may lack certain skills that are required by an employer.
- The demand and supply of skills may vary substantially in different regions of Canada. Employers tend to recruit employees from a narrow geographic area, which can make information collected at the national or provincial level not very meaningful.

What is a skillshed analysis?

- A skillshed has been defined as “the geographic area from which a region pulls its workforce and the skills, education, and experience that the workforce possesses” (Iowa Workforce Development, 2010).
- Closely related to the concept of a skillshed is a labourshed, which is an “area or region from which an employment center draws its commuting workers” (Colorado State University Extension & Colorado Department of Local Affairs, 2008).
- Whereas a labourshed refers to the geographic area from which a region draws its workers, a skillshed refers specifically to the skills, education, and experiences of the workers who comprise this geographic area.
- Studying a workforce at the labourshed level is different from other assessments that focus on a specific region or community. An analysis of a labourshed involves the examination of a distribution of workers as they relate to a node community, regardless of any natural (i.e., rivers, mountains) or political (i.e., state borders, county lines) boundaries (Iowa Workforce Development, n.d.).
- The general goal of a skillshed analysis is to describe the experiences and skills of an area’s labour force, and to compare these experiences and skills with the reported needs of area employers (The Pathfinders, 2012c). In other words, a skillshed analysis identifies and examines the supply and demand for labour with respect to the skills that are required to work within an occupation (Mid Iowa Growth Partnership, 2011; Northeast Iowa Business Network, 2012).
- Although such analyses have been called various different names (for example, skillshed, labourshed, labour availability, labour force, and labour market analyses), they are all similar in that they attempt to assess the skills and experiences of a workforce at the labourshed level.
- While there are differences in the scope and focus of these reports, this paper will consider all studies that examine the skills of a workforce and/or potential workforce at the labourshed level.
- Differences between reports include an exclusive focus on civilian labour (e.g., The Pathfinders, 2012c) as opposed to both civilian and military labour (e.g., TIP Strategies, 2007) within a labourshed, or a sole focus on available labour (e.g., The Pathfinders, 2012a) instead of considering both the current and potential workforce (e.g., North Central Iowa Alliance, 2010).

Why do a skillshed analysis?

- In the past, labour markets have typically been examined by considering the products that are produced by a region, which is then used as a basis for determining the relative strength of certain industries (Iowa Workforce Development, 2010). Also, unemployment rates were often used to form inferences of a region’s potential for economic growth (Cedar County Economic Development Commission, 2011).
- Solely relying on unemployment statistics to measure labour availability can lead to inaccurate conclusions. For example, it used to be believed that the state of Iowa could not sustain economic growth and could not accommodate the needs of expanding and new employers because of low unemployment rates. Despite this, many Iowa companies are receiving between five and ten applicants for new positions that they are attempting to fill. This indicates that unemployment statistics are not an accurate measure for available labour within a region (Cedar County Economic Development Commission, 2011).
- At its most basic level, a skillshed analysis identifies and examines the characteristics of the labour force that forms a part of an identified labourshed (Colorado State University Extension & Colorado Department of Local Affairs, 2008). Specifically, it identifies the current skills that are possessed by workers in the area (the labourshed’s supply), as well as the knowledge and skills required by employers in the area (the labourshed’s demand). This information is then compared to determine any gaps that exist between the skills and education of the workforce and the needs of employers (Iowa Workforce Development, 2010).
- In addition to showing the strengths of a region, this information can be examined in the context of a labourshed’s industry and occupational clusters, as well as the emerging markets, in order to identify which occupations or industries a region can “grow into” (Iowa Workforce Development, 2010).
- It is not entirely clear who actually uses the information that is provided by a skillshed analysis. However, it is apparent that many of the reports are primarily intended for recipients within the business community. For example, the Labour Availability Reports for East Central Indiana and Amarillo, Texas indicate that the availability of labour, the skills and experience of the workforce, and the cost of wages are among the most critical factors that a business considers when determining whether a location is appropriate for new or expanded operations. Therefore, a skillshed report can be an effective tool in understanding regional

workforce issues as they relate to site selections, relocations, expansions, employee retention, and both training requirements and opportunities (Foote Consulting Group, 2011).

- Other skillshed reports indicate that the information being collected is intended for a broader or more general audience. In addition to current and prospective businesses, the information contained in a skillshed report can be used by community and economic development officials in order to retain and expand existing businesses and to recruit new businesses to the area (Iowa Workforce Development, 2012; The Pathfinders, 2012a; 2012b). Local governments and policy makers can use this information to develop economic growth initiatives and to create policies that ensure the workforce is adequately prepared to support emerging occupations and industries. This is often done in conjunction with educational institutions (i.e., community colleges and universities), which may develop programs and tailor courses to respond to the needs of employers in the area. Data that reveals underemployment as a result of a mismatch of skills, low hours, and low income may also be used by community officials to develop initiatives that are intended to reduce poverty and other related social challenges in the area (Iowa Workforce Development, n.d.).
- On a more individual basis, information collected on the gaps in labour supply and demand within an area can be used by individuals to make decisions regarding the training and skills needed to transition from one occupation to another (Iowa Workforce Development, 2010). This information can also be used by “up-and-coming workers” in order to make informed decisions involving their education and future plans to enter the workforce (The Pathfinders, 2012c).

What follows are a series of results from two pilot surveys offered online on a volunteer basis. One was administered to 62 employers from around the Region of Durham. The other was designed to seek information from 299 employed and unemployed individuals who are working or looking for work in the same region. These results, as they are based on individuals who volunteered to complete the survey are not generalizable to the Region of Durham population. However, these results are informative as a pilot and should be used to inform future skillshed projects.

Selected results for the employer skillshed pilot study.

Primary location of business and rural/urban response rate			
	Freq.	%*	Rural/urban
Oshawa	17	27.4	72.6
Pickering	12	19.4	
Clarington	3	4.8	
Ajax	7	11.3	
Whitby	6	9.7	
Brock	3	4.8	11.3
Scugog	3	4.8	
Uxbridge	1	1.7	
More than 1 office across Durham Region.	4	6.5	6.5
Don't know/No answer	6	9.7	9.7
Total	62	100	100
*May not add up to 100% due to rounding.			

Table 1.2		
Number of full time employees excluding respondent		
	Freq.	%*
None	2	11.0
1-4	21	33.9
5 - 20	14	22.6
21-50	11	17.7
50 or more	8	12.9
Don't know/No answer	7	11.3
Total	62	100
*May not add up to 100% due to rounding.		

Table 1.3		
Number of part time employees excluding respondent		
	Freq.	%*
None	17	27.4
1-4	17	27.4
5 - 20	8	12.9
21-50	4	6.5
50 or more	8	12.9
Don't know/No answer	8	12.9
Total	62	100
*May not add up to 100% due to rounding.		

Table 1.4				
Number and percent of salaried and hourly employees				
	Salaried #	Salaried %*	Hourly #	Hourly %*
None	10	16.1	10	16.1
1-25%	14	22.58	5	8.1
26 – 50%	11	17.74	11	17.74
51-75%	7	11.3	8	12.9
76-99%	5	8.1	13	20.97
100%	8	12.9	8	12.9
Don't know/No answer	7	11.3	7	11.3
Total	62	100	62	100
*May not add up to 100% due to rounding.				

Table 1.5				
Number and percent of part and full time employees and hours worked.				
	PT #	PT %*	FT#	FT%*
34 hours or less	39	62.90	4	6.45
35 hours or more	1	1.6	49	79.0
Don't know/No answer	22	35.5	9	14.5
Total	62	100	62	100
*May not add up to 100% due to rounding.				

Table 1.6		
Number and percent of company characteristics: contract and seasonal work, unionization, and employees on layoff.		
	Freq.	%
No. of companies with employees under contract	18	29.0
No. of companies with employees that are seasonal	6	9.7
No. of companies with unionized employees	11	17.7
No. of companies with less than 50% or less unionized workers	5	8.1
No. of companies with employees on layoff	1	1.6

Table 1.7		
Number and percent of businesses requiring various reading, document, numeracy, writing, and computing skills.		
	Freq.	%
Reading skills		
You would like your employees to be able to scan written materials for information and/or overall meaning	44	71
You would like your employees to be able to read materials to understand, learn, critique or evaluate	48	77.4

You would like your employees to be able to analyze and synthesize information from multiple sources for or from complex and lengthy text	33	53.2
Other reading skills not mentioned above	2	1.6
Documents skills		
You would like your employees to be able to read signs, labels or lists	46	74.2
You would like your employees to be able to understand information on graphs or charts	40	64.5
You would like your employees to be able to enter information into forms	48	77.4
You would like your employees to be able to create or read schematic drawings	16	25.8
Other document skills needed not mentioned above	1	1.6
Numeracy skills		
You would like your employees to be able to make calculations	48	77.4
You would like your employees to be able to make measurements	29	46.8
You would like your employees to be able to perform scheduling, budgeting or accounting activities	36	58.1
You would like your employees to be able to analyze data	37	59.7
You would like your employees to be able to make estimations	31	50
Other numeracy skills needed that are not mentioned	3	4.8
Writing skills		
You would like your employees to be able to write to organize or record information	51	82.3

You would like your employees to be able to write to inform or persuade	40	64.5
You would like your employees to be able to write to request information or justify a request	46	74.2
You would like your employees to be able to write an analysis or comparison	34	54.8
Other writing skills needed that are not mentioned above	1	1.6
Computing skills		
You would like your employees to be able to use different forms of technology such as cash registers or fax machines	42	67.6
You would like your employees to be able to use word processing software	45	72.6
You would like your employees to be able to send and receive emails	48	77.4
You would like your employees to be able to create and modify spreadsheets	39	62.9
You would like your employees to be able to navigate the internet	48	77.4
Other computing skills needed that are not mentioned above	4	6.3

Employers were then asked to comment about other skills that were not mentioned in the above lists that were needed for the jobs they were looking for:

- Initiative
- Research capabilities
- Excellent writing, listening, assessment, critical thinking. Able to prioritize, meet deadlines, handle heavy workload, creativity
- Formal training and if possible, real world experience in Video Game Development. Experienced & Fluent in most commonly used software programs necessary for the development of video games.
- Customer service skills. Proper language skills.
- A small percentage of employees will need some of the skills I have not listed
- We require our employees to have customer service skills including problem solving
- Experience working with children and youth
- As web developers we require employees who understand HTML, CSS and Javascript. They need to be self-learners as they will need to learn new programming as the industry evolves.
- Mechanically inclined.
- Excellent Customer Service skills, Ability to build rapport and relationships

- Dental experience
- Must have excellent verbal and written communications skills (English only). Must be able to create a well-written letter email with correct spelling and grammar.
- Would like employees to be responsible to check the quality of their own work
- Most of our employees are skilled labourers - mig welders, industrial painters, mechanically inclined labourers
- Technical Aptitude Millwright Welding
- Our employees need to have basic computer skills on top of their health care training
- Common Sense Open to learn and lead learn from mistakes take direction well Creative thinking
- Compassion for others Passion for completion
- Strong Interpersonal and communication skills
- Many of our employees who are new to the workforce don't know how to open a bank account. Many of them cannot read. Simple math (counting change) is troublesome for many new hires.
- Skills will all be subject to the positions.
- People skills Sales
- We need skilled welders and machinists

Table 1.8		
Number and percent in which businesses reported that at least some of their employees came from the following areas within Durham Region.		
	Freq.	%
Ajax	25	40.3
Oshawa	35	56.5
Pickering	23	37.1
Clarington	23	37.1
Whitby	29	46.8
Brock	7	11.3
Scugog	10	16.1
Uxbridge	9	14.5
Other	15	24.2

Table 1.9		
Recruitment services used to search for employees		
	Freq.	%
Attend job fairs	7	11.3
Centre d'Access a l'Emploi	3	4.8
Durham College Community Employment resource Centre	12	19.4
Durham Region Unemployed Help Centre	10	16.1
Government job banks	9	14.5
John Howard Society	3	4.8

Northern Lights	6	9.7
Online job search engines (i.e., Monster, Workopolis, etc.)	15	24.2
VPI	1	1.6
YMCA Durham Employment	6	9.7
Your company's website	22	35.5
Not applicable	3	4.8
Other methods (acquaintances, agencies, Charity Village, newspaper advertising, references, etc.)	18	29.0

Table 1.10		
Total number of listed recruitment services used by companies to search for employees		
	Freq.	%*
None	20	32.3
1-2	25	40.3
2-4	12	19.4
5 or more	5	8.1
Total	62	100
*May not add up to 100% due to rounding.		

Table 1.11			
Rating from 1 (poor) to 7 (excellent) the availability of services in the Regional Municipality of Durham			
	Mean ¹	S.D. ²	Responses ³
Apprenticeship training	4.44	1.667	9
Colleges	5.38	1.071	21
Cultural facilities	4.77	1.382	30
Daycare affordability	4.05	1.432	20
Daycare availability	4.28	1.320	18
Electrical power	5.94	1.145	36
Housing affordability	4.06	1.492	36
Housing availability	4.42	1.388	36
Medical services	4.93	1.679	41
Other utilities	5.29	1.596	31
Private career colleges	4.47	1.867	19
Public transportation	4.34	1.477	41
Recreation	5.41	1.013	37
Roads	4.71	1.293	38
Secondary schools	5.30	1.262	33

Universities	5.63	1.651	38
<p>1 This is the average of the responses</p> <p>2This is the standard deviation. This means that this is the range of scores that fall within 68% of the mean. For example, if we have a mean of 4, and a standard deviation of 1, then 68 percent of the all the scores would fall in the range of 3 (1 SD below the mean) to 5 (1 SD above the mean).</p> <p>3These are the number of people who felt they had knowledge of the issue and provided an answer to the question.</p>			

Table 1.12			
Rating from 1 (poor) to 7 (excellent) the quality of services in the Regional Municipality of Durham			
	Mean ¹	S.D. ²	Responses ³
Apprenticeship training	4.26	1.695	19
Colleges	5.33	1.539	30
Cultural facilities	4.76	1.411	21
Daycare affordability	4.29	1.490	17
Daycare availability	4.65	1.115	17
Electrical power	5.38	1.522	29
Housing affordability	4.04	1.513	25
Housing availability	4.07	1.328	27
Medical services	4.90	1.689	30
Other utilities	5.08	1.552	25
Private career colleges	4.67	1.557	12
Public transportation	4.22	1.672	27
Recreation	5.21	0.940	29
Roads	4.27	1.437	30
Secondary schools	5.23	1.193	22
Universities	5.43	1.550	28
<p>1 This is the average of the responses</p> <p>2This is the standard deviation. This means that this is the range of scores that fall within 68% of the mean. For example, if we have a mean of 4, and a standard deviation of 1, then 68 percent of the all the scores would fall in the range of 3 (1 SD below the mean) to 5 (1 SD above the mean).</p> <p>3These are the number of people who felt they had knowledge of the issue and provided an answer to the question.</p>			

Table 1.13			
Rating from 1 (poor) to 7 (excellent) the availability and ease that companies are able to fill positions in the following labour areas.			
	Mean ¹	S.D. ²	Responses ³
Skilled	3.89	1.705	38
Unskilled	5.12	1.166	25
Clerical	5.25	1.519	36
Technical	4.39	1.771	28
Management	4.62	1.738	37

1 This is the average of the responses
 2 This is the standard deviation. This means that this is the range of scores that fall within 68% of the mean. For example, if we have a mean of 4, and a standard deviation of 1, then 68 percent of the all the scores would fall in the range of 3 (1 SD below the mean) to 5 (1 SD above the mean).
 3 These are the number of people who felt they had knowledge of the issue and provided an answer to the question.

