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A Case Study of Online Essential Skills Enhancement for the Construction Trades



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Association of
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du Canada

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SUMMARY

Saskatchewan's residential construction industry faces high demand for skilled tradespeople and therefore, the focus of this pilot project was to provide flexible, online training designed for those seeking entry-level employment or to enhance the skills of current workers for upward mobility in their careers. In total, 102 workers were recruited and 70 of those workers received professional assessment debriefings. Twenty workers pre-tested at Level 2 using the Test of Workplace Essential Skills (TOWES) and all but one received training licenses. The majority of potential participants tested below the Level 2 document use skills required for entry into the project. Of the remaining group, training was offered through Bow Valley College's Essential Skills Direct – Apprenticeship (ESD) online training program. For most who progressed through the training to the first post-assessment phase, increases in skill levels were recorded. However, for various reasons only four workers were able to complete the intervention and were post-tested. Results of this study also indicated that online learning for the construction trades needs to be fully explored with this learner group because the drop-out rates were high.

BUSINESS CASE

It is expected that Saskatchewan will have 77,000 job openings between 2009 and 2014; 70% through attrition and 30% linked to economic growth. In addition, the demand for skilled workers with post-secondary education is expected to grow at a rate of 1.1% per year over the next four years. Furthermore, economic projections from September of 2011 predict that Saskatchewan will grow at a rate of 4.1% in 2012 with continued low unemployment rates (Ministry of Advanced Education, Employment & Immigration, 2010.) The trades, and in particular those in the construction sector, are experiencing the tightest labour markets; the number of workers with the necessary skills to meet employer expectations are not available.

Industries rely on highly skilled workers to ensure quality, safety and efficiency on the job site. Essential skills enhancement provides workers with the tools necessary to increase their foundational skills which link to increased participation, improved morale, enhanced worker engagement and improved team performance (Conference Board of Canada, 2005). Enhanced worker understanding of employer expectations leads to improved communication, higher job satisfaction and ultimately improved worker retention.

As Saskatchewan's primary institution for post-secondary technical education and skills training, the Saskatchewan Institute of Applied Science and Technology (SIAST), and more specifically, the Industrial Trades Department, serves a diverse adult population including Aboriginal people, newcomers to Canada, unemployed and displaced workers. SIAST has worked closely with many essential skills (ES) initiatives over the past 12 years. Recognized nationally and internationally for its expertise and innovation through projects and partnerships in over 30 countries, SIAST serves students with programs that touch every sector of the economy.

PARTNERSHIPS

There were three partners who worked collaboratively; each contributed their areas of expertise to the project. The Canadian Home Builders' Association - Saskatchewan, SIAST and Bow Valley College, recognized the need for ES training in the residential construction industry and have experienced success while partnering in previous initiatives. Since 2008, a division of the Association, Skill Build Training Services, has

provided ES assessments and interventions to nearly 400 industry workers. Through the provision of Test of Workplace Essential Skills (TOWES) assessments, classroom-based and online training, participants have had the opportunity to understand workplace expectations and recognize their current abilities. Subsequently, they were able to develop and improve their foundational skills such as numeracy and document use.

Participation in the Association of Canadian Community Colleges (ACCC) National Framework for Essential Skills pilot project allowed for expanded training capacity, enhanced knowledge of the application of essential skills processes, tools and interventions. This allowed for further development of an increased number of residential construction worker's essential skills.

The Canadian Home Builders' Association – Saskatchewan supplied the essential skills practitioners, certified as TOWES test site administrators, to recruit, conduct TOWES and related assessments and provide the ES interventions. Their linkages to industry stakeholders like The Saskatchewan Apprenticeship and Trade Certification Commission, employer members of the Home Builders' Associations, government and training institutions such as The Saskatoon Trades and Skills Centre, also provided valuable sources of recruitment.

Lou Charlebois, Continuing Education Consultant at SIAST, provided expert knowledge and support in managing the pilot project by monitoring and evaluating planned activities, data collection and interpretation of results. SIAST also provided space needed to complete assessments and computers required to access the ES interventions.

Through previous research it has been determined that ES interventions must be convenient, offer topics that are relevant to the workplace, and are led by professionals with a broad range of skills (Construction Sector Council, The Business Case for Essential Skills in Construction, 2010). Bow Valley College provided TOWES assessments and Essential Skills Direct - Apprenticeship (ESD) training licenses at no cost to participants.