Companies were asked about the training they provided to ensure the company becomes a “good fit” for the employee. Below are a selection of for this question:

- Computer programs training – i.e., excel, word
- Company orientation, mental health training, AODA , training on programs offered by MTCU (informal)
- AODA, Employment Services Related workshops
- Corporate orientation, buddy system, probationary performance reviews, ongoing training and development (pending budget availability), annual performance appraisals
- We are in the start-up phase and have not yet hired a full-time or part-time employee outside of the founders. As we prepare to hire our first employee we will ensure that we create some sort of training program for that position. As our company’s employees do operate very closely in a team dynamic, the employee will need to be a ‘good fit’ both personality and in ability to perform job roles.
- On-site and hands on by us the owners
- Many types, both in-house and external.
- Computer program training - ms word suite
- Professional development workshops
- It varies for my office since it is such a variety of skill sets required.
- Individual training with an existing employee. Also online and class training.
- Required to take Mortgage Agent course & become AMP
- A variety of training often provided by our funders at not charge. We also give all staff PHCD, First Aid, CPR, WHMIS, and a wide variety of in-house training.
- We teach new employees the latest methods in building websites. We also introduce them to new online services.
- We provide management, clerical skills and technical type training
- High school College/University
- On the job training
- Hands-on work as well as seminar workshops at best practice stores
- Dental back ground
- orientation of 6 - 7 days health and safety training, policy training
- All
- We need employees that have experience, we cannot train on the job.
- Internal training. On-line training (virtual training).
- Full learning and development course and in class courses
- WHMIS, forklift, overhead crane, violence & harassment

- Apprentice Millwright All necessary safety training Vantage Software Training Durham college courses applicable to position
- In long term care we take a lot of students, PSW, RPN, and RN. These students become our future hires. All new hires are provided full training in their positions
- Training set up by company
- None
- On the job training.
- training courses provincial lic for OTL training course and lic for LLQP Life lic training course and lic for mutual funds
- On hand training as well as computerized specialized product training
- New employee orientation and training
- Defusing anger training Customer Service Training Conferences Workshops
- On the job/hands on training with fully trained staff/management. Training materials are used to help aid in the training of new staff members
- Health & Safety (variations) Dealing with Difficult People/Customer Service On the job training Mentorship PD as available
- Train them on my standards. Food handling course.
- Internal and external as needed.
- Industry specific seminars - payroll, software, taxation
- We have an educational reimbursement program for employees to upgrade College, University level. We also provide in house training and have employees attend seminars where applicable.
- Product training customer service training office training
- We do not have any specific/skilled training for our employees. Employees are encouraged to participate in professional development.
- Sales training
- We provide and pay for all education that the employee and the company believe is relevant to success and pay on passing marks!
- We do one on one training here as well as courses they attend.
- Corporate
- Product knowledge training 3 step professional salesmanship training house hold procedure
- Generally 2 weeks' worth of training before a new employee becomes integrated.

Businesses were also asked about the positive aspects of hiring from within the Regional Municipality of Durham:

- They know the community
- Access to skilled young professionals (through the colleges and universities), local workforce that is willing to and looking for work, employment network you are able to connect with the find the right employees
- Large talent pool of highly skilled workers available. High levels of education. Free employment services throughout the region to assist in hiring.
- Knowledge of community, ease of commute, supports local residents, and their lifestyles
- As our company's founders are all graduates of UOIT's Game Development & Entrepreneurship program, we are still well connected with the University, and have access to the most recent graduates of the program. Additionally, Durham College has a similar program and we have a similar connection with the College.
- Feel good about hiring in our own region
- Stable employee base.
- Understand the region because they live here.
- Some qualified staff familiar with the region
- Support the community and economy in the area. Enjoy working with local students or young people. Less stressful for them than commuting to Toronto. Feel a commitment to the success of my business in Durham Region.
- Employees are close to home so they see value in not having to travel outside of where they live
- People like being able to work close to home. There are a lot of college and university students interested in finding part-time work. Our full-time staff stay a long time with our agency.

- People that are from Durham aren't from Toronto. They have an appreciation for the life that Durham affords. Scugog is a community. Our advantage is attracting those type of employees that prefer this type of rural community over urban Toronto.
- Whenever possible we like to hire locally (Durham) because it helps us with employee retention.
- Keep the skills in own community
- Know people in the area
- Realistic workers
- Close to home
- Our trucks are located in Durham region so hiring from the area means less travelling to pick up the trucks
- Happier employees (able to work closer to home and save on time and gas). Fewer problems with attendance.
- Close to work community involvement
- Larger population to choose from
- There is a large pool of mature employees willing to work to make a difference. Durham College provides us good apprentice employees.
- Hiring in your own community is always good.
- Close to work, helping the economy
- Wages are minimal
- Durham college graduates have been referred to me and have been good employees
- reliability to get to work
- Applicants are keen as UOIT is close to home Greater sense of community belonging with a growing University
- Hiring individuals who live in Durham and want to work in Durham. They know the Region well.
- So far we have not had very much luck in finding reliable/capable/responsible/dependable/honest employees (we have a handful of good employees but the majority are not employable)
- Lots of applicants to choose from
- Local talent, local growth
- Transportation costs and time for their families.
- Allows people to work close to home
- Recruiting is not restricted to the Durham region. We look in Durham and outside to find the best candidates for our open positions if we are not able to promote from within.
- Travel location
- Less travel & stress
- They are close to work.
- Readily available, close commute
- People are eager to work.

Employers were then asked to identify some of the negative aspects to hiring from within the Regional Municipality of Durham:

- Perception that companies in Durham Region do not pay competitive wages, employees can look outside of Durham Region for work where wages will be higher
- Rural areas lack service
- A large portion of the video game industry in Canada is in Toronto, Montreal and Vancouver. A lot of game developers live in these cities. In the future this could be a potential problem in recruiting individuals to move to Durham Region from Toronto, etc.
- Writing and language skills.
- Limited talent
- Lots of people looking for work means that there are hundreds of resumes to go through
- Not as much variety in terms of educational background
- Variety of job skills
- We are sometimes unable to fill all of our positions. People don't stay long as they find better paying jobs (part-time only)
- At times it is difficult to find qualified electrical trades and engineering staff.
- Not enough qualified candidates. Wages not high enough to keep them.

- Overall, the quality of applicants interested in positions at our store is quite poor in terms of skills, education and experience.
- Not enough Registered staff
- Quality of personnel
- Not enough experienced drivers - need to look outside of the region to hire
- Lack of movement once in a role due to close to home
- Lots of unemployment from auto industry which are semi-non skilled labourers
- As in any community right now qualified and experienced technical staff hard to find.
- Skills and results are minimal
- Shortage of available reliable help in the Northern part of the Region
- Many people seem to want high salary, benefits, and fixed hours. Not sure if it is because of long history of unions in Oshawa, hard for small sole proprietor. have found that younger employees fit better
- Some challenges in finding candidates with post-secondary work experience
- Smaller pool of qualified candidates
- Most of the people who come to apply for positions are our establishment are either just looking for some extra pocket change or their parents have sent them out to find a job. This group is not responsible or reliable and they don't care about my business or their co-workers
- Often receive applications from people who live very far away for a contract position... Will the person stay?
- The pay scale is a bit less than GTA.
- Smaller pool than Toronto
- No jobs available

Employers we asked at the end of the survey to identify which positions they were currently looking to hire. Of the 62 respondents, 20 did not answer this question. Another 12 responded that they were not looking for employees at this time. Therefore just over half of those who responded to the survey (51.6%) stated they were not looking for workers or did not feel they could answer the question.

Selected results for the employee skillshed pilot study.

Table 2.1		
Age of respondent (N=229)		
	Freq.	%*
18-24	33	14.4
25-34	29	12.7
35-44	39	17.0
45-54	81	35.4
55-64	31	13.6
65 and over	5	2.2
Don't know/No answer	11	4.8
Total	229	100
*May not add up to 100% due to rounding.		

Table 2.2		
Gender of respondent (N=229)		
	Freq.	%*
Female	150	65.5
Male	71	31.0
Don't know/No answer	8	3.5
Total	229	100
*May not add up to 100% due to rounding.		

Table 2.3		
Highest educational attainment of respondent (N=229)		
	Freq.	%*
No certificate, diploma, or degree	4	1.7
High school certificate or equivalent	45	19.7
Apprenticeship of trades certificate or diploma	7	3.1
Some college/working on college degree	2	0.9
College, CEGEP, or other non-university certificate or diploma	70	30.6
Some university/working on university degree	2	0.9
University certificate, diploma, or degree	64	27.9
Graduate or post graduate degree	23	10.0
Other	1	0.4
Don't know/No answer	11	4.8
Total	229	100
*May not add up to 100% due to rounding.		

Table 2.4		
Number and percent of workforce respondents and position in the workforce career		
	Freq.	%
No. of workforce employed - full time	137	59.8
No. of workforce employed - part time	33	14.4
No. of workforce unemployed	32	14.0
No. of workforce retired	6	2.2
No of workforce who are home makers – full time	2	0.9
No of workforce who are home makers – part time	1	0.4
No. of workforce who are students – full time	10	4.4
No. of workforce who are students – part time	1	0.4
No. of workforce who are self employed	12	5.2
No of workforce – precarious short term full time employment or sporadic part time employment	3	1.3
Receiving benefits - disability	1	0.4

Table 2.5		
How many workplaces do you have? (N=229)		
	Freq.	%*
0	12	5.2
1	151	65.9
2	24	12.4
3 or more	6	2.6
Don't know/No answer	36	15.7

How long have you been at your job (years) (N=229)			
	Freq.	%*	
Less than one year	7	3.1	Proportion of people working 5 years or less at current job: 30.6%
1 year	18	7.9	
2 years	17	7.4	
3 years	14	6.1	
4 years	9	3.9	
5 years	15	6.6	
6-10 years	37	16.2	Proportion of people working 6 years or more at current job: 34.9%
11-15 years	19	8.3	
16-20 years	8	3.5	
21-30 years	14	6.1	
30 or more years	2	0.9	
Don't know/No answer/ Not applicable	69	30.1	
Total	229	100	
*May not add up to 100% due to rounding.			

Employed respondent's personal income from all sources and before taxes and other deductions and desired salary (N=229)					
	Current Income		Desired Salary		
	Freq.	%*		Freq.	%*
No income	3	1.3		4	1.7
Less than \$5000	11	4.8		6	2.6
\$5000 or more by less than \$9,999	13	5.7		4	1.7
\$10,000 or more but less than \$14,999	10	4.4		9	3.9

\$15,000 or more but less than \$19,999	5	2.2		9	3.9
\$20,000 or more but less than \$29,999	9	3.9		10	4.4
\$30,000 or more but less than \$39,999	15	6.6		13	5.7
\$40,000 or more but less than \$49,999	18	7.9		23	10.0
\$50,000 or more but less than \$59,999	18	7.9		14	6.1
\$60,000 or more but less than \$69,999	22	9.6		17	7.4
\$70,000 or more but less than \$79,999	18	7.9		19	8.3
\$80,000 or more but less than \$89,999	12	5.2		9	3.9
\$90,000 or more but less than \$99,999	6	2.6		10	4.4
\$100,000 or more but less than \$109,999	8	3.5		6	2.6
\$110,000 or more but less than \$149,999	8	2.5		7	3.1
\$150,000 or more	5	2.2		4	1.7
Income loss	1	0.4		0	0.0
Don't know/No answer	47	20.5		62	27.1
Total	229	100		229	100
*May not add up to 100% due to rounding.					

Table 2.8		
Number and percent who answered “yes” to job happiness and fit questions.		
	Freq.	%*
Are you willing to apply for a different job?	102	44.5
I have all the skills and training I need to do my job.	102	44.5
I have more skills than this job requires.	59	25.8
I need more training to do my job effectively.	21	9.2

Table 2.9		
Number and percent of respondents in the workforce who are required to do various reading, document, numeracy, writing, and computing skills as part of their employment.		
	Freq.	%
Reading skills		
Do you scan written materials for information and/or overall meaning	145	63.3
Do you read materials to understand, learn, critique or evaluate	167	72.9
Do you to analyze and synthesize information from multiple sources for or from complex and lengthy text	121	52.8
Other reading skills not mentioned (highly specialized reading/analysis)	3	1.7
Documents skills		
Do you have to read signs, labels or lists	137	59.8
Do you have to be able to understand information on graphs or charts	146	63.8
Do you have to be able to enter information into forms	155	67.7
Do you have to be able to create or read schematic drawings	41	17.9

Other document skills needed not mentioned (create or read documents, read spreadsheets, contracts, blueprints, and proofreading)	6	2.6
Numeracy skills		
Do you have to make calculations	158	69.0
Do you have to be able to make measurements	77	33.6
Do you have to be able to perform scheduling, budgeting or accounting activities	141	61.6
Do you have to be able to analyze data	139	60.7
Do you have to be able to make estimations	114	49.8
Other numeracy skills needed that are not mentioned (projections)	1	0.4
Writing skills		
Do you have to be able to write to organize or record information	167	72.9
Do you have to be able to write to inform or persuade	145	63.3
Do you have to be able to write to request information or justify a request	156	68.1
Do you have to be able to write an analysis or comparison	113	49.3
Other writing skills needed that are not mentioned above (create policy, write grants, legal writing)	3	1.7
Computing skills		
Do you have to use different forms of technology such as cash registers or fax machines	141	61.6
Do you have to be able to use word processing software	169	73.8
Do you have to be able to send and receive emails	150	65.5

Do you have to be able to create and modify spreadsheets	176	76.9
Do you have to be able to navigate the internet	149	65.1
Other computing skills needed that are not mentioned above (software design, other IT including computer hardware and specialized software skills)	8	3.5

Table 2.10		
Number and percent of respondents in the workforce who stated these skills are NOT used at their place of employment		
	Freq.	%
Reading skills		
Scanning written materials for information and/or overall meaning	32	14.0
Read materials to understand, learn, critique or evaluate	20	8.7
Analyze and synthesize information from multiple sources for or from complex and lengthy text	36	15.7
Documents skills		
Read signs, labels or lists	32	14.0
Understand information on graphs or charts	39	17.0
Enter information into forms	24	10.5
Create or read schematic drawings	82	35.8
Numeracy skills		
Make calculations	34	14.8
Make measurements	75	32.8
Perform scheduling, budgeting or accounting activities	40	17.5
Analyze data	39	17.0
Make estimations	44	19.2
Writing skills		

Write to organize or record information	24	10.5
Write to inform or persuade	35	15.3
Write to request information or justify a request	28	12.2
Write an analysis or comparison	35	15.3
Computing skills		
Use different forms of technology such as cash registers or fax machines	28	12.2
Use word processing software	32	14.0
Send and receive emails	29	12.7
Create and modify spreadsheets	34	14.8
Navigate the internet	26	11.4

Table 2.11					
Commuting characteristics, current and desired commuting times					
	Yes	%		No	%
Do you commute to your place of employment?	166	72.5		63	27.5
Commuting distances					
	Current		Desired		
Commute distances	Freq.	%*		Freq.	%*
Less than 1 km	12	12.4		9	3.9
1 to 5 kms	35	15.3		3	1.3
6 to 10 kms	39	17.0		5	2.2
11 to 20 kms	30	13.1		17	7.4
21 to 30 kms	23	10.0		49	21.4
31 to 40 kms	13	5.7		22	9.6
41 to 50 kms	18	7.9		37	16.2
51 to 80 kms	8	3.5		29	12.7
81 or more kms	5	2.2		15	6.6
Don't know/No answer	43	18.8		43	18.8
Total	229	100		229	100
*May not add up to 100% due to rounding.					

Table 2.12		
How long have you been unemployed (years) (N=229)		
	Freq.	%*
Less than one year	29	12.7
1 year	3	1.3
2 years	8	3.5
3 years	3	1.3
4 years	1	0.4
5 years	0	0.0
6-10 years	4	1.7
Don't know/No answer/Not applicable	180	78.6
Total	229	100
*May not add up to 100% due to rounding.		

Table 2.13		
Number and percent of unemployed work experience and work interest		
	Freq.	%
Do you have any interest in entering or re-entering the workforce	46	12.7
Have you had full time work before?	21	1.3

Table 2.14		
Number and percent of respondents who are unemployed and skills possessed: various reading, document, numeracy, writing, and computing skills		
	Freq.	%
Reading skills		
Can you scan written materials for information and/or overall meaning	44	19.2
Can you read materials to understand, learn, critique or evaluate	52	22.7
Can you to analyze and synthesize information from multiple sources for or from complex and lengthy text	35	15.3
Other reading skills not mentioned (fluency in other languages)	1	0.4
Documents skills		
Can you read signs, labels or lists	52	22.7

Can you understand information on graphs or charts	45	19.7
Can you enter information into forms	46	20.1
Can you create or read schematic drawings	23	10.0
Numeracy skills		
Can you make calculations	49	21.4
Can you make measurements	37	16.2
Can you perform scheduling, budgeting or accounting activities	38	16.6
Can you analyze data	40	17.5
Can you make estimations	31	13.5
Writing skills		
Can you write to organize or record information	56	24.5
Can you write to inform or persuade	42	18.3
Can you write to request information or justify a request	47	20.5
Can you write an analysis or comparison	42	18.3
Other writing skills needed that are not mentioned above (create poetry, music)	1	0.4
Computing skills		
Can you use different forms of technology such as cash registers or fax machines	41	17.9
Can you use word processing software	41	17.9
Can you send and receive emails	51	22.3
Can you create and modify spreadsheets	37	16.2
Can you navigate the internet	49	21.4
Other computing skills you perform that are not mentioned above (PC assembly and trouble shooting)	1	0.4

	Freq.	%
Attend job fairs	23	10.0
Centre d'Access a l'Emploi	4	1.7
Durham College Community Employment resource Centre	13	5.7
Durham Region Unemployed Help Centre	32	14.0
Government job banks	38	16.6
John Howard Society	14	6.1
Northern Lights	10	4.4
Online job search engines (i.e., Monster, Workopolis, etc.)	44	19.2
Other websites (i.e. Kijiji, Craigslist, etc.)	32	14.0
Talk to friends and family	42	18.3
VPI	5	2.2
YMCA Durham Employment	11	4.8
Other methods (acquaintances, agencies, charity village, newspaper advertising, references, etc.)		

Respondents were asked, in addition to what was mentioned in the list above, what other resources have they used to look for work.

- Charity Village
- Cold calls
- Durham Region Employment Network
- Job Skills Seneca Newmarket
- Newspapers
- Professional websites and recruiters
- Specific employer websites
- Volunteering

Table 2.16					
If you entered the workforce, how far would you be willing to commute to work in kilometers, and in minutes, one-way?					
	Kilometers		Minutes		
Commute distances	Freq.	%*		Freq.	%*
Less than 1 km or minutes	0	0.0		2	3.6
1 to 5 kms or minutes	3	5.6		1	1.8
6 to 10 kms or minutes	3	5.6		0	0.0
11 to 20 kms or minutes	9	16.7		7	12.5
21 to 30 kms or minutes	12	22.2		9	16.1
31 to 40 kms or minutes	1	0.4		4	7.1
41 to 50 kms or minutes	15	1.9		8	14.3
51 to 80 kms or minutes	6	6.7		20	35.7
81 or more kms or minutes	5	9.3		5	8.9
Total	54	100		56	100
*May not add up to 100% due to rounding.					

Table 2.17		
As an unemployed person, if you were offered a job in your field that has a lower salary than what you desired, but was closer to home would you consider taking it?		
	Freq.	%*
Yes	43	70.5
No	13	21.3
Don't know	5	8.2
Total	61	100
*May not add up to 100% due to rounding.		

Table 2.18		
All respondents - if you were offered a job in your field that has a lower salary than what you desired, but was closer to home would you consider taking it?		
	Freq.	%*
Yes	74	32.3
No	87	38.0
Not applicable	21	9.2
No answer	47	20.5
Total	229	100

*May not add up to 100% due to rounding.

Table 2.19		
Unemployed respondent's desired salary (N=54)		
	Desired Income	
	Freq.	%*
No income	1	1.9
Less than \$5000	0	0.0
\$5000 or more but less than \$9,999	1	1.9
\$10,000 or more but less than \$14,999	0	0.0
\$15,000 or more but less than \$19,999	2	3.7
\$20,000 or more but less than \$29,999	5	9.3
\$30,000 or more but less than \$39,999	10	18.5
\$40,000 or more but less than \$49,999	12	22.2
\$50,000 or more but less than \$59,999	2	3.7
\$60,000 or more but less than \$69,999	4	7.4
\$70,000 or more but less than \$79,999	2	3.7
\$80,000 or more but less than \$89,999	0	0.0
\$90,000 or more but less than \$99,999	1	1.9
\$100,000 or more but less than \$109,999	3	5.6

\$110,000 or more but less than \$149,999	1	1.9
\$150,000 or more	5	9.3
Total	54	100
*May not add up to 100% due to rounding.		

Table 2.20		
All respondents (whether employed or unemployed) - If they said yes to working more locally, what would be their desired salary (n=70)		
	Desired Income	
	Freq.	%*
No income	1	1.4
Less than \$5000	0	0.0
\$5000 or more by less than \$9,999	1	1.4
\$10,000 or more but less than \$14,999	1	1.4
\$15,000 or more but less than \$19,999	1	1.4
\$20,000 or more but less than \$29,999	9	12.9
\$30,000 or more but less than \$39,999	16	22.9
\$40,000 or more but less than \$49,999	11	15.7
\$50,000 or more but less than \$59,999	6	8.6
\$60,000 or more but less than \$69,999	5	7.1
\$70,000 or more but less than \$79,999	6	8.6
\$80,000 or more but less than \$89,999	2	2.9
\$90,000 or more but less than \$99,999	2	2.9
\$100,000 or more but less than \$109,999	1	1.4
\$110,000 or more but less than \$149,999	3	4.3
\$150,000 or more	2	2.9
Total	70	100
*May not add up to 100% due to rounding.		

Table 2.21		
Do you volunteer?		
	Freq.	%*
Yes	116	50.7
No	74	32.3
Not applicable	39	17.0
Total	229	100
*May not add up to 100% due to rounding.		

Table 2.22		
Are the skills you listed above used in your volunteer position?		
	Freq.	%*
Yes	93	40.6
No	21	9.2
Not applicable/do not volunteer	115	50.2
Total	229	100
*May not add up to 100% due to rounding.		

Respondents both employed and unemployed were asked to explain which of their skills were utilized at their volunteer position. A total of 138 people did not answer this question as they did not want to answer, either felt that the question was not applicable to their situation, or they did not volunteer. Below is a selection of their comments:

- Drafting or Preparing Program Proposal - Conducting or Facilitating Workshop - Listening others needs and providing advises - Excellent Interpersonal Skill - Tutoring - Problem Solving Skill
- Office procedures -Filing -Searching -Telephone/Communications -Fax machines -Typing -Preparing reports -Forms -Writing articles -Creating brochures and flyers -Critical thinking
- accounting, first aid, organizing schedules and time management
- accounting, strategic planning,
- Administration
- All of the skills mentioned above I use in my volunteer position
- All skills which are applicable to serving as a Board member.
- analyzing data, strategic planning, communication, internet, forms, emailing, scheduling, advising, manual labour
- Any and all computer skills, reading, writing and more that aren't used for work.
- calculations/budgeting/written and verbal skills
- Communication Reading Writing Physical Activity
- Communication skills, negotiation skills, planning and scheduling skills and document use skills
- communication, networking, computer skills, analyzing, record keeping and estimating
- crisis intervention facilitate group discussion
- Customer Service childcare cooking
- Data Entry
- email
- Employment Counselling skills i.e. resume writing, career coaching, facilitation skills, public speaking, memorizing, communication skills
- Event planning and fundraising

- Filling out forms, word processing, writing to inform/persuade, using technology, writing to request information, making calculations. Washing everything constant. Getting slobbered on by large dogs.
- Financial Process Analysis
- helping people help themselves
- Helping Seniors
- Highly organized. Attention to detail. Compassion for the career. Reliable, Dependable. Independent worker. Problem Solving.
- I am able to help with their taxes, fundraising activities, incorporate some analytical point of views in regards to ideas through conversations and formulating written ideas
- I am sometimes called upon to write on behalf of organizations to persuade people to donate or alter a decision.
- Leadership and team player abilities for committee/project planning and activity. Multiple resource contacts amassed from job and networking. Public relations and diplomacy skills.
- leadership skills, team building, time management, problem solving, organizational skills, fundraising
- listening, comprehending, calculating, email, internet search, inform, persuade, organize, record data, schedule, request information.
- Make calculations
- Many of them, at different times
- math, budgets, scanning docs, writing minutes
- Mathematical skills, leadership, problem solving, carrying weight
- Mentoring, listening, organizing, review/ interpret business plan
- Most of them
- my communications and willing to share what i learned from the members of AA
- negotiating, planning, budgeting, presenting,
- numeracy, communication, reading, analysis, writing, computer usage
- Observing, note taking,
- organizational skills, facilitation skills, document preparation and distribution, analytical skills
- Organizing, Planning, Scanning, Calculations
- Organizing, reading, data collection and storage, email, web, accounting and numeracy
- organizing, writing skills, computer skills, people skills
- patient care
- Photography
- Planning, Budgeting, Reading, Writing
- Presentation, writing, analysis, spreadsheets, technology such as email text and cell phone
- Read material, record information, create spreadsheets, use fax, photocopier & internet.
- Reading (for drills etc.) Writing- parent information etc.
- reading reports; analyzing data
- Reading skills, grant writing, public speaking
- Reading text, writing reports, writing grant applications
- Reading, Document Use, Numeracy, Computer Use, Writing, Working with Others, Thinking Skills, Oral Communication
- Reading, explaining, counting, using information to make decisions i.e. diet list says no thin liquids for Mr. Smith so no cup of tea offered but frozen ice cream OK
- recording information Helping others in need
- Researching, computer use, internet use, fundraising
- Safety Experience
- sales / networking / entrepreneurial
- scan written materials for information and/or overall meaning read materials to understand, learn write to organize or record information Do you write to inform or persuade write to request information or justify a request perform scheduling activities Make calculations use word processing software send and receive emails create and modify spreadsheets navigate the internet read lists enter information into forms
- Scheduling and directing of rehearsals, reading plays and interpreting for production values and needs; emailing performers and crew; communicating intent of play and performance requirements;
- Scheduling, Collaborative activities for execution of events.

- Self confidence
- Sending and receiving email analyzing data Preparing spreadsheets Written work
- TASK ORIENTED, TECHNOLOGY
- teaching diplomacy
- This is my primary employer, but I volunteer time and skills to specific fundraising events. Part of my job function is to welcome dignitaries and the general public. I also will help with set up/tear down of the events, and participate in the events.
- until recently volunteered at Pickering Soccer Club as the House league Director - computer use and calling of people (phone skills) as well as organization/spread-sheeting were very important.
- Use of computer and internet
- Writing, computer and communication skills.
- written communication, emails, creating reports, spreadsheets, website, navigating the website, calculations, banking

All respondents were then asked to share some of the obstacles and challenges they have faced or were currently experiencing. Below is a very preliminary trend analysis of patterns in responses:

- Many mention that the job market is saturated or highly competitive as jobs are few in specific areas in fields they have been trained. Certification in many cases is very specific, and getting required certifications can be difficult. Some identified that they had many of the skills needed but were certified in other fields, suggesting that the skills they had were transferable, but there was an over-reliance on certification requirements.
- Only one respondent mentioned ethnicity is an obstacle to employment
- Time completion was a major factor, for those either trying to negotiate work and family needs, or job search needs with maintaining a current job for which they felt was not in their area, or they were displeased with for other reasons.
- Many respondents identified ageism and age discrimination as problematic. Although this was most widely commented on by older respondents, some younger respondents were also feeling this was an issue.
- Many also expressed the concern that it was difficult to get a job without work experience even after internships and volunteer experience. Others, who have experience in other countries mentioned issues with having specifically Canadian work experience.
- Some mentioned that finding a job was important but there was concern over a reasonable wage. Some in this group were even more specific, looking for jobs with reasonable wages, in a community that worked for them. Although not mentioned that often, commute times did appear to play a role in some obstacles faced, looking at the number of people who mentioned commute times, or the importance of the local job market and transportation issues.
- Many respondents identified that they needed more job searching skills such as interview training, cover letter writing, resume building, and help with computer internet job searches.
- Many also expressed frustration in the job search when prospective employers were not providing any feedback, including a notification that the candidate was not successful in the job search. Many also identified that the job search, especially over computer, was overwhelming and that employers were not prepared to get to know them. People felt that the computer application process was “automated” and alienating. Further the computer application process enhanced the employer’s non-responsiveness if unsuccessful in the job application providing little understanding of why their applications were unsuccessful.
- Many who were searching for work recognized that many jobs were short term full and part time contract positions that were precarious.
- Further, one person suggested job councillors were identified as overworked and were not able to offer quality feedback.
- A few individuals felt that getting to know or learn about jobs that are available was an obstacle. Some felt that jobs posted may be for internal candidates only, or that you had to know someone who knew of a job that was available as they felt that some job opportunities were not being posted.
- A few respondents mentioned that they wanted to work for current employers in the region, but those employers were not replacing the workforce in those jobs.
- Many, especially older and/or retired workers felt that they had a lot of job experience, but were not able to get a job and a salary that reflected their experience. Often they would be told they are over-qualified for positions.

- One respondent had concerns that there were no jobs in the automotive industry for which they were trained. This same person also talked about hostile work environments as an obstacle in looking for work.
- Some, who were currently employed, were looking for jobs that held more interest for them.

Respondents were then asked to identify what they felt they would need in terms of training and/or training in order to obtain a job that was desirable.

Overall respondents stated that they needed help in a variety of ways. Many identified the need for advanced university degrees or certificates from colleges or training facilities. Some identified the need for some additional coursework to upgrade or maintain skills. Those new to the work environment who were looking for work expressed needs for more job search training. Some identified that they needed more experience in the workforce and were working towards that goal. A small portion (13 of 149 responses) of respondents stated that they did not need additional training, education, or certification to get the job they desired.

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Appendix

Appendix
Table of Contents
Page

Employer Survey	36	
Employee Survey	44	
SSHRC Knowledge Synthesis grant final report on Skillshed analysis.		54

Skillshed Employer Survey - Template

INFORMATION ABOUT THE EMPLOYER

First, we would like to get to know your business and gather some details about your employees and the employee structure of your business.

1. What is the name of your business/company/organization?

2. What are the first 3 characters of your business's postal code? (i.e., L9L)

3. What industry is your business/company/organization in?

- Accommodation, Food Services, and Hospitality
- Agriculture, Fishing and Hunting
- Construction
- Finance and Insurance
- Forestry and Forest Industries
- Government
- Health Care and Social Assistance
- Information and Cultural Industries
- Licensed Trades (i.e. Plumber, Electrician, etc.)
- Mining, Quarrying, and Oil and Gas Extraction
- Not-For-Profit
- Professional, Scientific, and Technical Services
- Professional Services (i.e. Legal, Accounting, Real Estate, etc.)
- Public Administration
- Transportation and Warehousing
- Waste Management and Remediation Services
- Other

4. What is your job title?

5. Other than yourself, how many full-time employees does your business/company/organization have?

6. Other than yourself, how many part-time employees does your business/company organization have?

7. How many of your employees are salaried and how many are paid hourly?

Salaried

Hourly

8. How many hours a week do your part-time and full-time employees work?

Part-time

Full-time

9. How many of your employees are contractual and how many are seasonal? If this does not apply to you please skip to the next question.

Contractual

Seasonal

10a. Do you have unionized employees?

- Yes
- No
- Not applicable

10b. If you answered yes to 11a, approximately what percentage of your employees are unionized? If none of your employees are unionized, please place a zero (0) in the box below.

11a. Do you have employees on layoff? (If you answer yes, please answer questions 11b & 11c, if you answered no please move on to question 12)

- Yes
- No
- Not applicable

11b. If you answered yes to question 12a, how many employees are on layoff?

11c. If you answered yes to question 12a, how long is the average layoff term? (Please state this in terms of months).

12. What is your average starting wage per hour at your business/company/organization?

\$
Per hour

SKILLS NEEDS

Which of the following skills do you need from your workforce?

(Please answer questions 13a to 13f with regards to desired skills sets. There is an example provided for each skill set. Please select any options that are applicable to each skills desired from your workforce).

13a. Reading Skills:

For example, an airlines sales agent reads notices on a computer screen, such as special handling requirements or weather information.

Please choose all that apply:

- You would like your employees to be able to scan written materials for information and/or overall meaning
- You would like your employees to be able to read materials to understand, learn, critique or evaluate
- You would like your employees to be able to analyze and synthesize information from multiple sources for or from complex and lengthy text
- Other, please specify:

13b. Document Use Skills:

For example, a bricklayer interprets blueprints to determine the height, length and thickness of walls.