AWARENESS AND PROMOTION

One full-time and two part-time ES practitioners worked diligently to promote the project and the benefits of ES training. Promotional and recruitment activities took place

including meetings, phone calls, e-mail correspondence, electronic newsletter advertisements, presentations and posters as efforts to attract workers to the project. Association staff held positions on several boards and committees such as the Skills Canada Saskatchewan Board of Directors and the Saskatchewan Indian Institute of Technologies Steering Committee, and utilized this platform for promoting the project, engaging employers, recruiting participants and increasing the awareness of essential skills.

As a means of promotion, a poster was created outlining the steps of the project as well as the benefits of increased essential skills (See Appendix A). To encourage continued participation and completion of the project, workers were offered gift cards and their names entered into a prize draw for a tablet computer.



Bridges and Foundations Career Development Corporation, an initiative of the Saskatoon and Region Home Builders' Association, has a mandate to offer training to employment programming to Aboriginal clients seeking to enter the residential construction workforce.

Bridges and Foundations clients were recruited into the pilot project as a means to improve their essential skills while participating in pre-employment trades training at SIAST such as the Carpentry and Electrical Applied Certificate programs. Because the ES intervention was being offered in an online format it was thought that this type of intervention would complement the class-room style trades training and not significantly impact their workload.

Tanya Myrfield-Wolfe, the Skills Development Coordinator for Bridges and Foundations, championed for essential skills awareness. The value of foundational skills development was highlighted throughout discussions she had with SIAST instructors, the Aboriginal Student Advisor and presentations to student groups.

In an effort to attract workers to the project a variety of stakeholders were targeted (See Appendix B). Settlement agencies, such as the Saskatoon Open Door Society and community based organizations like the YWCA Learning and Employment Centre,

provided diverse groups of workers to the project. This diversity would benefit the project by highlighting the need for ES training across a broader scope of the population. As well, networking with agencies that had widespread connections such as the City of Saskatoon's Community Development Branch and Canada-Saskatchewan Career and Employment Services was instrumental in disseminating information.

ESSENTIAL SKILLS INTERVENTIONS

Adult Education Principles

The ES practitioners recruited participants who exhibited their motivation to learn through engaging in the project processes, such as attending the information sessions, completing the consent form, completing TOWES and the like. Participants understood that developing essential skills would provide greater opportunities to enter or advance their careers in construction. As a result of establishing interest in training through relating learning activities to career goals and personal advancement, participants were engaged in training as they began the program. The intervention utilized was 'Essential Skills Direct – Apprenticeship' (ESD). This modular program integrated essential skills development with trades-specific activities and scenarios, to relate learning to the workplace, ensuring relevancy and practicality in an online learning environment.

Flexibility in course delivery and self-direction were integral to the pilot project's training interventions, as participants were typically working full-time or had other competing priorities. All training was accessible online, with additional facilitation available during business hours and two evenings per week. This ensured that workers had access to computers and internet if they did not have these available, a facilitator for questions about course content, and ongoing encouragement to complete materials. In some instances, hard copies of curriculum were also provided, where workers did not have a computer and were unable to attend facilitated sessions.

Professional Practitioner Skills

The pilot project was facilitated by ES practitioners with extensive experience in workplace ES program delivery. One practitioner was a Certified Essential Skills Analyst and all three practitioners had previously completed Essential Skills Training and Certification in TOWES Test Site Administration through SIAST. The Canadian

Home Builders' Association – Saskatchewan delivers residential construction-specific ES courses such as Blueprint Reading and Trades Math, coupled with TOWES assessments, to address gaps between workers' skill levels and industry needs.

The practitioners had a thorough understanding of how essential skills are integral to adult learning and the ability to acquire technical skills. Promotion of workplace essential skills and partnerships with industry stakeholders, businesses and community organizations were previously established by the practitioners, which further assisted in recruitment of the workers for this project. Through effective communication regarding the benefits of essential skills, practitioners were able to introduce training options such as Essential Skills Online and Essential Skills Direct.