Please choose all that apply:

- You would like your employees to be able to read signs, labels or lists
- You would like your employees to be able to understand information on graphs or charts
- You would like your employees to be able to enter information into forms
- You would like your employees to be able to create or read schematic drawings
- Other, please specify:

13c. Numeracy Skills:

For example, payroll clerks monitor vacation entitlements to prepare budget and scheduling forecasts.

Please choose all that apply:

- You would like your employees to be able to make calculations
- You would like your employees to be able to make measurements
- You would like your employees to be able to perform scheduling, budgeting or accounting activities
- You would like your employees to be able to analyze data
- You would like your employees to be able to make estimations
- Other, please specify:

13d. Writing Skills:

For example, Human resources professionals write recommendations on issues such as workplace health and safety.

Please choose all that apply:

- You would like your employees to be able to write to organize or record information
- You would like your employees to be able to write to inform or persuade
- You would like your employees to be able to write to request information or justify a request
- You would like your employees to be able to write an analysis or comparison
- Other, please specify:

13e. Computer Use Skills:

For example, telephone operators use customized software to scan databases for telephone numbers or long distance rates.

Please choose all that apply:

- You would like your employees to be able to use different forms of technology such as cash registers or fax machines
- You would like your employees to be able to use word processing software
- You would like your employees to be able to send and receive emails
- You would like your employees to be able to create and modify spreadsheets
- You would like your employees to be able to navigate the internet
- Other, please specify:

13f. Please provide us with any other comments you may have on the desired skills from your workforce (If you currently do not have any employees, please write 'not applicable' below).

14. Approximately what percentage of your employees come from each of the following areas?

Please choose all that apply and provide a comment:

[Local boundary designation (i.e, neighbourhood, township, parish, etc.)]

Other, please specify:

TRAINING AND RECRUITING EMPLOYEES

We would now like to ask you some questions about training and recruiting of employees

15a. Are you trying to fill a position in your business/company/organization?

- Yes
- No
- Not applicable

15b. If you answered “yes” to the question above, how many positions are you currently trying to fill?

16. Now, thinking about your last series of hiring, about how long, on average, does it take to fill a position once it has been created, or vacated?

17. Please indicate what occupations you are having difficulty filling and retaining?

18. Thinking about all the jobs that you offer in your place of employment, which jobs do you think are the hardest to fill?

19. In the last year have you had any changes to the size of your workforce?

- Increased the number of employees
- Decreased the number of employees
- My workforce has stayed about the same size over the last year
- Not applicable

20. Thinking about the next five years are you looking to change the size of your workforce?

- Increased the number of employees
- Decreased the number of employees
- My workforce has stayed about the same size over the last year
- Not applicable

21. What are the methods your organization uses to recruit employees?

Please choose all that apply:

- Attend job fairs
- Government job banks
- John Howard Society
- Online job search engines (i.e. Monster, Workopolis, etc.)
- Other websites (i.e. Kijiji, Craigslist, etc.)
- Talk to friends and family about job opportunities
- [Local employment resource]
- [Local employment resource]
- Not applicable
- Other, please specify:

22. Please rate the availability of services in the region of Durham:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Apprenticeship training	<input type="radio"/>							
Colleges	<input type="radio"/>							
Cultural facilities	<input type="radio"/>							
Daycare affordability	<input type="radio"/>							
Daycare availability	<input type="radio"/>							
Electrical power	<input type="radio"/>							
Housing affordability	<input type="radio"/>							
Housing availability	<input type="radio"/>							
Medical services	<input type="radio"/>							
Other utilities	<input type="radio"/>							
Private career colleges	<input type="radio"/>							
Public transportation	<input type="radio"/>							
Recreation	<input type="radio"/>							
Roads	<input type="radio"/>							
Secondary schools	<input type="radio"/>							
Universities	<input type="radio"/>							

23. Please rate the quality of services in the region of Durham:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Apprenticeship training	<input type="radio"/>							
Colleges	<input type="radio"/>							
Cultural facilities	<input type="radio"/>							
Daycare affordability	<input type="radio"/>							
Daycare availability	<input type="radio"/>							
Electrical power	<input type="radio"/>							
Housing affordability	<input type="radio"/>							
Housing availability	<input type="radio"/>							
Medical services	<input type="radio"/>							
Other utilities	<input type="radio"/>							
Private career colleges	<input type="radio"/>							
Public transportation	<input type="radio"/>							
Recreation	<input type="radio"/>							
Roads	<input type="radio"/>							
Secondary schools	<input type="radio"/>							
Universities	<input type="radio"/>							

24. Please rate the availability and ease with which you are able to fill company positions in the following categories:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Skilled	<input type="radio"/>							
Semi-skilled	<input type="radio"/>							
Unskilled	<input type="radio"/>							
Clerical	<input type="radio"/>							
Technical	<input type="radio"/>							
Management	<input type="radio"/>							

25. Now, thinking about the business climate of your community please rate the following attributes of your community with respect to the community business climate:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Support for businesses	<input type="radio"/>							
Communication	<input type="radio"/>							
Quality of Life	<input type="radio"/>							

NEXT STEPS

26. We would now like to get your thoughts of the next stages of employment for this region.

27. What education and/or training do you provide to ensure your employee becomes a “good fit” for your company?

28. Overall, what are the positive aspects of hiring in Durham Region?

29. What are the negative aspects of hiring in the region of Durham?

Thank you for your feedback. We very much appreciate your time and effort in answering these questions.

Skillshed Workforce Survey - Template

DEMOGRAPHIC INFORMATION

Please share with us a little bit about yourself.

1. How old are you (in years)?

2. Please indicate your gender:

- Male
- Female
- Transgendered

3. What are the first 3 characters of your postal code? (i.e., L9L)

4a. What is the highest level of education that you have attained?

- No certificate, diploma, or degree
- High school certificate or equivalent
- Apprenticeship or trades certificate or diploma
- College, CEGEP, or other non-university certificate or diploma
- University certificate, diploma, or degree
- Graduate or post graduate degree
- Other, please specify:

4b. What is/was your field of study while attending school. If this question is not applicable to you, please write "not applicable."

5. What is your current employment status?

Please choose all that apply:

- Employed full-time
- Employed part-time
- Unemployed
- Retired
- Home maker full-time
- Home maker part-time
- Student full-time
- Student part-time
- Self-employed
- No answer
- Other, please specify:

QUESTIONS FOR RESPONDENTS WHO ARE CURRENTLY WORKING

Now we would like to know more about the jobs people have: If you answered yes to being EMPLOYED, full or part-time, please answer the following questions.

(If you are not currently employed please skip to question 19)

6. How many work places do you have? In other words, how many jobs do you currently hold?

7. Now, thinking of your primary employment, what type of business or organization do you work for?

- Accommodation, Food Services, and Hospitality
- Agriculture, Fishing and Hunting
- Construction
- Education and Training Services
- Entertainment, Arts, Recreation
- Finance and Insurance
- Forestry and Forest Industries
- Government
- Health Care and Social Assistance
- Information and Cultural Industries
- Licensed Trade (i.e. Plumber, Electrician, etc.)
- Management of Companies and Enterprises
- Manufacturing (i.e. textiles or machinery, etc.)
- Mining, Quarrying, and Oil and Gas Extraction
- Not-For-Profit
- Nuclear Industry
- Professional, Scientific, and Technical Services
- Professional Services (i.e. Legal, Accounting, Real Estate, etc.)
- Public Administration
- Retail
- Transportation and Warehousing
- Waste Management and Remediation Services
- Other, please specify:

8. What is your current job title(s)?

9. How long have you been at your primary job? (For example, if you have been unemployed for 8 months, you would put 0 in the years box and 8 in the months box).

Years

Months

10. What is your best estimate of your total PERSONAL income before taxes and deductions, from all sources during the past 12 months?

- Income loss
- No income
- Less than \$5000
- \$5000, or more but less than \$9,999
- \$10,000, or more but less than \$14,999
- \$15,000, or more but less than \$19,999
- \$20,000, or more but less than \$29,999
- \$30,000, or more but less than \$39,999
- \$40,000, or more but less than \$49,999
- \$50,000, or more but less than \$59,999
- \$60,000, or more but less than \$69,999
- \$70,000, or more but less than \$79,999
- \$80,000, or more but less than \$89,999
- \$90,000, or more but less than \$99,999
- \$100,000, or more but less than \$109,999
- \$110,000, or more but less than \$119,999
- \$120,000, or more but less than \$129,999
- \$130,000, or more but less than \$139,999
- \$140,000, or more but less than \$149,999
- \$150,000 or more
- Don't know
- Not applicable

11. Do you have any interest or are you willing to apply for a different job other than the one(s) you are currently in?

- Yes
- No
- Not applicable

12. We are interested in knowing about whether people who are currently employed are making what they feel they are worth. How much are you currently making per year and what would be your desired salary?

Current

Desired

13. How well do you feel you fit your current job based on your experience and education?

- I have all the skills and training I need to do my job
- I have more skills than this job requires
- I need more training to do my job effectively
- Not applicable

SKILLS ON THE JOB

We are now interested in learning a little bit about the skills you currently possess. What employable skills do you feel you currently have?

(Please answer questions 14a to 14f, with regards to your employable skills. We provide you with the skill set, an example, and skill options. Please select any skills from the options that you feel apply to your employable abilities).

14a. Reading Skills:

For example, an airline sales agent reads notices on a computer screen, such as special handling requirements or weather information.

Please choose all that apply:

- Do you scan written materials for information and/or overall meaning
- Do you read materials to understand, learn, critique or do evaluation
- Do you analyze and synthesize information from multiple sources for or from complex and lengthy text
- Other, please specify:

14b. Document Use Skills:

For example, a bricklayer interprets blueprints to determine the height, length and thickness of walls.

Please choose all that apply:

- Do you read signs, labels or lists
- Do you read and understand information on graphs or charts
- Do you enter information into forms
- Do you create or read schematic drawings
- Other, please specify:

14c. Numeracy Skills:

For example, payroll clerks monitor vacation entitlement to prepare budget and scheduling forecasts.

Please choose all that apply:

- Do you make calculations
- Do you make measurements
- Do you perform scheduling, budgeting or accounting activities
- Do you analyze data
- Do you make estimations
- Other, please specify:

14d. Writing Skills:

For example, human resources professionals write recommendations on issues such as workplace health and safety.

Please choose all that apply:

- Do you write to organize or record information
- Do you write to inform or persuade
- Do you write to request information or justify a request
- Do you write an analysis or comparisons
- Other, please specify:

14e. Computer Use Skills:

For example, telephone operators use customized software to scan databases for telephone numbers or long distance rates.

Please choose all that apply:

- Do you use different forms of technology such as cash registers or fax machines
- Do you use word processing software
- Do you send and receive emails
- Do you create and modify spreadsheets
- Do you navigate the internet
- Do you use tablets or smart phones for things like texting, instant messaging, emailing etc.
- Other, please specify:

14f. Which of the skills you selected, from 14a to 14e, are not used at your current place of employment?

Please choose all that apply:

- Scan written materials for information and/or overall meaning
- Read materials to understand, learn, critique or evaluate
- Analyze and synthesize information from multiple sources for or from complex and lengthy text
- Read signs, labels or lists
- Understand information on graphs or charts
- Enter information into forms
- Create or read schematic drawings
- Make calculations
- Take measurements
- Perform scheduling, budgeting or accounting activities
- Analyze data
- Make estimations
- Write to organize or record information
- Write to inform or persuade
- Write to request information or justify a request
- Write an analysis or comparison
- Use different forms of technology such as cash registers or fax machines
- Use word processing software
- Send and receive emails
- Create and modify spreadsheets
- Navigate the internet
- Other, please specify:

TRAVELLING TO WORK

We would like to know a little bit about how much time you spend getting to work each day. Thinking about your primary place of employment...

15. Do you commute to your place of employment?

- Yes, I commute
- No, I work from home
- Not applicable

16. Approximately how many kilometers is it from your house to your place of employment, one way? If you work from home please place 0 in the space below.

17. Approximately how many minutes does it take you to travel to work, one way? (Please note that the system will accept a range, i.e. 20-35)

18. How many kilometers would you be willing to commute, one way, for a higher pay rate?

FOR RESPONDENTS CURRENTLY NOT WORKING

If you are currently unemployed, we would like know more about your situation (If this section does not apply to you please skip to question 27)

19. How long have you been unemployed? (For example, if you have been unemployed for 8 months, you would put 0 in the years box and 8 in the months box).

Years

Months

20. Do you have any interest in entering or re-entering the workforce full-time?

- Yes
- No
- Not applicable

21. If you are currently looking for work, would this be your first time entering the workforce in a full-time/long term position? In other words, have you had a full-time, long term job before?

- Yes
- No
- Not applicable

SKILLS YOU HAVE ACQUIRED

We would now like to learn a little bit about the skills you feel you currently possess? Thinking back to your previous jobs, answer the questions below.

(Please answer questions 22a to 22e, with regards to your employable skills. We provide you with the skill set, an example, and skill options. Please select any skills from the options that you feel apply to your employable abilities).

22a. Reading Skills:

For example, an airline sales agent reads notices on a computer screen, such as special handling requirements or weather information.

Please choose all that apply:

- Have you scanned written materials for information and/or overall meaning
- Have you read materials to understand, learn, critique or do evaluation
- Have you analyzed and synthesized information from multiple sources for or from complex and lengthy text
- Other, please specify:

22b. Document Use Skills:

For example, a bricklayer interprets blueprints to determine the height, length and thickness of walls.

Please choose all that apply:

- Have you read signs, labels or lists
- Have you read and understand information on graphs or charts
- Have you entered information into forms
- Have you created or read schematic drawings
- Other, please specify:

22c. Numeracy Skills:

For example, payroll clerks monitor vacation entitlement to prepare budget and scheduling forecasts.

Please choose all that apply:

- Have you made calculations
- Have you made measurements
- Have you performed scheduling, budgeting or accounting activities
- Have you analyzed data
- Have you made estimations
- Other:

22d. Writing Skills:

For example, human resources professionals write recommendations on issues such as workplace health and safety.

Please choose all that apply:

- Have you written to organize or record information
- Have you written to inform or persuade
- Have you written to request information or justify a request
- Have you written an analysis or comparisons
- Other, please specify:

22e. Computer Use Skills:

For example, telephone operators use customized software to scan databases for telephone numbers or long distance rates.

Please choose all that apply:

- Have you used different forms of technology such as cash registers or fax machines
- Have you used word processing software
- Have you sent and received emails
- Have you created and modified spreadsheets
- Have you navigated the internet
- Have you used tablets or smart phones for things like texting, instant messaging, emailing etc.
- Other, please specify:

23. What resources do you use in order to search for a job? [Note: this question can be tailored to resources within the skillshed area]

Please choose all that apply:

- Attend job fairs
- Government job banks
- John Howard Society
- Online job search engines (i.e. Monster, Workopolis, etc.)
- Other websites (i.e. Kijiji, Craigslist, etc.)
- Talk to friends and family about job opportunities
- [Local employment resource]
- [Local employment resource]
- Not applicable
- Other, please specify:

24a. If you are thinking about entering or re-entering the workforce, how far would you be willing to commute to work, one way? Please list the distance in kilometers.

24b. If you are thinking of entering or re-entering the workforce, what is the maximum time (in minutes) you would be willing to spend travelling to work one way?

25. If you were offered a job in your field that paid a lower salary than what you desired, but it was closer to home, would you consider taking it?

- Yes
- No
- Don't know

26. What would be your desired annual salary to enter or re-enter the workforce? Please round to the closest whole number.

VOLUNTEERISM

(Whether you are employed or unemployed, please answer the following questions, if you do not volunteer and these questions are not applicable to you please skip forward to question 30)

27. Do you volunteer?

- Yes
- No

28a. About how many hours a month do you volunteer, on average. If you do not volunteer, please place a zero (0) in the box below.

28b. If you feel comfortable, please share with us the name of the organization(s) you volunteer with (you may list any/all volunteer positions you currently hold):

29a. Do you feel at least some of the skills you listed, in this survey, are used at your volunteer position?