The practitioners' previous experience proved beneficial throughout the project. From garnering interest in the program, to assessments and training delivery, clear benefits of essential skills could be communicated to all stakeholders. Employers understood the benefits of continuous learning in the workplace, while workers had an opportunity to interact with practitioners on a one-on-one basis. Of the 102 participants recruited, 70 completed the TOWES assessment, received professional assessment debriefing, individual learning plan development, accessible training facilitation and recommendations for additional career development and employment options.

Types of Interventions

The essential skills intervention tool utilized by the pilot project was supplied by Bow Valley College's TOWES Department. Following recruitment, 102 participants were provided with an opportunity to complete a Test of Workplace Essential Skills (TOWES) General 2 Series assessment with 70 of those workers receiving professional assessment briefings. The assessment provided was paper-based for all participants. There were 21 participants who scored within the pilot project's qualifying range of Level 2 document use and 20 received an ESD training license. The 48 participants with document use skills at Level 1 were offered an opportunity to enter the Canadian Home Builders' Association – Saskatchewan's Skill Build – Workplace Essential Skills program and, if interested, were provided with access to an Essential Skills Online (ESO) training license. Nine individuals at Level 1 accepted this training and were provided with access to ESO. Two participants who scored at Level 3 document use were provided with opportunities to enter classroom-based Skill Build courses if they desired; however, their skills were deemed sufficient for workplace success (See Figure 1). Four participants completed the intervention and post TOWES and as a result, three of the

four completers saw increases in their scores for reading text, document use and numeracy. (See Figure 2).

Summary of Results

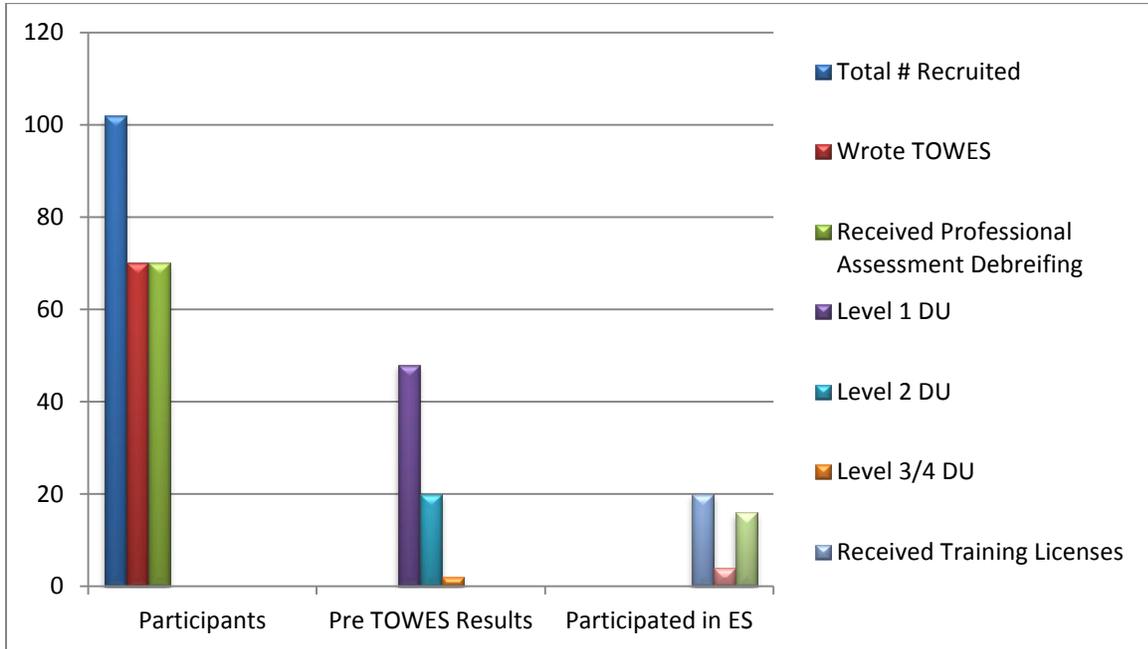


Figure 1

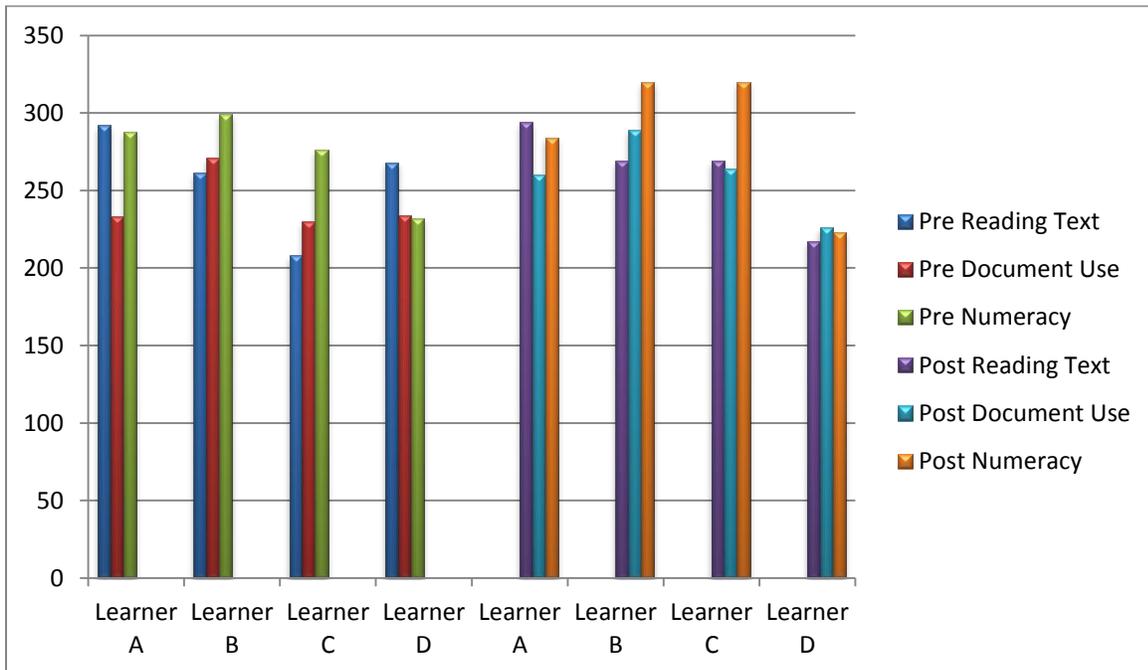


Figure 2

Interventions were delivered to individuals at varying times based on ongoing recruitment and intake from multiple sources. For this reason, a single cohort was not established to offer classroom-based training within a specific time frame. In order to accommodate the transient nature of the construction industry, online essential skills training tools were implemented to allow for flexible, ongoing access to skill development. This feature could have ensured that participants could still meet work demands, including extended overtime requirements.

By participating in the ESD training interventions, participants were expected to complete four online workbooks and related skill builder activities. The intention was that participants would commit to twenty to twenty-four hours on average, which could be completed over a four to six week time frame. However, the intervention tool did not allow us to collect data on the actual time invested by each participant. Individual learning plans, with a schedule for completion, were established with each participant. This ensured that anticipated work, training and/or personal commitments could be factored into expected dates of completion. The ES practitioner also maintained contact with participants, whenever possible, to monitor progress, provide tutoring, arrange computer access if required and adjust completion dates when necessary. Participants who entered the ESO stream outside of the scope of this pilot project were provided with the same model of facilitation and training interventions.

TRANSITION PATHWAYS TO EMPLOYABILITY

The pilot project recruited participants from a variety of sources and partnerships and as such, there was more than one Transition Pathway to Employability recognized in this project. Those most closely related were:

- Unemployed to employed
- Under-employed to better employed
- Unemployed/under-employed to apprenticeship/technical training

The common strand amongst all participants was however, they all had a desire to work in the residential construction industry. Through member companies we recruited individuals who were already engaged in the residential construction industry but had a

desire to either advance in their current positions or enter apprenticeship training. Our recruitment efforts with settlement agencies and community based organizations included new-comers to Canada who were unemployed and seeking opportunities to work in construction.

Varying aspects of the economic sector, such as a mild winter, heavy workloads and regular access to computers, impacted the pilot project and engagement in training. The concept of essential skills is still new to many employers; especially small-business contractors. Therefore, an increased emphasis on awareness and promotion were required to support recruitment. As well, the transient nature of the construction industry impacted participants' ability to fully engage in training. While many workers recognized the value of skill development, the time was not always available to complete training according to schedule. Overtime is often required and employers did not provide time in-lieu of training participation. This indicated the necessity to have buy-in from employers with regards to the benefits of increased essential skills at the outset of such a project.