- Yes
- No

29b. Please explain what skills are utilized at your volunteer position:

GENERAL QUESTIONS

Please answer these questions regardless of your employment status.

30. Now, thinking about the last time you searched for a job (if you are currently employed) or your current job search experiences (if you are not currently employed), please share with us some of the obstacles and challenges you have or are currently experiencing?

31. What do you feel you would require in terms of training and education in order to obtain the job you desire?

32a. Would you be willing to earn less if you were able to work closer to home?

- Yes
- No
- Not applicable

32b. If you answered yes to 32a, what would be the minimum annual salary you would require to work locally?

Thank you for your feedback. We very much appreciate your time and effort in answering these questions.

A Review of Skillshed Analysis Practices and Outcomes

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A Review of Skillshed Analysis Practices and Outcomes

Main Messages

The skills gap — whether in the form of wide ranging skills shortages or the result of skills being mismatched to employment opportunities — has been described as one of the great challenges facing the Canadian economy. Communities have identified a growing need for data gathering at the local level to address the community response to putting workers in touch with jobs in their communities. Provincial and federal studies looking at the “skills gap” between the skills workers have and the skills employers need do not provide sufficient direction for addressing local responses to what is needed within the community.

One response to this issue, undertaken in the United States, is conducting a “skillshed study.” A skillshed is an area from which employers pull their workforce and workers receive locally relevant training and education. Skillshed studies can be done within a relatively small geographic area and/or be sector-specific in their focus (e.g., skills associated with the manufacturing or information technology sectors within a specific region). Both the workforce and the business community are surveyed in efforts to assess which skills each has and/or needs, in efforts to determine an appropriate community response to addressing unemployment and preparing future employees for the ever-changing labour market.

Skillshed analysis is a promising tool for evaluating skills within a labourshed and skills needs at a local level, however the methodology for conducting this form of analysis still needs to be further systematized and refined. Furthermore, the economic impact of skillshed analysis is unclear, as there are generally no systematic follow-up efforts to assess or measure the impact of conducting skillshed analysis.

If conducting a skillshed analysis, we recommend a few practices that may help in assuring the effectiveness of the effort. First, it is important to determine, in advance, the exact purpose of the report and its target audience: Who the information is intended for and how it is going to be used? For example, reports intended to assist the business community with site selection decisions should contain different information than those intended to assist economic development officials in developing economic growth initiatives and to create policies that ensure the workforce is adequately prepared to support emerging occupations and industries. Second, these surveys require that they be done by telephone or in person and randomized sampling methods to enhance response rates and make the study meaningful to the entire community. This can be expensive and, therefore, having a financial strategy is important before initiating the study. Third, make reports easy to understand. According to survey results, users of skillshed studies experience difficulties understanding skillshed reports and have indicated that they might benefit from assistance in interpreting the data provided. Fourth, educate the public and potential stakeholders on the importance of studying a skillshed and the benefits that such an assessment would have for the community. Finally, conduct follow-up evaluation analyses to assess whether the study is of value to stakeholders and learning if, when, and how the data is actually being used.

A Review of Skillshed Analysis Practices and Outcomes

Executive Summary

- Canadian companies are encountering increasing challenges in finding qualified job candidates with the appropriate skill sets. The shortage of skills is affecting most sectors and regions of the country and impeding Canada’s economic growth and innovation capacity particularly in technology-based and knowledge-based sectors.
- There is some disagreement on whether the Canadian workforce is experiencing a skills gap (i.e., the skills needed for jobs in Canada are not available) or a skills mismatch (i.e., the skills needed for jobs exist within the workforce, but they have not been matched for a number of reasons to the right employers).
- Communities have identified a growing need for data gathering at the local level to address the community response to putting workers in touch with jobs in their communities. Provincial and federal studies looking at the “skills gap” between the skills workers have and the skills employers need do not provide sufficient direction for addressing local responses to what is needed within the community.
- Skillshed analysis is a process for evaluating and projecting skills needs at a labourshed level, which refers to the geographic area from which an employer draws its commuting employees and skills, level education, and experience that the workforce possesses. The two elements that make this form of analysis unique include (i) its focus on the geographic area meaningful to employers and employees (as opposed to following municipal or provincial boundaries) and (ii) its focus on skills (as opposed to types of jobs). While this innovative approach to projecting skills needs has been gaining popularity in the United States, it has not been done in the Canadian context.

Approach/Methodology

- For the purposes of this project, extensive searches of newspapers, academic and trade journals, and industry and consulting reports were conducted using the search terms skillshed, labourshed, skills gap, gap analysis, and labour availability. We have examined skillshed analysis reports completed in the states of Colorado, Iowa, South Dakota, Texas, Illinois, Indiana, Tennessee, Mississippi, Michigan, Minnesota, Rhode Island, and Virginia. Skillshed studies have not been done, to date, in Canada or the United Kingdom.
- Templates of both a workforce and an employer skillshed survey have been prepared based on best practices, based on the studies reviewed, and are available in the Appendix.

Results

- Studies vary in how analysts establish boundaries of a labourshed area to conduct a skillshed study. Tactics ranged from surveying within a 15 to 65 mile radius around a community node. Factors typically included for consideration in establishing boundaries of a skillshed are population density, local geography (e.g., rivers), and transportation infrastructure (e.g., roads and highways). Studies have also focused on a series of skill sets (for example occupational or essential skills) in a geographic region.
- The two key components of skillshed analysis include the workforce survey and the employer survey. The workforce survey is used to measure the supply of available workers within a labourshed tapping into the skillsets, work activities, and tasks of workers. The employer survey is used to measure the demand for workers within a skillshed, as well as understanding what education, training, and skills are needed to produce consumer products.
- Workforce surveys generally collect the following information on individuals including, but not limited to: age, gender, race, educational background, areas of study, certifications attained, desired/current commute times, employment status, current or desired employment type and/or current or desired occupation. Respondents are also often asked their desired salary, the lowest salary they would accept to live closer to their worksite, openness to job-specific training, willingness to move for work, and the tools and resources they use to search for a jobs.
- Some workforce surveys measure the supply of skills at the basic skills level (i.e., literacy, numeracy), while others measure skills at the occupational level (e.g., analytic, managerial). For example, respondents are often asked to identify the knowledge or skills used in their current or past occupation and the length of time that they have used each skill. Some initiatives indirectly measure a respondent's skills by identifying the knowledge levels and work activities associated with their job by using software aids such as the Occupational Information Network (O*NET).
- Workforce surveys are generally conducted via telephone. Phone numbers associated with landlines and/or cell phones belonging to a skillshed area are randomly selected using tools such as Computer Assisted Telephone Interviewing (CATI) software. To avoid respondents being geographically clustered in one area of the skillshed, areas are sometimes divided into different zones that require equal representation in the sample (i.e., quota sampled). Cell phone numbers can be problematic as these numbers are not tracked by geographic locators (such as ZIP or postal codes) and users may be less willing to participate in the survey as some have to pay for the call.
- Sample sizes in the studies examined tended to range substantially, from 98 to 773, and some initiatives maintain an annual or biannual 'rolling survey' in which over-sampling from a specific area is used.
- In contrast to workforce surveys, employer surveys collect data primarily through face-to-face interviews. Other initiatives utilize a combination of both in person and telephone interviews, as well as email correspondence. Most surveys rely on interviews with area employers, while others also collect information from educators and human resource professionals. Most studies appear to have only 30 to 35 participants, however at least one study used 586 employer surveys in order to conduct its skillshed analysis.
- Employers are commonly asked about the following: size of their workforce; future plans to expand or downsize (including an assessment of the number of employees who are eligible to retire within the next five years and of plans to replace retiring employees), the number of job vacancies and the degree of challenge employers face when filling positions; the availability of skilled workers in their area, the type of skills that they think are needed in the workforce, perceived quality of area educational institutions, and any partnerships or programs that such institutions have in place to respond to the needs of the area workforce. Employers are also asked about starting pay rates and the competitiveness of those rates, and perceived worker attitudes and productivity. This last variable is assessed through measures of employee turnover, tardiness, absenteeism and substance abuse.

- Studies vary greatly in the level of analysis conducted in each of the skillshed reports, ranging from simple data summaries, to assessments of workforce skill levels and/or recommendations about future directions. For example, the most detailed study reviewed included an in-depth analysis of three occupational clusters in the labourshed that were believed to have the most potential based on consideration of the labourshed trend analysis, current workforce needs, projected employment growth, and median wages. The study focused on these criteria in order for the region to make an easier transition in terms of advancing economic development and narrowing the skills gap.

Further Research / Research Gaps

- Skillshed analysis is a promising technique for gathering relevant data needed to help with local economic planning. The methods surrounding this type of activity, however, have to be further refined and consistently documented. It appears there is no common practice for conducting skillshed studies.
- In reviewing publicly available skillshed reports, the target audience is not entirely clear. Many of the reports are intended for use by the business community to assist companies with decisions pertaining to site selection, relocation, expansion, employee retention and training requirements. Other reports indicate that the information is intended for use by broader community and economic development officials in order to help retain and expand existing businesses, recruit new businesses to the area, develop economic growth initiatives, and to create policies that ensure the workforce is adequately prepared to support emerging occupations and industries.
- The economic impact of conducting skillshed analysis is unclear. There are generally no systematic follow-up efforts to assess or measure the impact of conducting skillshed analysis. Some surveys reveal that individuals who have used labourshed/skillshed reports were generally satisfied with the analysis and information provided. There are also periodic accounts of skillshed analysis serving as an effective economic tool, however these are largely unreferenced and anecdotal testimonials. There are some limited reports that availability of skilled and semi-skilled workers was reportedly improved and skills that were previously noted as being difficult to find became increasingly available. However, our search of newspaper articles has not produced any stories detailing economic development, economic growth, or a distinguishable effect on the unemployment rate in the region within the two years following the completion of a skillshed report.
- Future research should work on the development of better methods for measuring specific skills at a sufficient level of detail. The present measures of skills are too broad to be meaningful for assessing the exact skills gaps in the case of occupations that are changing and the new occupations that are emerging. Organizations are redefining jobs and recognizing a need for additional skills in their employees. Skill shortages are more related to workers not possessing the right combination of specific skills and experience, rather than a lack of general skills associated with a particular profession. This issue is reflected in survey feedback which indicated that some individuals find the results to be too generic, lacking job specific information.
- Further research should also seek to develop better methods for evaluating and assessing the impact and effectiveness of skillshed initiatives. There is a need to establish criteria and methods for measuring benefits of such studies.

A Review of Skillshed Analysis Practices and Outcomes Final Report

Context:

Canadian companies are encountering increasing challenges in finding qualified job candidates with the right skill sets. The shortage of skills is affecting most sectors and regions of the country and impeding Canada's economic growth and innovation capacity particularly in technology-based and knowledge-based sectors. This presents a challenge to the Canadian economy and its workforce. There is growing need to know which specific skills are in short supply in various communities to be able to respond effectively to each situation, as communities differ in terms of their skills needs. Correspondingly, there is increasing demand for knowledge on conducting skills needs analysis at a local level. Unfortunately, in Canada, there has not been a single effective method identified for collecting such information. The purpose of this review of the American practice of skillshed analysis is to generate a synthesis of practices for conducting such a study, and to develop a template for use by pertinent stakeholders across this country.

Skillshed analysis is a process for evaluating and projecting skills needs at a skillshed level, which refers to the geographic area from which an employer draws its commuting employees and skills, education, and experience that the workforce possesses. The two elements that make this form of analysis unique include (i) its focus on

the geographic area meaningful to employers and employees (as opposed to following municipal or provincial boundaries) and (ii) its focus on skills (as opposed to types of jobs).

Recently, we were approached by the Durham Workforce Authority (DWA) which “provides leadership in labour market planning through the creation of the annual labour market plan” and is one of 25 Workforce Planning Boards spread across Ontario. The DWA was looking for data that revealed more labour market information, information for site selectors, information for economic development, etc., at the local level. The data that were available to them at provincial and federal levels were not effective in helping the members of this organization understand what they needed to do in their own region. The data analysis was too broad, showing amalgamated numbers which were of little use, and not specific to the employment needs of The Regional Municipality of Durham. They needed local data for local solutions. The goal was to create an understanding of the available skills and the desired skills within the area for which they were charged. The DWA was looking for data that could speak to the need to have the appropriate level of detail for their planning process.

The DWA also brought with them documentation on a practice that had been conducted in the United States, called a “skillshed analysis.” They wanted to know if we could try to replicate it here. They stated that it looked like the level data and analysis that was provided in these studies would be appropriate for their planning process. Further, the Durham Region Local Training Board’s mandate calls upon the DWA to promote and facilitate the development of a skilled, relevant, inclusive and adaptive labour force. The DWA’s mandate outlines that this be achieved through improving the availability of labour market information, planning frameworks that advise on training and adjustment programs which can be deployed locally, and promotion of life-long learning within the region. They also suggested that if this skillshed analysis was successful within the Regional Municipality of Durham, that other Workforce Planning Boards have hinted that this might also be a useful in their communities.

Approach:

A number of studies were collected from a variety of sources on skillshed analyses that had been conducted in the United States by both private and public entities. Further, research was also collected and summarized on other similar data collection processes and reporting systems that currently exist here in Canada that have been used to assess similar issues: skills gap, labour shed, and labour studies. These studies were reviewed for methods used to collect this data, how the data from the studies were used, and whether the outcomes produced by the studies were useful. For the purposes of this project, extensive searches of newspapers, academic and trade journals, and industry and consulting reports were conducted using the search terms skillshed, labourshed, skills gap, gap analysis, and labour availability. We have examined reports completed in the states of Colorado, Iowa, South Dakota, Texas, Illinois, Indiana, Tennessee, Mississippi, Michigan, Minnesota and Virginia. Results from this review were used to build a template for both a workforce and an employer survey, using best practices that emerged out of this review. These survey templates are available in the Appendix.

Literature review:

Addressing the skills gap in the Canadian context:

Recently, there has been a significant amount of attention focused on the shortage of skilled workers and the growing challenges that Canadian companies face when trying to recruit employees who have the skills needed for a position. The shortage of skills, or the skills gap, may have a negative effect on a company’s ability to be productive, profitable, and innovative. If occurring on a grand scale, this can reduce the country’s competitiveness, prosperity, and potential for economic growth. As a result, the skills shortage has been described as “one of the great challenges facing Canada and has been identified as the country’s leading economic issue.”

The economic implications of the skills gap are illustrated by Stuckey and Munro, who estimate that, in the province of Ontario alone, the shortage of skills results in \$24.3 billion in lost Gross Domestic Product (GDP), \$4.4 billion in lost federal tax revenues, and \$3.7 billion in lost provincial tax revenues each year. On a more individual level, there is a growing disparity between the wages of employees who are considered to be ‘more skilled’ and the wages of employees who are considered to be ‘less skilled.’ As a result, marketable skills are now considered to be a “critical asset” for those who are searching for jobs and for those who already have jobs. In this sense, the skills gap can affect a person’s employability and salary level and can, as a result, also influence one’s quality of life.

While the concept of a skills gap has been subject to various different meanings and applications, at a more basic level, it refers to the difference between the skills required for a job and the skills possessed by a job-seeker.

The extent or severity of the skills gap is shown by the fact that workers are unable to find jobs and employers cannot find workers with the skill sets that they require. This is emphasized by Miner, who explains that there is a “looming shortage of skilled labour occurring in the midst of a surplus of unskilled labour.”

The growing demand for skilled workers is closely associated with the development of a knowledge-based workplace, which has resulted in changes to both the nature and organization of work. As a result, jobs are now more specialized than in the past, and therefore require workers to have higher levels of education and skills.⁷ Jobs can be classified within the knowledge-based workplace depending on measures of research, development, and human capital. For example, a job or profession could be categorized as being of a high, medium, or low-knowledge depending on the proportion of employees who have a post-secondary education or the proportion of employees who conduct innovative research to advance their field.¹⁰

In order to illustrate the pervasive shift toward a knowledge-based workplace, the Canadian Council of Learning noted, in 2006, that, between 1991 and 2003, there was a 12% increase in the number of businesses in Canada. However, despite the moderate increase in the number of businesses over this period, there was a 78% growth in the number of high-knowledge businesses, a 14% growth in the number of medium-knowledge businesses, and a 3% decrease in the number of low-knowledge businesses.¹⁰ The demand for highly skilled workers that has accompanied the transition to a knowledge-based workplace is not unique to Canada; in a review of the transitioning economies in Hungary, Romania, and Russia, Commander and Kollo found a corresponding “strong bias against unskilled labour” in each nation.