PERSONAL REFLECTION

This pilot project faced numerous challenges and limited success was realized in this project for multiple reasons. The primary lesson learned was the importance of learner engagement throughout ES training. Essentially, the main recruitment sources were individuals who were underemployed in residential construction since many other potential participants were too busy to commit to training outside of business/overtime hours. As transient individuals lack consistent contact information, regular follow-up and scheduling was a challenge. Furthermore, this target group often has limited access to computer and internet facilities within their place of residence. Although access to computers was made available throughout the project, this barrier limited the flexibility of online training. In many instances, participants would be required to leave their home and arrange transportation to complete activities. Moreover, participants who do not consistently access personal computers often do not have the skills necessary to navigate the internet, software and programs at the level required by the training intervention tools provided. This led to frustration and disengagement.

Challenges were also faced in encouraging participants to continue accessing training on a regular schedule, as other priorities and time commitments often interfered with

self-directed learning goals. As well, many workers faced English language barriers, making online training more challenging. In order to remedy these challenges, future ES training delivery would be best modeled after classroom-based courses that have been successfully delivered through other projects. Although online training delivery has the benefit of flexibility, online ES training is best provided in conjunction with other classroom-based activities that can utilize technical and/or workplace learning materials. This helps the participants see the connection between essential skills, technical skills and their career. With an understanding of how training will benefit them directly and a more structured environment that requires accountability to an instructor, there is greater motivation to complete training activities.

The ESD provided by Bow Valley College, was developed with the intention of linking trades/apprenticeship-based content with essential skills. Content and course format, however, were too general and did not often engage participants. As well, the online tool was not user friendly and required relatively high computer competencies for navigation; in many cases, beyond the capability of the project participants. This resulted in a lack of progression through the training and many lost interest in completing the pilot project.

Encouragingly, three of the four participants who did complete the online intervention and wrote the TOWES post-test saw increases in their scores. A more user-friendly interface, combined with enhanced linkages to culture and workplace-specific content with delivery in conjunction with technical or workplace training may help to encourage increased completion rates and as a result, increases in ES levels.

REFERENCES

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The Conference Board of Canada (2005). *Building essential skills in the workplace*. Ottawa, ON: Author.

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APPENDIX A - POSTER



The Canadian Home Builders' Association – Saskatchewan needs you!

Be part of an exciting national *Essential Skills Pilot Project!*

What are Essential Skills?

Essential Skills provide the foundations for success in work, learning and life. They include *Reading Text, Numeracy and Document Use*.

For more information: www.hrsdc.gc.ca/eng/workplaceskills/LES

What is involved in the Essential Skills Project?

- Orientation
- Test of Workplace Essential Skills (TOWES) pre and post-assessments
- Essential Skills Direct online training.

What's in it for me?

Develop skills that employers are looking for

Increased safety and productivity on the job

Develop strategies to help you learn better

Build on your current skills

****CHANCE TO WIN AN IPAD****

GIFT CARDS

How do I sign up?

Contact the Canadian Home Builders' Association- Saskatchewan at 306-955-5188.

APPENDIX B – RECRUITMENT LIST

- Ardel Steel
- Bridges & Foundations Career Development Corporation
- Canada-Saskatchewan Career and Employment Services
- City of Saskatoon
- Correctional Services of Canada – Parole Office
- Granite Transformations
- Innovative Residential
- McMillan Works Contracting
- Nordic Fencing
- North Prairie Developments Ltd.
- READ Saskatoon
- Regina Open Door Society
- Saskatchewan Construction Association
- Saskatchewan Learning Disabilities Association
- Saskatchewan Tourism Education Council
- Saskatchewan Indian Institute of Technologies/Construction Careers (SIIT)
- Saskatchewan Institute of Applied Science and Technology (SIAST)
 - Aboriginal Student Achievement Plan
 - Aboriginal Student’s Association
 - Industrial Training Division
- Saskatoon Food Bank and Learning Centre
- Saskatoon Tribal Council (STC Urban)
- Saskatoon Open Door Society
- Saskatoon Trades & Skills Centre
- Skill Build – Essential Skills Course Participants
- Skills Canada Saskatchewan
- Transition to Trades
- Warman Homes