One of the identifying features of the knowledge-based workplace is the presence of advanced and sophisticated technology, which can increase productivity and facilitate both communication and information sharing.¹⁰ This has contributed to the skills gap, as such technologies are constantly evolving and, as a result, require workers to continually engage in learning and skill upgrading. At the same time, the shortage of skills is intensified by a worker shortage, which may be the result of an aging population where a large number of the “Baby Boomer” generation will be retiring from the workforce over the next few decades.⁷ Another factor that has contributed to the skills gap is related to globalization and the growing competition that Canadian businesses face as a result of the increased level of skills held by people in developing countries.⁷ As a result of markets now being connected globally, labour that has in the past been completed by domestic unskilled workers is now often outsourced to foreign countries. This reduces the domestic demand for unskilled labour, which in turn increases the overall demand for skilled workers.^{5, 10}

Solutions for the Skills Gap:

Unsurprisingly, discussions of how to address the shortage of skills often focus on education. For example, Stuckey and Munro conclusively state that the shortage of skills is the “result of too many Ontarians not obtaining adequate levels of education.” In this context, it would appear that the most basic solution to the skills gap is to re-train existing workers and to educate current students differently. Consequently, it follows that innovative measures are required within the education system in order to prepare the country’s ‘human resources’ for the current and future demands of businesses and industries. However, despite education often being at the center of discussions on skill shortages, it is apparent that the education system is only one of many factors that are responsible for both creating and maintaining the skills gap. As such, in order for solutions to the skills shortage to have any merit or effectiveness, they must be formed through a comprehensive and rounded analysis that examines the issue as a whole.¹³

It is worth noting that there is a degree of skepticism as to the existence and severity of a skills gap in Canada. For example, Burleton, Gulati, McDonald and Scarfone conclude that there is no evidence that the country is suffering a broad-based or aggregate-level skill shortage. While this may be the case, their findings do support the existence of skill mismatches at an occupational and regional level. In other words, studies done at the federal level have suggested that we Canadians may have the skilled workers we need within our own borders, but the local level knowledge suggests that those skilled labourers may not be where the jobs are. They conclude that “bold movement is warranted to maintain Canada’s standard of living today and into the future.” In order to do this, Burleton et al., in 2013, recommend that comprehensive and specific labour market information be collected in order to develop and guide targeted strategies and policies to address the skills gap. Furthermore, Custodia-Loria et al. suggest that “more creative solutions” be used to help match skilled employees with appropriate job openings,¹³ and Act concludes that any forms of addressing the skill shortages must be practical in nature.⁸

Measuring Skills in Canada:

In Canada, there has not been a single effective method identified for collecting skills-based information at a local level, which is important because communities differ in terms of their skills needs. In other words, it is a safe assumption that the skills needed in Fort McMurray, AB, are not the same as those needed in Vancouver, BC, Saskatoon, SK, Trois-Rivieres, QU, or Charlottetown, PEI. This is a serious shortcoming in the effort to develop a skilled labour pool, as local skills-based information is not easily obtainable in a suitable format from other sources. While sources that provide information on labour gaps in Canada do exist, they generally focus on labour as opposed to the skills workers have. At the national level, the Canadian Occupational Projection System (which is maintained by Human Resources and Skills Development Canada) provides projections of labour demand and supply and identifies occupations that may face a shortage or surplus of workers. There are also numerous studies that have been conducted at a provincial, regional and even local level. However, these too have largely focused on labour shortages and surpluses, whether by industry or by the National Occupational Classification code, instead of focusing on specific skill sets people possess.

Several challenges do exist when drawing conclusions from this type of information. First, it is often too broad to be meaningful for assessing the exact skills gaps that exist within a relatively small geographic area. For example, while there could be a sufficient number of representatives for a certain occupational group, there could still be a skills gap, as many individuals may lack certain critical skills required by employers in the area. This is shown in the case of information and communication workers, as Industry Canada, in 2010, has recognized that “skill shortages are more related to workers not possessing the right combination of specific skills and experience required by Canadian employers, rather than a lack of formal qualifications.”

Second, the information collected at the national and provincial level is not very meaningful for employers, many of whom draw labour from a narrow geographic area, or for individuals who may not find travel or relocation to be a feasible option. The demand and supply of particular skills tends to differ substantially by locality across Canada, and there is a great need for knowledge on evaluating and projecting skills needs in an employer’s specific recruiting area. This is supported by the Canadian Chamber of Commerce’s observation that: “Educators may not be fully aware of local employers’ needs. We need better systems for predicting future skills needs. There are limitations in the current labour market information, which is national and provincial, not local.”

Finally, while analysis of occupational groups can be valuable for industries characterized by a stable occupational structure and for research and policy development, such analysis is less useful when the required knowledge, skills and attributes of an occupation are changing, when new occupations are emerging, or when there are great ranges in the proficiencies associated with a given occupation. As such, knowledge of how local communities can evaluate and project their particular skills needs is critically required.

What is a Skillshed Analysis?

The concept of a skillshed analysis was created by the Institute for Decision Making at the University of Iowa in 1998. Their primary goal in developing this model was to respond to the needs of economic development groups, who were trying to form a nuanced understanding of the labour force in their area. In the state of Iowa, such studies continued to be conducted by the Institute for Decision Making until 2001, after which point the Iowa Workforce Development assumed responsibility for completing labourshed assessments.

A skillshed is defined as “the geographic area from which a region pulls its workforce and the skills, education, and experience that the workforce possesses.” Closely related to the concept of a skillshed is a labourshed, which is the “area or region from which an employment center draws its commuting workers.” Thus, whereas a labourshed refers to the geographic area from which a region recruits its workers, a skillshed refers specifically to the skills, education, and experiences of the workers who comprise this geographic area. Studying a workforce at the labourshed level is different than other assessments that focus on a specific region or community, as it involves the examination of a distribution of workers as they relate to a node community, regardless of any natural (i.e., rivers, mountains) or political (i.e., state borders, county lines) boundaries.

The general goal of a skillshed analysis is to compare the experiences and skills of an area’s labour force with the reported needs of area employers. In other words, a skillshed analysis identifies and evaluates the supply and demand for labour with respect to the skills that are required to work within an occupation. The main interest of these studies focuses on commuting patterns, current or desired wages, and skills. The focus on skills was linked to essential skills for comparison across multiple locations using devices such as surveys and information collected on and around these issues. In addition to showing the strengths of a region, this information can be examined in order to identify “which occupations or industries [a] region could grow into by understanding the difference between the current skill set and that skill set required by emerging markets.”

Although such analyses have been called various different names (for example, skillshed, labourshed, labour availability, labour force, and labour market analyses), they are all similar in that they attempt to assess the skills and experiences of a workforce at the labourshed level. While there are differences in the scope and focus of these reports, this paper considers all studies that examine the skills of a workforce and/or potential workforce at the labourshed level.

Identifying the Boundaries of a Skillshed:

Factors related to an area's geography and infrastructure may affect an individual's commute to work and can, therefore, play a role in determining the boundaries of a labourshed. For example, while one employee who lives a far distance from work may be able to easily commute on a highway, another employee who lives a short distance from work may face challenges as a result of a geographic obstacle such as regular dense street traffic, a lake, or river.²⁷ It has been recognized that workers prefer to commute short distances, and that when this is not the case, they are likely to either move closer to their job or change jobs so that they are closer to their home. This is supported by the findings of the 2007 Labourshed Analysis for Boone and Winnebago, which found that 84% of employees live within 15 miles of their place of employment. As a result, employers tend to be less comfortable when hiring workers who commute long distances, as they perceive these individuals as being less committed to the company and more likely to leave for a job that is closer to their home.

Throughout the various skillshed reports, there does not appear to be a common practice in place for identifying the boundaries of an area's labourshed. Of the studies reviewed, the Labourshed Analysis for Boone and Winnebago Counties used the most conservative boundaries, which were identified as being within a 15 to 20 mile radius of the node community.³⁴ Other studies determine labourshed boundaries using a 40 mile radius,²⁸ a 45 mile radius,³³ or a 65 mile radius from the node community. Of note, while laboursheds may be of a similar geographic size, they can vary greatly in terms of both population and population density.

Who can use the skillshed analysis?

In reviewing publicly available reports, it is not entirely clear who uses the information that is provided by a skillshed analysis. However, it is apparent that many of the reports are primarily intended for recipients within the business community. For example, the Labour Availability Reports for East Central Indiana and Amarillo, Texas indicate that the availability of labour, the skills and experience of the workforce, and the cost of wages are among the most critical factors that a business considers when determining whether a location is appropriate for new or expanded operations. Similarly, Foote Consulting Group³⁴ states that skillshed reports are an effective tool in understanding workforce issues as they relate to decisions of site selection, relocation, expansion, and employee retention and training requirements and opportunities.

Other skillshed reports indicate that the information being collected is intended for a broader or more general audience. In addition to current and prospective businesses, the information contained in a skillshed report can be used by community and economic development officials in order to retain and expand existing businesses and to recruit new businesses to the area. ^{24, 36, 37} Local governments and policy makers can use this information to develop economic growth initiatives and to create policies that ensure the workforce is adequately prepared to support emerging occupations and industries. This is often done in conjunction with educational institutions (i.e., colleges and universities), which may develop programs or modify an existing curriculum in order to respond to the needs of employers in the area.²⁷ In Ontario, the DWA has offered that there is a need for the detailed and local data for economic development, to use in making decisions about site selection, essential skills and/or literacy based skills and programs, employment trends, and community and workplace planning.

On a more individual level, information collected on the gaps in labour supply and demand within an area can be used by local stakeholders to make decisions regarding the training and skills needed to transition between different occupations³¹ within a relatively small geographic location. In addition, this information can be used by "up-and-coming workers" in order to make informed decisions involving their education choices and future plans to enter the workforce.

Types of surveys used in skillshed analyses

Skillshed analyses are often conducted using two surveys, carried out in the same geographic area over the same time frame. The first of these is given to individuals in the labourshed asking about current or desired skill sets, while the second is given to members of the business community where those skills would typically be used. Sections of both surveys are closely matched in style of questioning so that the results can be compared for

analysis. Surveys can be broad based, taking an inventory of skills possessed and or/needed by both individuals and businesses within a geographic boundary. Alternatively they can be targeted to specific skills of specific sectors within a commuter radius around a key location where there is sector concentration. For example, a community skillshed team can decide to survey employers seeking specific knowledge-based skills, and systematically survey the workforce about whether they possess those skills.

The Workforce Survey:

One of the key components of a skillshed analysis is the workforce survey, which is used to measure the supply of available workers within a labourshed and “the knowledge, skills, and work activities those workers possess.” Of the publicly available reports, information appears to be most commonly collected from individuals who are between the ages of 18 and 64 years, as it is believed that people between this age range are most likely to be either employed or willing to enter/re-enter the workforce.²⁷ Interestingly, in an effort to assess the future workforce, the Northeastern Colorado Labour Force Study also collected data on the career and education plans of individuals between the ages of 16 and 18 years.³³

Sample sizes for workforce surveys were not always disclosed, however when available, the number of participants who participated in this part of the assessment generally ranged from 98 to 773. The number of respondents included in a sample is dependent on the size of the population being studied; for example, in order to have a representative sample, Colorado State University Extension and Colorado Department of Local Affairs²⁶ selected a sample size that would achieve a +/- 5% margin of error at a 95% confidence level. While most skillshed studies begin with data being collected from the labourshed that is under review, the state of Iowa maintains a continual ‘rolling survey’ in which over-sampling is used and respondents are identified through their ZIP code. This information is entered in a statewide labourshed database, from which data can be extracted for analysis as desired.²⁴

All of the examined skillshed reports used a telephone survey to collect data on the area’s workforce. Phone numbers were selected at random, and were at times obtained using Computer Assisted Telephone Interviewing (CATI) software. Using their ZIP code, respondents are classified as either living in the node community, living near the node community, or living in an outlying area in relation to the node community. In order to prevent respondents from being clustered in one area of the labourshed, quota sampling methods can be used. For example, Iowa Workforce Development divides each area being studied into three different zones that require equal representation in the sample.

Studies vary with respect to the use of landline and cell phone numbers to contact participants. While some studies do make use of both landline and cell phone numbers for the telephone survey, the Northeastern Colorado Labour Force Study does note that using cell phones to contact participants can be problematic because cell phone numbers are not tracked by ZIP code. Additionally, there are concerns that a cell phone user may be less willing to participate in the survey because he or she has to pay for the call.³³

All of the skillshed studies collected demographic information from respondents, which included their age, gender and race. Table 1 provides a summary of the types of data collected with respect to a respondent’s education, experience and skills. As is shown, all studies asked participants a range of questions with respect to their educational background, such as highest level of education completed, areas of study and certifications attained. Additionally, participants were often asked to indicate their area of employment or current occupation. For consistency with other labour market information, a common practice is for a respondent’s occupation to be recoded according to the Standard Occupational Coding System, which is an occupation classification system that is maintained by the United States Department of Labour.⁴¹

Individuals participating in the workforce survey were also asked to identify their skills, which were generally measured at the occupational level. Respondents were often asked to identify the knowledge or skills used in their current or past occupation and the length of time that they have used each skill. The Iowa Workforce Development indirectly measures a respondent’s skills by identifying the knowledge levels and work activities associated with their job. This is done using the Occupational Information Network (O*NET), which was created by the United States Department of Labour and the North Carolina Employment Security Commission, and uses “a continuing worker survey [to maintain a] database of the knowledge, work activities, abilities, and distinguishing characteristics of each occupation.”

All of the skillshed studies recognize that a region’s potential workforce consists of both unemployed and underemployed persons. According to the Iowa Workforce Development,⁴¹ individuals are classified as being unemployed if they are actively seeking work or if they are a homemaker or retiree who is willing to enter or re-enter the workforce. Alternatively, underemployed individuals are those “who are working but who desire

better jobs and who appear to possess the skills, education, and experience to qualify them for those better jobs.” Employed individuals are classified as being underemployed if they work less hours than what they desire, if they appear to have a mismatch of skills, or if they have a low income that places them below the poverty line.⁴¹ In order to assess the potential workforce, respondents are generally asked to identify how far they are willing to commute to work, their desired salary and the lowest salary they would accept, their openness to job-specific training, and the tools and resources they use to search for a jobs.

When analyzing the data collected from a workforce survey, some studies made an effort to validate the responses being provided by participants. This is evident in The Amarillo, Texas Area Labour Availability Report, as The Pathfinders³⁷ removed any participants from the results who said they would accept a job for what was perceived to be an unreasonable wage. Similarly, for individuals who indicate that they are overqualified for their current job, the Iowa Workforce Development⁴¹ reviews the respondent’s education, experience and skills in order to assess whether this is indeed the case.

Looking at how these surveys have been done, it is clear that there is a wide variability of what is collected in each survey, depending on several factors. A template of a workforce survey has been built and offered to the reader, in the Appendix, should they consider conducting a study of this type. We recommend this document be used as a facilitation tool and starting point for discussion about conducting such a study. Stakeholders may also wish to tailor their questions to the needs of the group.

The Employer Survey:

A second key component of a skillshed analysis is the employer survey, which is used to measure the demand for workers within a labourshed and “the education, training, and skills required for...industries to produce...products and services for consumers.” The majority of reports that were examined collected this data solely through interviews with area employers. This is grounded in the belief that employers provide a current and “expert opinion” of the labour situation in a particular area.³⁴ Two exceptions to this method were the Longview, Texas Area Skillshed Analysis which collected information from both area employers and educators.²⁸ In addition, on occasion, The Pathfinders also collected data from senior management and human resource professionals.

While a face-to-face interview was the most common method for administering the employer survey, The Pathfinders²⁸ did collect information for The Longview, Texas Area Skillshed Analysis through a combination of both in person and telephone interviews, as well as email correspondence. While sample sizes for the employer survey were not consistently disclosed in the publicly available reports, most studies that took place outside of the state of Iowa appeared to have between 30 and 35 participants. Similar to Iowa’s labourshed database, the state conducts a continuing Workforce Needs Assessment, from which employer data for a specific region can be extracted as required. As a result of their statewide effort to collect employer data, the sample sizes for studies conducted in Iowa are significantly larger than studies that are conducted in other states. For example, the Mid Iowa Growth Partnership region used 586 employer surveys in order to conduct its skillshed analysis.²⁹

In the studies examined, employers were asked to comment on the size of their workforce in terms of future plans to expand or downsize. In some studies, this included an assessment of the number of employees who are eligible to retire within the next five years and of plans to replace retiring employees. The employer surveys also collected information on the availability of area labour in terms of the number of job vacancies and the degree of challenge employers may face when filling positions.

Employers were asked to comment on the availability of skilled workers in their area and the type of skills that they see continually lacking in the workforce. According to the Iowa Workforce Development, a region’s skill and education needs can also be inferred by the occupational demand for workers. In terms of education, respondents are often asked to evaluate the quality of area educational institutions, and to identify any partnerships or programs that such institutions have in place to respond to the needs of the area workforce.

Finally, many of the surveys asked respondents to identify their starting pay rates and whether they perceive these to be competitive with other area businesses. As is shown in Table 1, information was also often collected on perceived worker attitudes and productivity, which were assessed through measures of employee turnover, tardiness, absenteeism and substance abuse. As with the Employee/Workforce survey, a copy of a suggested template of the workforce survey has been built, and placed in the Appendix.

Who carries out skillshed analyses?

While skillshed and labourshed studies may still be conducted by academic institutions,³³ such assessments appear to be increasingly carried out by private consulting companies. The Pathfinders appear to be the most frequently used company when conducting publicly available skillshed reports; they primarily consult in the areas of strategic planning for economic development and business site-selection.^{36, 37} Regardless of which company or organization conducts the skillshed analysis, they are generally retained by either a local government or by an area's economic development corporation, workforce investment board, and/or chamber of commerce.

Despite this, it often remains unclear who provided funding for a skillshed analysis and how a financial contributor has affected the scope of the assessment and its execution. As is shown by the skillshed analyses conducted by Iowa Workforce Development, it is not uncommon for multiple parties (for example, different levels of government, economic development organizations, local businesses, educational institutions, utility companies, etc.) to pool resources in order to fund such assessments. To this end, it is important that the public and potential donors be educated as to the importance of studying a skillshed and the benefits that such an assessment would have for the community. Encouraging diverse community involvement and developing a sound financial strategy are effective methods which maybe more likely to result in data that more community stakeholders can use. This process should begin as early as possible as financial sponsors, once convinced of the usefulness of the project, may divide their contribution over multiple years.⁴¹

What kinds of analyses are done with the data?

There appears to be a large degree of variance in the level of analysis conducted in each of the skillshed reports that were examined. Some reports simply present a summary of the data collected, and do not form any specific conclusions or recommendations for the reader.³⁶ Other studies include general conclusions that are based on the data collected; for example, Foote Consulting Group³⁴ identifies the potential workforce, the distribution of workers within the labourshed, commuting patterns, and also makes general comments on the skills possessed by those in the workforce.

The most detailed skillshed analysis reviewed was conducted by Iowa Workforce Development, which brought together and analyzed information from the area's labourshed study, workforce needs assessment, and the Occupational Information Network (O*NET). These reports include an in-depth analysis of the three occupational clusters in the labourshed that are believed to have the most potential based on consideration of the labourshed trend analysis, current workforce needs, and the projected employment growth and median wages.²⁹ By focusing on these criteria, it is expected that the region will face "the path of least resistance" in terms of advancing economic development and narrowing the skills gap.

The skillshed reports completed by the Iowa Workforce Development can also be used for the purpose of assessing an individual's transferable skills. Through examining occupational profiles and performing a qualitative gap analysis, readers can create "job ladders", which map out the additional education, training and skills an individual needs to qualify for a successive job. This is shown, for example, in the Northeast Iowa Skillshed Report, which lists occupations that are closely related to the three identified emerging occupations in the region and identifies the shared and additional skills or education needed for a person to transition from a related occupation to one of the region's emerging occupations. In doing so, a person is able to identify any overlaps or gaps between emerging and related occupations, which can serve as a "career pathway."⁵² The Iowa Skillshed Gap Report illustrated this process for two occupation fields: nursing and those who are welders, cutters, solderers, and brazers. In each they looked at the occupational profile, knowledge requirements, and work activities, and tasks associated with the occupation. This process then generated lists of six other related occupations that use many of the same skills that an individual wishing to switch or upgrade jobs can consider. Similarly, Mihm-herold (2010) uses O*NET information to identify the numerical difference between the knowledge and work levels possessed by dislocated workers in Northeast Iowa and the levels required to adequately complete a work activity. As a result, skills gaps can be quantified and prioritized, which encourages a more efficient use of limited resources, as resources can first be used to address the largest gaps.

Most of the skillshed studies compare their findings to other regions, which is done "for the purpose of making the data meaningful" and out of a recognition that prospect companies will consider a region on a comparative basis. As such, The Pathfinders often compare the labourshed's underemployed workforce with other areas that were surveyed in the past eighteen months. Additionally, when conducting the employer survey, The Pathfinders ask employers who are a part of a company that has operations in other regions of the country to compare the area's operations in terms of profitability and production. Similarly, Iowa Workforce

Development²⁴ notes that while there are no established methods for comparing labourshed data, results can be compared to the findings of previous studies that have been conducted in the region. For example, the Mid Iowa Growth Partnership Skillshed Analysis²⁹ calculates a change in location quotient for each occupational category, which is used to identify how the concentration of occupational clusters in 2011 differs from the 2005 results.

Benefits of a Skillshed Analysis:

A review of the literature indicates that there have been no follow-up studies to assess or measure the actual benefit of conducting a skillshed analysis. Currently, the benefits of such reports have been revealed through unreferenced and anecdotal testimonials, which have indicated that the information provided has been both accurate and an effective economic development tool. Additionally, the impact of a skillshed analysis can be inferred through a comparison between the results of current and previous studies for the same region. For example, the Labourshed Analysis for Boone and Winnebago Counties notes that the availability of skilled and semi-skilled workers has improved since the area's 2005 report was completed, and that skills which were previously noted as being difficult to find have become increasingly available.³⁴

Despite such indicators, the actual benefit of conducting a skillshed analysis remains unclear. It does not appear that post-survey impact assessments were not conducted at any of the sites. A search of newspaper articles did not return any conclusive evidence of economic development or growth in either the Mid Iowa or Longview, Texas region within the two years following the completion of their skillshed report. Moreover, the completion of a skillshed report does not appear to have had a distinguishable reducing effect on a region's unemployment rate, which is shown by increases in the rate of unemployment in the two years following the completion of Sioux City, Iowa's skillshed analysis and the sixteen months following the completion of Amarillo, Texas' labour availability report.

Nevertheless, in a survey conducted by the Iowa Workforce Development, individuals who have used a labourshed report indicate that they are generally satisfied with the analysis and information provided. Participant feedback also indicates that some individuals find the labourshed results to be too generic with regard to both industry and job specific information. Also, some respondents reported difficulties understanding skillshed reports, and indicated that they might benefit from some degree of training on how to interpret the data provided.

Limitations of a Skillshed/Labourshed Analysis:

Despite the benefits of studying a workforce skillshed at the labourshed level, there are notable limitations that are associated with this type of assessment. First, skillshed findings are based on a random sample of the labourshed's population, which means that results may not accurately reflect the entire area being studied.²⁷ Similarly, the data collected from area employers may not accurately reflect all employers in the labourshed, as it is possible that businesses that do not have current vacancies or difficulties filling positions are less likely to respond to the survey. ²⁴ Also, relying on an employer's perception of a skills gap or an individual's self-assessment of a skill can be problematic, as such evaluations are subjective in nature and generally lack consistency in the criteria used when making such an assessment. ⁸

All evaluations in a skillshed analysis are conducted at an aggregate or cluster level; studies do not provide specific information on individual occupations and cannot be used to identify the skills possessed or the skills required by individual workers. ⁴¹ As such, skillshed reports are not meant to be "stand-alone documents" with respect to decisions involving individual workers or individual occupations. They are also not immune from "large economic events" in a region, such as a new business locating in the area, a business closing, or mass layoffs. As a result of such factors, it is recognized that skillshed data only remains accurate for eighteen to twenty-four months.²⁷

Finally, a labourshed is not always made up of a "perfectly concentric ring" around the node community; its boundaries may be affected by both geographic barriers and infrastructure developments, which could either increase or decrease a worker's travel time. Additionally, labourshed boundaries do overlap, which means that residents are attracted to work in multiple different geographic directions. While laboursheds can be easily identified, there is currently no way of assessing the actual impact that one labourshed has on another.²⁷

Summary and Recommendations:

The skillshed analysis presents as an innovative technique to evaluate and project skills needs within an employer's specific recruiting area and may also be a promising tool for local economic planning. While the level

of analysis does vary between reports, such assessments have been found to be a valuable tool in the effort to expand and recruit businesses to an area and in the development of policies related to the local skills gap issues. Despite these theoretical benefits, additional research is required on the actual effect that a skillshed analysis has on a region. To this end, future studies should consider conducting a follow-up assessment in order to evaluate the effect of a skillshed analysis in terms of economic development and the skills gap.

If conducting a skillshed analysis, we recommend a few practices that may help in assuring the effectiveness of the effort. First, it is important to determine, in advance, the exact purpose of the report and its target audience: Who the information is intended for and how it is going to be used? For example, reports intended to assist the business community with site selection decisions should contain different information than those intended to assist economic development officials in developing economic growth initiatives and to create policies that ensure the workforce is adequately prepared to support emerging occupations and industries. Knowing, in advance, what the data is to be used for can save considerable time and precious financial resources.

Second, it may be beneficial to collect information from examples of skillshed studies to see the number of ways that they have been done, and the lessons learned from these efforts. Creating a repository of examples and best practices is a good starting point for this type of survey given that the methodologies vary depending on community needs. Getting stakeholder input on these documents may also serve to guide a study that is right for a specific area. The process of choosing the right design to meet the needs of the community may also serve as an educational tool, the importance of which is listed below.

Third, these surveys require that they be done by telephone or in person using random samples to enhance response rates and create representative sample data which can be generalized to the larger community. Online surveys, albeit considerably cheaper to conduct, are not appropriate for this type of study as online surveys typically rely on volunteer samples. This means it is difficult to use the results of studies derived from volunteers (i.e., non random selection) to set policy as the sample is very likely not to be representative of the larger community. Although it may be tempting to try to save money by doing the online survey, getting individuals and employers to the website is often of considerable challenge. Telephone and in-person interviews can be expensive and therefore having a financial strategy is important before initiating the study. Stakeholders need to consider whether funding will be required for a one-time effort, or is the community willing to invest long term conducting a rolling survey, how will it be funded, and who will carry out the survey?

Fourth, make reports easy to understand. The few follow-up survey results that were available in the literature suggest that some users of such analyses experience difficulties understanding skillshed reports, and might benefit from assistance in interpreting the data provided. This education may also have to be done with stakeholders to understand the importance of gathering data/information from a skillshed and the benefits that such an assessment would have for the community. Finally, a skillshed study is of little value unless the data is used effectively. Having stakeholders and community members involved at the earliest points in the project may enhance promotion and education efforts around the study. We recommend that interested parties build in, fund, and conduct follow-up evaluation analyses to assess if, when, and how the data is actually used by stakeholders. Our findings suggest that this is rarely done. One way to do this is to have a media strategy for all stages of the project to educate the public and attract new stakeholders to the project.

**Table 1:
Summary of Skill Measures used by four organizations who regularly conduct skillshed analyses.**

Variable.	Colorado State University & Colorado Department of Local Affairs	Foote Consulting Group	The Pathfinders – Skillshed Analysis	Iowa Workforce Development – Labourshed Analysis
Education	-Highest level of education completed	-Primary area of study -Other areas of education or formal training -Additional certifications	-Highest level of education completed	-Educational field of study
Experience & Skills	-Name top 3 job skills	-Identify current and primary occupation -Name the most important skills or knowledge base associated with current/past occupation -Number of years in current/past occupation	-Identify current area of employment -Indicate whether have a high, moderate, or low skill level for a series of skill categories -Identify the number of years of experience using each skill	-Identify current occupation
Attitudes		-Employer ranks on a scale from 1 to 10 employee turnover, absenteeism, attitudes, trainability, alcohol and drug use, and productivity	-Employer ranks employee turnover, tardiness, absenteeism, attitudes, productivity, and reliability as poor, fair, good, or excellent -Employer describes substance abuse testing practices	

Appendix A

Template surveys built using best recommendations from various studies.

1. Workforce Survey
2. Employer Survey

Skillshed Workforce Survey - Template

DEMOGRAPHIC INFORMATION

Please share with us a little bit about yourself.

1. How old are you (in years)?

2. Please indicate your gender:

- Male
- Female
- Transgendered

3. What are the first 3 characters of your postal code? (i.e., L9L)

4a. What is the highest level of education that you have attained?

- No certificate, diploma, or degree
- High school certificate or equivalent
- Apprenticeship or trades certificate or diploma
- College, CEGEP, or other non-university certificate or diploma
- University certificate, diploma, or degree
- Graduate or post graduate degree
- Other, please specify:

4b. What is/was your field of study while attending school. If this question is not applicable to you, please write "not applicable."

5. What is your current employment status?

Please choose all that apply:

- Employed full-time
- Employed part-time
- Unemployed
- Retired
- Home maker full-time
- Home maker part-time
- Student full-time
- Student part-time
- Self-employed
- No answer
- Other, please specify:

QUESTIONS FOR RESPONDENTS WHO ARE CURRENTLY WORKING

Now we would like to know more about the jobs people have: If you answered yes to being EMPLOYED, full or part-time, please answer the following questions.

(If you are not currently employed please skip to question 19)

6. How many work places do you have? In other words, how many jobs do you currently hold?

7. Now, thinking of your primary employment, what type of business or organization do you work for?

- Accommodation, Food Services, and Hospitality
- Agriculture, Fishing and Hunting
- Construction
- Education and Training Services
- Entertainment, Arts, Recreation
- Finance and Insurance
- Forestry and Forest Industries
- Government
- Health Care and Social Assistance
- Information and Cultural Industries
- Licensed Trade (i.e. Plumber, Electrician, etc.)
- Management of Companies and Enterprises
- Manufacturing (i.e. textiles or machinery, etc.)
- Mining, Quarrying, and Oil and Gas Extraction
- Not-For-Profit
- Nuclear Industry
- Professional, Scientific, and Technical Services
- Professional Services (i.e. Legal, Accounting, Real Estate, etc.)
- Public Administration
- Retail
- Transportation and Warehousing
- Waste Management and Remediation Services
- Other, please specify:

8. What is your current job title(s)?

9. How long have you been at your primary job? (For example, if you have been unemployed for 8 months, you would put 0 in the years box and 8 in the months box).

Years

Months

10. What is your best estimate of your total PERSONAL income before taxes and deductions, from all sources during the past 12 months?

- Income loss
- No income
- Less than \$5000
- \$5000, or more but less than \$9,999
- \$10,000, or more but less than \$14,999
- \$15,000, or more but less than \$19,999
- \$20,000, or more but less than \$29,999
- \$30,000, or more but less than \$39,999
- \$40,000, or more but less than \$49,999
- \$50,000, or more but less than \$59,999
- \$60,000, or more but less than \$69,999
- \$70,000, or more but less than \$79,999
- \$80,000, or more but less than \$89,999
- \$90,000, or more but less than \$99,999
- \$100,000, or more but less than \$109,999
- \$110,000, or more but less than \$119,999
- \$120,000, or more but less than \$129,999
- \$130,000, or more but less than \$139,999
- \$140,000, or more but less than \$149,999
- \$150,000 or more
- Don't know
- Not applicable

11. Do you have any interest or are you willing to apply for a different job other than the one(s) you are currently in?

- Yes
- No
- Not applicable

12. We are interested in knowing about whether people who are currently employed are making what they feel they are worth. How much are you currently making per year and what would be your desired salary?

Current

Desired

13. How well do you feel you fit your current job based on your experience and education?

- I have all the skills and training I need to do my job
- I have more skills than this job requires
- I need more training to do my job effectively
- Not applicable

SKILLS ON THE JOB

We are now interested in learning a little bit about the skills you currently possess. What employable skills do you feel you currently have?

(Please answer questions 14a to 14f, with regards to your employable skills. We provide you with the skill set, an example, and skill options. Please select any skills from the options that you feel apply to your employable abilities).

14a. Reading Skills:

For example, an airline sales agent reads notices on a computer screen, such as special handling requirements or weather information.

Please choose all that apply:

- Do you scan written materials for information and/or overall meaning
- Do you read materials to understand, learn, critique or do evaluation
- Do you analyze and synthesize information from multiple sources for or from complex and lengthy text
- Other, please specify:

14b. Document Use Skills:

For example, a bricklayer interprets blueprints to determine the height, length and thickness of walls.

Please choose all that apply:

- Do you read signs, labels or lists
- Do you read and understand information on graphs or charts
- Do you enter information into forms
- Do you create or read schematic drawings
- Other, please specify:

14c. Numeracy Skills:

For example, payroll clerks monitor vacation entitlement to prepare budget and scheduling forecasts.

Please choose all that apply:

- Do you make calculations
- Do you make measurements
- Do you perform scheduling, budgeting or accounting activities
- Do you analyze data
- Do you make estimations
- Other, please specify:

14d. Writing Skills:

For example, human resources professionals write recommendations on issues such as workplace health and safety.

Please choose all that apply:

- Do you write to organize or record information
- Do you write to inform or persuade
- Do you write to request information or justify a request
- Do you write an analysis or comparisons
- Other, please specify:

14e. Computer Use Skills:

For example, telephone operators use customized software to scan databases for telephone numbers or long distance rates.

Please choose all that apply:

- Do you use different forms of technology such as cash registers or fax machines
- Do you use word processing software
- Do you send and receive emails
- Do you create and modify spreadsheets
- Do you navigate the internet
- Do you use tablets or smart phones for things like texting, instant messaging, emailing etc.
- Other, please specify:

14f. Which of the skills you selected, from 14a to 14e, are not used at your current place of employment?

Please choose all that apply:

- Scan written materials for information and/or overall meaning
- Read materials to understand, learn, critique or evaluate
- Analyze and synthesize information from multiple sources for or from complex and lengthy text
- Read signs, labels or lists
- Understand information on graphs or charts
- Enter information into forms
- Create or read schematic drawings
- Make calculations
- Take measurements
- Perform scheduling, budgeting or accounting activities
- Analyze data
- Make estimations
- Write to organize or record information
- Write to inform or persuade
- Write to request information or justify a request
- Write an analysis or comparison
- Use different forms of technology such as cash registers or fax machines
- Use word processing software
- Send and receive emails
- Create and modify spreadsheets
- Navigate the internet
- Other, please specify:

TRAVELLING TO WORK

We would like to know a little bit about how much time you spend getting to work each day. Thinking about your primary place of employment...

15. Do you commute to your place of employment?

- Yes, I commute
- No, I work from home
- Not applicable

16. Approximately how many kilometers is it from your house to your place of employment, one way? If you work from home please place 0 in the space below.

17. Approximately how many minutes does it take you to travel to work, one way? (Please note that the system will accept a range, i.e. 20-35)

18. How many kilometers would you be willing to commute, one way, for a higher pay rate?

FOR RESPONDENTS CURRENTLY NOT WORKING

If you are currently unemployed, we would like know more about your situation (If this section does not apply to you please skip to question 27)

19. How long have you been unemployed? (For example, if you have been unemployed for 8 months, you would put 0 in the years box and 8 in the months box).

Years

Months

20. Do you have any interest in entering or re-entering the workforce full-time?

- Yes
- No
- Not applicable

21. If you are currently looking for work, would this be your first time entering the workforce in a full-time/long term position? In other words, have you had a full-time, long term job before?

- Yes
- No
- Not applicable

SKILLS YOU HAVE ACQUIRED

We would now like to learn a little bit about the skills you feel you currently possess? Thinking back to your previous jobs, answer the questions below.

(Please answer questions 22a to 22e, with regards to your employable skills. We provide you with the skill set, an example, and skill options. Please select any skills from the options that you feel apply to your employable abilities).

22a. Reading Skills:

For example, an airline sales agent reads notices on a computer screen, such as special handling requirements or weather information.

Please choose all that apply:

- Have you scanned written materials for information and/or overall meaning
- Have you read materials to understand, learn, critique or do evaluation
- Have you analyzed and synthesized information from multiple sources for or from complex and lengthy text
- Other, please specify:

22b. Document Use Skills:

For example, a bricklayer interprets blueprints to determine the height, length and thickness of walls.

Please choose all that apply:

- Have you read signs, labels or lists
- Have you read and understand information on graphs or charts
- Have you entered information into forms
- Have you created or read schematic drawings
- Other, please specify:

22c. Numeracy Skills:

For example, payroll clerks monitor vacation entitlement to prepare budget and scheduling forecasts.

Please choose all that apply:

- Have you made calculations
- Have you made measurements
- Have you performed scheduling, budgeting or accounting activities
- Have you analyzed data
- Have you made estimations
- Other:

22d. Writing Skills:

For example, human resources professionals write recommendations on issues such as workplace health and safety.

Please choose all that apply:

- Have you written to organize or record information
- Have you written to inform or persuade
- Have you written to request information or justify a request
- Have you written an analysis or comparisons
- Other, please specify:

22e. Computer Use Skills:

For example, telephone operators use customized software to scan databases for telephone numbers or long distance rates.

Please choose all that apply:

- Have you used different forms of technology such as cash registers or fax machines
- Have you used word processing software
- Have you sent and received emails
- Have you created and modified spreadsheets
- Have you navigated the internet
- Have you used tablets or smart phones for things like texting, instant messaging, emailing etc.
- Other, please specify:

23. What resources do you use in order to search for a job? [Note: this question can be tailored to resources within the skillshed area]

Please choose all that apply:

- Attend job fairs
- Government job banks
- John Howard Society
- Online job search engines (i.e. Monster, Workopolis, etc.)
- Other websites (i.e. Kijiji, Craigslist, etc.)
- Talk to friends and family about job opportunities
- [Local employment resource]
- [Local employment resource]
- Not applicable
- Other, please specify:

24a. If you are thinking about entering or re-entering the workforce, how far would you be willing to commute to work, one way? Please list the distance in kilometers.

24b. If you are thinking of entering or re-entering the workforce, what is the maximum time (in minutes) you would be willing to spend travelling to work one way?

25. If you were offered a job in your field that paid a lower salary than what you desired, but it was closer to home, would you consider taking it?

- Yes
- No
- Don't know

26. What would be your desired annual salary to enter or re-enter the workforce? Please round to the closest whole number.

VOLUNTEERISM

(Whether you are employed or unemployed, please answer the following questions, if you do not volunteer and these questions are not applicable to you please skip forward to question 30)

27. Do you volunteer?

- Yes
- No

28a. About how many hours a month do you volunteer, on average. If you do not volunteer, please place a zero (0) in the box below.

28b. If you feel comfortable, please share with us the name of the organization(s) you volunteer with (you may list any/all volunteer positions you currently hold):

29a. Do you feel at least some of the skills you listed, in this survey, are used at your volunteer position?

- Yes
- No

29b. Please explain what skills are utilized at your volunteer position:

GENERAL QUESTIONS

Please answer these questions regardless of your employment status.

30. Now, thinking about the last time you searched for a job (if you are currently employed) or your current job search experiences (if you are not currently employed), please share with us some of the obstacles and challenges you have or are currently experiencing?

31. What do you feel you would require in terms of training and education in order to obtain the job you desire?

32a. Would you be willing to earn less if you were able to work closer to home?

- Yes
- No
- Not applicable

32b. If you answered yes to 32a, what would be the minimum annual salary you would require to work locally?

Thank you for your feedback. We very much appreciate your time and effort in answering these questions.

Skillshed Employer Survey - Template

INFORMATION ABOUT THE EMPLOYER

First, we would like to get to know your business and gather some details about your employees and the employee structure of your business.

1. What is the name of your business/company/organization?

2. What are the first 3 characters of your business's postal code? (i.e., L9L)

3. What industry is your business/company/organization in?
 - Accommodation, Food Services, and Hospitality
 - Agriculture, Fishing and Hunting
 - Construction
 - Finance and Insurance
 - Forestry and Forest Industries
 - Government
 - Health Care and Social Assistance
 - Information and Cultural Industries
 - Licensed Trades (i.e. Plumber, Electrician, etc.)
 - Mining, Quarrying, and Oil and Gas Extraction
 - Not-For-Profit
 - Professional, Scientific, and Technical Services
 - Professional Services (i.e. Legal, Accounting, Real Estate, etc.)
 - Public Administration
 - Transportation and Warehousing
 - Waste Management and Remediation Services
 - Other

4. What is your job title?

5. Other than yourself, how many full-time employees does your business/company/organization have?

6. Other than yourself, how many part-time employees does your business/company organization have?

7. How many of your employees are salaried and how many are paid hourly?

Salaried

Hourly

8. How many hours a week do your part-time and full-time employees work?

Part-time

Full-time

9. How many of your employees are contractual and how many are seasonal? If this does not apply to you please skip to the next question.

Contractual

Seasonal

10a. Do you have unionized employees?

- Yes
- No
- Not applicable

10b. If you answered yes to 11a, approximately what percentage of your employees are unionized? If none of your employees are unionized, please place a zero (0) in the box below.

11a. Do you have employees on layoff? (If you answer yes, please answer questions 11b & 11c, if you answered no please move on to question 12)

- Yes
- No
- Not applicable

11b. If you answered yes to question 12a, how many employees are on layoff?

11c. If you answered yes to question 12a, how long is the average layoff term? (Please state this in terms of months).

12. What is your average starting wage per hour at your business/company/organization?

\$
Per hour

SKILLS NEEDS

Which of the following skills do you need from your workforce?

(Please answer questions 13a to 13f with regards to desired skills sets. There is an example provided for each skill set. Please select any options that are applicable to each skills desired from your workforce).

13a. Reading Skills:

For example, an airlines sales agent reads notices on a computer screen, such as special handling requirements or weather information.

Please choose all that apply:

- You would like your employees to be able to scan written materials for information and/or overall meaning
- You would like your employees to be able to read materials to understand, learn, critique or evaluate
- You would like your employees to be able to analyze and synthesize information from multiple sources for or from complex and lengthy text
- Other, please specify:

13b. Document Use Skills:

For example, a bricklayer interprets blueprints to determine the height, length and thickness of walls.

Please choose all that apply:

- You would like your employees to be able to read signs, labels or lists
- You would like your employees to be able to understand information on graphs or charts
- You would like your employees to be able to enter information into forms
- You would like your employees to be able to create or read schematic drawings
- Other, please specify:

13c. Numeracy Skills:

For example, payroll clerks monitor vacation entitlements to prepare budget and scheduling forecasts.

Please choose all that apply:

- You would like your employees to be able to make calculations
- You would like your employees to be able to make measurements
- You would like your employees to be able to perform scheduling, budgeting or accounting activities
- You would like your employees to be able to analyze data
- You would like your employees to be able to make estimations
- Other, please specify:

13d. Writing Skills:

For example, Human resources professionals write recommendations on issues such as workplace health and safety.

Please choose all that apply:

- You would like your employees to be able to write to organize or record information
- You would like your employees to be able to write to inform or persuade
- You would like your employees to be able to write to request information or justify a request
- You would like your employees to be able to write an analysis or comparison
- Other, please specify:

13e. Computer Use Skills:

For example, telephone operators use customized software to scan databases for telephone numbers or long distance rates.

Please choose all that apply:

- You would like your employees to be able to use different forms of technology such as cash registers or fax machines
- You would like your employees to be able to use word processing software
- You would like your employees to be able to send and receive emails
- You would like your employees to be able to create and modify spreadsheets
- You would like your employees to be able to navigate the internet
- Other, please specify:

13f. Please provide us with any other comments you may have on the desired skills from your workforce (If you currently do not have any employees, please write 'not applicable' below).

14. Approximately what percentage of your employees come from each of the following areas?

Please choose all that apply and provide a comment:

[Local boundary designation (i.e, neighbourhood, township, parish, etc.)]

Other, please specify:

TRAINING AND RECRUITING EMPLOYEES

We would now like to ask you some questions about training and recruiting of employees

15a. Are you trying to fill a position in your business/company/organization?

- Yes
- No
- Not applicable

15b. If you answered “yes” to the question above, how many positions are you currently trying to fill?

16. Now, thinking about your last series of hiring, about how long, on average, does it take to fill a position once it has been created, or vacated?

17. Please indicate what occupations you are having difficulty filling and retaining?

18. Thinking about all the jobs that you offer in your place of employment, which jobs do you think are the hardest to fill?

19. In the last year have you had any changes to the size of your workforce?

- Increased the number of employees
- Decreased the number of employees
- My workforce has stayed about the same size over the last year
- Not applicable

20. Thinking about the next five years are you looking to change the size of your workforce?

- Increased the number of employees
- Decreased the number of employees
- My workforce has stayed about the same size over the last year
- Not applicable

21. What are the methods your organization uses to recruit employees?
Please choose all that apply:

Please choose all that apply:

- Attend job fairs
- Government job banks
- John Howard Society
- Online job search engines (i.e. Monster, Workopolis, etc.)
- Other websites (i.e. Kijiji, Craigslist, etc.)
- Talk to friends and family about job opportunities
- [Local employment resource]
- [Local employment resource]
- Not applicable
- Other, please specify:

22. Please rate the availability of services in the region of Durham:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Apprenticeship training	<input type="radio"/>							
Colleges	<input type="radio"/>							
Cultural facilities	<input type="radio"/>							
Daycare affordability	<input type="radio"/>							
Daycare availability	<input type="radio"/>							
Electrical power	<input type="radio"/>							
Housing affordability	<input type="radio"/>							
Housing availability	<input type="radio"/>							
Medical services	<input type="radio"/>							
Other utilities	<input type="radio"/>							
Private career colleges	<input type="radio"/>							
Public transportation	<input type="radio"/>							
Recreation	<input type="radio"/>							
Roads	<input type="radio"/>							
Secondary schools	<input type="radio"/>							
Universities	<input type="radio"/>							

23. Please rate the quality of services in the region of Durham:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Apprenticeship training	<input type="radio"/>							
Colleges	<input type="radio"/>							
Cultural facilities	<input type="radio"/>							
Daycare affordability	<input type="radio"/>							
Daycare availability	<input type="radio"/>							
Electrical power	<input type="radio"/>							
Housing affordability	<input type="radio"/>							
Housing availability	<input type="radio"/>							
Medical services	<input type="radio"/>							
Other utilities	<input type="radio"/>							
Private career colleges	<input type="radio"/>							
Public transportation	<input type="radio"/>							
Recreation	<input type="radio"/>							
Roads	<input type="radio"/>							
Secondary schools	<input type="radio"/>							
Universities	<input type="radio"/>							

24. Please rate the availability and ease with which you are able to fill company positions in the following categories:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Skilled	<input type="radio"/>							
Semi-skilled	<input type="radio"/>							
Unskilled	<input type="radio"/>							
Clerical	<input type="radio"/>							
Technical	<input type="radio"/>							

25. Now, thinking about the business climate of your community please rate the following attributes of your community with respect to the community business climate:

	1 Poor	2	3	4 Average	5	6	7 Excel- lent	Don't know
Support for businesses	<input type="radio"/>							
Communication	<input type="radio"/>							
Quality of Life	<input type="radio"/>							

NEXT STEPS

26. We would now like to get your thoughts of the next stages of employment for this region.

27. What education and/or training do you provide to ensure your employee becomes a “good fit” for your company?

28. Overall, what are the positive aspects of hiring in Durham Region?

29. What are the negative aspects of hiring in the region of Durham?

Thank you for your feedback. We very much appreciate your time and effort in answering these questions.

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